

Skjemainformasjon

Skjema	SFU
Referanse	1006647
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Host

Information about host institution and center

Name of centre	Health and Social - Unlimited
Host institution	Faculty of Medicine, University of Oslo
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Contact person

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About the centre

About the centre

Is the centre already established at the time of application

No

Describe briefly the plans for establishing the centre (maximum 1500 characters)

The consortium consists of the following institutions: Faculty of Medicine, University of Oslo (UiO) (host institution); Faculty of Health and Faculty of Social Sciences at Oslo and Akershus University College of Applied Science (HiOA); and the Faculty of Health, Care, and Nursing at University College at Gjøvik (GUC). The consortium brings together institutions that have demonstrated excellence in the areas of medical, health, and social education, along with their fields of practice. The consortium and its collaborating partners together cover the core issues in health and social education and practice.

Based on the R&D plan, we aim to disseminate excellence and develop new educational and learning models in both education and work settings. The main aim is to create a bi-directional relationship between education and practice. We have selected the following problem areas in which educational innovation will be developed and spread in and outside the consortium: child care and welfare, care of persons with chronic lung disease, chronic musculoskeletal diseases, and elderly citizens.

The outcome from the R&D will be improved education, creating new curriculum and models for continuous interprofessional education in work settings. These improvements will not only pertain to the selected focus areas; through the construction of generic models, they will be disseminated for the broader care, health, and social field.

Describe briefly the aims and current as well as planned activities of the centre (maximum 1500 characters)

- Reforms in the curriculum that create conditions for new forms of competencies for first line services
- Educational models that develop students' capacities to manage the radical increase in scientific knowledge and to apply that knowledge to individual patients/clients/users
- Educational models that teach students and professionals to master both user-generated and scientific knowledge
- Educational models that teach students to be active knowledge translation participants in their profession and in interprofessional teams
- Educational models in which students and professionals learn "just in time" as part of clinical reasoning, diagnostic work, and problem solving
- Educational models that value high-level, specialized knowledge as part of individual expertise and as part of interprofessional teams
- Educational models that develop interprofessional learning in specific health services (e.g., child care and welfare, chronic care, and care for the elderly)

The center will collaborate with university hospitals; municipalities in Norway's southeast region; national, regional, and local developmental centers; the research centers for educational measurement (CEMO) and for higher education studies (HEIK) (both at the Faculty of Education, University of Oslo); as well as international partners. The partners in practice and the research partners will be involved in the research and development plan.

Application Document

Application Document

Upload application document

[profile_SFU_Med_Health_Social_pdf.pdf](#)

Timeline and budget

Timeline and budget

Upload planned timeline and the activities to be conducted

[timeline_timetable\[Med-final5\].pdf](#)

Upload plan for financial resource acquisition

[financial_SFU - Med.fak UiO \[budget-final1\].pdf](#)

Upload budget

[budget_SFU - Med.fak UiO \[budget-final1\].pdf](#)

Attachments

Attachments

- ReferanserSFU_all2_.pdf
- Lettersof_I_ALL_.pdf
- CV_steering_leader_goup.pdf
- CV_SFU_Sten_Ludvigsen_2013.pdf
- UIO_Med_Appendix.docx
- budget_SFU - Med.fak UiO[budget-final1].pdf
- timeline_timetable[Med-final5].pdf
- financial_SFU - Med.fak UiO[budget-final1].pdf
- profile_SFU_Med_Health_Social_pdf.pdf
- InstitutionalCV_SAB_all__3_.pdf

Comments

Comments to the application form (maximum 1500 characters)

Budget and financial resources is described in the same document. If this is a problem contact K.M. Heggen.

Center for Excellence in Education: Health and Social Education - Unlimited

1. Vision, Background, and Strategies

The Center for Excellence in Education proposes innovations in health and social education through changes in curriculum, new teaching and learning methods, interprofessional education, and the reorganization of how educational institutions collaborate with the different institutions and professions in the sector.¹ This reorganization is what we call the bi-directional relationship for improving educational institutions and practices. These changes aim to ensure that current and future professionals will be able to meet the great challenges described in the white papers “Education for Welfare”² and “Coordination Reform.”³ These white papers set forth the basic premises for the educational and learning innovations that we will outline.

The white papers address the problems caused by ongoing large demographic changes (e.g., aging society and increasing care needs, more complex medical and social conditions, increases in chronic diseases, a growing need for child welfare services, and greater cultural diversity). A principal solution offered by health authorities is to shift the increasing responsibility for promotive and preventive work, patient care, treatment, and rehabilitation from the specialist level (e.g., hospitals) to community-based health and social care systems.³ The consequences for these first-line services are as follows:

- Increased needs for knowledge and skills to meet the extended responsibilities
- Calls for new ways of learning and more advanced in-service education and training
- Complexity of social and medical problems and new technologies requiring greater emphasis on collaboration among different professionals and coordination among different services
- Increased collaboration between the production, translation, and use of new knowledge

The main aims for the center are as follows:

- To provide students with advanced knowledge and skills to work in community-based services
- To educate students through systems of life-long learning (e.g., asynchronous learning and learning on demand) including continuous professional learning in the workplace
- To educate students in interprofessional work to adapt to systemic changes and to design new frameworks for interprofessional learning in the workplace
- To design knowledge translation for first-line and community-based services as part of a process that integrates work-based experiences

The most comprehensive term for this vision is **unlimited education**—both in time and space. The future of educational institutions relies on the great challenge of opening up and becoming responsive and adaptive to systemic changes that involve the development of new knowledge and

skills in the sector. A bi-directional relationship implies that the emerging problems in practice must be seen as one main feedback mechanism for how the educational program should be changed.¹ New educational models give students and professionals a new position when it comes to developing and using knowledge.⁴ This also includes knowledge about how the health and social sector works.² The overall approach for achieving these educational goals is knowledge translation (KT).^{5,6,7} KT encompasses the methods for creating dynamic interaction between (1) education, research, and practice; (2) the patient/client and health and social services; and (3) the different professions involved. The KT approach enables students and professionals to understand their work and put knowledge into action in new ways, through bi-directional relationships. Thus, they can help patients, clients, and users and make sure that the health and social systems work efficiently (the KT approach is elaborated in the Research & Development plan).

Interprofessional education (IPE),^{8,9} e-learning,^{10,11} and simulation¹² will be the main strategies employed to enhance student and professional capacity to solve problems as experts and as part of teams of experts. However, in health and social education, multiple learning methods are used and achieve success, and we will capitalize on these methods both in education and for continuous education in the workplace. We have selected the following problem areas in which educational innovation will be developed and spread in and outside the consortium: child care and welfare, care of persons with chronic lung disease, chronic musculoskeletal diseases, and elderly citizens.

This consortium brings together institutions that have demonstrated excellence in the areas of medical, health, and social education, along with their fields of practice. The consortium is based on the active involvement of academics and collaborating institutions that produce research that creates the foundation for improving education and learning. The consortium and its collaborating partners together cover the core issues in health and social education and practice, and the different professional cultures, populations, and geographic locations. The consortium consists of the following institutions: Faculty of Medicine, University of Oslo (UiO) (host institution); Faculty of Health and Faculty of Social Sciences at Oslo and Akershus University College of Applied Science (HiOA); and the Faculty of Health, Care, and Nursing at University College at Gjøvik (GUC).

2. Organization: Steering, Leadership, Collaboration, and Governance

The steering group will consist of the vice deans for education and deans from the faculties of the participating institutions, together with student representatives. This group will be led by Professor Kristin Heggen (UiO). The steering group will decide on the R&D, allocate resources to the center, and implement curriculum changes. *The operational leader group* will consist of the center leader Professor Sten Ludvigsen (UiO), Professor Per Grøttum (UiO) (responsible for e-learning and measurement), Professor Eivind Engebretsen (HiOA) (responsible for KT in health and social

sector) ,and Associate Professor Sigrid Wangensten (GUC) (responsible for IPE, simulation in health and social sector). Together with the leader of the steering group, the members of the leader group have demonstrated excellence in building an R&D center, building new health education institutions, developing systems for e-learning, and implementing changes in educational and work settings. In addition, we will appoint R&D leaders from the participating institutions for each strand and activity. We will establish a *scientific advisory board* (SAB) composed of seven international experts in the different areas on which the consortium aims to focus (see appendix for the members that have been confirmed). The function of the SAB will be to provide feedback on the R&D program and offer an international perspective on the educational programs and strategies for dissemination, and educational innovations. The *reference group* will consist of the consortium members and the collaborative partners (see the ten letters of intent), and students from the consortium member institutions. The *research collaboration* will be based on existing partnerships within the selected problem areas and new partnerships with research institutions that work with the core problems on which this center is focused.

3. Consortium Members and Collaborative Partners

3.1 Faculty of Medicine (UiO), Faculty of Social Science and Faculty of Health Science (HiOA, HF/SAM), and Faculty of Health, Care, and Nursing (GUC)

The three consortium members have unique capacities in the Norwegian health and social sector. This uniqueness will help create new connections between medical, health, and social education, and enable the R&D plan to establish the foundation for the changes that we propose. At the Faculty of Medicine, education and research extend molecular medicine to patients, with an international profile and advanced life sciences research. The faculty's international work involves extensive student exchanges with numerous medical and health faculties. Students are tutored and educated by teachers who are researchers of a high international standard. In the recent international evaluation of the biomedical research conducted by the Research Council of Norway, the Faculty of Medicine at Oslo was deemed world-class in its research. At this center, the educational programs in medicine, clinical nutrition, nursing, and health sciences are particularly important.

HiOA is Norway's largest state university college due to the wide range of professional programs with close ties to practice arenas. The Faculty of Social Sciences (SAM) is the only faculty in Norway to offer bachelor, master's, and PhD programs as well as programs for continuing education in social work, child welfare, and social policy. The Faculty of Health Sciences (HF) has a broad study portfolio and educates students in most health professions, focusing on health issues through the life span and health promotion, prevention, rehabilitation, therapeutic, and care work. In this consortium, the educational programs in Social Education, Physiotherapy, and Public Health Nutrition are particularly important. The faculty members at both

SAM and HF in the selected programs deliver high quality teaching and research. UiO and HiOA work very closely with their strategic partners, Oslo University Hospital (OUS) and Akershus University Hospital (AUH)—two teaching hospitals with nearly 25,000 employees and 1.5 million patient encounters annually.

The Faculty of Health, Care, and Nursing (GUC) offers full- and part-time education for nurses and collaborates with national and regional centers for advancing the care and treatment of elderly patients in the municipal sector. The faculty's core activities are education, research, and innovation in clinical nursing (BSc, MSc), aging knowledge (MSc gerontology), and ambient assisted living and community care (MSc). The use of an advanced simulation center is integrated in all study programs. On behalf of the Ministry of Health and Care Services, GUC is responsible for coordinating the four regional Centers for Care Research in Norway, in addition to supervising the R&D centers, nursing homes and in home care services in the Eastern Health Region.

3.2 Collaborative partners

In addition to the aforementioned university hospitals and the national and regional centers, the consortium will collaborate with specialized institutions and institutions that represent first-line health and social services, as well as local, regional, and national centers of competence, including the Oslo municipality; Ullensaker municipality; Center for the Development of Institutional and Home Care Services; Center for Old Age Psychiatric Research; Norwegian Centre for Violence and Traumatic Stress Studies (NKVTS), which studies violence and trauma in children; and the Centre for Child and Adolescent Mental Health Eastern and Southern Norway (RBUP South-East), which is a center for research, education, and the dissemination of knowledge among the regional child welfare services. Together with these institutions, we can ensure the high-quality practical training of students with regard to student access, practical experience, quality of supervision, and overall relevance.^{8,9} To develop models for large-scale innovations in education, we will collaborate with the Faculty of Education's research group for higher education studies.

4. Result–Process–Input Factors

In this section, we will provide evidence of the excellence in education and a few examples of the research foundation for our partners' educational programs.

4.1 Faculty of Medicine, UiO

Result factors. *Student flow:* The ratio of achieved to planned annual credits in medical studies is 94%, exceeding the national average in higher education by 9%. The corresponding figures for newly developed or recently revised programs, i.e., Master of Health Administration and Master of Advanced Geriatric Nursing, are 92% and 99%, respectively. *Credits:* The annual production of credits per student in the medical studies exceeds the national average in higher education by 21%

(53.0 vs. 43.8 credits). *Candidate production*: The average completed number of degrees is 192 per year, while the admittance rate of new students is about 210 per year, suggesting a drop-out rate of approximately 9%. UiO admits 36% of the total number of medical students in Norway (210/590). In addition, 150 students graduate annually from bachelor and master's studies. *Evaluation of the faculty's programs*: The faculty has been awarded first prize three times in the most prestigious national award for educational quality from the Ministry of Education and Research and NOKUT ("*Utdanningskvalitetsprisen*"). The first time was in 2001, for its innovative revisions of medical education (Oslo96—a pedagogical reform in which problem-based learning (PBL) was implemented), second, in 2010, for the Master of International Community Health, and third, in 2011, for the Master of Health Sciences. The committees wrote the following: (2010): ". . . a contribution that must be characterized as excellent work to improve educational quality , an important step in making students work scientifically . . . a multitude of pedagogical approaches . . . All teaching has been subjected to continuous written and standardized evaluation"; and (2011): ". . . developed a research inspired pedagogy where working methods, content and forms of evaluation are closely related to the way researchers work . . . the evaluations show that the students perceive this as extraordinarily instructive." A similar pedagogical approach is adopted by two other programs: the Master of Advanced Geriatrics and the Master of Nursing Sciences.

4.1.2 Process- and input factors

In 2014, the Faculty of Medicine will implement a medical curriculum reform, with an increased focus on community-based health care, public health, clinical skills, international health, and varied student-activating learning methods that go beyond the current PBL. Innovative and new assessment methods, like the Objective Structured Clinical Examination (OSCE), and computer-based exams are widely used in medical studies and are unique to Norway (1,000 students this spring). Educational leadership is now being strengthened as part of the new reform. A new section for e-learning has been established with two full-time professors and technical staff. This section leads the national efforts to build up a national e-learning portfolio with accessibility for all Norwegian institutions of medical education, with the possibility for extension to all health professionals as well as the general public and international partners. These initiatives testify to the faculty's continuous commitment to modernize and improve the education to meet the challenges of the health care system.

4.2 HiOA: Result factors

The ratio of achieved to planned annual credits in the BA in Social Work is 98%, Child Care and Welfare 95%, Physiotherapy 97%, Social Education 98%, and in Public Health Nutrition 94%; all exceed the national average of 85%. The annual production of credits per student exceeds by far the

national average of 43.8 credits: BA Social Work (54), Child Care and Welfare (56), Physiotherapy (55), Social Education (56), and Public Health Nutrition (56). The MA in Public Health Nutrition has 54 credits. While 78% of the BA students complete their studies within the nominal length of time, the sector average is 42%. A total of 76% of the MA in Social Work students complete the degree within the nominal length of time, the sector average is 40%. Close to 1,900 students graduate annually from BA and MA studies within the Faculties of Health and Social Science. Admission to the BA program in Physiotherapy requires 55.9 grade points, thus ranking as a very prestigious program of study. External evaluations confirm the strong academic competence and relevance of the BA program in Physiotherapy (2010) and the MA program in Applied Social Science (2008).

4.2.2 Process- and input factors

Examples of innovative learning methods are videotaped cases with children, skills training in a variety of laboratories, and simulation centers (e.g., Movement Analysis Laboratory, role-play within child care in specially designed rooms, laboratory related to cost studies). In addition, the educational programs include interprofessional collaboration in class and vocational training, work in university college policlinics in physiotherapy, and practical training in social work (HiOA/Sagene-The Norwegian Labour and Welfare Service, NAV). One example of research-based teaching is the program “Talk with us,”¹³ which organizes modules in both health- and social sciences at all levels, from bachelor to PhD, in methods for children’s care and treatment. Another example is FysioPol, where bachelor students collect data and upload them to a database. This provides an opportunity for students to (a) get experience with clinical documentation by using standardized and scientific validated instruments and (b) to create a database for bachelor- and master’s theses and research projects. Courses in pedagogies and guidance are provided for clinical supervisors and courses in interprofessional education are a strategic priority. SAM has a specific professorship in pedagogy in order to increase the quality and relevance of the educational programs. The leadership at HF and SAM are highly committed to strategically and financially supporting and continuously improving research-based education in collaboration with their partners in practice.

4.3 GUC: Result factors

Student flow: The ratio of achieved to planned annual credits in the full-time Bachelor of Nursing program is 95%, exceeding the national average by 10%. For the part-time program, the number is 93%. *Candidate production and credits:* The average completed number of degrees is 117 yearly for full-time students and 41 for part-time students. The annual production of credits per student for the full-time program exceeds the national average in higher education by 14% (50 vs. 44 credits). *Regional need for educated personnel:* Every year, GUC admits 36 new students into decentralized

part-time nursing programs in three different locations in Oppland County. After completing their studies, 88% of graduates continue to work in the same region, and 75% would not have completed their nursing education if such a program was not available. *Evaluations of the programs:* GUC has twice been awarded the Education Quality award (Utdanningskvalitetsprisen): in 2009, for working systematically with quality improvement in education, and in 2012, for developing a simulation center to improve educational quality in health professional studies.

4.3.1 Process- and input factors

Teaching, student work, and assessment methods: In addition to the clinical teachers from GUC, practitioners serve as supervisors in the simulation center as peer educators. The simulation center is part of a national and international network for planning scenarios that are validated and part of the curriculum. In order to enhance the research in education, combined professorships have been established with the local hospital (Sykehuset Innlandet). The advanced simulation practice and technical infrastructures at GUC create the conditions for expanding the use of simulation as an essential learning method in professions and in interprofessional education. The academic staff at GUC possess a good balance between academic and clinical competence, which increases the potential for high quality education that is relevant for the health and social sector.

5. Research and Development Plan – New Learning Models for Education

Based on the R&D plan, we aim to disseminate excellence and develop new educational and learning models in both education and work settings. The main aim is to create a bi-directional relationship between education and practice. The R&D strands are as follows:

5.1 Strand one: Innovation and development of instruments for measuring learning outcomes

The Faculty of Medicine has developed and uses the OSCE, consisting of several stations incorporating the use of manikins, standardized patients, and scenarios, and all students are tested similarly. Further, the in-depth and broad testing of knowledge has been carried out through new and innovative forms of computer-based exams. These include case histories that are now being widely implemented. These innovations will be disseminated in and outside the consortium. In collaboration with the Center for Educational Measurement (CEMO) at UiO, we will develop new quantitative and qualitative instruments for assessing the learning outcomes of students and interprofessional teams.

5.2 Strand two: Analysis of advanced practice

This strand capitalizes on a few previous achievements that offer new insight into how to design for knowledge translation and interprofessional work in education and work settings.

1. Developing new forms of collaboration between education, services, and users to enhance knowledge and quality in the social services (called HUSK in Norwegian). Analyses of the project are ongoing in collaboration with University of California, Berkeley (Prof. M. Austin).

2. Developing new methods for communicating with children in crisis to ensure that their rights are acknowledged in preparing their care plans (based on the RCN research project “Talk with us”).
3. Analyzing simulation as a learning method and creating scenarios for use in KT and IPE.
4. Systematically assessing and revising curricula across educational programs in order to adapt to the needs for knowledge brought about by the Coordination Reform.

5.3 Strand three: Methods for vertical and horizontal knowledge translation and learning

There is an increasing recognition of filtering mechanisms in the process of translating knowledge to action in the health and social sector. To move knowledge between research, education, and practice, between health and social services, and between different professionals is not only a question of simple application but requires dynamic interaction (bi-directional relationships).¹⁵ The KT framework provides a model for exploring these processes (see Figure 1). The model was developed by the Canadian Institutes of Health Research.⁷ In this model, the KT process is presented as interactive, dynamic, and complex. The creation of knowledge is depicted as a pyramid with three stages: inquiry, synthesis, and knowledge tools. The application of knowledge is illustrated as a cycle, identifying the key elements in a knowledge-to-action cycle. To become a

professional of high quality and to meet the challenges outlined in this application, students must learn to participate in KT that is not only related to their own profession or specialization.¹⁵ They must also be able to take part in KT along two dimensions: horizontally, by collaborating in interprofessional teams, and vertically, in interactions between the specialist and primary care levels. The subprojects described below aim to create a foundation for improving the educational programs in the consortium. UIO, HiOA, and GUC will be involved with students and academic staff in all subprojects, while the partners in practice will be involved in a selection of the subprojects. Each subproject is given a distinct focus.

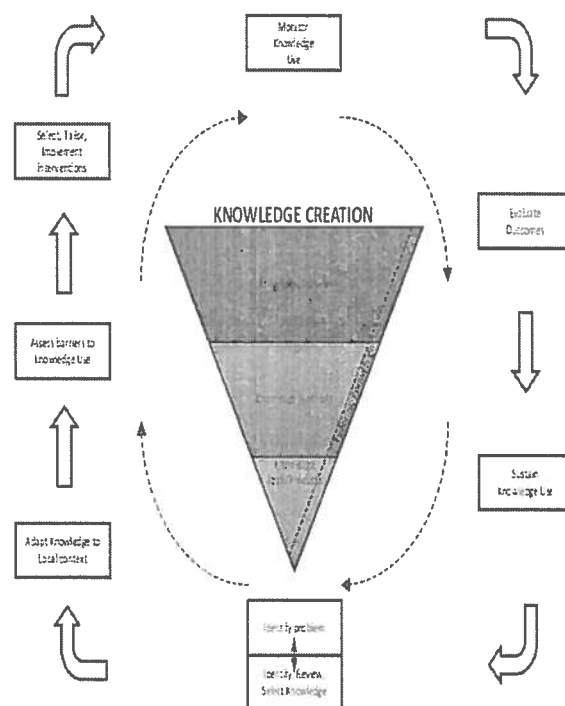


Figure 1: Knowledge-to-action framework.

Subproject 1 – Knowledge translation, exemplified by child welfare services

The purpose of this subproject is to study the vertical aspects of KT between educational

institutions and professional practice. The focus is on professionals involved in child care, such as child care officers, social workers, public health service nurses, general practitioners, and psychologists. Reforms in the organization of child welfare systems and the UN Declaration of the Rights of the Child have strengthened children's rights to be listened to and to participate in decision making processes. The responsibility for the Norwegian child welfare service is shared between the municipalities and the state, with four regional centers (RBUP), and approximately 350 child welfare units in the municipalities handle roughly 52,000 cases annually. Significant shortcomings and major challenges in the education of professionals working in child welfare have been highlighted (NOU2009:8):¹⁶ (1) insufficient competence in handling notifications of concern, uncovering problems, making early interventions and effective interventions, and making decisions about out-of-home displacement; (2) insufficient eliciting of, and attention to, children's rights and opinions; (3) insufficient methods for communicating with children and young adults; and (4) insufficient integration of research-based and practice-based knowledge. This subproject will investigate how (a) knowledge from the practice field and the clients (including the children) can be identified, formulated, gathered, and translated to the educational institutions; (b) educational institutions can select research-based knowledge, like synthesis, and tailor it into practice relevant knowledge, and develop focused education; and (c) collaborative modes of working with children and methods for communicating with children can be integrated into the interprofessional educational programs (the horizontal dimension).

Subproject 2 – Knowledge translation, exemplified by chronic lung disease (CLD) and chronic musculoskeletal disorders (MSD)

The purpose of this subproject is to study (1) the horizontal knowledge translation in interprofessional teams and (2) the translation of interprofessional team structures from specialist to primary health care for CLD patients.³ CLD is prevalent and affects close to 10% of the population, and this figure is expected to rise significantly in the coming decades. CLD is one of the more costly diseases, and it is associated with sick leave, disability, and early death. The strategies are prevention through the empowerment of the public to make healthier choices, and intervention including early treatment, quality care, and management of the disease to avoid disability. The follow-up for CLD is now mainly conducted by interprofessional specialist teams including doctors, nurses, physiotherapists, and social workers. As part of the Coordination Reform, many of the team tasks must be taken over by primary health care. We will study how this educational process can be handled in an organized and systematic manner: (1) replicating team competencies from specialist care to primary health care, (2) exposing and handling knowledge gaps in the new teams, and (3) identifying the drivers and barriers for interprofessional learning in the workplace.

In order to develop an educational model for chronic diseases, we will also work with the

care that patients with chronic musculoskeletal disorders (MSD) receive. MSD are highly prevalent, heterogeneous, and range from mild to disabling conditions, and the etiology and treatment options may vary accordingly. Various health professionals are involved in this fragmented field. They work independently and with little interaction with other health professionals, making the patient the messenger. The task of interprofessional recognition, bridging and establishing interprofessional expertise, is thus a considerable challenge. For the MSD areas we will focus knowledge gaps in teams and drives and barriers in interprofessional learning in the workplace.

Subproject 3 –Interprofessional education and work; care for the elderly

This subproject integrates vertical and horizontal KT into one complex model and applies it to the important domain of care for the elderly. The municipal health care services represent the largest health care institution in Norway, with about 200,000 patients/users (HOD 2008–2009).³ Forty thousand elderly people live in nursing homes and 160,000 are in need of home care (HOD 2005–2006).¹⁷ Most elderly people have several chronic diseases and physical disability, and malnutrition is a common problem. Over the next 35 years, a demographic shift in the population will cause a 50% increase in the number of senior citizens over 80 years of age. Insufficient coordination between health professionals may affect elderly patients in particular. The subproject will explore KT as (1) competence translation between different professionals and (2) methods for addressing the gap between research and practice. The research will focus on the following issues: (a) drivers and barriers for interprofessional collaboration in practice and learning in educational institutions and (b) vertical, horizontal, and oblique flow of knowledge between different professionals in the practice field and in educational institutions.

Potential for innovation, dissemination, and added value













The outcome from the R&D will be improved curriculum and educational programs as well as models for continuous interprofessional education in work settings. These improvements will not only pertain to the selected focus areas; through the construction of generic models, they will be disseminated for the broader care, health, and social field. We will organize a national conference for student research in medical, health and social education institutions. Students from the health and social sector will be recruited as ambassadors for new forms of learning. Furthermore, the R&D activities will be published in international journals. The models for e-learning will be produced simultaneously in Norwegian and English in order to disseminate these resources to partner universities around the world and particularly to low income countries. These resources will undergo peer-review quality assurance processes and be disseminated through the Center's web portal, which also includes newsletters and other dissemination efforts. We aim to develop instruments for measuring educational quality and learning outcomes together with Center for Educational Measurement (CEMU) and with other centers of excellence in education.

Timetable: Health and Social education Unlimited
 NOKUT: Evaluation spring-fall 2017

	2014	2015	2016	2017	2018
1. Kick off seminar and seminar after 5 years	■				■
2. Web page and portal	■	■	■	■	■
3. Plan for collaboration with partners in practice	■	■	■	■	■
4. PhD announcement	■				
5. PhD employment		■	■	■	
6. Appointment of team of leaders and participants for the R&D teams	■	■	■	■	■
7. Workshops for all areas in the R&D plan	■				
8. Start design of elearning for two areas (children welfare and elderly)	■	■	■		
9. Synthesis: HUSK, Talk with us, Simulation – extended	■				
10. Instruments for learning outcome		■	■	■	■
11. Design of elearning finished for two areas (children welfare elderly)	■				
12. Curriculum reports	■				
13. Scientific advisory board		■		■	
14. Status report					

and detailed plan for the next four years					
15.R&D: design trials for two areas (children welfare and elderly)					
16.Start design of elearning for two areas (CLD and MSD)					
17.Student research conference					
18.Design of elearning finished for two areas (CLD and MSD)					
19.R&D: design trial for two areas (CLD and MSD)					
20.Testing of new instruments for learning outcome					
21.Curriculum reports					
22.Status report and revised plan for the next three years					
23.New educational models for interprofessional education – implementation in the ordinary study programs (all four areas)					
24.New educational					

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two areas					
35.Design of elearning finished for two areas					
36.R&D: design trial for two areas					
37.Testing of new instruments for learning outcome					
38.Curriculum reports					
39.Status report and revised plan for the next year					
40.R&D: design trials for two areas (refinement of the four areas for further development or selection of new areas)					
41.Start design of elearning for two areas					
42. Design of elearning finished for two areas					
43. R&D: design trial for two areas					
44. Start design for elearning for two new areas					
45.Finishing design for elearning for two new areas					
46.R&D: design trials for two new areas					

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47. Use of new instruments for learning outcome					
48. Curriculum reports					
49. End report for the center for the period: 2014-2018.					

International and national publication and documentation will be ongoing from 2014-2018.

Core activities

2014

1. Kick-off seminar and seminar after 5 years
2. Web site and portal
3. Plan for collaboration with partners in practice
4. 3 PhD positions, announcement
5. Employment of PhD positions
6. Appointment of team of leaders and participants for the R&D teams
7. Workshops for all areas in the R&D plan
8. Start design of elearning for two areas (children welfare and elderly)
9. HUSK, Talk with us, Simulation – extended
10. Start: Instruments for learning outcomes
11. Design of elearning finished for two areas (children welfare elderly)
12. Curriculum reports
13. Scientific advisory board
14. Status report and detailed plan for the next four years

2015

15. R&D: design trials for two areas (children welfare and elderly)
16. Start design of elearning for two areas (CLD and MSD)
17. Student research conference
18. Design of elearning finished for two areas (CLD and MSD)
19. R&D: design trial for two areas (CLD and MSD)
20. Testing of new instruments for learning outcome
21. Curriculum reports
22. Status report and revised plan for the next three years

2016

23. New educational models for interprofessional education – implementation in the ordinary study programs (all four areas)
24. New educational models for continuous education in workplaces – implementation (all for areas)
25. Test of new instruments for learning outcomes in ordinary educational programs
26. Testing of instruments for learning outcome in work settings
27. Curriculum reports
28. Status report and revised plan for the next two years
29. Synthesis of the R&D for the first three years

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2017 – Start new cycle of development

30. Announcement of PhD position
31. Employment of PhD's
32. Second student research conference
33. R&D: design trials for two areas (refinement of the four areas for further development or selection of new areas)
34. Start design of elearning for two areas
35. Design of elearning finished for two areas
36. R&D: design trial for two areas
37. Testing of new instruments for learning outcome
38. Curriculum reports
39. Status report and revised plan for the next year

2018

40. R&D: design trials for two areas (refinement of the four areas for further development or selection of new areas)
41. Start design of elearning for two areas
42. Design of elearning finished for two areas
43. R&D: design trial for two areas
44. Start design for elearning for two new areas
45. Finishing design for elearning for two new areas
46. R&D: design trials for two new areas
47. Use of new instruments for learning outcome
48. Curriculum reports
49. End report for the center for the period: 2014-2018.

Overall Budget

EXPENSES (in thousand NOK)

Cost category	2014	2015	2016	2017	2018	Total
Personnell						
PI*	1 200 000	1 200 000	1 200 000	1 200 000	1 200 000	6 000 000
Senior staff	1 760 000	2 600 000	2 600 000	2 600 000	2 600 000	12 160 000
Post docs	-	-	-	-	-	-
PhD students	1 732 000	1 762 000	1 793 000	826 000	-	6 113 000
Other	1 800 000	1 800 000	1 800 000	1 800 000	1 800 000	9 000 000
Total personnel:	6 492 000	7 362 000	7 393 000	6 426 000	5 600 000	33 273 000
Other costs:						
Equipment	-	-	-	-	-	-
Consumables	-	-	-	-	-	-
Travel	-	-	-	-	-	-
Publications, etc.	-	-	-	-	-	-
Other	3 620 000	3 620 000	3 620 000	3 620 000	3 620 000	18 100 000
Total other costs	3 620 000	3 620 000	3 620 000	3 620 000	3 620 000	18 100 000
Subcontracting costs	-	-	-	-	-	-
Total costs of project	10 112 000	10 982 000	11 013 000	10 046 000	9 220 000	51 373 000

Budget - MED

EXPENSES (in thousand NOK)

Cost category	2014	2015	2016	2017	2018	Total
Personnell						
PI*	600 000	600 000	600 000	600 000	600 000	3 000 000
Senior staff	600 000	600 000	600 000	600 000	600 000	3 000 000
Post docs						-
PhD students	826 000	826 000	826 000	826 000		3 304 000
Other	800 000	800 000	800 000	800 000	800 000	4 000 000
Total personnel:	2 826 000	2 826 000	2 826 000	2 826 000	2 000 000	13 304 000
Other costs:						
Equipment						-
Consumables						-
Travel						-
Publications, etc.						-
Other	1 000 000	1 000 000	1 000 000	1 000 000	1 000 000	5 000 000
Total other costs	1 000 000	1 000 000	1 000 000	1 000 000	1 000 000	5 000 000
Subcontracting costs						-
Total costs of project	3 826 000	3 826 000	3 826 000	3 826 000	3 000 000	18 304 000

Budget - HiOA

EXPENSES (in thousand NOK)

Cost category	2014	2015	2016	2017	2018	Total
Personnell						
PI*						-
Senior staff	360 000	1 200 000	1 200 000	1 200 000	1 200 000	5 160 000
Post docs						-
PhD students	906 000	936 000	967 000			2 809 000
Other						-
Total personnel:	1 266 000	2 136 000	2 167 000	1 200 000	1 200 000	7 969 000
Other costs:						
Equipment						-
Consumables						-
Travel						-
Publications, etc.						-
Other	220 000	220 000	220 000	220 000	220 000	1 100 000
Total other costs	220 000	220 000	220 000	220 000	220 000	1 100 000
Subcontracting costs						-
Total costs of project	1 486 000	2 356 000	2 387 000	1 420 000	1 420 000	9 069 000

Overview: Additional appendix

Letter of intent

Institutional CV – extended descriptions and scientific advisory board

CVs, Leader of the board, leader of the center and the leader group

References

References:

1. Frenk, J. et al (2010). Health professionals for new century: transforming education to strengthen health systems in an interdependent world. *The Lancet* 376(9756), 1923-1958.
2. KD (2012). St.meld.nr. 13. *Utdanning for velferd. Samspill i praksis. [Education for Welfare]*. Oslo: Kunnskapsdepartementet.
3. HOD (2008-2009). *Samhandlingsreformen: rett behandling – på rett sted – til rett tid. [The Coordination Reform]*. Oslo: Helse- og omsorgsdepartementet.
4. KD (2012-2013). St.meld.nr. 18. *Lange linjer. Kunnskap gir muligheter. [Long-term perspectives – knowledge provides opportunity]* Oslo: Kunnskapsdepartementet.
5. Graham ID, Logan J, Harrison MB, Straus SE, Tetroe J, Caswell W, Robinson N. (2006). Lost in knowledge translation: time for a map? *J Contin Educ Health Prof* 26(1), 13-24
6. Kitto S, Bell M, Peller J, Sargeant J, Etchells E, Reeves S, Silver I. (2011). Positioning continuing education: boundaries and intersections between the domains continuing education, knowledge translation, patient safety and quality improvement. *Adv Health Sci Educ Theory Pract* 18(1), 141-156.
7. Straus, S. E., Tetroe, J. & Graham, I. (2009). Defining knowledge translation. *CMAJ* 181(3-4): 165-68. 4,
8. Nisbett, G., Hendry, G. D., Rolls, G. & Fields, M.J. (2008). Interprofessional learning for pre-qualification health students: An outcomes-based evaluation. *Journal of interprofessional education* 22(1): 57-68
9. Oandasan, I. & Reeves, S. (2005). Key elements of interprofessional education. Part 2: Factors, processes and outcomes. *Journal of interprofessional education*, May, Suppl 1, 39-48
10. Ludvigsen, S. & Mørch, A. (2010). Computer-Supported Collaborative Learning: Basic Concepts, Multiple Perspectives, and Emerging Trends. In: Baker, E., Peterson, P. and McGaw, B. *International Encyclopedia of Education 3rd Edition*. Amsterdam: Elsevier, 46-51
11. Helsedirektoratet(2012). *Velferdsteknologi: Fagrappport om implementering av velferdsteknologi i de kommunale helse- og omsorgstjenestene 2013-2030*. [Report about welfare technology from the Norwegian Directorate of Health]
12. McGagic, W.C., Issenberg, S.B., Petrusa, E.R. & Scalese, R.J (2010). A critical of simulation-based medical education: 2003-2009. *Medical Education* 44:50-63
13. Gulbrandsen, L. M. (2012) Being a Child, Coming of Age: Exploring Processes of Growing Up. In: Hedegaard, M. et al: *Children, Childhood and Everyday Life: Children's Perspectives*. Information Age Publishing, 3-20.
14. Woolf SH. (2008) The Meaning of Translational Research and Why It Matters. *JAMA* 299(2): 211-213.
15. Lillehagen I, Vøllestad NK, Heggen, KM, Engebretsen E. (2013). Study protocol: A methodological design for understanding knowledge translations in a participatory research program in physiotherapy. *Implementation Science* Submitted.
16. NOU (2009:8). *Kvalifisering til arbeid i barnevernet gjennom praksisnær og forskningsbasert utdanning*. [Report about research based education for child welfare professionals from the Norwegian Ministry of Children, Equality and Social Inclusion] Oslo: Barne- og likestillingsdepartementet
17. HOD (2005-2006). St.meld.nr. 25. *Mestring, muligheter og mening. Framtidas omsorgsutfordringer*. [White paper about the future challenges in care services from Ministry of Health and Care Services] Oslo: Helse- og omsorgsdepartementet.

CV: Sten R. Ludvigsen (b. 221059)

Positions:

Professor at The Faculty of Medicine (2013-)
Professor at InterMedia (2010-2013)
Professor and director, InterMedia, University of Oslo (2004- 2009),
Associate professor, InterMedia (1999-2004)
Postdoc, Department of Educational research 1998-1999

Tel: +47 228 40712
E-mail: sten.ludvigsen@intermedia.uio.no
Website: <http://www.med.uio.no/helsam/english/people/aca/sten/>

Professor Sten Ludvigsen holds a PhD in educational sciences (education psychology, from University of Oslo 1998). Ludvigsen is professor in learning in education and work. He has specialized in research about how to use digital learning resources and the relationship between co-located and distributed settings, in the educational sector and in workplace settings. He has broad methodological experience. Ludvigsen has long experience in academic leadership and in research education teaching, supervision and leadership at both international, national and university level. He is former director of InterMedia (2004-2009), *NATED: the national research school in educational science* (2008-2012) and the research group *CHANGE* at the Faculty of Education (2010-2013). Ludvigsen started as professor in medical and health education spring 2013.

PhD theses (1998): Learning clinical reasoning in education and work settings. University of Oslo.

Leadership: International experience

Kaleidoscope European Network of Excellence, (NoE) (Program: Technology Enhanced Learning)

- Scientific Manager 2007-2008
- Member core group (from 2004), member executive committee (from 2005)
- Member steering group, Virtual Doctoral School and CSCL SIG
- Co-chair for Kaleidoscope CSCL symposium in Lausanne (2004)

EU research activities, Integrated Projects (IP)

- *Parle* (holistic learning in public sector). Submitted april 2013
- SCY – Science Created by You (FP7, 2008-2012): Member of the scientific board, Member of InterMedia team, IP-FP7 (2008-2012)
- KP-Lab: Knowledge practice laboratory (FP6, 2006-2011): Leader of the scientific board 2008-2010. Member of InterMedia research team (IME did studies in health, higher education and scientific practices)

Visiting positions

- Visiting Fulbright professor, Berkeley University (spring 2012)
- Visiting professor Open University (spring 2003)
- Visiting professor, Stanford University (2001)
- Visiting scholar, Learning Research and Development Center at the University of Pittsburgh (1995)

Member of editorial boards

- The International Journal of Computer-Supported Collaborative Learning (ijCSCL) (associate editor)
- Journal of Computer Assisted Learning
- Learning, Culture and Social Interaction

Member of advisory board

- The Linnaeus Centre of Excellence for Research on Learning, Interaction and Mediated Communication in Contemporary Society (LinCS), University of Gothenburg (2006-)
- Member of the international advisory board for the research program "Technology intensive work" at Falun University College, Sweden (2011-).

Scientific evaluation

- Chair, research evaluation of the Faculty of Education at University of Jyväskylä (2011)

Conferences

- Computer-Supported Collaborative Learning Conference (CSCL): Program co-chair (2003)
- Computer-Supported Collaborative Learning Conference (CSCL): Member, organizing committee (2005 and 2007),
- International Society for Cultural and Activity Research (Nordic ISCAR): Program chair (2007)

Nordic

Nordlearn, Nordic network of Excellence: 2009-2011 (Partner and member of the steering group)

Leadership, national positions and projects

Institutional leadership

- Director, InterMedia, University of Oslo (2004-2009) In 2009 InterMedia was ranked at number 20 in the Norwegian publication system

Boards and programs

- Chair, Board for scientific evaluation of the national knowledge promotion program (Kunnskapsløftet) (2008-2012)

Current and former research projects and research groups; leader and co-leader (selection)

- CHANGE: learning and communication with digital knowledge representations in changing contexts, research group at the Faculty of Education, University of Oslo (2009 -2013)
- CONTACT: Communicating Organizations in Networks of Art and Cultural Heritage Technologies (NRC-VERDIKT, 2009-2011)
- TRANSFORM: The Transformation of Productive Learning Practice (NFR, 2004-2007, with prof. Barbara Wasson/UiB).
- Design of Telelearning Artefacts NSS (ITU, 2000-2003, with prof. Barbara Wasson/UiB)
- New technology and new social practices (NRC, 2000-2002, with prof. Svein Østerud).
- Learning in interdisciplinary teams (NRC: 2000-2002, with prof. Leif Lahn)

Research education leadership and supervision

- Scientific leader, NATED: National Graduate School in Educational Research (NRC-funded, 2009-2016)
- Scientific leader, the Research School Learning, communication and ICT, University of Oslo (2004-2010)
- Supervision: 14 PhD theses completed and three in process

PhD thesis (1998): Learning clinical reasoning in medical education and work context. University of Oslo

Publications: Sten Ludvigsen has published more than 80 articles, books, chapters, and papers in English and Norwegian the last 14 years (selection of publications below). See national research database CRISTIN for 160 registered publications and reports.

Impact – handbooks in the field of educational research and recent volume in the Earli serie.

Rasmussen, I. & Ludvigsen, S. (2010). Learning with Computer Tools and Environments: A Sociocultural Perspective. *In International Handbook of Psychology in Education*. Edited by Littleton, K., Wood, C. & Staarman, J.K. Emerald Publishing. pp. 399-435

Ludvigsen, S. & Mørch, A. (2010). Computer-Supported Collaborative Learning: Basic Concepts, Multiple Perspectives, and Emerging Trends. *International Encyclopedia of Education 3rd Edition*. Edited by Eva Baker, Penelope Peterson and Barry McGaw, Elsevier 2010.

Ludvigsen, S. Lund, A., Rasmussen, I. & Säljö, R. (2011). *Learning across sites: New tools, infrastructures and practices*. London. Routledge. The Learning serie.

Editor international volumes

1. Balacheff, N., Ludvigsen, S., de Jong, T., Lazonder, A., Barnes, S. (2009). *Technology Enhanced Learning: Principles and Products*. Springer 326 pages. ISBN: 978-1-4020-9826-0.
2. Daniels Harry, Edwards Anne, Engeström Yrjö, Gallagher Tony, Ludvigsen Sten (2009) *Activity theory in practice: promoting learning across boundaries and agencies*. Routledge 240 pages. ISBN: 978-0-415-47725-3.
3. Wasson, B. Hoppe, U. & Ludvigsen, S. (2003) (Eds.) *Designing for Change in Networked Learning Environments*. Amsterdam, Kluwer.

Articles peer reviewed:

4. Furberg, A., Kluge, A. & Ludvigsen, S. (2013). Students' conceptual sense-making *with and of* science diagrams in computer-based inquiry settings. Vol 9, March, pp. *International Journal of Computer Supported Collaborative Learning*.
5. de Jong, T., Weinberger, A., Girault, I, Kluge, A., Lazonder, A., Pedaste, M., Ludvigsen, S., Ney, M. et al (2012). Using scenarios to design complex technology-enhanced learning environments. *Educational Technology Development and Research*. DOI:10.1007/s11423-012-9258-1

6. Børte, Kristin; Ludvigsen, Sten Runar & Mørch, Anders Irving (2012). The role of social interaction in software effort estimation: Unpacking the "magic step" between reasoning and decision-making. *Information and Software Technology*, 54(9), s 985-996 . doi: [10.1016/j.infsof.2012.03.002](https://doi.org/10.1016/j.infsof.2012.03.002)
7. Dolonen, Jan Arild & Ludvigsen, Sten Runar (2012). Analyzing students' interaction with a 3D geometry learning tool and their teacher. *Learning, Culture and Social Interaction*. 1(3-4), s 167- 182 . doi: [10.1016/j.lcsi.2012.08.002](https://doi.org/10.1016/j.lcsi.2012.08.002)
8. Krange, Ingeborg; Moen, Anne & Ludvigsen, Sten Runar (2012). Computer-based 3D simulation: a study of communication practices in a trauma team performing patient examination and diagnostic work. *Instructional science*, 40(5), s 829- 847 . doi: [10.1007/s11251-012-9214-9](https://doi.org/10.1007/s11251-012-9214-9)
9. Ludvigsen, S. (2012). Commentary. Collaborating with digital tools and peers in medical education. Cases and simulations as interventions in learning. Special Issue. *Instructional science*. .
10. Ludvigsen, S. (2012). What counts as knowledge: learning to use categories in computer environments. *Learning, Media & Technology*. doi: [10.1080/17439884.2011.573149](https://doi.org/10.1080/17439884.2011.573149)
11. Nilsen, L. L. & Ludvigsen, S. (2010). Collaborative work and medical talk: opportunities for learning through knowledge sharing. *Communication & Medicine*, Vol 7(2), 143-153.
12. Krange Ingeborg, Ludvigsen Sten Runar 2009 The historical and situated nature design experiments - Implications for data analysis. *Journal of Computer Assisted Learning* 25 (3) pp. 268-279.
13. Rasmussen Ingvill, Ludvigsen Sten Runar 2009 *The Hedgehog and the Fox. A discussion of the approaches to the analysis of ICT reforms in teacher education of L. Cuban and Y. Engeström*. *Mind, culture and activity* 16 (1) pp. 83-104.
14. Furberg, A & Ludvigsen, S. (2008). Students' meaning-making of socio-scientific issues in computer mediated settings: Exploring learning through interaction trajectories. *International journal of Science education*, 1-25.
15. Krange, I. & Ludvigsen, S. (2008). What does it mean? Students' procedural and conceptual problem solving in CSCL environment designed within the field of science education. *International Journal of Computer supported collaborative learning*, 3: 25-51.
16. Konkola, R., Tuomi-Gröhn, T., Lambert, P. & Ludvigsen, S. (2007). Promoting learning and transfer between school and workplace. *Journal of Education and Work*, 20:3, 211-228.
17. Jahreie, C.F. & Ludvigsen, S. (2007). Portfolios as Boundary Object: Learning and Change in Teacher Education. *Research and Partice in Technology Enhanced Learning*, Vol. 2, No. 3, pp. 299-318
18. Amseth, H.C. & S. Ludvigsen (2006). Approaching institutional contexts: Systemic versus dialogical research in CSCL. *International Journal of Computer-Supported Collaborative Learning*. 1, 2, 167-185.
19. Rasmussen, I. , Krange, I. & Ludvigsen, S. (2005). 'Understanding the task: How is agency distributed between tools, students and teachers in technology-rich learning environments?' *International Journal of Educational Research*, 39. 839-849.
20. Ludvigsen, S. & Fjuk, A. (2001). "Tools in Social Practice: Learning, Medical Education and 3D Environments." *Outlines*, No. 2 200, 5-23 .
21. Akre, V. og Ludvigsen, S.R. (1998): Where physicians interact and meet in dialogue knowledge develops. Learning environment in two norwegian hospitals, *The Journal of the Norwegian Medical Association*, 118: 48-52.
22. Akre., V. And Ludvigsen, S.R. (1997): Learning medical practice. *The Journal of the Norwegian Medical Association*. 117: 2757-61.
23. Akre, V. and Ludvigsen, S. R. (1997): Learning Medical Practice: Where physicians interact and meet in dialogue - knowledge develops. *Journal of Nordic Educational Research*. (Special issue about "Apprenticeship - Learning as social practice, Eds. Kvale S. and Nielsen, K.)

Book chapters with peer-review

24. Ludvigsen, S. & Nerland, M. (2013). Knowledge Sharing in Professions: Working Creatively with Standards in Local Settings. In A. Sannino & V. Ellis, Eds, *Learning and Collective Creativity: Activity-theoretical and Sociocultural Studies*. Routledge Research in Education Series.
25. Damsa, C., Ludvigsen, S. & Andriessen, J. (2013). Knowledge co-construction – epistemic consensus or relational assent? In Baker, M., Andriessen, J. & S. Järvelä (Eds). *Affective Learning Together*. (EARLI book serie)
26. Ludvigsen, Sten Runar; Lund, Andreas; Rasmussen, Ingvill; Säljö, Roger (2011). *Introduction-Learning in different contexts in the knowledge society. I: Learning across sites : new tools, infrastructures and practices*. Cambridge University Press.
27. Ludvigsen, Sten Runar; Mørch, Anders Irving (2011). *Theoretical bases of computer supported learning. I: Learning and cognition in education* (p. 46-51) Elsevier.
28. Ludvigsen, Sten Runar; Rasmussen, Ingvill; Krange, Ingeborg; Moen, Anne; Middleton, David. (2011). *Intersecting trajectories of Participation: temporality and learning* (p. 105-121). I: *Learning across sites : new tools, infrastructures and practices*. Cambridge University Press
29. Ludvigsen, S. (2009). *Sociogenesis and Cognition: the struggle between social and cognitive activities*. (Eds.) Schwarz, B. Dreyfus, T. and Hershkowitz, R. *Transformation of Knowledge Through Classroom Interaction* (Eds.) London. Routledge.
30. Ludvigsen, S.R. & Digernes, T. (2009). *Research leadership: Productive communities and the Integration of Research Fellows*. In *Learning and Expanding with Activity Theory*. Sannino, A., Daniels, H. & Gutiérrez, K. D. Cambridge. Cambridge University Press.
31. Mørch, A.O., Nygård, K.A., Ludvigsen, S.R. (2009). *Adaptation and generalization in software product development*. In Daniels Harry, Edwards Anne, Engeström Yrjö, Gallagher Tony, Ludvigsen Sten Runar (eds.) *Activity theory in practice: promoting learning across boundaries and agencies*. Routledge 240 pages. ISBN: 978-0-415-47725-3.
32. Ludvigsen, S. R., Havnes, A. & Lahn, L.C. (2003). 'Workplace Learning across Activity Systems: A Case Study of Sales Engineers.' In Gröhn, T. & Engeström, Y. (Eds.). *Between School and Work. New perspectives on Transfer and Boundary Crossing* (pp. 291-310). Amsterdam: Pergamon, Elsevier Science Ltd.

Papers in peer review conference (peer review on the full paper)

33. Ludvigsen, S. & Mørch, A. (2003). CATEGORISATION IN KNOWLEDGE BUILDING. Task specific argumentation in a co-located CSCL environment. In Wasson, B. Hoppe, U. & Ludvigsen, S. (Eds.) *Designing for Change in Networked Learning Environments*. Amsterdam, Kluwer
34. Krange, I. Larsen, A., Fjuk, A., Ludvigsen, S (2002): Describing construction of knowledge through identification of collaboration patterns in 3D learning environments. In Stahl, G. 2002. *Computer Support for Collaborative Learning: Foundations for a CSCL Community*. Proceedings of: CSCL 2002, January 7-11, 2002. Boulder, Colorado, USA.
35. Amseth, H. C., Ludvigsen, S.R. Mørck, A. I., & Wasson, B. (2001): Collaboration and Problem Solving in Distributed Collaborative Learning. . In Dillenbourg, P., Eurelings, A. & Hakkarainen, K. (Eds.) *ECSCCL - European Perspectives on Computer-Supported Collaborative Learning*. Proceedings of E-CSCL: University Maastricht.
36. Fjuk, A. & Ludvigsen, S. (2001): The Complexity of Distributed Collaborative Learning: Unit of Analysis. In Dillenbourg, P., Eurelings, A. & Hakkarainen, K. (Eds.) *ECSCCL - European Perspectives on Computer-Supported Collaborative Learning*. Proceedings of E-CSCL: University Maastricht.

37. Paper at conferences with peer review on abstracts (selected)

38. Ludvigsen, S., Børte, K. & Mørch, A. (2010). Inside the magical steps. Concepts in practical activities. *EASST, 2010; Trento, Italy 2-4th September, 2010*
39. Ludvigsen, S., Børte, K. & Mørch, A. (2010). Concepts in practical activities. Understanding estimation practices. Nordic Iscar 2010, Helsinki, May 2010.
40. Symposium: Hanni Muukkonen, University of Helsinki; Crina Damşa & Sten Ludvigsen Intermedia, University of Oslo, Norway: Collective object-bound activities. Nordic ISCAR. Helsinki, May 2010
41. Mørch, Anders Irving; Moen, Anne; Hauge, Trond Eiliv; Ludvigsen, Sten Runar. From Knowledge Management to Technology-Enhanced Workplace Learning: Issues and Examples. First Int'l Conf. on E-Learning in the Workplace (ICELW-08); 2008-06-12 - 2008-06-13 UiO
42. Ludvigsen, S. and Rasmussen, I. (2008). Artefacts and objects in - cultural historical activity Theory, ISCAR, San Diego, 2008
43. Ludvigsen, S. Lund, A., & Rasmussen (2007). Learning across sites. Symposium at Earli.
44. Mørch, Anders Irving; Moen, Anne; Nygård, Kathrine Amundsen; Ludvigsen, Sten Runar. Design-based research in the workplace: Tools for creating and analyzing sustainable intervention. Workshop "The Third Metaphor of Learning" at CSCL 2007 (Jerry Andriessen & Baruch Schwartz, organizers); 2007-07-16 - 2007-07-16 UiO
45. Mørch, Anders Irving; Åsand, Hege-René Hansen; Ludvigsen, Sten Runar. The Organization of End User Development in an Accounting Company. I: *End User Computing Challenges and Technologies: Emerging Tools and Applications*. Information Science Reference 2007, p. 102-123
48. Rasmussen, I. , Krange, I. & Ludvigsen, S. (2003). Understanding the task: How is agency distributed between tools, students and teachers in technology-rich learning environments? 10th European Conference for Research on learning and Instruction - Earli August, Padova, Italy
49. Flo, C. F. & Ludvigsen, S (2003): Transformation of co-developing activity systems – interventions, boundaries and boundary zone activities. Symposium: Developmental transfer and expansive learning: Conceptual and empirical issues. Paper EARLI 2003, Padova
50. Ludvigsen, S. R., Åsand, H.R., Djupvik, P.D., and Mørch, A. (2003). Leadership development in multiple activity systems – learning as networked activities. In *Work and Lifelong learning in different Contexts*. 3rd International Conference of Researching Work and Learning. University of Tampere.
51. Amseth, H. C., Ludvigsen, S., Guribye, F. & Wasson, B. (2002): *From Categories of Knowledge Building to Trajectories of Participation. Analysing the Social and Rhetorical Organization of Collaborative Knowledge Construction*. Paper ISCRAT 2002, Amsterdam.
52. Flo, C. F. & Ludvigsen, S (2002): *Diversity and innovation in teacher education. Analysis of different types of participants' structures and the agents' meaning-making between different activity systems*. Symposium – Innovation and developmental transfer between educational and work activities. New tools and infrastructures. Paper ISCRAT 2002, Amsterdam.
53. Ludvigsen, S. & Mørch, A. (2002): *Categories at work: Small-group collaboration in co-located and distributed settings*. Paper for ISCRAT, Amsterdam, 2002.
54. Rasmussen, I., Krange, I. and Ludvigsen, S. (2002): *Openness and structure in a technology rich learning*. Paper ISCRAT 2002, Amsterdam
55. Ludvigsen, S. & Flo, C.F. (2001): Innovasjon, IKT og organisasjonslæring i lærerutdanning. *NFPF 2001 - Symposium: Reforms in teacher education; digital and problem-oriented learning environments and new forms of assessment*. Organizers: Hauge, T.E & Ludvigsen, S.R.
56. Flo, C.F. & Ludvigsen, S. (2001): *Innovation and learning in a teacher educationprogram - ICT a catalyst for change*. Paper på NIRES.
57. Ludvigsen, S. (2000): Health Education in Virtual Environments - Matador as example: Technology in Social Practice: Education, Organization, and Health Care. September 8th and 9th 2000, Department of Psychology, University of Copenhagen.
58. Amseth, H. C., Ludvigsen, S., Guribye, F. & Wasson, B. (2002): *From Categories of Knowledge Building to Trajectories of Participation. Analysing the Social and Rhetorical Organization of Collaborative Knowledge Construction*. Paper ISCRAT 2002, Amsterdam.

59. Flo, C. F. & Ludvigsen, S. (2002): *Diversity and innovation in teacher education. Analysis of different types of participants' structures and the agents' meaning-making between different activity systems*. Symposium – Innovation and developmental transfer between educational and work activities. New tools and infrastructures. Paper ISCRAT 2002, Amsterdam.
60. Ludvigsen, S. & Mørch, A. (2002): *Categories at work: Small-group collaboration in co-located and distributed settings*. Paper for ISCRAT, Amsterdam, 2002.
61. Rasmussen, I., Krangle, I. and Ludvigsen, S. (2002): *Openness and structure in a technology rich learning*. Paper ISCRAT 2002, Amsterdam
62. Ludvigsen, S. (2000): Health Education in Virtual Environments - Matador as example: Technology in Social Practice: Education, Organization, and Health Care. September 8th and 9th 2000, Department of Psychology, University of Copenhagen.
63. Ludvigsen, S. Havnes, A. and Staff, P. (1999): Learning in and between Activity Systems. Boundary crossing and Knotworking. 8th European Conference for Research on learning and Instruction - Early August 24-28 1999, Göteborg, Sweden. Conference theme: Advancing Learning Communities in the New Millennium. Keynote symposium: Expansive learning in workplace communities - an activity theoretical perspective. Organiser: Yrjö Engeström

Nordic languages

64. Ludvigsen, S. R., & Rasmussen, I. (2006). Modeller på reise. Digital kompetanse [Nordic Journal of Digital Literacy](3).
65. Ludvigsen, Sten & Digernes, Turi Øvre (2006). Integrasjon av stipendiater i produktive forskningsmiljøer: Utdfordringer for forskningslederne, pp. 80-100 i Forskningsveiledning på master- og doktorgradsnivå, red av Dysthe, Olga & Samara, Akylina. Bergen: Abstrakt forlag.
66. Ludvigsen, S. (2006). Læring og bruk av IKT i høyere utdanning. Forventinger og resultater. I K.H. Lycke, H.I. Strømsø & Lauvås, P. (red.). Oslo: Cappelen forlag.
67. Ludvigsen, S. (2005). Læring og IKT – Et perspektiv og en oversikt. I Brøyn, T. og Schultz, J.H. (red.). IKT og tilpasset opplæring (s. 158-183). Oslo, Universitetsforlaget.
68. Åsand, H.R., Mørch, A. & Ludvigsen (2004). Læring av nye representasjonsteknologier på arbeidsplassen. I Kanstrup, A.M. (Red) E-læring på arbejde (s. 131-148). Roskilde, Roskilde Universitetsforlag.
69. Ludvigsen, S. og Flo, C.F. (2002). Innovasjon i lærerutdanningen: Hvordan skapes endring?; I Ludvigsen, S. og Løkensgard Hoel, T. (Red). Et utdanningssystem i endring. IKT og Læring (s. 83-106). Oslo: Gyldendal Akademisk Forlag.
70. Ludvigsen, S. og Løkensgard, Hoel, T. (2002): Når vilkårene for læring endres. ? I Ludvigsen, S. og Løkensgard Hoel, T. (Red). *Et utdanningssystem i endring. IKT og Læring*. Oslo: Gyldendal Akademisk Forlag.
71. Ludvigsen, S. (2002): Læring, IKT og institusjonelle endringer – hvordan kan de forstås? Når kompleksitet er utgangspunktet. ? I Ludvigsen, S. og Løkensgard Hoel, T. (Red). *Et utdanningssystem i endring. IKT og Læring*. Oslo: Gyldendal Akademisk Forlag.
72. Ludvigsen, S., Rasmussen, I and Solheim, I. (2002). Lärande i multimediale miljösamtal mellom elever och lärare. I: Linderoth, J. og Säljö, R. (red.) *Utm@ningar och E-frestelser. IT och skolans lärkultur*. Stockholm: Prisma.
73. Ludvigsen, S. & Handal, G. (2002): Hvordan kan problembasert læring realisere kollektive og individuelle læringsprosesser? Prinsipper og strategier. I Lycke, K.H (Red.) *Perspektiver på problembasert læring*. Oslo: Cappelen Akademiske forlag.
74. Ludvigsen, S., Rasmussen, I and Solheim, I. (2001). Multimедier og prosjektarbeid. I: Hovdenak, S. S. (red). *Perspektiver på Reform 97*. Oslo, Gyldendal.
75. Ludvigsen, S. og Østerud, S. (2000, red.): *Ny teknologi – nye praksisformer*. Oslo ITU, Nr. 2, Unipub forlag.
76. Larsen, A. og Ludvigsen, S. (2000): Bruk av IKT i prosjektarbeid – et utgangspunkt for produktive samtaler. I Ludvigsen, S. og Østerud, S. (Red.) *Ny teknologi – nye praksisformer*. Oslo ITU, Nr. 2, Unipub forlag.
77. Ludvigsen, S. Arnseth, H.C. Larsen, A. og Østerud, S (2000): Ny teknologi – nye praksisformer (innledning). I Ludvigsen, S. og Østerud, S. (Red.) *Ny teknologi – nye praksisformer*. Oslo ITU, Nr. 2, Unipub forlag.
78. Ludvigsen, S. (2000): Læring av og med teknologi. I Ludvigsen, S. og Østerud, S. (Red.) *Ny teknologi – nye praksisformer*. Oslo ITU, Nr. 2, Unipub forlag.
79. Ludvigsen, S. (2000): Informasjons- og kommunikasjonsteknologi og klasserommet. I Ludvigsen, S. og Østerud, S. (Red.) *Ny teknologi – nye praksisformer*. Oslo ITU, Nr. 2, Unipub forlag.
80. Ludvigsen, S. (2000): Veien videre. Læring i et nytt millennium. I Ludvigsen, S. og Østerud, S. (Red.) *Ny teknologi – nye praksisformer*. Oslo ITU, Nr. 2, Unipub forlag.

Books in Norwegian

81. Ludvigsen, S., Arnseth, H.C. and Østerud, S. (1998): Elektronisk ransel. IKT i videregående skole. Oslo, ITU, no. 2, Uni Pub.
82. Ludvigsen, S. og Østerud, S. (2000, red.): *Ny teknologi – nye praksisformer*. Oslo ITU, Nr. 2, Unipub forlag.
83. Ludvigsen, S. og Løkensgard Hoel, T. (2002, Red). *Et utdanningssystem i endring. IKT og Læring*. Oslo: Gyldendal Akademisk Forlag.

Leader of the steering group

Kristin Heggen (born 1954)

Vice Dean of Education, Faculty of Medicine, University of Oslo
Professor dr.polit.

Email: k.m.heggen@medisin.uio.no

Tel.: + 47 995 75 450

Kristin Heggen holds her PhD in Educational Science (1994) from the University of Oslo. Her doctoral thesis deals with the “hospital as a classroom” for nursing students. Throughout her entire career she has worked as a researcher, teacher, supervisor and leader in the field of professional education and practice. Her scholarly interests are denoted by key words such as knowledge, power, education and health policies, technology and gender. In 2012 she was elected Vice-Dean at the Faculty of Medicine as the very first dean to have responsibility for the Faculty’s extensive portfolio of bachelor’s and master’s programmes. She is Adjunct Professor at the Centre for the Study of Professions, Oslo and Akershus University College of Applied Sciences.

Background

- Vice-Dean, Faculty of Medicine. Elected for the period 2011- 2014.
- Professor in Health Sciences (from 2005-)
- Adjunct Professor, Oslo and Akershus University College of Applied Sciences (2011-)
- Associate Professor in Health Sciences (1997-2004)
- Adjunct Professor at Ballarat University, Australia (2004-2006)
- Associate Professor, Vestfold University College (1994-1996)
- Dr.polit, Faculty of Education, UiO (1994)
- Nurse (1979) and nurse anaesthetist (1981)

Offices held

- Programme Director for the master’s degree programme in health sciences (2003-2009)
(received the Ministry of Education and Research’ award for outstanding quality in education in 2010)
- Leader of the Research Group for Medical Humanities (2007-2011)
- Head of Section for the Department of Health Sciences, UiO (2001-2002)
- Member of the Board of the Inter-faculty Research Network PluRel, UiO (2008-)
- Member of the Board of the Centre in Gender Research, UiO (2008-2011)
- Member of the Board of the Research Programme on Mental Health, Research Council of Norway (NFR) (2010- 2013)
- Member of the Board of the University College of Vestfold (1995-1996)
- Member of the Board of the Faculty of Social Sciences, UiO (1989-1992)
- Chair of the UiO’s Committee for Professional Conduct (2013-)

Collaboration

- Centre for Health and Society, Melbourne University, Australia.
- Preparation for the Professions Program, Carnegie Foundation for Advancement of Teaching, USA (2010-2012)
- Department of Sociology and Human Geography, UiO in connection with the "Disease prestige and informal priority settings" project funded by the Research Council of Norway.
- Professor II at the Centre for the Study of Professions, Oslo and Akershus University College of Applied Sciences, in connection with the "Qualifying for professional careers" project funded by the Research Council of Norway.

Teaching/supervision

- Taught on programmes (mainly in health science studies and pedagogics) ranging from bachelor's degree programmes to PhD programmes on a number of subjects such as the philosophy of science, research methodology, ethics, pedagogy and understanding health and disease.
- Supervised 10 PhD candidates up to the completion of the PhD, and currently supervising 5 PhD students. Examples of thematic areas: clinical training and teacher roles in nursing education, scrutiny of textbooks in social work and nursing, power and empowerment in caring for dementia patients in nursing homes, training clinical PhD candidates in medicine in teaching/supervision, challenges to professional identity and integrity in health professionals, the nursing home as a home, the home as a workplace for health professionals.
- Participated in 18 examination committees for PhD candidates (Norway, Sweden, Denmark, Australia)

Publications

Heggen has published more than a hundred articles, books and book chapters since becoming a professor in 2005 (see national data database CRISTIN for registered publications).

Solbrakke, Kari Nyheim; Solvoll, Betty-Ann & Heggen, Kristin: Reframing the field of gender and nursing education. *Gender and Education*. (accepted for publication, April 2013)

Lunde, Ashild; Heggen, Kristin & Strand, Roger (2013). Knowledge and Power: Exploring Unproductive Interplay Between Quantitative and Qualitative Researchers. *Journal of Mixed Methods Research* 7(2) pp. 197-210

Solbrekke, Tone Dyrdal; Heggen, Kristin & Engebretsen, Eivind (2013). Ambitions and responsibilities: A textual analysis of the Norwegian national curriculum regulations for nursing education. *Scandinavian Journal of Educational Research*. Published online: 06 Mar 2013

Engebretsen, Eivind & Heggen, Kristin (eds.) (2012) *Makt på nye måter* (Power in new forms). Universitetsforlaget (University Press).

Guillemin, Marilys & Heggen, Kristin (2012). The Narrative Approach as a Learning Strategy in the Formation of Novice Researchers. *Qualitative Health Research*. 22(5) pp700- 707

- Heggen, Kristin & Guillemin, Marilys (2012). Protecting Participants' Confidentiality Using a Situated Research Ethics Approach , In Jaber F. Gubrium; James A. Holstein; Amir B. Marvasti & Karyn D. McKinney (ed.), *The SAGE Handbook of Interview Research: The Complexity of the Craft* Sage Publications. pp 465 - 476
- Juritzen, Truls I; Engebretsen, Eivind & Heggen, Kristin (2012). Subject to empowerment: The constitution of power in an educational programme for health professionals. *Medicine, Health care and Philosophy*. Published online 05.April 2012
- Solbrække, Kari Nyheim; Fransson, Elisabeth & Heggen, Kristin (2012). Mannen og kallet. En kulturanalytisk studie av mannlige italienske sykepleiere og deres yrkesidentitet (The man and the vocation. A cultural analysis of male Italian nurses and their professional identity) *Sykepleien Forskning*. 7(4) pp 316- 322
- Guillemin, Marilys & Heggen, Kristin (2012). Narrative approach as a learning strategy in the formation of novice researchers. *Qualitative Health Research*. 22(5) pp. 700-707
- Engebretsen, Eivind; Heggen, Kristin & Eilertsen, Heidi (2011). Accreditation and Power - A discourse analysis of a new regime of governance in higher education. *Scandinavian Journal of Educational Research*. 56(4) pp 401-417
- Thoresen, Lisbeth; Wyller, Trygve E & Heggen, Kristin (2011). The significance of lifeworld and the case of hospice . *Medicine, Health care and Philosophy*. 14(3) pp 257- 263.
- Heggen, Kristin; Karseth, Berit & Kyvik, Svein (2010). The Relevance of Research for the Improvement of Education and Professional Practice, In Svein Kyvik; Benedetto Lepori & Benedetto Lepori (ed.), *The Research Mission of Higher Education Institutions outside the University Sector Striving for Differentiation*. Springer. pp 45 - 60
- Solvoll, Betty-Ann & Heggen, Kristin (2010). Teaching and learning care - Exploring nursing students' clinical practice. *Nurse Education Today*. 30(1) pp 73- 77
- Wellard, Sally J. & Heggen, Kristin (2010). Are laboratories useful fiction? A comparison of Norwegian and Australian undergraduate nursing skills laboratories. *Nursing and Health Sciences*. 12(1) pp 39- 44
- Guillemin, Marilys & Heggen, Kristin (2009). Rapport and respect: negotiating ethical relations between researcher and participant. *Medicine, Health care and Philosophy*. 12(3) pp 291- 299
- Heggen, Kristin & Engebretsen, Eivind (2009). *Tvetydig om kunnskapsbasert praksis. En dekonstruktiv nærlesning av arbeidsbok for sykepleiere* (Ambiguity in knowledge-based practice. A deconstructive reading of a nursing manual). *Sykepleien Forskning*. 4(1) pp 28- 33
- Juritzen, Truls Ingvar & Heggen, Kristin (2009). *Produktive maktpraksiser i sykehjem - en Foucaultinspirert analyse av pleiefaglig handlekraft*. (Productive exercise of power in nursing

homes – a Foucault inspired analysis of nursing efficiency) *Tidsskrift for velferdsforskning*. 12(2) pp 94- 104

Solbrekke, Tone Dyrdal & Heggen, Kristin (2009). *Sykepleieansvar - fra profesjonelt moralsk ansvar til teknisk regnskapsplikt?* (Nursing responsibility – from a professional moral responsibility to a technical duty to keep records). *Tidsskrift for Arbejdsliv*. 11(3), p 49- 61

Solvoll, Betty-Ann & Heggen, Kristin (2009). Teaching and learning care - exploring nursing students' clinical practice. *Nurse Education Today*.

Hauge, Solveig & Heggen, Kristin (2008). The nursing home as a home: a field study of residents' daily life in the common living rooms. *Journal of Clinical Nursing*. 1, p 460- 467

Hem, Marit Helene; Heggen, Kristin & Ruyter, Knut W (2008). Creating trust in an acute psychiatric ward. *Nursing Ethics*. ISSN 0969-7330. 15(6), p 777- 788

Members of the leader group

Curriculum vitae

Name: Per Grøttum

Gender: Male

Born: 1951

Nationality: Norwegian

Present position: professor of medical informatics,

Faculty of medicine, University of Oslo, Oslo, Norway

Education:

1977 MD University of Oslo

1990 PhD in medicine, University of Oslo.

Thesis: "Quantitation and monitoring of acute myocardial ischemia and infarction"

Employment:

1981-86 Research student, Department of informatics, University of Oslo.

1986-90 Assistant professor of microelectronics, Department of Informatics, University of Oslo.

1990-92 Associate professor of microelectronics, Department of Informatics, University of Oslo.

1992-96 Norwegian Research Council Research fellow: establishment of medical informatics at the Faculty of medicine, University of Oslo

1996- Professor of medical informatics, Faculty of medicine, University of Oslo

2001-2011 Researcher (part-time), Simula Research Laboratory, Fornebu

Research:

Fetal biometry. Collaboration with National Center for Fetal Medicine, Trondheim. Established around 1980 the first Norwegian system for term determination from ultrasound measurements of fetal head dimensions. The system was for more than 20 years the only system in use in Norway and approximately 90% of the pregnant population had during this period term determined by the system. Revised in 2007 and evaluated on 70000 pregnancies. Methodologies: statistical analysis with emphasis on regression analysis. See www.esnurra.no for more information and publications.

Mathematical modelling of cardiac electrical activity. Established in 1997 together with professor of numerical analysis Aslak Tveito research in mathematical modelling of cardiac activity which later became one of three core activities at the Norwegian research center Simula Research Laboratory. The purpose was to establish better electrocardiographic methods for assessing myocardial ischemia. Methodologies: electrocardiology, nuclear medicine, differential equations, finite-element methods.

Latest publication: Nielsen BF, Lysaker M, Grøttum P: Computing ischemic regions in the heart with the bidomain model; first steps towards validation. IEEE Transactions on medical imaging [accepted](#)

Pedagogics. Collaborated during the period 2001-7 with professors Kirsten Lycke and Helge Strømsø at the Faculty of educational sciences in a study of computer-based, distributed problem-based learning. Methodologies: quantitative and qualitative methods.

Publications:

Strømsø HI, Grøttum P, Lycke KH. Content and processes in problem-based learning: A comparison of computer mediated and face-to-face communication. Journal of Computer Assisted Learning. 2007; 23(3):271- 282.

Lycke KH, Grøttum P, Strømsø HI. Student learning strategies, mental models and learning outcomes in problem-based and traditional curricula in medicine. Medical teacher. 2006;28(8):717- 722

Lycke KH, Strømsø HI, Grøttum P. Tracing the tutor role in problem-based learning and PBLonline. In Maggi Savin-Baden & Kay Wilkie (ed.), Problem-based learning online. Open University Press. ISBN 0335220061. 2006;4:45 – 60.

Strømsø HI, Grøttum P, Lycke KH. Changes in student approaches to learning with the introduction of computer-supported problem-based learning. Medical Education. 2004;38(4):390- 398.

Teaching:

Responsible for development of e-learning activities and digital exams at the Faculty of medicine.

E-learning. An annual project budget of approximately NOK 1000000 is used to establish e-learning projects lead by teachers, carried out by teachers and students and technically supported by an e-learning team of computer specialists and educational scientists. See [inventory of e-learning resources](#) for examples. In 2013 11 new projects are established. Central aspects are interprofessional collaboration, blended teaching, self-directed interactive learning, public domain access, national and international collaboration.

Digital exams were introduced in 2012 to achieve better exam reliability and validity. In 2013 approximately 1000 students will take a digital exam. The exams are designed as clinical decision trees with electronic submission of answers at every decision node. In the subsequent question block the students are given the correct answer to the previous block and thus pulled back on the “right” track. An exam typically consists of 5-12 assignments each with a total of 10-20 questions (MC, MR, mini-essays etc) in 2-6 blocks.

Curriculum Vitae

Name: Eivind Engebretsen

Address: Kjelsåsveien 162

Telephone: 0047 21 92 42 38

Mobile: 0047 92 42 52 31

Email: eivind.engebretsen@medisin.uio.no

Date of birth: 17.11.1974

Nationality: Norwegian

Education:

2006: PhD (Dr. art.), University of Oslo

2003-2004: Doctoral courses at Université Paris VII and Université Nancy 2

2001: Cand. Philol. (Master’s degree in the History of Ideas), University of Oslo (1999: Guest student at EHESS, Paris, under the supervision of Professor Jacques DERRIDA)

1997: Cand. Mag., University of Oslo

Employment record:

2012-: Professor of Medicine (Theory of Science), Faculty of Medicine, University of Oslo (UiO)

2013-: Head of the PhD Programme of Social Work and Social Policy, Oslo and Akershus University College of Applied Sciences (HiOA)

2007-: Associate Professor (professor from 2012), Oslo and Akershus University College of Applied Sciences

2009-2012: Adjunct Associate Professor (full positions from 2011), Faculty of Medicine, University of Oslo

2008-2010: Head of the Graduate School of Social Work, Oslo University College

2006-2007: Senior Adviser, Norad (Norwegian Agency for Development Cooperation)

2005-2006: Adviser, the Norwegian Agency for Quality Assurance in Education (Nokut)

2003-2004: Guest researcher, Université Paris VII and Université Nancy 2

2002-2005: Research Fellow, University of Oslo

2001-2002: Assistant professor, Université Nancy 2, France

Selected appointments:

Member of the Programme Board of the BALANSE-programme ([website](#)), Research Council of Norway

Member of the Committee for Gender Balance in Research ([website](#)), Norwegian Ministry of Education External expert in evaluation methods, Evaluation Department, Norwegian Agency for Development Cooperation (Norad) (2007-2011)

Board member of the Norwegian Evaluation Society (2009-2010)

Head of the Doctoral Programme Development Committee (developed accreditation application for Nokut), Faculty of Social Science, Oslo University College (2007-2009)

Research fields:

Some of my current research topics are knowledge translation, disease and social prestige, and history of social work. I have an interdisciplinary research profile and have research competence in intellectual history, social science and health science. In recent years I have played a key role in the development of Knowledge Translation as a priority research area at the Faculty of Medicine, UiO.

Leadership:

I have led the development of a multidisciplinary PhD-program in social policy and social work, and am currently head of the programme. From 2007-2010 I headed the Graduate School of Social Work. Between 2006 and 2007 I worked on evaluation management at the Norwegian Agency for Quality Assurance and later at the Ministry of Foreign Affairs / NORAD. This work has later resulted in international publications. Founder member of the Norwegian Evaluation Society and a board member (2009-2010). I am the lead PI of an international multidisciplinary research project (*Disease prestige and informal priority settings*) and a member of one of the Research Council of Norway's programme committees. I am also a member of the Committee for Gender Balance in Research (KIF Committee) that is appointed by the Norwegian Minister of Education and Research. Together with Professor Nina Vøllestad I have built a research group on Knowledge Translation at the Faculty of Medicine involving several different projects. An application has been submitted for ERC Synergy Grants on this topic in which I am one of 3 PIs. I have also developed and led a research group at Oslo and Akershus University College of Applied Sciences on knowledge development in social work and child care. The group has 27 members (including five professors, four PhD students and two post docs).

Research funding:

-Project manager of *Disease prestige and informal priority settings*, competitive external funding of approx. EUR 1 mill., Research Council of Norway. 5 year project, launched in 2011.

-Project manager of *Knowledge Translation in primary health care*, funding of two current PhD-projects and one post doc, launched in 2012. Application sent for ERC Synergy Grants (10 mill EUR) and for the Research Council of Norway.

-Project manager of the *Kristeva Days 2009* on language, knowledge and vulnerability (with the world famous philosopher Julia Kristeva). Competitive external funding: EUR 100 000

Teaching and supervision:

Currently supervising 8 PhD students at UiO and HiOA. 2007-2012: Supervision of 25 master students in social work, medicine and health sciences, 2007-2013: 9 PhD courses in intellectual history, discourse analysis and theory of science, 2007-2013: annual courses in theory of science, qualitative methods and discourse analysis at UiO and HiOA.

International collaboration:

Université Paris VII (Professor Julia Kristeva); *Forschungsschwerpunkt (FSP) Historische Kulturwissenschaften* (Professor Jörg Rogge) Université de Grenoble (Professor Nicolas Piqué); Université de Strasbourg (Professor David Le Breton); London's Global University (Professor Graham Scambler); Université Lyon 2 (Professor Charles Gardou)

Total number of scientific contributions:

Peer reviewed articles, book chapters and monographs: 48; invited presentations (only international): 31; evaluation reports: 6; organization of international conferences/work-shops: 11; evaluation of PhD-dissertations: 2. My average point score (last three years) in the national research database CRISTIN is a strong 3.45 (against an average of 1.3 per man-year at the University of Oslo and 0.8 at other Norwegian universities).

Articles in peer reviewed journals (last five years):

Haldar, Marit & Engebretsen, Eivind. 2013. Governmentality in Childhood. *Childhood* (accepted)

Engbretsen, Eivind. 2013. Consuming hunger. Ideas of hunger in 17th century poor relief. *Social History* (accepted)

Solbrekke, Tone, Heggen, Kristin & Engebretsen, Eivind. 2013. Ambitions and Responsibilities: A text analysis of the Norwegian National curriculum regulations for nursing education. *Scandinavian journal of educational research* (published online)

Engbretsen, Eivind. 2012. Darnton's Cats – text or reality? *Ideas in History* nr. 2

Engbretsen, Eivind. 2013. Making sense of the confinement. *Mainzer Historische Kulturwissenschaft (MHK)* (in press)

Thoresen, Lisbeth & Engebretsen, Eivind. 2013. *Døden i offentligheten* (Death in the public eye). *Tidsskriftet Omsorg* (in press)

Album, Dag & Engebretsen, Eivind. 2013. *Sykdomsprestisje* (Disease prestige). *Praktiske Grunde* (in press)

Juritzen, Truls, Engebretsen, Eivind & Heggen Kristin. 2012. Subject to empowerment. The constitution of power in an educational program for employees in nursing homes. *Medicine, Health Care and Philosophy* (published online)

Engbretsen, Eivind & Heggen, Kristin. 2011. Accreditation and Power. A discourse analysis of a new regime of governance in higher education. *Scandinavian journal of educational research*, nr. 4 (56)

Engbretsen, Eivind. 2011. Antoine Godeau et la pauvreté exemplaire. *17eme siècle* nr. 2 (251)

Engbretsen, Eivind; Johnsen, Berit H; Kirkebæk, Birgit; Markussen, Ingrid. 2010. En Norvège, les discours des droits et du contrôle dans une culture du bien-être. Gardou, Charles

(red.). *Connaissances de la diversité : Le handicap au risque des cultures*. Toulouse, France: Edition ERES

Kleppe, Lise & Engebretsen, Eivind. 2010. Professional Responsibility and Human Rights at Asylum Reception Centres. *Nordic Journal of Human Rights* nr 3/4

Haldar, Marit & Engebretsen, Eivind. 2009. *Et nederlagsnarrativ* (Defeat Narrative). *Sosiologi i dag*, nr. 4

Heggen, Kristin & Engebretsen, Eivind. 2009. *Tvetydig om kunnskapsbasert praksis – en dekonstruktiv nærlesning av arbeidsbok for sykepleiere* (Ambiguous about knowledge-based practice. A deconstructive reading of a nursing manual). *Sykepleien Forskning* nr. 4

Submitted articles:

Lillehagen, Ida, Vøllestad, Nina, Heggen Kristin & Engebretsen, Eivind. 2013. Study protocol: A methodological design for understanding knowledge translation in a participatory research program in physiotherapy, *Implementations Science*

Engebretsen, Eivind & Eriksen, Anne. 2013. Antoine Godeau and his Universal History. *Seventeenth Century French Studies*

Christoffersen, Hanne; Engebretsen, Eivind & Haldar, Marit. 2013. True Americans don't need help – a discourse analysis of the speeches made by Barack Obama and John McCain at their respective national party congresses in 2008. *Rhetoric & Public Affairs*

Kleppe, Lise, Heggen, Kristin og Engebretsen, Eivind. 2013. The professional relationship in nursing. A critical analysis of textbooks. *Nursing Inquiry*

Kleppe, Lise og Engebretsen, Eivind. 2014. Professional responsibility in social work. A dual responsibility? *Nordic Social Work Research*

Book chapters (last five years):

Engebretsen, Eivind. 2012. *Fattighjelpens underdanige forbilder* (Subservient models of poor relief). I: Krefting, Ellen, Rønning, Anne Birgitte og Eriksen, Anne. *Eksempelets makt. Kjønn og eksemplaritet* (The power of example. Gender and exemplarity). Oslo: Spartacus

Engebretsen, Eivind & Solvang, Per. 2013. The politics of vulnerability. I: Johnsen, Berit H. (red.). *Special Needs Education towards Inclusion*. Oslo: Høgskoleforlaget (in press)

Engebretsen, Eivind, Johnsen, Berit & Markussen, Ingrid. 2008. 'Livet bøyes i flertall' (Life is conjugated in the plural – introduction to Julia Kristeva's Letter to the President". I: Kristeva, Julia. *Brev til presidenten om mennesker med funksjonshemming* (Letter to the President of the Republic on the subject of disabled citizens). Oslo: Cappelen

Books and monographs:

Engebretsen, Eivind & Heggen, Kristin. 2012. *Makt på nye måter* (New forms of Power). Oslo: Universitetsforlaget (contributed to 15 chapters)

Kristeva, Julia & Engebretsen Eivind (red). 2010. *Annerledeshet. Sårbarhetens språk og politikk* (Difference – The language and policy of vulnerability). Oslo: Gyldendal Akademisk (contributed to 3 chapters)

Engebretsen, Eivind. 2007. *Hva sa klienten? Retorikken i barnevernets journaler* (What did the client say? Rhetoric in child welfare records). Oslo: Cappelen

Engebretsen, Eivind. 2006. *Barnevernet som tekst. Nærlesning av 15 utvalgte saker fra 1950- og 1980-tallet* (Child welfare as text. Close reading of 15 selected cases from the 1950s to the 1980s). Doctoral thesis for the degree of Dr.art. Oslo: The Faculty of Humanities

CV: Sigrid Wangensteen (born 22.10.1954)
Gjøvik University College.

Positions:

- Study program Manager BA in Nursing, Gjøvik University College (2012 -)
- Associate professor, Gjøvik University College (2010-2012)
- Senior Lecturer /PhD student, Gjøvik University College (2007-2010)
- Assistant professor/PhD student, Gjøvik University College (2004-2007)
- Leader of BA in Nursing program, Gjøvik University College (2002-2003)
- Lecturer/assistant professor, Gjøvik University College (1999-2002)
- County Leader, Norwegian Nurses Association (1990-1998)

Sigrid Wangensteen holds a PhD in Nursing from Karlstad University, Karlstad, Sweden 2010, and a Master's Degree in Nursing Science from Pacific Lutheran University, Tacoma, Washington, USA 2002. Nursing education in general and challenges with respect to competence development in special have been the main focus and interest throughout the whole career.

The period in Norwegian Nurses Association (NNA) gave insight in a more system perspective of health care organisation and service. Among activities in the NNA was education of NNA representatives, negotiations at a community and county level in addition to participation in the NNA at a National level.

She was leader of the committee established to develop a BA program in radiography at Gjøvik University College (GUC). The work was completed within the timeframe and in cooperation with another university college the first radiography students were admitted at GUC one year after the committee started the work. With respect to the BA program in nursing she was the leader of a faculty group established to develop a new course description for the Bachelor thesis. She also had the course responsibility for the new Bachelor thesis course (100 students).

As member of the "Simulation team" she takes part in discussions on how to develop, facilitate and evaluate learning activities in the simulation centre. She is a member of this the simulation team because of the study program manager role and the researcher role. When three university colleges in two counties were in process for developing master programs and PhD programs aiming at applying for status as a university, she was representing the Gjøvik University Board. Understanding other institutions' challenges and opportunities were among the aspects needed paying attention for in this work.

PhD dissertation (2010): Newly graduated nurses' perception of competence, critical thinking and research utilization.

Leadership:

Member of the Gjøvik University College Board (2007-)

Publications:

Wangensteen, S, Johansson, IS, Björkström, ME & Nordström, G. (2012) Newly graduated nurses' perception of competence and possible predictors: A cross-sectional survey. *Journal of Professional Nursing*, 28(3), 170-181

Wangensteen, S, Johansson, IS, Björkström, ME & Nordström, G. (2011) Research utilization and critical thinking among newly graduated nurses. A quantitative cross-sectional study. *Journal of Clinical Nursing*, 20, 2436-2447

Wangensteen, S, Johansson, IS, Björkström, ME & Nordström, G. (2010) Critical thinking dispositions among newly graduated nurses. *Journal of Advanced Nursing*, 66(10), 2170-2181

Wangensteen, S. (2010) Newly graduated nurses' perception of competence, critical thinking and research utilization. Faculty of Social and and Life Sciences. Karlstad University. Karlstad.

Wangensteen, S, Johansson, IS & Nordström, G.(2008) The first year as a nurse – an experience of growth and development. *Journal of Clinical Nursing*, (17), 1877-1885

UiO : University of Oslo
Faculty of Medicine

P.O.Box 1078 Blindern

0316 Oslo, Norway

Oslo 8 May, 2013

Consortium agreement: Letter of intent

The following institutions has agreed to form a consortium for a Center of Excellence in Education, with the name: *Health and Social Education: Unlimited*, the Faculty of Medicine, University of Oslo (host institution), the Faculties of Health and Social Sciences at Oslo and Akershus University College of Applied Sciences, and the Faculty of Health, Care, and Nursing at University College at Gjøvik.

University of Oslo



Frode Vartdal

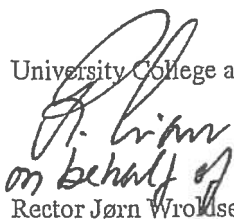
Dean, Faculty of Medicine

Oslo and Akershus University College of Applied Sciences



Rector, Kari Toverud Jensen

University College at Gjøvik.



on behalf of

Rector Jørn Wrodden





City of Oslo
Departement for Health and Social services

University of Oslo
Faculty of Medicine
P.O box 1078 Blindern
0316 OSLO Norway

Dato: 07.05.2013

Deres ref:

Vår ref (saksnr):

Saksbeh:

Arkivkode:

201302184-2

Marie Anbjørg Joten, 23461224

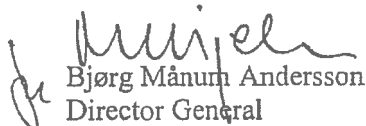
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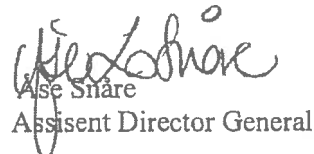
Letter of intent

The city of Oslo, Department for Health and Social services hereby confirms its willingness to participate as a partner in the Center of Excellence in Education within Health and Social Education: Unlimited, proposed by the consortium of the Medical Faculty, University of Oslo (host institution), the Faculty of Health and the Faculty of Social Science at Oslo and Akershus University College of Applied Science, and the Faculty of Health, Care, and Nursing at University College of Gjøvik.

This Center of Excellence in Education will contribute to health and social education by ensuring that current and future professionals can meet the challenges described in the white papers "Education for Welfare" and "Coordination Reform". The main purpose is to develop methods for more effective knowledge translation in education between research and practice, between service levels and between professions. The selected areas for inter-professional collaboration in this project are: children, elderly and persons with chronic diseases. Research on inter-professional education and inter-professional practice in work settings, and research on knowledge translation will be conducted.

Yours faithfully


Bjørg Månun Andersson
Director General


Aise Snåre
Assistent Director General

Byrådsavdeling for eldre og
sosiale tjenester

Postadresse:

Rådhuset, 0037 Oslo

E-post: postmottak@byr.oslo.kommune.no

Universitetet i Oslo
Det medisinske fakultet
PB 1078 Blindern
0316 OSLO

Vår ref.:
2013/6865

Deres ref.:

Saksbeh.:

Dato:
06.05.2013

Oppgis ved all henvendelse

Letter of intent

Oslo University Hospital hereby confirms its willingness to participate as a partner in the Center of Excellence in Education, Health and Social Education.

Oslo University Hospital is a highly specialised hospital in charge of extensive, national, regional and local hospital assignments. The hospital is Scandinavia's largest and we each year carry out more than 1.2 million patient treatments.

Oslo University Hospital carry out advanced patient treatment, research and is a significant role player within the education of the large variety of health care professionals on international levels.

Our vision is to provide a broad range of undergraduate and post-graduate education services for the modern health service.

We intend to provide the students involved access to high quality practices in the healthcare education and strive to achieve predictability in access to supervisors and supervision competence.

Yours sincerely,



Erlend B. Smeland
Director Research, Innovation and Education

University of Oslo
Faculty of Medicine
P.O box 1078 Blindern
0316 OSLO Norway

Letter of intent

Akershus University Hospital hereby confirms its willingness to participate as a partner in the Center of Excellence in Education within Health and Social Education: Unlimited, proposed by the consortium of the Medical Faculty, University of Oslo (host institution), the Faculty of Health and the Faculty of Social Science at Oslo and Akershus University College of Applied Sciences, and the Faculty of Health, Care, and Nursing at University College at Gjøvik.


This Center of Excellence in Education will contribute to health and social education by ensuring that current and future professionals can meet the grand challenges described in the white papers "Education for Welfare" and "Coordination Reform". The main purpose is to develop methods for more effective knowledge translation in education between research and practice, between service levels and between professions. The selected fields for inter-professional collaboration in this project are: children, elderly and persons with chronic diseases. Research about inter-professional education and inter-professional practice in work settings, and research about knowledge translation will be conducted.

Oslo, May, 8nd, 2013,



Stein Vaaler

Vice CEO



Hilde Lurås

Head of Research



University of Oslo
Faculty of Medicine
P.O box 1078 Blindern
0316 OSLO Norway

Letter of intent

Ullensaker kommune hereby confirms its willingness to participate as a partner in the Center of Excellence in Education within Health and Social Education: Unlimited, proposed by the consortium of the Medical Faculty, University of Oslo (host institution), the Faculty of Health and the Faculty of Social Science at Oslo and Akershus University College of Applied Science, and the Faculty of Health, Care, and Nursing at University College at Gjøvik.

This Center of Excellence in Education will contribute to health and social education by ensuring that current and future professionals can meet the grand challenges described in the white papers "Education for Welfare" and "Coordination Reform". The main purpose is to develop methods for more effective knowledge translation in education between research and practice, between service levels and between professions. The selected fields for inter-professional collaboration in this project are: children, elderly and persons with chronic diseases. Research about inter-professional education and inter-professional practice in work settings, and research about knowledge translation will be conducted.

Oslo, May, 3rd, 2013,

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Mette Gro Iversen', is written over a circular stamp.

Mette Gro Iversen
kommunaldirektør

Besøksadresse
Rådhuset, Furusetgt. 12
2050 JESSHEIM
Servicetorget
Åpningstid: 08.00-15.30

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Internett:
www.ullensaker.kommune.no



University of Oslo
Faculty of Medicine
P.O box 1078 Blindern
0316 OSLO Norway

Hamar 3rd May 2013

Letter of intent

Centre for Old Age Psychiatric Research, Innlandet Hospital Trust, hereby confirms its willingness to participate as a partner in the Center of Excellence in Education, Health and Social Education: Unlimited, proposed by the consortium of the Medical Faculty, University of Oslo (host institution), the Faculty of Health and the Faculty of Social Science at Oslo and Akershus University College of Applied Science, and the Faculty of Health, Care, and Nursing at University College at Gjøvik.

Centre for Old Age Psychiatric Research is one of the leading milieus in Norway in the research and development of old age psychiatry. We have an inter-professional approach with projects in medicine, health services research and caring science, aiming to raise the quality of the services in the field of old age psychiatry. In close cooperation with the Norwegian Centre for Ageing and Health we have projects focusing on translation of research results into practice and implementation to the services.

The research centre will have master and PhD students affiliated to different projects and we will ensure that the students involved in the center have access to high quality practices and that we achieve predictability in access to supervisors and supervision competence; provide clarity about responsibilities, roles, and functions.

Yours sincerely,

Geir Selbæk
Research manager

Birger Lillesveen
Manager



**Utviklingscenter
for sykehjem**
Oppland

Centre for Development of Institutional Care Services in Oppland
Haugtun Institutional Care Center
Storgata 33
2821 Gjøvik

University of Oslo
Faculty of Medicine
P.O box 1078 Blindern
0316 OSLO Norway
Oslo

Gjøvik, 06.05.2013

Letter of intent

The Centre for Development of Institutional and Home Care Services (USHT) hereby confirms its willingness to participate as a partner in the Center of Excellence in Education, Health and Social Education: Unlimited, proposed by the consortium of the Medical Faculty, University of Oslo (host institution), the Faculty of Health and the Faculty of Social Science at Oslo and Akershus University College of Applied Science, and the Faculty of Health, Care, and Nursing at University College at Gjøvik.

The Centre for Development of Institutional and Home Care Services (USHT) is a national initiative to ensure the provision of good quality nursing and care services throughout the country. It is financed by means of a grant from the Norwegian Directorate of Health. Each county has two development centres; one for nursing homes and one for home care services.

Primary objective: The Centre of Development of Institutional and Home Care Services is the driving force for expertise and quality in nursing home and home care services in the county.

Initiative objectives: To stimulate committed cooperation across educational institutions, municipalities, county administrators and the state. To support good local initiatives to improve quality - by giving financial subsidies to selected municipal units in each county. To stimulate the sharing of experience and knowledge between municipalities both within the county and nationally

USHT Haugtun omsorgssenter has a close cooperation with respect to education and research activities with the Faculty of Health, Care, and Nursing at University College at Gjøvik today. We will ensure that the students involved in our nursing home have access to high quality practice.

Yours sincerely,

Målfrid Schiager
Leader of USHT Haugtun omsorgssenter

Nasjonalt kunnskapssenter

om vold og traumatisk stress a/s

Kirkeveien 166 (bygning 48)

N-0450 Oslo

Tlf.: +47 22 59 55 00

Faks: +47 22 59 55 01

e-post: postmottak@nkvtv.unirand.no

Org. nr.: 986 304 096

University of Oslo
Faculty of Medicine
P.O box 1078 Blindern
0316 OSLO Norway

Oslo, 02.05.2013

Letter of intent

Norwegian Centre for Violence and Traumatic Stress Studies (NKVTS) hereby confirms its willingness to participate as a partner in the Center of Excellence in Education, Health and Social Education: Unlimited, proposed by the consortium of the Medical Faculty, University of Oslo (host institution), the Faculty of Health and the Faculty of Social Science at Oslo and Akershus University College of Applied Science, and the Faculty of Health, Care, and Nursing at University College at Gjøvik.

The Norwegian Centre for Violence and Traumatic Stress Studies develops and disseminates knowledge and competence in the field of violence and traumatic stress.

The centre's objective is to help prevent and reduce the health-related and social consequences that can follow from exposure to violence and traumatic stress. The centre has an international outlook and develops knowledge at an international academic level. Our main tasks are: Research and development, as well as dissemination in the form of teaching, guidance and counselling. The centre assumes an interdisciplinary perspective, which includes medical, psychological, social, cultural and legal aspects.

The center aims to implement evidenced based knowledge and competence in study curriculums for students within faculties of e.g. medicine, psychology and sociology and college educations (nursing and child welfare), and has successfully collaborated with two partners on a master program in psychosocial work at the University of Oslo since 2010 (<http://www.uio.no/studier/program/psykososial-master/hvorfor-velge/>). Professionals at our center has extended experience in supervision and teaching (e.g. lectures, problem-based-learning).

Yours sincerely,



Grete Dyb, MD, PhD
Senior researcher NKVTS
Associate professor University of Oslo

www.nkvts.no

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University of Oslo
Faculty of Medicine
P.O box 1078 Blindern
0316 OSLO Norway

R.
B.
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P.

Letter of intent

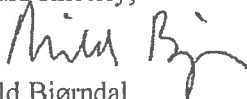
Centre for child and adolescent mental health, Eastern and Southern Norway (RBUP) hereby confirms its willingness to participate as a partner in the Center of Excellence in Education, Health and Social Education: Unlimited, proposed by the consortium of the Medical Faculty, University of Oslo (host institution), the Faculty of Health and the Faculty of Social Science at Oslo and Akershus University College of Applied Science, and the Faculty of Health, Care, and Nursing at University College at Gjøvik.

RBUP contributes to quality improvement in services for child mental health and child protection through postgraduate training, applied research and a host of other "services for services". Our postgraduate program brings us in contact with at least 3000 professionals from the field every year. Our library offers support all professionals working with child mental health and child protection in half of Norway. We aim at innovation and improvement in competence building, especially through clinical relevance, good knowledge management and extensive use of practice based learning.

We will ensure that the students involved in the center of excellence have access to high quality practices in our institution and we will offer our extensive network as an arena to collaborate within. Several of our senior researchers have contributed to research on student learning in health and social welfare and on knowledge translation.

Oslo, May 10th 2013

Yours sincerely,



Arild Bjørndal
Centre director, Professor of Public Health (at UIO)

**Centre for Child and Adolescent Mental Health
Eastern and Southern Norway**

RBUP Oslo
Gullhaug Torg 4B, 0484 Oslo
P.O.Box 4623 Nydalen, NO-0405 Oslo, Norway

Switchboard: + 47 22 58 60 00
<http://www.r-bup.no>
mail@r-bup.no

SWIFT/BIC: NDEANOKK
IBAN NO: NO7560960518392
Organization.no: 980.633.004

UiO : University of Oslo

Faculty of Educational Sciences
Centre for Educational Measurement
at University of Oslo (CEMO)
P.O Box 1161 Blindern 0318 OSLO Norway

Oslo, 3 May 2013

Faculty of Medicine, University of Oslo
P.O box 1078 Blindern 0316 OSLO Norway

Letter of intent

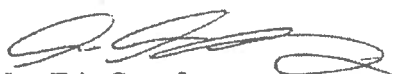
Center of Educational Measurement hereby confirms its willingness to participate as a partner in the Center of Excellence in Education, Health and Social Education: Unlimited, proposed by the consortium of the Faculty of Medicine, University of Oslo (host institution), the Faculty of Health and the Faculty of Social Science at Oslo and Akershus University College of Applied Science, and the Faculty of Health, Care, and Nursing at University College at Gjøvik.

Centre for Educational Measurement at University of Oslo (CEMO) is a research unit which contributes to development of national competence within the field of educational measurement. Through its research- and development activities the unit shall develop and disseminate knowledge to relevant stakeholders in the sector of education.

CEMO will in collaboration with the host institution educate candidates at the master- and doctoral levels. The unit will conduct applied research within the fields of early childhood education, primary and secondary education, and higher education, and basic research within the field of educational measurement.

CEMO intends to collaborate with the proposed center, especially concerning development of and research on measures of learning outcomes for students and professionals in medicine, health and social education.

Yours sincerely,



Jan-Eric Gustafsson

Professor and Director



UiO University of Oslo

Faculty of Education

Department of Educational research and Intermedia

Oslo, 7th May 2013

University of Oslo

Faculty of Medicine

P.O box 1078 Blindern

0316 OSLO Norway

Letter of intent

The Department of Educational Research and Intermedia, Faculty of Education, University of Oslo hereby confirms its willingness to participate as a partner in the Center of Excellence in Education, Health and Social Education: Unlimited, proposed by the consortium of the Faculty of Medicine, University of Oslo (host institution), the Faculty of Health and the Faculty of Social Science at Oslo and Akershus University College of Applied Science, and the Faculty of Health, Care, and Nursing at University College at Gjøvik.

The Department's participation in 'Unlimited' will be materialized through the involvement of the research group Higher Education: Institutional dynamics and Knowledge cultures (HEIK), and the '*Fagområdet for universitetspedagogikk*' (FUP), both administered by the Department.

FUP is an UiO funded unit that supports the individual staff and the academic units at UiO in their work with the quality of education. This includes the development and offering of relevant courses on educational quality and leadership for UiO's academic staff, in addition to various forms of advice and consultation work for UiO's faculties and central administration. In addition, the FUP staff is involved in research projects in the area of higher education at the Faculty of Education, undertaken with non-FUP colleagues in the HEIK group.

HEIK is a research group that contributes to strengthen the knowledge basis and enhance the theoretical, methodological, and empirical understanding of the dynamics of higher education and its way of fostering academic and professional development.

FUP will in collaboration with the host institution in the proposed Center 'Unlimited', provide support to the practical initiatives in educational development and innovation. In this support, the unit will draw on the collective competence established in the FUP-unit on quality work in higher education and allocate time to this supportive work based on the established faculty-consultation agreement at the University of Oslo. The provided supportive work can also be extended by drawing on the FUP-members individual research time.

HEIK shall in collaboration with the host institution contribute to the development of the appropriate organisation and governance models for 'Unlimited'. In addition, the group will conduct applied research that will strengthen the organisational learning dynamics of

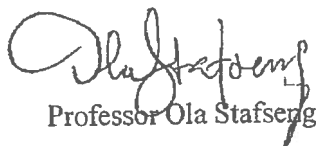
UiO : University of Oslo

Faculty of Education

Department of Educational research and Intermedia

'Unlimited'. This concerns research on the innovativeness of the proposed Center's educational strategies and plans, and the distribution of the educational innovations of the proposed Center not only to other units at the three partner institutions, but to Norwegian higher education in general. For that purpose also international studies will be undertaken, comparing the development at the proposed Center with educational innovations at other Nordic universities, incl. Karolinska Institute, and Aarhus University.

Yours sincerely,



Professor Ola Stafseng

Head of Department

UiO • Faculty of Medicine

University of Oslo

The University of Oslo (UiO) is the largest university in Norway, with eight faculties, two museums, 27,414 students, 3,327 academic staff, and 1,707 administrative staff. In 2012, its operating budget was NOK 6.6 billion. The Faculty of Medicine will celebrate its 200-year anniversary next year. With a proud tradition of academic excellence, it is the oldest Norwegian faculty of medicine.

Study

The reformed curriculum in the professional study program in medicine was implemented in 1996 and has been recognized as highly innovative (Norwegian Agency for Quality Assurance in Education [NOKUT] awards). The Faculty will pursue its mission of achieving high quality in education, clinical practice, research, and engagement in the community in a revised curriculum for the next decade. The goal is to meet the challenges of improved patient and population health outcomes in a society with changing demography, epidemiology, political expectations, and new medical and technological developments. The medical program encompasses the extensive use of “student centered learning” methods such as problem-based learning (PBL), small clinical groups, e-learning, simulation, and skills training, and highly innovative examinations, for example, modified objective structured clinical examination (OSCE), modified miniCEX (clinical examination) in rotations at four stations to assess professional performance and to provide direct observation and feedback, and PC-based exams based on case histories with a set-up similar to that of modified essay questions (MEQs), including multiple choice questions (MCQs), and key feature problems.

The revised curriculum will implement interprofessional learning as well as team-based and case-based learning, and develop new assessment methods and elective courses. The extensive student exchange program in clinical semesters including the English language based 9th semester will be extended to a teacher exchange program.

The medical students’ research program was launched in 2002 and has been a great success. Of the 138 students who have been admitted to the program since its inception, a total of 17 students have completed the PhD program and 29 students are currently enrolled in the PhD program.

The Faculty offers one bachelor’s degree program (Health Leadership and Health Economics), and nine master’s degree programs have been established so far. These are (1) Clinical Nutrition; (2) Nursing Sciences; (3) Health Sciences (NOKUT award); (4) International Community Health (NOKUT award); (5) Health Administration; (6) Health Economics, Policy, and Management; (7) Master in Suicidology, Addiction, Violence, and Trauma – Psychosocial and Biological Intervention (this program is unique in the national context and there are over 500 applicants for 60 available study places in the current year). (8) The European Master in Health Economics and Management, offered jointly by Erasmus University Rotterdam, the Management Centre Innsbruck, the University of Bologna, and UiO, is the latest program at the Faculty; it is interdisciplinary and students can study at any of the four locations. Practice skills are ensured through internship opportunities in public or private organizations (e.g., local government, primary health care, the pharmaceutical industry, humanitarian organizations, etc.), and the program is also closely linked to research. The academic staff responsible for the program have been requested to conduct research on the effect of the Coordination Reform. Lastly, in 2011, the Faculty launched a new program that is unique to Norway: (9) Advanced Practitioner in Geriatric Nursing. The aim of this program is to educate nurses who



can strengthen preventive medicine and rehabilitation services for the elderly, and it is based on international models that have had a documented impact. The students also learn to utilize welfare technology.

The Faculty is planning to introduce a Master of Public Health (MPH) degree that will satisfy the political expectations arising from the Report to the Storting on the Coordination Reform, and will make use of courses embedded in the existing master programs. MPH will be a multi-disciplinary professional degree related to public health practice. Our international profile will be strengthened by the availability of elective courses in MPH programs all over the world.

Other

Most master's programs have established **alumni networks** that ensure life-long contact between graduates. One excellent example is the highly regarded alumni network of the Master's degree program in Health Administration that was introduced 27 years ago.

Oslo municipality and the hospitals in Oslo are collaborating on a **new practice arena** (the so-called *Samhandlingsarena Aker*) that will include, for example, the establishment of emergency 24-hour municipal hospital stays and the provision of living accommodations for elderly patients with dementia (Alma's House). Thus, a range of high-quality arenas for training and research will be available.

A **centre for clinical nutrition** will be opened to offer patients outpatient treatment/counseling and to provide skills training for students. This arena will also provide opportunities for research and represents a joint cooperation between UiO and Oslo University Hospital.

To strengthen the educational programs and create opportunities for innovation and the dynamic development of the programs, the current Dean, Frode Vartdal, appointed in 2011 not one but **two associate deans of education**—one responsible for the professional study program in medicine and the other for the bachelor's and master's degree programs.

Furthermore, the Faculty recently established **three new awards** for excellence and innovation in education and announced **grants** that will enable us to invite outstanding lecturers from universities abroad and to allow staff to travel abroad to teach and to learn about excellent teaching.

In addition, infrastructures for **e-learning and educational technology** will be developed, thus facilitating open line courses (e.g., MOOC) for national and international health care staff and students. This will be done in conjunction with the three other Norwegian medical schools.

The Medical Faculty's **partner universities** have been carefully selected among the best universities in the world, including the University of Melbourne, the University of California, Berkeley and Irvine, Peking University, and Zhengzhou University, as well as the Norwegian University Centre in St. Petersburg. A partnership contract was also signed in 2012 with Jimma University (JU) in Ethiopia, and a grant application (NOK 18 million) was sent to NORAD in April 2012 with emphasis on the education of health workers in public health. JU offers several academic programs in health and medical sciences and has been recognized as the leading public university in Ethiopia for three consecutive years, utilizing community-based education (CBE) including team training programs as an innovative educational strategy. This strategy will serve as a model for interprofessional education at UiO.

The Quality Assurance System is an important element in fulfilling the ambitions and objectives set for the education within the Faculty of Medicine. The description of faculty procedures is based on UiO's System Description for Quality Assurance. Internal and external evaluations (with educators from other universities and student representatives) are conducted periodically for each program. In addition, student evaluations of each course are conducted every semester. These are documented and serve as the basis of improvement for various courses.

Institutional CV: Faculty of Health and Faculty of Social Sciences at Oslo and Akershus University College of Applied Science, HiOA

HiOA has a student body of about 17,000 students and 1,850 employees located at two campuses—Pilestredet and Kjeller—and is organized into 4 faculties, 21 departments, and 2 centers of research and development (Centre for the Study of Professions (CSP) and National Centre for Multicultural Education (NAFO)).

HiOA offers 53 bachelor programs, 28 master's programs, 5 PhD programs, and further- and continuing education programs. A sixth PhD program in Health Sciences has been recommended by the NOKUT expert committee (May 2013). This variety of programs ensures that within the selected fields (children, elderly, CLD, and musculoskeletal disorders) of this project, the students can proceed to various PhD degrees. The Norwegian Qualification framework has been implemented in all degree programs at HiOA. The HiOA Quality Assurance System embraces all matters of relevance for study quality improvement and quality assurance for all study programs. Student and teacher evaluations of all modules will be conducted through a three-year cycle. The focus will be on learning outcomes, workplace relevance, social needs, and international profile. The student evaluations of the teaching related to children, the elderly, COPD^[1], and musculoskeletal disorders are excellent both in the bachelor and advanced courses.

The Centre for the Study of Professions (CSP) was formally opened in 1999 in order to stimulate research and critical reflection within the study of professions. The study of professions includes several areas of research, such as professional practice, its autonomy, social organization, and governance, the qualification of professionals, work motivation, and professional careers, and the social and historical roles of professions. CSP develops the study of professions as a multidisciplinary field of research emphasizing comparative approaches. CSP carries out a number of projects and activities, among them, the PhD program in the study of professions, various research projects, and StudData, a database for Studies of Recruitment and Qualification in the Professions. NAFO was established on January 1, 2004 as one of the steps undertaken by the Norwegian government to implement its strategic plan, "Equal Education in practice! Strategy for better learning and greater participation of linguistic minorities in kindergartens, schools and education." The Centre collaborates with specialist environments at universities, university colleges, and resource centers, and works to promote the establishment of networks in this field at the national and local levels.

University college policlinics are run to offer students practice placement. Throughout the years, the policlinics have received excellent student evaluations. The policlinic at the Institute of Physiotherapy provides an opportunity for students to practice knowledge-based assessments and treating patients with a wide range of diagnoses and functional problems. The students are supervised by the academic staff, all of whom are authorized physical therapists holding a master's or PhD degree. The policlinic at Sagene – NAV gives the students the opportunity to practice practical training in social work. This policlinic is part of the national HUSK Project. One of the main goals is to develop understanding, skills, and practice in what constitutes good social service and social work. This teaching is unique in its relation to the practice field, in collaboration with the users. Regular student evaluations have helped to develop the study environment and educational quality. Various professional and pedagogical tools are used to create the best possible conditions for student learning.

The movement analysis laboratory is equipped with modern facilities for clinical research into human movement and performance. This allows for the coordinated analysis of a wide variety of kinematic, biomechanical, and physiological measurements. In addition, the laboratory is widely used by the students of medical engineering, physiotherapy, occupational therapy, and orthopedic engineering.

Interprofessional collaborative learning (Tverrprofesjonell samarbeidsl ring – TPS)

HiOA has several ongoing development projects related to TPS. The main focus is on creating possibilities for TPS in the student’s vocational training and to guide the clinical supervisors in TPS groups. Students, teachers, and professionals from the study programs within Child Care and Welfare, Social Work, Social Education, Physiotherapy, Occupational Therapy, and Nursing participate in one or several projects.

eCampus HiOA accommodates learning technologies that provide added value to both online and campus based teaching and learning. Apart from the campus learning and teaching context, the eCampus facilitates learning wherever the student is, whether at home, out in practice, or in the workplace. Hence, it facilitates lifelong learning. eCampus enhances the efficiency and renewal of the learning processes for the teachers, administration, and students, and in this way fulfills the expectations of digitally competent students.

CHILDREN AND CHILD CARE SERVICES

The faculties of Social Sciences and Health Sciences at HiOA offer study programs to educate professional practitioners whose primary target group is children and youth^[2] (child care/social workers, child physiotherapists and occupational therapists, public health nurses, public health nutritionists, etc.). A common theme is collaborative modes of working with children, including explorative modes and supporting ways of communicating with children and youth. Collaborative modes of working with children are also a prominent field of interdisciplinary research at HiOA, e.g., the project “Snakk med oss.” There are several senior researchers as well as master’s and PhD students involved in projects that investigate professional practices with children. The research within public health nutrition has a definite focus on vulnerable groups, pregnant women and children^[3], vulnerable ethnic groups, and people with low education. The research is related to health communication, food sociology, and cultural aspects in relation to diet. There is also research on nutrients and related biochemical substances in food, found in the body as biomarkers, and their effects on health. There is collaboration among international researchers including Professor Minja Hadders Algra MD, University of Groningen, Associate Professor Doreen Bartlett, Western University of Ontario, and CanChild, Canada, and within the network “Researching Children’s Participation” (Ben Bradley, Charles Sturt University, Australia; Sheila Greene, Trinity College, Ireland; William A. Corsaro, Indiana University, US; Charlotte Højholt, University of Roskilde; Alison Clark, Open University, UK; Erica Burman, Manchester Metropolitan University, UK).

ELDERLY

The core themes in teaching related to the elderly are ethics, dignity, quality of life, function, nutrition, health, disease, and aging in the broadest sense—encompassing physical, psychological, and social conditions.

The HiOA research in this field is related to elderly people living in their homes, at senior centers^[4], staying in hospitals, nursing homes, and the transition from home to an institution^[5], the relation between the aging process and various functions (physical, mental, and social), and the capacity of the older individual and his or her surroundings. International research cooperation consists, for example, of the EU-funded networks “Improving Infrastructures for Leisure-Time Physical Activity in the Local Area” (IMPALA), “Building Policy Capacities for Health Promotion through Physical Activity among Sedentary Older People” (PASEO), “The European Network for Action on Ageing and Physical Activity” (EUNAAPA), and

“Prevention of Falls Network Europe” (Prophet). Furthermore, researchers are participating in “A Global Network to Improve Fragility Fracture Management and Prevention” (FNN). Other networks are “The Norwegian-Chinese Interdisciplinary Research Network within Health and Welfare, Disability, and Rehabilitation in the PRC and Norway” linked to rehabilitation and Sunnaas International Network. The latter consists of scientists from China, the United States, Israel, Palestine, Sweden, Russia, and Norway. The network has also established research collaborations with Glasgow Caledonian University (UK), Uppsala University, Gothenburg University, the University of Manchester, Criminal Hire Word University (UK), and the University of Erlangen-Nurnberg. International cooperation related to student and teacher mobility has also been established with several of these universities.

COPD (CLD) (KOLS)

Physical activity, one of the cornerstones in pulmonary rehabilitation (PR), presupposes testing, evaluation, and customized training programs. An increased emphasis on empowerment and self-management has led to a shift from the traditional therapist role to a greater emphasis on the supervisor role. The module in the physiotherapy program is based on an educational perspective of confluent pedagogies and a problem-oriented understanding. Patients with COPD are invited to share their experiences with the student group. Films are used to exemplify the themes and content of teaching. Teaching is closely linked to relevant casuistries, representing typical challenges that the students will confront in practice. They provide a coherent context to the parts of the course content. Throughout the course, the students are expected to work with these cases in groups. The intention of the group work is to help the students focus their reading, uncover their own learning needs, and search for evidence-based knowledge. Group discussions promote critical thinking and reflection and give the students opportunities to raise their awareness of their own attitudes and values. The problems to be addressed are presented by respective students groups and discussed in plenary with peers and teachers, including contributions and feedback from the teachers. Switching between PBL, discussions, lectures, practical training, and meetings with real patients help the students develop conceptual understanding and clinical reasoning. The international partner is York St. John University, Faculty of Health and Life Sciences, and the national partners include Glittreklinikken, St. Olavs Hospital/NTNU, OuS, A-Hus, and the Norwegian branch of the International Primary Care Respiratory Group.

MUSCULOSKELETAL DISORDERS (MSD)

Musculoskeletal disorders are the core themes in physiotherapy education. Supervised skills training is a key part of the teaching and usually takes place in small groups. The students treat each other and alternate between being “patient” and “therapist.” Based on theory, they practice examining the musculoskeletal system, analyze and try out different physical therapy treatments and other measures. As manual and relational skills are more than technique and exercises, emphasis is placed on interaction with the “patient/client.” The students must experience observing and being observed, touching and being touched, instructing and being instructed, and evaluating and being evaluated. The students analyze the motion of children, adults, and seniors, who volunteer to be “patients/users.” Skills training can also be based on case reports, videos, or observations of customized group activities led by physical therapists or other professionals. Through their own movement in various activities, the students experience and reflect on their own and others’ bodily sensations and reactions. They then share these experiences to gain insights into the world of experience and into the body’s importance in communication and relationships. The academic staff have participated in several musculoskeletal research projects (epidemiological and randomized controlled trials), in particular spinal and shoulder disorders, both in primary and secondary care. There are also strong research groups at HiOA (e.g., at the research unit Sosialforsk) working on the relations between chronic diseases (such as COPD and musculoskeletal disorders) and social inequality. An important aspect of

internationalization is the employee networks, research, and other forms of cooperation with counterparts in other countries. HIOA is represented in international networks such as Primary Care Musculoskeletal Research Centre at Keele University, UK, the Back Pain Research Group at the University of Sydney, and Treatment Interventions for Long-Lasting Pain and Psychological Suffering at the University of Beijing.



Gjøvik University College (GUC)

Gjøvik University College (GUC) boasts roughly 3,000 students and 320 employees from more than 25 countries. Student numbers have increased by 43% since 2006. It offers a wide range of bachelor and master's degrees, as well as doctoral programs in Information Security and Computer Science, and a wide range of continuing education courses.

In recent years, GUC has developed to become a dynamic and exciting research-intensive organization with integrated study programs at all levels, from one-year courses to PhDs. It fosters a high level of research activity and increasing cooperation with the private and public sectors. GUC is well established in the market and offers future-oriented courses within the five key areas of health, technology, information technology (IT), media, and economic management. GUC endeavors to incorporate sustainability into all relevant aspects of the institution, included teaching, research, and the management of the campus.

All academic departments at GUC share a common priority and ambition with regard to ambient assisted living, where nursing, engineering, and IT/ICT are core academic areas. The institution has a unique advantage, in that one campus houses all three of these core areas; complementary interdisciplinary expertise is always close at hand.

For over a decade, GUC has strongly emphasized the use of systematic student evaluations and has integrated them into its study programs to improve their quality. GUC was one of the first university colleges in Norway to be granted accreditation by NOKUT on the basis of its Quality Assurance System in higher education. In 2009, GUC was awarded the Ministry of Education and Research prize for quality in education, due to its institutional approach to continuous improvement in higher education.

Faculty of Health, Care, and Nursing

The core activities of the Faculty of Health, Care, and Nursing are education, research, and innovation in clinical nursing (BSc, MSc), aging knowledge (MSc in gerontology), ambient assisted living, and community care (MSc). Together, these areas contribute to the diversity of the expertise necessary to meet future welfare challenges. The Simulation Centre is an integrated unit within the faculty and the infrastructure of its study programs. A high-priority research area connected to quality in nursing is that of patient needs and safety. The Simulation Centre is acknowledged as one of the Nordic countries' leading simulation centers with regard to health services. It was awarded the Ministry of Education and Research prize for quality in education in 2012. Simulation as a learning method has proven to be a valuable educational tool in the training of health personnel. It facilitates goal-oriented education and training, without exposing patients to danger, as no actual patients are involved. Internationally, there is a now a strong focus on simulation as a learning tool, and many studies have reported its positive learning outcomes.

GUC offers intensive research programs connected to the Simulation Centre. These include collaborations with the Innlandet Hospital Trust, focusing on patient safety and patient safety culture. GUC students are involved in this research focusing on the use of simulation as an educational tool in nursing, to increase the quality of education. The translation and validation of evaluation and assessment tools for Norwegian conditions is a component of that research.

Different health professions and specialties incorporate the Simulation Centre into their student courses; professionals also use it to update their knowledge bases and skill-sets. Simulation has proven to be particularly valuable for training interdisciplinary teams, such as those related to trauma, critically ill children, cooperation between different sections and personnel, critical medical conditions, and intensive-care and surgery patients.

GUC has initiated several interdisciplinary collaborations between health sciences and technology academic personnel, and executive health professionals. It has a clear strategy to strengthen and further develop such interdisciplinary research, innovation, and development activities by involving PhD and master's students.

At the establishment of the Centre for Care Research in 2006, GUC was appointed a national task on care services research in Norway. The main focus of this research is municipal nursing and care services. GUC was also delegated the responsibility of coordinating four other regional Centres for Care Research in Norway by the Ministry of Health and Care Services. Additionally, it is responsible for offering research guidance to all Development Centres for nursing homes and home care services in the eastern health region. Moreover, the Centre for Care Research has a close collaborative relationship with the Centre for Innovation in Services at Lillehammer University College. This includes the PhD program in the field of public and private service innovation (INNSEPP).

GUC also has a strong collaborative relationship with the Centre of Old Age Psychiatric Research at Innlandet Hospital Trust. In accordance with the national objectives, the collaboration aims to strengthen research related to health among the elderly, with particular emphasis on nursing and caring for those with dementia. This includes research focused on the examination, treatment, and care of elderly people with dementia, and how services can be optimized to deliver high-quality nursing and care throughout the progression of the disease.

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~~Together~~ ~~†~~ This SAB ~~cover~~ covers in depth the core problem that the consortium will work with, and meetings with these experts will provide us with important feedback and international perspectives. The experts listed above have all confirmed their willingness to ~~participate in~~ serve on the SAB.