

## Skjemainformasjon

Skjema	SFU
Referanse	1006695
Innsendt	12.05.2013 23:47:01

## Host

Information about host institution and center

Name of centre	Science Centre Health and Technology
Host institution	Buskerud University College
PO Box address	Postboks 235
Postal code / City/place	3603 KONGSBERG
Telephone	32869500
E-mail address	postmottak@hibu.no

## Contact person

Contact person

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Title	Professor, Study Director
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## About the centre

About the centre

Is the centre already established at the time of application	Yes
When was the centre established	27.09.2012

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

The vision of the Science Center Health and Technology is to create a cutting-edge framework for excellent education of healthcare professionals for the future.

The Science Center is already established as a unique educational initiative at Buskerud University College in Drammen. The Science Centre is a long term priority of the Faculty, an arena where education meets working life, where educators meets practitioners, researchers and technology innovators, producing new ways of educating for the future, applying simulation training, welfare technology and web-based learning facilities.

The overall aim of the Science Centre is to develop models for excellent healthcare education, to create new premises for high quality, person-centred healthcare services. The Centre will include work packages aiming at developing, implement, evaluate and disseminate new models of educational practice: 1) The Virtual Science Centre, developing virtual surroundings for interaction and collaboration, 2) Healthcare Education Clinics, 3) Simulation Training Scenarios and 4) teaching modules for Closing the Technology Gap.

The results will be made accessible to all, in the form of scientific publications, educational course programs on all levels (bachelor, master, post graduate), educational model packages on the Science Centre's web site, and educational collaboration with healthcare and social services (municipalities, hospitals/hospital trusts, the NAV system)

# Application Document

Application Document

Upload application document

profile\_SFU plan Science Centre  
Health and Technology BUC  
2013.pdf

## Timeline and budget

Timeline and budget

Upload planned timeline and the activities to be conducted

timeline\_SFU Timeline and milestones The Science Centre 2013.pdf

Upload plan for financial resource acquisition

financial\_Budget - detailed.pdf

Upload budget

budget\_Budget\_overview.pdf

## Attachments

Attachments

- Oversendelsesbrev.pdf
- budget\_Budget\_overview.pdf
- financial\_Budget - detailed.pdf
- timeline\_SFU Timeline and milestones The Science Centre 2013.pdf
- profile\_SFU plan Science Centre Health and Technology BUC 2013.pdf
- CVs\_core\_persons.pdf
- R\_D\_strategy\_Faculty\_of\_Helath\_Sciences\_BUC\_2012\_2015.docx
- References\_and\_documentation.pdf
- Partners.pdf

Comments

Comments to the application form (maximum 1500 characters)

NOKUT- Nasjonalt organ for kvalitet i utdanningen  
Kronprinsens gate 9  
Postboks 1708 Vika  
0121 Oslo

Drammen 12.mai 2013

### **Søknad om senter for fremragende utdanning**

Vedlagt oversendes søknad om senter for fremragende utdanning.  
Søknaden er et samarbeidsprosjekt mellom Høgskolen i Buskerud og  
Høgskolen i Vestfold.

Søknaden er forankret i Fakultet for teknologi og maritime fag og  
Fakultet for helsevitenskap ved Høgskolen i Vestfold og i Fakultet for  
teknologi, Fakultet for lærerutdanning og Fakultet for helsevitenskap ved  
Høgskolen i Buskerud, som vil være vertsinstitusjonen.

Fra 1.januar 2014 er høgskolene fusjonert og heter Høgskolen i Buskerud  
Vestfold

De to høgskolene er en del av Oslofjordalliansen, som er et strategisk  
samarbeid mellom høgskolene i Østfold, Vestfold , Buskerud og  
Universitetet for miljø- og biovitenskap. Et av satsningsområdene i  
alliansen er innen helse-, miljø- og sosialvitenskaplige fagområder. Et  
senter for fremragende utdanning vil videreutvikles til også å gjelde  
Oslofjordallianse samarbeidet

Med hilsen



Rektor  
Høgskolen i Buskerud

SFU – application:

## **The Science Centre Health and Technology**

### **Vision**

*The vision of the Science Center Health and Technology is to create a cutting-edge framework for excellent education of healthcare providers for the future*

### **Background**

*Societal change and reforms in the health and welfare services require corresponding changes in health and social care education at all levels.* This is the key message in the white paper 11 (2011-12) *Education for welfare* (KD 2012). The health care system are facing great challenges (HOD 2006, 2013). Patient security and rights and quality of care are at stake (Helsetilsynet 2011, 2012, 2013; HOD 2013, 2013). Patient-centredness is an inherent aspect of Norwegian healthcare policy, and there is a general agreement that user participation and collaboration across professions must be intensified to ensure that the individual users of healthcare services get proper care and treatment in the right place and at the right time (HOD 2009). There is a need for innovation, and welfare and health technology is supposed to become an essential part of the solution to present challenges (HOD 2011). However, students need to be better prepared for the working methods and competence requirements they will face in the future, dealing with clients and patients with complex needs who often require assistance from several services and professions (KD 2012). There is a need for innovation also in healthcare education, a need for developing new models of training and experiential learning, to meet new competence requirements, safeguard patient security and rights, and prepare for collaboration and person-centred practice.

The Science Center Health and Technology was established as a unique educational initiative at Buskerud University College, Drammen, in 2012. The Science Centre is a long term priority of the Faculty, an arena where education meets working life, where educators meets practitioners, researchers and technology innovators, with the aim of producing new ways of educating for the future, applying simulation training, welfare technology, web-based learning facilities, etc. The healthcare research environment attached to the centre is one of the most productive in Norway, publishing on high international level, and continuously working on implementation of research results to improve education and practice. The centre facilities, partners, research results and funding for innovative projects from the Research Council of Norway, make developing a cutting-edge framework for excellent education of

healthcare providers to meet future challenges a natural, but also demanding next step. We therefore apply for being included in the SFU arrangement, to make it possible to intensify our long term commitment to contribute to innovation and excellence in healthcare education.

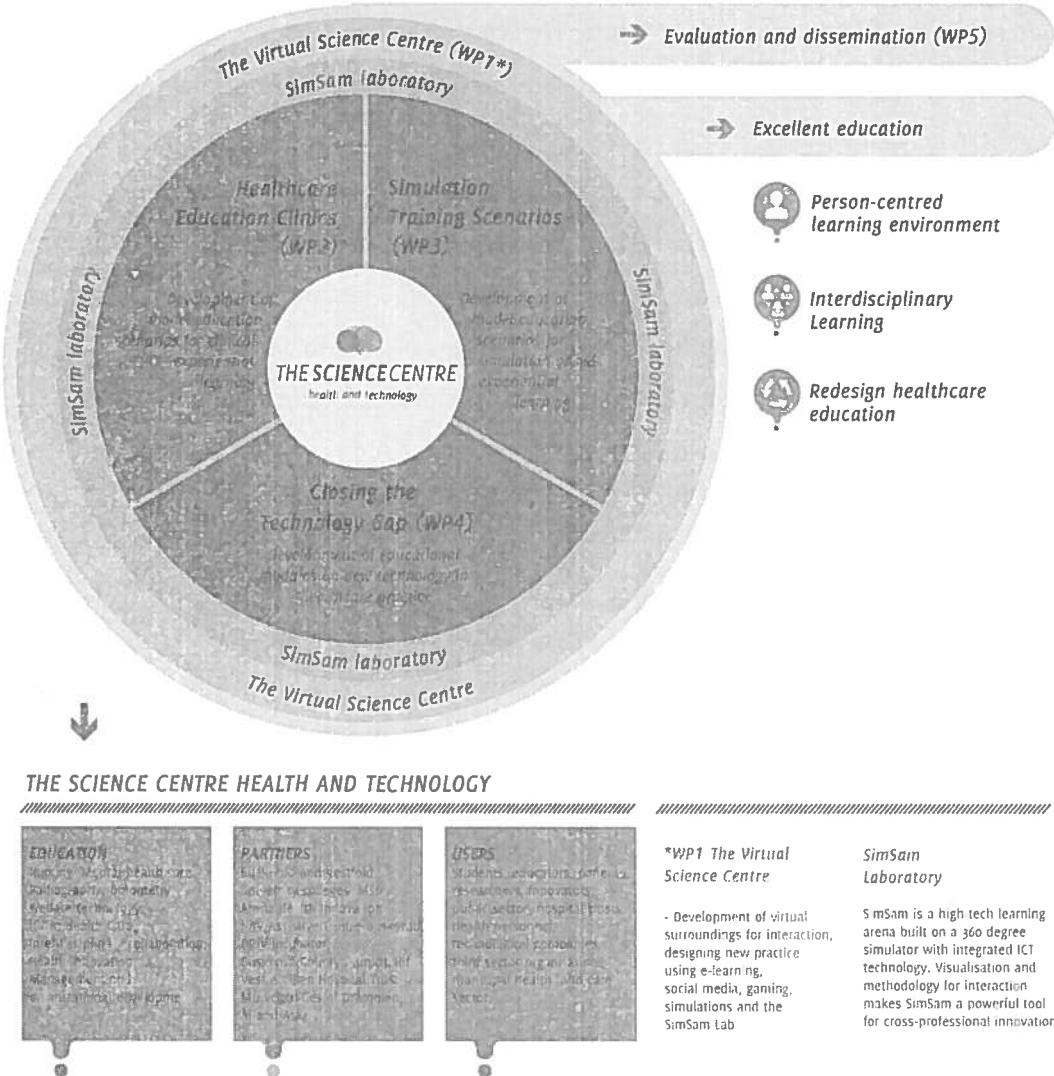
## **Aims**

**The overall aim** of the Science Centre is to develop cutting-edge models for excellent healthcare education, to create new premises for high quality, patient-centred healthcare services.

The centre will include five different, partly overlapping activities or work packages (WP 1-5), aiming at developing new models of educational practice:

1. *The Virtual Science Centre* (WP1) – developing virtual surroundings for interaction and collaboration (including e-learning platform and the SimSam technology), both to facilitate collaborative innovation processes to develop the center activities (WP2-5), and to develop new, technology-based models for collaborative practices and shared decision-making.
2. *Healthcare Education Clinics* (WP2) – develop and run three in-house clinics for experiential learning, in the fields of mental health, elderly care and optometry, for practitioners and students on bachelor and master level. The facilities are in place, the optometry clinic is running.
3. *Simulation Training Scenarios* (WP3) – develop three full scale simulation training scenarios, stimulating experiential learning of communication, collaboration and high quality treatment of patients suffering from stroke, dementia or chronic pain, for students on bachelor and master level and practitioners (further education). Facilities are in place, and simulation training of students on bachelor and master level is included in the programs.
4. *Closing the Technology Gap* (WP4) – develop educational modules on different aspects of technology in healthcare practice, like a) status in the field, b) specific technologies (home care, etc), c) implementation in practice, and d) leading change processes, both for students on all levels and for practitioners and health care leaders. Courses on bachelor and master level are running. More than 70 arrangements for external visitors, including practitioners, researchers and leaders, were organized last eight months.
5. *Evaluation and dissemination* (WP5) – both effect studies and process evaluations will be carried out, and the results (framework, models) will be made accessible to all, in the form of scientific publications, educational course programs on all levels (bachelor,

master, post graduate), educational model packages on the Science Centre's web site, and educational collaboration with healthcare and social services (municipalities, hospitals/hospital trusts, the NAV system, etc).



## Why a SFU at Buskerud University College?

#### **Long term commitment to educational innovation**

Most healthcare educations do their best to cope with the challenges of educating for the future, including new competence requirements, organizational change processes and expectations of innovation and implementation of healthcare and welfare technologies, etc. However, few educational institutions has made educating for the future a long term priority, including close cooperation with user/patients, municipalities/hospitals and technology developers/business partners (Strategy plan 2012-15). Even fewer have yet produced results

in the form of integration of healthcare innovation, welfare technology and simulation training on all levels of teaching, from bachelor to post graduate.

### **Advanced educational facilities**

Buskerud University College has made this long term commitment to educational innovation concrete by developing the Science Center Health and Technology, including training facilities: a hospital ward, a full scale x-ray lab, a hospital bed room for practicing procedures and patient care (including video transmission), an apartment (living room, kitchen, bathroom, bed), fully equipped with welfare technology for training home care, new sense-stimulating technology developed by partners for persons with different types of dementia, facilities for a healthcare education clinic for collaborative practices in mental health and substance abuse, a seminar room including video transmission to cooperating healthcare and educational partners, integrated ICT/Video infrastructure, laboratories and offices for educators, researchers and partners.

### **The SimSam Lab**

In addition to the advanced educational facilities in the Science Centre Health and Technology at the Buskerud University College in Drammen, the SFU will co-operate closely with the SimSam Laboratory, Vestfold University College (Buskerud University College and Vestfold University College will merge by January 1, 2014). The SimSam technology is a unique communication technology, developed with support from EU for innovation and cross-professional collaboration purposes. The SimSam lab is built on a 360 degree simulator, a 130 m<sup>2</sup> soft screen (3,75 m high, 11 m diameter) with integrated ICT technology. The Science Center, Drammen municipality and the regional business cluster of health- and welfare technology have successfully used the SimSam lab in early stages of the development of welfare technology (Gausdal 2012). In the proposed SFU the SimSam technology will be part of the virtual surroundings for interaction. It will be used to facilitate innovation processes in the centre, developing the clinics and simulation scenarios. It will also be tried out as a tool for simulation training, like participating in dialogues, collaboration and shared decision-making involving all parties (patients, professions, institutions, etc) (Gausdal 2008; Capjon & Hjelseth 2012).

### **Closeness to practice and partners**

The Science Center Health and Technology cooperate closely with institutions and users of different kinds. Collaborative partners in the Science Center are Buskerud County, regional

municipalities (Drammen, Ål and Asker), The Regional Labour and Welfare Service (NAV), Vestre Viken Hospital Trust, composed of four hospitals, DRIV incubator and a Regional business cluster (Arena Health Innovation) working with health and welfare technology. DRIV incubator and Arena Health Innovation business cluster are situated in the Science Centre. BUC and the Science Center, has together with the eight municipalities surrounding Drammen and the regional Hospital Trust, Vestre Viken, recently employed an R&D coordinator who will facilitate development of common research and implementation projects, as well as plan education for different groups of health care providers in the municipality health care. The coordinator will be situated in the Science Centre.

### **The academic community**

The Faculty of Health Sciences at the BUC is one of the most productive and competent healthcare research environments in Norway, both according to publication statistics and recognition in the form of external research funding. The faculty staff published more than 50 articles in international peer reviewed journals in the period 2010-13, most of them directly relevant to the centre activities. When it comes to publication points pro faculty member on 1st level (*førstestillingsnivå*), the Faculty of Health Sciences is one of the most productive of Norwegian faculties of health sciences and medicine, in 2012 in fact the most productive of *all* faculties of medicine and healthcare in Norway.

Key participants in the center publish on high international level in fields directly relevant to the center activities, like mental health, substance abuse, elderly care, dementia (also among younger people), stroke, chronic pain, e-health supervision and communication training. Since 2006, the Faculty has received recognition in the form of 35 million NOK in funding from the Research Council of Norway to projects central to the SFU activities, all projects led by professors at the centre:

- Characteristics of post stroke fatigue and related experiences (2006-12),
- Crises resolutions and home treatment in local based mental healthcare (2007-12),
- Care for home based elders with mental health problems (2012-15),
- Care for persons with mental health problems and substance abuse (2012-15),
- Person-centred communication with older persons in need of healthcare (2013-16).

A central aim of the centre is converting research results into practical educational training programs for students on all levels and practitioners. The three last mentioned research projects will run parallel with the center activities.

In addition to the funding from NFR, the Faculty has received funding for person-centred research projects from a series of other sources, like the Norwegian Directorate of Health, National Competence-Centre of Mental Health and several County Municipalities.

Another characteristic feature of the academic community, is that there is a continuous competence development and reflection-upon-practice among staff members going on, writing articles on educational issues. The publication statistics also include faculty member having qualified for associate professor (*førstelektor*). BUC is also ranked as the one of the two university colleges that has been awarded with most Strategic University College Project funding (SHP) from the Research Council of Norway.

## **Quality in established educational activities**

As of today our bachelor and master degree studies have good recruitment. We also have a goals that each students should take 55 study points / year and through this increase the quality.

To ensure the quality of our programs in education, both on bachelor and master level, and for the SFU, an Advisory Board at the Faculty of Health Sciences will be appointed. This Advisory Board will also contribute with advices and their knowhow to the leadership of the SFU. The Advisory Board will consist of staff from the Faculty, students and person from collaborative partners as municipalities, hospital and enterprises. The Advisory Board must highlight the learning outcomes regarding the knowledge, skills and general competence for our students and during this work ensure that the final competence is tailored for the professional health care worker in the future. Furthermore, we will have a joint management group with one leader from each intuition and or partners who participate in our SFU. The steering group for the Oslofjord Alliance will also be a part of this group. The joint management group together with the leadership of the SFU have the responsibility for working out the activity plan and have the overview of the progress in different work packages.

## **Organization of the SFU**

The Science Centre Health and Technology is already established at BUC. Resources are already allocated to the center; the director Janne Dugstad holds a 25% position for leading the Centre activities and has 75% allocated to research and development activities at the Centre, especially focusing on innovation, and learning needs related to implementation of welfare technology. Professor Hilde Eide will be the director of the SFU and use currently

50% of her resources allocated to R&D activities at the Centre. The rest of the position is allocated to being study director of the masters program in Clinical Health Care and other R&D activity including the communication study. The position as study director is actively used to improve education quality and support the staff in their education and research activity. The centre also holds a position of an administrative staff in 80%. As part of the SFU application we increase this position with 20% funding from NOKUT. We also want to strengthen the daily activities with an education coordinator in 75% the first two years and then 50% to continue to develop the centers external education activities. The other key persons and staff will perform the activities at the Centre in their usual positions. The funding from NOKUT will be used to increase the R&D activities both on the technological part (postdoc positions in 75 %) as well as on educational research in health care (PhD student 75% 4 years and a postdoc position from 2016 – 2018). The rest of the NOKUT funding will be used for the distributed SimSam Equipment as well as network cost for evaluation workshops.

## **Description of Work packages**

### **The Virtual Science Centre (WP1)**

*Aim 1: designing new education and practice using gaming and the The SimSam Lab*  
The Virtual Science Centre will consist of a custom-made e-learning platform which interact with the ICT/Video infrastructure in the Science Centre in Drammen, as well as the SimSam Lab. The Virtual Science Centre will be open to students, as well as employees in the municipalities and hospital trusts. Some applications will be open to the public.

*Aim 2: developing a new “e-dialog learning Platform”*

Applying the OFU model, BUC in cooperation with the Arena Health Innovation will delineate a set of requirement for the design of this learning platform. Based on the elicitation of the requirements from various stakeholders, a system will be specified. This technological part is suited for a postdoc-position. Minor parts could be bachelor or masters degree projects under supervisor.

*Aim 3: Development of the SimSam nodes*

This project will explore how to use distributed *SimSam nodes* at other educational sites. A node is a collaborative work station based on the same sense stimulation principles, but the 360 degree simulator is exchanged with a number of flat screens to achieve acceptable cost.

The nodes were developed through EU funding in the MARKIS project – 2013 ([www.markis.eu](http://www.markis.eu)). This study will be aimed at development of collaborative health technology projects in SimSam scenarios of the three above mentioned modes. It will be arranged as a process study, seen as a parallel aspect of differentiated product developments.

### **Health Care Education Clinics (WP2)**

#### *Aim 1: Success factors of in-house clinical training - optometry*

BUC has had an optometric education clinic at the Kongsberg campus for in-house clinical training of bachelor and master students and students of continuous education courses for more than 30 years. The clinic is run as a commercial optometric practice and is open for the public. The clinic is also used for research purposes by students and faculty, and is integrated as a part of the Centre for research on vision and health. In-house clinical training on real patients is not commonly used in healthcare education in Norway. This project will explore success factors, aiming at informing development of the two clinics in the Science Centre.

#### *Aim 2: Developing a clinic for collaborative practices in mental health and substance abuse*

The Clinic is a part of The Institute for research in Mental Health and Substance Abuse. The Clinic consists of two sections: *The clinic* and *The recovery college*. The Clinic will offer therapeutic services for the population in Drammen, as a supplement to the existing services. Students in master and postgraduate programs will practice in the clinic, including doing educational therapeutic outcome research. *The Recovery college* is a collaborative education and development arena organized in partnership between service users, carers and professionals/researchers. The idea is to establish courses focusing on experience based knowledge and offer research findings and knowledge to people struggling with mental health and substance abuse problems as well as the general population in Drammen.

#### *Aim 3: Establishing and educational clinic for health promotion for elderly persons*

To achieve high safety and quality in health promotion, healthcare and rehabilitation all professionals must have integrated knowledge, skills and insight regarding the significance of coordinating and working in team as well as using methods in communication technology. This may contribute to greater and effective collaboration in the health and care chains and between professions (WHO 2010). For this reason a *Clinic for health promotion* for elderly people will be developed and established at the Science Centre for interprofessional learning. The clinic concept; training skills, communication and team collaboration with focus on person centered care (involvement and empowerment), systematic work, data collection and documentation and integration of clinical research for a) bachelor and b) master students in

geriatric health care and c) clinical nursing specialist education. The students at advanced level will use and develop their competence and skills by teaching students at bachelor level. The students will plan and lead information at different levels to elderly persons – individually adapted or as adult education classes.

### **Simulation training (WP3)**

We will develop **three model education scenarios** related to persons suffering from 1) stroke, 2) Chronic pain and 3) dementia. We have substantial research past and ongoing related to these three patient groups with long term illness. We have already made a film (<http://www.viht.no/>) showing how the Science Centre can be used for simulations.

**3.1: Development of the scenarios:** The scenarios will be based on the possibilities for physical simulation in the science centre supported by us of the distributed SimSam laboratory and the e-learning platform also containing knowledge acquisition using gaming. Bachelor students in technology will be actively involved in designing the webbased simulations scenarios in collaboration with health care students as collaborative bachelor projects.

For the three different patients groups we will design learning activities relevant for the specific professions. Based on the functions elicited in the WP1, we will specify use cases based on interactive cooperation between various stakeholders involved in the overall medical environment such as nurses, students, patients, medical companies, hospitals, local communities. It will contribute to enhance the flow of knowledge, interprofessional communication and collaboration, assessment, shared and informed decision making, health information and counseling, medication, and treatment options. We will simulate situations and interprofessional collaboration in the different phases, patient information and assessment of patient reported data and patients preferences through shared-decision making tool, advanced simulation at the intensive care unit with the SimMan 3, patient simulator, care at the hospital ward, the rehabilitation unit, possible assistive technologies through the NAV-“hjelpemiddelsentralen”, and home-based training and rehabilitation with webbased counseling. Evaluation will be both in the form of testing knowledge as well as skills evaluated by specific criteria.

**3.2 Revise existing education programs** (ie. Nursing, optometry and radiography, master in clinical health care) to include the models developed in the SFU. Develop new further education / Master modules / program needed as “Pain management in collaboration with OUS and Advanced clinical nursing.

3.3 Develop a training module for health care workers – in collaboration with the faculty for teacher education, the municipalities and the municipality collaboration coordinator.

### **Closing the Technology Gap (WP4)**

4.1: Develop e-learning for persons working in municipality care – for enhanced competence in using the new technological systems – for all education levels that can be used in the workplace and be supported by on site counseling, group discussions and skills training if that is regarded useful. This is developed and followed by a PhD student in the Science Centre.

4.2 Explore the basis for and establish a bachelor program in technology knowledge and competence, health knowledge, counseling competence and implementation competence.

We believe that setting a special bachelor program focusing on health technology is important in many health care institutions. This educational program combines concepts in healthcare, information technology, and leadership practice to provide students with the knowledge and skills needed for a sustainable health and welfare system.

4.3 Launch a web-based master module in "helseteknologi i samhandling og omsorg". We have developed a specific course introducing different kinds of health technology, dealing with project development and implementation challenges in municipality health care.

4.4 We are currently developing a new master module where principles from Systems Engineering and Lean methodology, which are major focus areas in other faculties at BUC, are introduced in health science when educating in Innovation and Social Entrepreneurship. The SELISE course will be piloted for a large group of managers in the Drammen Municipality Health and Care sector, with a mix of web based learning modules and team training. This module is partly financed by the "Norway Opening Universities – NOU".

### **Evaluation and Dissemination plan (WP 5)**

This project has an action learning design, as well as an action research design. The different WPs will be developed and evaluated by the WP-group, and overall learning outcomes experiences will be evaluated with all the participants across the different WPs. Students on different levels, from secondary school to advanced masters level will play an active role in the development as well as in the assessment of the education modules developed.

We plan to run an on site "Science Centre Conference" each year. The first one was held this year in March. If we are awarded as SFU, this will form an important base for the merger – and stimulate collaborative activities to build a strong new organization.

**Attachment 1: Organization of the proposed SFU, Specification of work packages, WP-leaders and activities**

The SFU will be hosted by Faculty of Health Sciences lead by Dean Heidi Kapstad (PhD)

Professor Hilde Eide will be Director of the proposed SFU  
 Director and Vice dean for Innovation Janne Dugstad is director of the Science Centre Health and Technology.

Work packages	WP1 The Virtual Science Centre	WP2 (a&b) Health Care Education Clinics	WP3 Simulation training scenarios	WP4 Closing the technology gap	WP5 Evaluation and Dissemination
Aim of activities (Input – process- outcome)	Develop the virtual surroundings for interaction and collaboration	Develop and run 3 education clinics	Develop 3 integrated scenarios for full scale simulation including the patients home	Enhance technology competence and innovation skills for different user groups	Use action research methodology for use case development and improvements and controlled designs for evaluation of learning outcome and quality of education environment
WP - leaders	Professor Hilde Eide	Professor Kirsti Skovdal	Associate professor Lise Gladhus	Director Janne Dugstad	Professor Hilde Eide
WP- group participants	Professor Jan Capjon Professor Aurilla Arntzen Director Petter Stølen (AHI) Associate Professor Anne Gausdal Postdoc technology Student and user representatives	Institute director Turid Irene Jacobsen Institute director Bente Monika Aakre Prof. Marit Borg Prof. Lisbeth Fagrestøm Prof .Bengt Karlsson, Associate prof. Grethe Eilertsen Associate prof Helle Falkenberg, Associate Prof. Rolf Sundet, Associate Prof. Ottar Ness - Student representatives - users and municipality representatives	Associate prof. Grethe Eilertsen associate prof Siv Venke Gran, Associate professor Olaf Hallan Graven Associate professor Liv Helene Jensen Associate prof Marthe Ljosaa, Assistant prof Jill Flo, Assistant prof Dorte Kristensen, Assistant prof Elisabeth Solheim, Institute director Aud Mette Myklebust	Prof. Aurilla Arntzen Associate prof. Olaf Hallan Graven Associate Prof Monika Gausdal Associate prof. Sidsel Hofstun Knudsen adjunct associate prof Thomas Harding - Student representatives - users and municipality representatives - Other staff taking part in the education programs	All WP – leaders and participants in the WP's

		<ul style="list-style-type: none"> <li>- Other staff taking part in the education programs</li> </ul>	Postdoc technology PhD-student evaluation of health care education	
Outcome	User friendly technological surroundings for interprofessional learning and collaboration	<ul style="list-style-type: none"> <li>- Alternative settings for in-practice development of knowledge and skills</li> <li>- Outcome measures for clinical competence</li> </ul>	<ul style="list-style-type: none"> <li>- Student representatives</li> <li>- users and municipality representatives</li> <li>- Other staff taking part in the education programs</li> </ul>	
Evaluation	Iterative development processes, use case evaluation, feasibility studies	<ul style="list-style-type: none"> <li>- Learning outcome for students at different levels, including Objective Structured Clinical Exams (OSCE), Qualitative interviews, Student and teacher satisfaction, Knowledge test</li> </ul>	<ul style="list-style-type: none"> <li>- Alternative settings for in-practice development of knowledge and skills</li> <li>- Outcome measures for clinical competence</li> </ul>	<ul style="list-style-type: none"> <li>- Enhanced competence in implementation and use of technology to support practice improvement and user outcomes</li> </ul>
International Collaboration			<ul style="list-style-type: none"> <li>- Feasibility studies</li> <li>- Learning outcome for students at different levels, including Objective Structured Clinical Exams (OSCE), Qualitative interviews, Student and teacher satisfaction, Knowledge test</li> </ul>	<ul style="list-style-type: none"> <li>- Controlled trials - Comparing learning outcome through existing models - and revised models with alternative in-practice learning</li> </ul>
Partners in the Science Centre Health and technology			<p>Faculty of Health Sciences has several formal agreements especially relevant for the Science Centre: University of Ulster, Yale university, Örebro University and Kaunas University, Glasgow Caledonian University.</p> <p>The dedicated persons that will collaborate from these institutions are:</p> <ul style="list-style-type: none"> <li>- Professor Bredan Mc Cormack, University of Ulster, adjunct professor at BUC;</li> <li>- Professor Larry Davidson, Yale University, adjunct professor at BUC</li> <li>- Professor Kirtsí Skovdahl, professor at BUC, adjunct professor at Örebro University;</li> <li>- Professor Sandra van Dulmen, Netherlands Institute for Health Services research, Radboud University, adjunct professor at BUC and Professor Debra Roter, – Johns Hopkins University, partner in the RCN project Communication with older persons, development of a research based education platform</li> </ul>	<p>Revised professional education programs in nursing, optometry and radiography</p> <p>Learning outcome for students at different levels, including Knowledge tests, Certificates, Qualitative interviews, Student and teacher satisfaction, Knowledge test</p>

Formal agreements on collaboration on education and R&D activities	- The 8 municipalities, VVHT and BUC - collaboration on implementation of the coordination reform - NAV National collaboration partners are the Oslo Fjord Alliance (OFA), and the Partners in the Science Centre.
Dissemination	All activities posted on the website <a href="http://www.viht.no">www.viht.no</a> Yearly Science Centre Conference Publish in relevant national and international peer reviewed Journals Disseminate through different national and international conferences Uptake in “education as usual”

## Appendix 2 Timeline for WP activities

Activity	Year 1 - 2014	Year 2 - 2015	Year 3 - 2016	Year 4 - 2017	Year 5 - 2018
WP1	1.1 Develop the first version of the web-based learning environment 1.2 Develop and test cases for interprofessional collaboration for the distributed SimSamLab	1.1 Refine the webbased learning environment 1.2 Use the cases developed (in WP 3) in education	1.1 Use the application – evaluate – adjust 1.2 Regular use in education – dissemination	1.1 Regular use and dissemination – 1.2 Further technological development and refinement	Continue to develop the concept framework of gaming and simulation-based learning and the
WP2	2a.1 Run 1 <sup>st</sup> cohort student – practice 2a.2 Develop and Offer recovery college 2.b1 Plan clinic together in BVUC	2.a (1&2) Offer education and therapy – Evaluate both learning outcome and client outcome 2.b Run 1 <sup>st</sup> cohort student practice with bachelor and masters students	2.a (1&2) Offer education and therapy – Evaluate both learning outcome and client outcome 2.b Run revised student practice with bachelor and masters students – evaluate learning outcome in a controlled design	2.a (1&2) Offer education and therapy – Evaluate both learning outcome and client outcome 2.b Run student practice with bachelor and masters students – evaluate learning outcome in a controlled design	2.a (1&2) Offer education and therapy – Evaluate both learning outcome and client outcome 2.b Run student practice with bachelor and masters students – evaluate learning outcome in a controlled design
WP3	3.1 Develop the cases and scenarios for the simulation training 3.2 Strategic planning for revision of programs in BVUC – collaboration 3.3 Continue to develop and offer modules for secondary education of health care workers (helsefaggarbeidere)	3.1 Small scale testing and evaluation of the different scenarios. Plan large scale curriculum revision - and seek permission for a trial of a revised program 3.2 Implement revisions according to strategic planning 3.3 Offer these modules as	3.1&2 Start with revised study plan for nursing education in a controlled study design – intergration of WP 2 and 3	3.1&2 Second year of revised curriculum in nursing education	3.1&2 Third year of revised curriculum in the first cohort with new education model.

WP4	<p>4.1 Develop different course packages – related to the different types of technology – small scale testing and evaluation</p> <p>4.2 Explorative workshops to determine the ground for this bachelor education</p> <p>4.3 Offer an e-learning based module of the masters module in “Health technology in Interaction and care.”</p> <p>4.4 Offer the SELISE module on an e –learning platform</p>	<p>4.1 Continue to offer education to different groups implementing technology</p> <p>4.2 Plan education program if found feasible and needed.</p> <p>4.3 Continue to offer the course – evaluate – improve</p> <p>4.4 Continue to offer he course – evaluate, improve</p>	<p>4.1 Run e-learning courses - evaluate</p> <p>4.2 Run bachelor program in welfare technology</p> <p>4.3 Continue to offer the course – evaluate, improve</p> <p>4.4 Continue to offer he course – evaluate, improve</p>	<p>4.1 Run e-learning courses - evaluate</p> <p>4.2 Run bachelor program in welfare technology</p> <p>4.3 Continue to offer the course – evaluate, improve</p> <p>4.4 Continue to offer he course – evaluate, improve</p>
WP5		<ul style="list-style-type: none"> <li>- Yearly Science Centre Conference</li> <li>- Yearly evaluation workshop in the Sim Sam lab</li> <li>- Plan evaluation projects</li> </ul>	<ul style="list-style-type: none"> <li>- Yearly Science Centre Conference</li> <li>- Yearly evaluation workshop in the Sim Sam lab</li> <li>- Development of the fundaments for alternative learning trajectories</li> <li>- Plan the randomized controlled study</li> </ul>	<ul style="list-style-type: none"> <li>- Yearly Science Centre Conference</li> <li>- Randomized controlled study</li> <li>- Alternative nursing education program</li> <li>- Yearly evaluation workshop in the Sim Sam lab</li> <li>- Extended collaborative activites -</li> </ul>

## Budget - Overview

Expenses/Year	2014	2015	2016	2017	2018
Salaries	3 772 129	3 910 714	4 267 805	4 668 423	4 462 014
Equipment	3 546 000	3 546 000	3 546 000	3 546 000	3 546 000
Other costs incl. travel expenses	957 806	888 418	603 292	277 519	561 765
<b>Total</b>	<b>8 275 935</b>	<b>8 345 132</b>	<b>8 417 097</b>	<b>8 491 942</b>	<b>8 569 779</b>

## Budget - Detailed

	2014		2015		2016		2017		2018	
	HIBV/Partners	SFU	HIBV/Partners	SFU	HIBV/Partners	SFU	HIBV/Partners	SFU	HIBV/Partners	SFU
Infrastructure/technical equipment	3 546 000		3 546 000		3 546 000		3 546 000		3 546 000	
Salary expenses*	1 729 935		1 799 132		1 871 098		1 945 942		2 023 779	
PhD evaluation of health education	75 %	697 500		719 250		741 495		763 725		343 676
Post doc I, technology	75% (2014-2017), 100 % (2018)	697 500		719 250		741 495		763 725		823 000
Post doc II, health	50 % (2016), 75 % (2017 & 2018)					499 000		763 725		823 000
Administration	40% (2014-2015), 20 % (2016-2018)	225 111		234 115		97 392		101 287		105 339
Education coordinator	75% (2014-2015), 50 % (2016-2018)	422 083		438 966		317 326		330 019		343 220
Equipment expenses** and other network costs, travel etc.	957 806		888 418		603 292		277 519		561 765	
Total	5 275 935	3 000 000	5 345 132	3 000 000	5 417 098	3 000 000	5 491 942	3 000 000	5 569 779	3 000 000

\*Director of SFU, Director of SCHT

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\*\* Distributed Simsam 2014-2015

## ATTACHMENT

### PARTNERS IN THE SFU APPLICATION

This SFU application is initiated by the Science Centre Health and Technology, which is initiated and owned by the Faculty of Health Sciences, Buskerud University College (BUC). The Science Centre opened on 27<sup>th</sup> September 2012. It was initiated in order to further develop the education programs, research and innovation which BUC is responsible for, and which traditionally have been run in close cooperation with public and private partners and academic institutions in Norway and internationally. Several partners are involved in the Science Centre. Most of these have been cooperating with BUC for many years before establishing the Science Centre. We have signed contracts with the partners regarding our common interest in running and developing the Science Centre. All contracts are in Norwegian and can be provided upon request.

#### List of partners:

Arena Health Innovation business cluster

The Norwegian Labour and Welfare Service, Buskerud

Vestre Viken Health Trust

Buskerud County Municipality

Vestfold University College

Municipality of Drammen

Municipality of Ål

Municipality of Asker

MSD/Merck

BUC and Vestfold University College will merge into Buskerud and Vestfold University College as of 1<sup>st</sup> January 2014. This is decided by the Ministry of Education and Research (letter is attached).



Ifølge liste

Deres ref.

Vår ref.

12/3897-

Dato

15.11.2012

### Sammenslåing av høyskolene i Buskerud og Vestfold

Vi viser til brev 20. september 2012 med søknad om sammenslåing av høyskolene i Buskerud og Vestfold.

Ved kongelig resolusjon 26. oktober 2012 er det bestemt at Høgskolen i Buskerud og Høgskolen i Vestfold fra 1. januar 2014 skal organiseres som én institusjon under navnet Høgskolen i Buskerud og Vestfold (HiBV), jf. vedlagte kongelig resolusjon. Beslutningen er truffet på bakgrunn av søknad fra de to høyskolene.

Departementet har besluttet å forlenge funksjonsperioden til styrene for høyskolene og åremålsperioden til rektor ved Høgskolen i Buskerud frem til 31. desember 2013.

Høyskolene har foreslått at departementet oppnevner et fellesstyre for å lede arbeidet med integreringen av de to institusjonene frem til 1. januar 2014. Vi viser i den sammenheng til at departementet i særlig tilfelle kan fastsette annen styresammensetning eller styreordning enn loven normalt anviser, jf. universitets- og høyskoleloven § 9-3 femte ledd. På bakgrunn av dette har departementet oppnevnt et fellesstyre med slik sammensetning:

Leder:

Steinar Stjernø

Medlemmer:

Petter Aasen  
Kristin Ørmen Johnsen  
Anne Wenche Lindboe

Varmedlemmer:

Jorun Ulvestad  
Gunnar Horgen  
Eva Lian

**Medlemmer (forts.):**  
Sverre Gotaas  
Hans Sverre Sjøvold  
Helen Bjørnøy  
Maria-Karine Aasen Svensrud  
Siri Svanemyr Eriksen  
Carsten Tobiassen  
Santhos Rathakrishnarajah  
Solveig Østrem  
Marit G. Engseth  
Jan Mehlum  
Bjørn Ove Grønseth  
Hanne Kristin Solberg  
Kari Egelandsdal

**Varamedlemmer (forts.):**  
Per Steinar Jensen  
Jørn Rangnes  
Zahra Moini  
Tonje Berg  
Maria Borgersen  
Magnus Kne Hansen  
Mathilde Thorsen  
Tor Erik Jensen  
Anne Grethe Steinsvåg  
Berit Bratholm  
Per Lundmark  
Bjørnar P. Wølner  
Carl Henrik Eriksson

I tråd med forslag fra institusjonene har departementet fastsatt mandat for fellesstyret.  
Fellesstyret skal:

- Fastsette valgreglement for valg av rektor og styre, og sørge for at valg gjennomføres i tråd med dette.
- Tilsette administrerende direktør.
- Ferdigstille organisasjonsmodell.
- Tilsette faglige og administrative ledere.
- Utvikle virksomhetens strategi og styringsmodell, gjennom målstruktur, budsjett og ev. fremme søknader om akkrediteringer for studieåret 2014/2015.

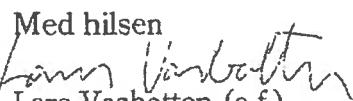
Vi oppfordrer fellesstyret til å se hen til den plattform for sammenslåingen som er uarbeidet av høyskolene.

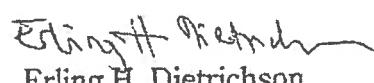
Videre ber vi fellesstyret foreslå sin godtgjørelse, som fastsettes av departementet.

Vi ber institusjonene om å ta kontakt med fellesstyrets leder og medlemmer, og tilrettelegge arbeidet for fellesstyret.

Departementet vil tildele 14 mill. kroner til arbeidet med sammenslåingen, og vil komme nærmere tilbake til utbetaling av disse.

Vi ønsker lykke til med arbeidet.

Med hilsen  
  
Lars Vasbotten (e.f.)  
avdelingsdirektør

  
Erling H. Dietrichson  
seniorrådgiver

Vedlegg



## **Curriculum Vitae**

Hilde Eide, RN, Dr. Philos. (PhD),  
Born in Oslo, February 26th 1953.  
Married, 3 children, 5 grandchildren.

### **Current main position:**

Professor, "Clinical Communication and Health Counselling"  
Study director Master of Clinical Health Care  
Head of Research, Science Centre Health and Technology  
Faculty of Health Sciences, Buskerud University College  
PO Box 7053, 3007 Drammen, Norway, Tel +47 48243096.  
E-mail: Hilde.Eide@hibu.no

### **Education:**

- 2004 Dr. Philos. The Medical Faculty, University of Oslo. Title of thesis: "Communication in Medical Specialist settings. Patient Concerns and Satisfaction in Relation to Patient-Physician Communication".  
1992 Cand.Polit. (MA) in psychology, University of Trondheim. Title of thesis: "Psycho-social Support to Breast Cancer Patients. The Effect of Rehabilitation Courses at the Montebello Centre"  
1991 Cand. mag. (Bachelor), University of Oslo  
1979 Registered Nurse, Ullevål College

### **Supervision PhD students**

#### *Completed:*

Kristin Haraldstad: KIDSCREEN Health Related Quality of life in children and adolescents. Main supervisor Professor Sølvi Helseth Oslo and Akershus UC. (co-supervisor)

#### *In progress:*

Ólöf Birna Kristjánsdóttir: "Stimulating self-management in patients with fibromyalgia syndrome through web-based situational feedback" (NRC. 182014/V50).1.7 2007 -15.06. 2013; (project leader and main supervisor) (3.2 MNOK from NFR)

Andréa Nes "Written online situational feedback via mobile phone to support self-management - Exploring mechanisms ". (main supervisor) 1.1 2009 – 30.11 2013

Katrine Gahre Fjeld: "Prevention of Oral infections in elderly persons in nursing homes. Project leader and main supervisor Ass. Prof Tiril Willumsen, Faculty of Odontology fakultet, UiO. 1.3 2011 – 1.3 2014. (co-supervisor)

Espen Brembo "Shared decision making and health technology. The development and feasibility testing of a web-based decision aid for patients diagnosed with osteoarthritis of the hip or knee". Prosjekt leader hovedveileder (KD –finansiert HiBu), med Heidi Kapstad (biveileder) i samarbeid med vestre Viken HF / Drammen sykehus 1.2 2013 – 30.1 2017

Janne Dugstad " Health and technology – higher education and innovation – a mixed methods approach." Project leader, main supervisor 1.1 2013 – 30.12 2016

Aud Mette Myklebust: New models of radiological service delivery in rural areas. Caldonian University Scotland (co-supervisor)

To be employed " Person centered communication with older persons in need of health care. Development of a research based education platform" (NRC, 1.6 2013 - 31.5 2017, 7,95 MNOK)

### **Supervision Master degree students:**

13 candidates completed their theses

7 in progress

## Publications

### Scientific papers (peer review)

1. Kristjansdottir O, Fors EA, Eide E, Finset A, van Dulmen S., Stensrud TL, Wigert S, H Eide H A smartphone-based intervention with diaries and therapist-feedback to reduce catastrophizing and increase functioning in women with chronic widespread pain. Part 2. 11-month results of a randomized controlled trial. *J Med Internet Res* 2013 | vol. 15 | iss. 3 | e72 |
2. Nes A, Eide H, Kristjansdottir O, van Dulmen S. Web-based, self-management enhancing interventions with e-diaries and personalized feedback for persons with chronic illness; a tale of three studies. In Press. *Patient education and Counseling*
3. Kristjansdottir O, Fors EA, Eide E, Finset A, van Dulmen S., Stensrud TL, Wigert S, H Eide H A smartphone-based intervention with diaries and therapist-feedback to reduce catastrophizing and increase functioning in women with chronic widespread pain: randomized controlled trial. *J Med Internet Res.* 2013 Jan 7;15(1):e5. doi: 10.2196/jmir.2249.
4. Heyn I, Ruland CM, Eide H, Finset A. Effects of an interactive tailored patient assessment on patient-provider communication in cancer care. *Psycho-Oncology*, 2013 Jan;22(1):89-96. doi: 10.1002/pon.2064. Epub 2011 Sep 15.
5. Andenæs R, Fagermoen MS, Eide H, Lerdal A. Changes in health-related quality of life in persons with morbid obesity after attending a learning and mastery course. A longitudinal study with 12-months follow-up. *Health and Quality of Life Outcomes* 2012, 10;10(1):95.
6. Nes A, van Dulmen S, Eide E, Finset A, Steen I, Eide H. I-Care: Stimulating self-management in patients with type 2 diabetes through web-based situational feedback. Development and feasibility of an intervention. *Diabetes Research and Clinical practice* 2012, 97,3:385-393.
7. Heyn L, Ruland CM, Eide H, Finset A. Talking about feelings and worries in cancer consultation - the effects of an interactive tailored symptom assessment on source, explicitness, and timing of emotional cues and concerns. *Cancer Nursing* (In press)
8. Eide Hilde, Stein Foss, Margareta Sanner, Robbie Mathiesen. Organdonasjon og legers behov for opplæring, *Det Norske legetidsskriftet*, 2012, 10, 132, 1235-1238
9. Sandra van Dulmen, Gerry Humphris, Hilde Eide. Towards a guideline for person-centred research in clinical communication; lessons learned from three countries. *International Journal of Person Centered Medicine*, 2012, 1, 58-63
10. Söderhamn U, Landmark B, Aasgaard L, Eide H, Söderhamn O. Volunteering in dementia care – A Norwegian phenomenological study. *Journal of Multidisciplinary Healthcare*. 2012;5:61-7. Epub 2012 Feb 22
11. Jelin E, Granum V, Eide H (2012). Experiences of a web-based nursing intervention—interviews with women with chronic musculoskeletal pain. *Pain Management Nursing*, 2012 Mar;13(1):2-10
12. Kristjansdottir O, Fors EA, Eide E, Finset A, van Dulmen S, Hørven Wigert S, Eide H. Written situational feedback via mobile phone to support self-management of chronic widespread pain: a usability pilot study. *BMC – Musculoskeletal disorders* 2011, 12:51. doi:10.1186/1471-2474-12-51
13. Meyer K, Bjørk IT, Eide H. Intensive care nurses perceptions of their professional competence in the organ donor process - A national survey. *Journal of Advanced nursing*, 2012 ;68(1):104-15. doi: 10.1111/j.1365-2648.2011.05721.x. Epub 2011 Jun 7.

14. Tschudi-Madsen C, Eide H. (2011). Hvordan opplever sykepleiestudenter at deltagelse i et fagutviklingsprosjekt styrker deres faglige identitet? [How does participation in a development project contribute to development of nursing students' professional identity?] I Løkensgård Hoel, T (red). FoU i praksis 2010, konferansebidrag. Tapir forlag
15. Anners Lerdal, Randi Andenæs, Eva Bjørnsborg, Tore Bonsaksen, Lisbet Borge, Bjørg Christiansen, Hilde Eide, Kari Hvinden and May Solveig Fagermoen. Personal factors associated with health-related quality of life in persons with morbid obesity on treatment waiting lists in Norway. *Quality of Life Research*, 20:1187-1196 DOI 10.1007/s11136-011-9865-z
16. Eide H, Sibbern T, Egeland T, Finset A, Johannessen T, Miaskowski C, Rustøen T. (2011) An Interaction Analysis of Fibromyalgia Patients' communication of Cues and Concerns in their First Consultation with a Nurse at a Pain Clinic. *Clinical Journal of Pain*, 27(7): 602-10
17. Hilde Eide, Tonje Sibbern, Tone Johannessen (2011). How empathic accurate are nurses immediate responses to fibromyalgia patients' expressions of negative emotions? Evaluation through interaction analysis. *Journal of Advanced nursing* 67(6), 1242–1253. doi: 10.1111/j.1365-2648.2010.05579.x
18. Eide, Hilde, Eide, Tom, Rustøen, Tone, Finset. Patient validation of Cues and Concerns identified according to Verona-CoDES. A Video – and Interview Based Approach. *Patient education and counselling* 82 (2011) 156–162
19. Eide Hilde, Eide Erlend, Kristjansdottir Olof; van Dulmen Sandra: Mobile Health Care and Health Behavior Change – Development of a System for Virtual Counseling based on Written Diary Questionnaires and Situational Feedback. Conference proceedings UNITECH 2010, ISBN 978-82-519-2546-4, Tapir, Trondheim, s. 59-70. <http://www.iu.hio.no/~frodes/unitech10/proceedings.html>
20. Graugaard, Peter; Rogg, Lotte; Eide, Hilde; Uligh, Till; Loge, Jon Håvard. Ways of providing the patient with a prognosis: a terminology based on qualitative data. *Patient education and counselling* 2011 83(1):80-6.
21. Kristin Haraldstad , Knut- Andreas Christophersen, Gerd Karin Natvig, Hilde Eide, Sølvi Helseth and the KIDSCREEN Group Europe. Health-related quality of life in children and adolescents: Reliability and validity of the Norwegian version of the KIDSCREEN-52 questionnaire: A cross-sectional study. *International Journal of Nursing Studies* 2011, 48(5):573-581 doi:10.1016/j.ijnurstu.2010.10.001
22. Kristin Haraldstad, Knut-Andreas Christophersen, Hilde Eide, Gerd Karin Natvig, Sølvi Helseth. Predictors of health-related quality of life in a sample of children and adolescents, a school survey. *Journal of Clinical nursing*. 2011 20(21-22):3048-56. doi: 10.1111/j.1365-2702.2010.03693.x. Epub 2011 Feb 15.
23. Zimmermann C, Del Piccolo L, Bensing J, Bergvik S, De Haes H, Eide H, Fletcher I, Goss C, Humphries G, Kim Y-M, Langewitz W, Meeuwesen L, Nuebling M, Rimondini M, Salmon P, Wissow L, Zandbelt L, van Dulmen S, Finset A. Coding Patient Cues and Concerns in Medical Consultations: The Verona Coding Definitions of Emotional Sequences (VR-CoDES).). *Patient education and counselling*, 2011, 82, 2: 141-148.
24. Del Piccolo L, de Haes H, Heaven C, Jansen J, Verheul W, Bensing J, Bergvik S, Deveugele M, Eide H, Fletcher I, Goss C, Humphries G, Kim Y-M, Langewitz W, Mazzi MA, Mjaaland T, Moretti F, Nübling M, Rimondini M, Salmon P, Sibbern T, Skre I, van Dulmen S, Wissow L, Young B, Zandbelt L, Zimmermann C, Finset A. Coding provider responses to cues and concerns: Development of the VR-CoDES-P framework. *Patient education and counseling*, 2011, 82, 2: 149-155.

25. Haraldstad, Kristin, Sørum, Ragnhild, Eide, Hilde, Natvig, Gerd Karin, Helseth, Sølvi. Pain in children and adolescents. Prevalence, Impact on daily life, and parent's perception: A school survey. *Scandinavian Journal of Caring Sciences*, 2011, 25(1), 27-36. DOI: 10.1111/j.1471-6712.2010.00785.x
26. Fjæra Brit, Tirill Willumsen, Hilde Eide. Eldre pasienter i hjemmesykepleien og tannhelse - En tverrfaglig studie med studentdeltakelse. *Sykepleien forskning*, 2010, 2,
27. Willumsen, Tiril; Fjaera, Brit; Eide, Hilde. "Oral health – related quality of life in patients receiving home care nursing: associations with aspects of dental status and xerostomia", *Gerodontology* 2010 27(4): 251-7.
28. Reitan AM, Eide H. Kreftsykepleie og kompetanseutvikling fra utdanning til klinikk – en evaluering av videreutdanning i kreftsykepleie. 2009, *Vård i Norden*, 3, 8-12.
29. Gude T, Vaglum P, Anvik T, Bærheim A, Fasmer OB, Grimstad H, Hjortdahl P, Holen A, Nordøy T, Eide H. Do physicians improve their communication skills between finishing medical school and completing internship? A nationwide prospective observational cohort study. *Patient education and Counseling*. 2009 Aug;76(2):207-12. Epub 2009 Jan 9
30. Gude T, Vaglum P, Anvik T, Baerheim A, Eide H, Fasmer OB, Graugaard P, Grimstad H, Hjortdahl P, Holen A, Nordoy T, Skirbekk H, Finset A. Observed communication skills: how do they relate to the consultation content? A nation-wide study of graduate medical students seeing a standardized patient for a first-time consultation in a general practice setting. *BMC Med Educ*. 2007 8;7:43.
31. Peter Graugaard, Kjersti Holgersen, Hilde Eide & Arnstein Finset. Changes in physician-patient communication from initial to return visits: a prospective study in a haematology outpatient clinic. *Patient Education and Counseling*, 2005, 57, 22-29.
32. Eide Hilde, Richard Frankel, Anne Christins Bull Haaversen, Kjerstin Anine Vaupel, Peter Graugaard, Arnstein Finset. Listening for feelings. Identifying and coding empathic and potential empathic opportunities in medical dialogues. *Patient Education and Counseling*, 2004, 54(3):291-7.
33. Stabell, Aase, Hilde Eide, Gunnel Anita Solheim, Kari Nässelqvist Solberg, Tone Rustoen. Interaction and Nursing home resident's dependence and independence at mealtimes. An Observational Study. *Journal of Clinical Nursing*, 2004, 6 :677-86.
34. Eide, Hilde. *Communication in Medical Specialist settings. Patient Concerns and Satisfaction in relation to Patient-Physician Communication. Thesis for the degree of Dr. Philos*, Faculty of Medicine, University of Oslo. Unipub 2004 (5 av artiklene er spesifisert i denne listen)
35. Eide, Hilde, Vicenç Quera, Peter Graugaard & Arnstein Finset. Sequential patterns of physician-patient dialogue surrounding cancer patient's expression of concern and worry. Applying sequence analysis to RIAs. *Social Science in Medicine*, 2004, 59, 1 : 145-155.
36. Finset, Arnstein, Øivind Ekeberg, Hilde Eide & Knut Aspegren. Long Term Benefits of Communication Skills Training for Cancer Doctors. *Psycho-Oncology*, 2003; 12, 7:686-693.
37. Graugaard, Peter, Hilde Eide & Arnstein Finset. Interaction analysis of Physician - Patient Communication: The Influence of Trait Anxiety on Communication and Outcome. *Patient Education and Counseling*, 2003, 49:149-156.
38. Eide, Hilde, Peter Graugaard, Kjersti Holgersen & Arnstein Finset Physician communication in different phases of a consultation at an oncology outpatient clinic related to patient satisfaction. *Patient Education and counseling*, 2003; 51,3:259-266.

39. Eide,H., Quera,V., and Finset,A., Exploring rare patient behaviour with sequential analysis: Methodological aspects, *Epidemiologia e psichiatria sociale*, 12 (2003) 109-114.
40. Sandvik, Margareth, Hilde Eide, Marianne Lind, Peter Graugaard, Jorun Torper, Arnstein Finset Analysing medical dialogues: Strengths and weaknesses of Roter's interaction analysis system (RIAS). *Patient Education and Counseling*, 46 (2002), 235-241.
41. Eide, Hilde, Per Nerdrum og Margaret Sandvik. Hjelpende kommunikasjon. Evalueringsmetoder og instrumenter [Helping communication. Evaluation methods and instruments]. *Nordisk Psykologi*, nr 3, 2002, 179-200.

#### **Books, book chapters, scientific reports**

42. Eide H, Eide T: Kommunikasjon i relasjoner – det lille som gjør en forskjell. I Kjetil Johnsen og Hans Otto Engvold (red). *Klinisk kommunikasjon i praksis*. Under utgivelse, Universitetsforlaget, Oslo (planlagt utgivelse april)
43. Hilde Eide, Ólöf B. Kristjánsdoóttir, Andrea Nes. Kommunikasjonsteknologisk helseveileddning - kognisjon, emosjonalitet og betydningen av situasjonsfeedback. I Lerdal A og Fagermoen MS (red). *Læring og mestring - et helsefremmende perspektiv i praksis og forskning*. 2011, Gyldendal Akademisk; Oslo
44. Eide, Tom and Hilde Eide. *Verdien av en verdiintervensjon. En studie av verdiarbeid i et norsk sykehus* [The value of a value-intervention. A study of working with values in a Norwegian Hospital]. Vitenskapelig rapport 2/08. Oslo: Diakonhjemmet University College, 2008 (50 p.)
45. Eide Hilde. Kommunikasjon, relasjon og smerte [Communication, relationship and pain] in Tone Rustøen og Astrid Wahl (ed). *Ulike tekster om smerte. Fra nocicepsjon til livskvalitet* [Different texts about pain. From nociception to Quality of Life]. Oslo: Gyldental Academic Press, 2008.
46. Eide, Hilde & Tom Eide. *Kommunikasjon i relasjoner. Samhandling, konfliktløsning, etikk* [Communication in relationships]. Second Edition, Oslo: Gyldental Academic Press, 2007 (450 p.) (1th edition 1996). (oversatt til svensk og dansk).
47. Eide Hilde & Tom Eide. Gylne øyeblikk i samtalen med pasienten [Golden moments in doctor - patient communication]. In: Hem E, Fyrand L, Nerdrum P, Vaglum P, (ed). *Pasienten og sykdommen – om psykiske faktorer ved somatisk sykdom* [The patient and his illness – about psychological factor and somatic disease]. Oslo: Gyldental Academic Press, 2007.
48. Eide, Tom & Hilde Eide. *Kommunikasjon i praksis. Relasjoner, samspill og etikk i de sosialfaglige utdanningene* [Communication in practice]. Oslo: Gyldental Academic Press, 2004 (300 p.). (oversatt til svensk)
49. Eide, Hilde, Per Nerdrum, og Margaret Sandvik. Evalueringsmetoder for hjelpende kommunikasjon. *Rapport til Forskningsrådet*. 2001. NFR-finansiert prosjekt. Prosjektleader: Per Nerdrum.

#### **Tasks / committees**

- 2013 Dissertation committee Janicke Nordmann. Radbout University, The Netherlands.
- 2011 – 2013 Member of the working group writing an application for PhD in Health Care at BUC
- 2012 National deputy European Association for Communication in Health Care
- 2012 Reviewer The Italian Research and University Evaluation Agency, Review of production from 2004-2010.
- 2012 Annica Ernesäter, Planned September 2012, National telephone advice in Sweden –

- communication and safety issues. University of Uppsala
- 2011 - Leader of the Advisory Board of the Fibromyalgia Association, Norway
- 2007 - Member of the Scientific Committee, International Conference on Communication in Health Care, Yearly conference
- 2010 Dissertation committee. 1st opponent. PhD fellow Elin Damsgård. Thesis: "Activity related pain in patients with musculoskeletal disorders. An exploratory study". Tromsø University. Norway.
- 2009 Dissertation committee. 1st opponent. PhD fellow Per Egil Kummervold. Internet-Based Patient Communication. Institute of Clinical Medicine, Tromsø University. Norway.
- 2008 Dissertation evaluation committee. 2nd opponent; PhD fellow Deede Gammon, "Telemedicine, Meta-theory, and a Case. Institute of Clinical Medicine, Tromsø University. Norway.
- 2008-2010 Coordinator research area Clinical Nursing Science and Health Care. Faculty of Nursing/Oslo University College
- 2006- 2013 Member of the research committee of European association for communication in health care, "R-EACH"
- 2006-2008 Leader of a work group with the aim of suggesting a teaching program for health care personal working with organ donation. (the Norwegian Directorate for Health)
- 2005- 2010 Member of Research and Development Committee (FoU-utvalg) at the Faculty of Nursing

#### **Ongoing International Research Cooperation**

1. European network on sequence analysis in communication research, headed by professor Christa Zimmermann, University of Verona
2. Cooperation with the NIVEL (Netherlands Institute for Health Services) on communication research (present projects on "Situational feedback")

#### **Teaching**

Teaching communication skills at all levels, from bachelor to masters degree students to lecturers in communication, and different professional groups; nurses, medical students, physicians, pharmacists and pharmaceutical students, and other health care professions.

#### **Memberships**

EACH – European Association for Communication in health care

AACH – American Association for communication in health care

IASP – International Association for the Study of Pain

Norwegian Pain Association

Norwegian nurse association

#### **Referee**

*Patient Education and Counselling, Journal of Genetics, Social Science and Medicine, Dansk tidsskrift for sygepleieforskning, BMC Nursing, BMC Medicine, BMC Public Health, BMC Medical ethics, Sykepleien Forskning, Psycho-Oncology, Journal of Oncology/Hematology, Gerodontology, Journal of Advanced Nursing, Journal of Clinical Nursing,*

**Janne Herholdt Dugstad**  
The Science Centre Health and Technology  
Buskerud University College  
Drammen, NORWAY  
Phone: +47 90 99 36 46  
E-mail: [Janne.Dugstad@hibu.no](mailto:Janne.Dugstad@hibu.no)

DOB 15<sup>th</sup> December 1970

Married to Thor A Dugstad  
3 children: Line (1998), Eirik (2000) and Mats (2002)

#### **EDUCATION & TRAINING**

2013	Service Innovation	7,5 ECTS Lillehammer University College, PhD course
2010-2011	Innovation Management	7,5 ECTS, Norwegian University of Science and Technology
2004 - 2005	The Dean School	The Norwegian Association of Higher Education Institutions
1997 – 2000	Master of Science	Master of Science in Clinical Optometry, Thesis <i>The effect of treatment of unilateral infantile cataract</i> , Supervisor: Dr Michael Galloway, Pennsylvania College of Optometry, USA. Qualified to use diagnostic drugs in optometric practice in Norway
1996	Education for people with special needs	30 ECTS, Vestfold University College, Faculty of Education
1992 - 1994	Bachelor of Science	Bachelor of Science with honours in Optometry and Vision Sciences (upper second) Thesis <i>Treatment of and progression of visual field defects in primary open angle glaucoma</i> , Supervisor: Dr David Henson, Department of Optometry and Vision Sciences, University of Wales College of Cardiff, UK.
1993 – 1996	Optometry	Qualified as contact lens practitioner in Norway 3 yr professional degree program, Department of Optometry, Kongsberg College of Engineering, Kongsberg, Qualified as an optometrist in Norway

#### **PROFESSIONAL MEMBERSHIP**

1990 – present Member of the Norwegian Optometric Association. Awarded Gold Medallion in 2011

#### **APPOINTMENTS & COMMISSIONS**

08/12 – present	Director, Science Centre Health and Technology in Drammen (owned by BUC)
06/12 – present	Member of advisory board, DRIV Inkubator AS
01/12 – present	Vice-Dean, Faculty of Health Sciences, Buskerud University College (BUC)
11/11 – 12/11	Member of audit committee for optometry, Hellenic QA Agency for Higher Education, Greece
09/11 – 07/12	Member of advisory board for the Business Manager ( <i>næringssjef</i> ) of Kongsberg Municipality
08/10 – 06/12	Chairman of the board of DRIV inkubator AS
05/08 – 07/10	Member of the board of DRIV inkubator AS
03/07 – present	Member of the board of Arena Health Innovation, 1 yr as chairman
01/07 – 07/11	Vice member of National Board for Health and Social Sciences Education
08/06 – 12/11	Dean, Department of Optometry and Visual Science, BUC
02/05 – 02/06	Member of National Expert Committee regarding new grading scale in Health and Social Sciences Education
08/02 – present	Member of Programrådet, Department of Optometry, Linnaeus University, Sweden
04/02 – 05/02	Member of audit committee for optometry, Högskoleverket, Sweden

08/00 – 07/06	Head of Department of Optometry and Visual Science, BUC
08/97 – 01/12	Member of the board of Hultgren's Memorial Foundation
08/97 – 07/00	Deputy Head of Department of Optometry, Faculty of Engineering, BUC
08/95 – 07/99	Clinical director and director of academic affairs- Department of Optometry, Faculty of Engineering, BUC
08/94 – present	Member of BUC committees: Instituttstyre, avdelingsstyre, studiekvalitetsutvalg, arbeidsmiljøutvalg, likestillingsutvalg, biblioteksutvalg, læringsmiljøutvalg, diverse omorganiseringsgrupper, fusjonsutredningsgrupper, budsjettmodellutvalg og rektors ledergruppe (2001/2002; 2006–2012)
08/94 – present	Assistant professor - Department of Optometry and Visual Science, BUC
06/92 - 09/95	Part time optometrist, Interoptik Holt, Tønsberg, Norway
06/85 – 05/92	Part time optometrist's assistant, Interoptik Holt, Tønsberg, Norway

#### TEACHING EXPERIENCE

1994 – present	Assisstant professor - Department of Optometry and Visual Science, Buskerud University College (BUC), Kongsberg, Norway Teaching (BSc level): optometric instrumentation, refraction, low vision/visual rehabilitation, physiology of vision, visual fields Teaching (MSc level): Vision in the elderly, Dept of Health Sciences, BUC Supervision: MSc students (vision in the elderly) and BSc Final year student research projects (vision in mental retardation) at BUC. Also MSc student projects at Vestfold University College, Faculty of Education (related to reading problems and vision)
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#### RESEARCH/DEVELOPMENT/INNOVATION EXPERIENCE

1995-1997	Synsnettverk Buskerud; vision care for school children in Buskerud county; development and implementation of new model of cooperation between BUC/optometry and visual science, regional hospital and school health service.
1996 - 2000	"Se & Hør"; regional R&D project regarding dual sensory loss (vision and hearing) in people with mental retardation. Cooperation between BUC/optometry and visual science, Øvre Eiker Municipality and regional resource centre for impaired hearing and hearing loss
2005 - present	Health innovation projects in the Drammen region; Arena helse og lys, and Arena Helseinnovasjon. Member of boards, coordinator of BUC team
2006 – 2010	Studies on vision care and visual environment of elderly residents in nursing homes. In cooperation with Dr Helle K Falkenberg, Department of Optometry and Visual Science, Buskerud University College, Kongsberg, Norway
2009 - 2012	Innovation projects in Kongsberg. Participating/leading several projects groups regarding innovation in Kongsberg Kunnskapspark (KKP) and Kongsbergskolen (project)
2012	Participated in research group writing research proposal and application to Norges Forskningsråd: Person centered communication with older persons in need of health care. Development of a research based education platform. Project leader: professor Hilde Eide, BUC

#### RESEARCH INTERESTS

The research up to 2010 focused on how vision care and visual environment of elderly residents in nursing homes are maintained by the public health care system in Norway. The research included studies of combined vision- and hearing loss in the elderly. I was Dean of optometry and visual science at this time.

As I increasingly focused on innovation through the involvement in *Arena Helseinnovasjon* in Drammen and several projects in Kongsberg, I studied innovation management and changed my focus of research into health and service innovation, educational needs and welfare technology implementation. My job situation changed in 2012 as I became Director of The Science Centre Health and Technology, reinforcing the research focus.

#### RESEARCH GRANTS (AS PROJECT LEADER)

<u>Period</u>	<u>Source</u>	<u>Study and Amount</u>
2011	Norway Opening Universities	SELISE NOK 975 000
2007	Norwegian Directorate for Health and Social Affairs	Kombinert alvorlige sansetap (KAS) hos eldre i institusjon, NOK 500 000
2006	Norwegian Directorate for Health and Social Affairs	Kartlegging av synsforholdene til eldre i institusjon, NOK 500 000
2002/2003	SOFF (now: Norway Opening Universities)	Fleksibel læring innen norsk optometri – utvikling av et webstøttet undervisningskonsept, NOK 320 000

## PUBLICATIONS

### 1. Abstracts

- Falkenberg, H. K., Langegegen I. and Dugstad J (2013) Is the vision care provided to Norwegian nursing home residents adequate? *21st IAGG World Congress of Gerontology and Geriatrics*, Korea, June 2013  
Accepted
- Falkenberg, H. K., I. Langegegen, and J. Dugstad (2009) Vision and Hearing Loss in Nursing Home Residents: Do We Care? *Invest. Ophthalmol. Vis. Sci.* 50: E-Abstract 3205.
- Falkenberg, H. K. and Dugstad J. (2007) Evaluation of the eye health care and vision conditions provided to nursing home residents in Norway, *Invest. Ophthalmol. Vis. Sci.* 48: E-Abstract 2390

### 2. Professional journals, BUC reports etc

- 1 Dugstad JH (2012): Godt nettsted for studenter *Optikeren*; 7
- 2 Dugstad JH (2012): Rekruttering til optikerutdanningen 1995-2011, *Optikeren*; 3
- 3 Dugstad JH (2011): Er forskning nyttig? *Optikeren*; 5
- 4 Dugstad JH (2010): Syn og aldring - et satsingsområde ved AFOS *Optikeren*; 7
- 5 Helland M, Dugstad J (2005): *The use of multiple choice questions for formal examinations – experiences and useful advice*. In "Til å bli klok av ... Et knippe prosjekterfaringer", Norgesuniversitetets skriftserie nr. 2/2005, Norgesuniversitetet, Tromsø (ISBN 82-91308-38-1)
- 6 Dugstad JH (2004): HiBu diagnosene, *Optikeren*; 4
- Dugstad JH (2001): Svar til Knut Erik Hansen (leserbrev), *Optikeren*; 7
- 7 J Ebbestad, EA Saxrud, H Eines, MS Goodchild, EM Hermansen, JH Dugstad (2001): Synundersøkelse av mennesker med psykisk utviklingshemming, *Optikeren*; 4
- 8 Dugstad JH (2001): Utdanning i endring, *Optikeren*; 2
- 9 Dugstad JH (2001): GOCs rapport mars 2000 – en oppsummering, *Optikeren*; 2
- 10 Dugstad JH (2000): *Sammenlikning av norsk optometriststudie med europeisk diplom i optometri* Rapporter fra Høgskolen i Buskerud, ISBN 82-91116-26-1
- 11 Dugstad JH, Westerfjell B, Arnestad JE (2000): Henvisninger – dagens praksis og morgendagens utfordringer. Del 4 – epikriser, *Optikeren*; 2
- 12 Dugstad JH, Westerfjell B, Arnestad JE (2000): Henvisninger – dagens praksis og morgendagens utfordringer. Del 3 – henvisningsårsaker, *Optikeren*; 1
- 13 Dugstad JH, Westerfjell B, Arnestad JE (1999): Henvisninger – dagens praksis og morgendagens utfordringer. Del 2 – henvisningen, *Optikeren*; 7
- 14 Dugstad JH, Westerfjell B, Arnestad JE (1999): Henvisninger – dagens praksis og morgendagens utfordringer. Del 1 – allmennpraktikerne sterkere inn på henvisningsarenaen, *Optikeren*; 6
- 15 Dugstad JH (1998): Hvordan lære mer om pasienter med spesielle behov? *Optikeren*; 5
- 16 Helland M, Dugstad JH (1998): Bruk av referanser i optometriske fagtidsskrifter: noen veiledende råd til fremtidige artikkelforfattere, *Optikeren*; 2
- 17 Dugstad JH (1997): Synshemmede i skole, arbeid og fritid; *Optikeren*; 2
- 18 Berntsen JH (1996): Klinisk virksomhet ved Institutt for optometri. *Optikeren*; 3: 31-32
- 19 Berntsen JH (1995): Opptak ved institutt for optometri. *Optikeren*; 5
- 20 Cowriter in: Lühr E (ed) (1995): *Problemer med synet? 3. Hjelpeinstanser og hjelpemidler*. Sintef Rehab ISBN 82-595-8953-2
- 21 Cowriter in: Lühr E (ed) (1995): *Problemer med synet? 2. Bistand og tilrettelegging*. Sintef Rehab ISBN 82-595-8952-4
- 22 Cowriter in: Lühr E (ed) (1995): *Problemer med synet? 1. Synsevne og synsnedsettelse*. Sintef Rehab ISBN 82-595-8951-6



## CV

Prof. Dr. Aurelie Aurilla Bechyna Arntzen is Professor at Buskerud University College in Kongsberg (HIBU). She has supervised several master and Phd thesis in the Knowledge Management, innovation fields, social and gaming technologies, web2.0 technologies, eLearning technologies, medical devices, etc. She is board member of the KM forum Norway and in a program committee in several international KM and software conferences. She received her Ph.D from the University of Strasbourg, France. She has several years combined business- research and IT-experience from Australian, French, German, Swedish, Asian and Norwegian institutions. She was involved in several European programme ERNET (European Robotics network), Eurimus EU and as co-ordinate two EU projects (OSA-TESMA-MEDIASITE) She has served as an expert evaluator for the European commission, Norwegian research council. Currently she is working on NORBOTECH project funded NORAD on knowledge transfer from Norway to Bosnia. Her focus in this project is on how to enhance education in Bosnian universities based on e-learning concepts. She is author and co-author of more than 100 technical and scientific publications.

### Papers (peer review from 2010)

1. Bechyna, Aurilla Aurelie; Sols, Alberto. Challenges for Engineering firms to become a learning organization. Society for Design and Process Science 2012 ;Volum 17. s. -
2. Arntzen Bechyna, Aurilla Aurelie. Challenges and Opportunities for women in science: the role of social network. How to hunt research funding and succeed in writing research applications: Experiences from writing EU proposals.. Workshop on Women and Science; 2012-05-21 - 2012-05-21
3. Arntzen Bechyna, Aurilla Aurelie. Social Technologies and their Implication for Education and Business. 2012 Joint Conference of The International Industrial Information Systems Conference & The International Conference on Computers, Communications and Systems (IIISC & ICCC); 2012-12-20 - 2012-12-23
4. Arntzen Bechyna, Aurilla Aurelie; Graven, Olaf Hallan. The use of social communication tools : A Norwegian experience. Society for Design and Process Science 2012 ;Volum 17. s. -
5. Arntzen Bechyna, Aurilla Aurelie; Hustad, Eli. Social media networking tools (SMNT): Concepts, challenges and corollaries of organisational work practices. I: Leading Issues in Social Knowledge Management. Academic Publishing International 2012 ISBN 978-1-908272-38-6. s. 157-173
6. Arntzen Bechyna, Aurilla Aurelie; Ribi  re, Vincent. Is the emergence of social software a source of knowledge management revival?. I: Leading Issues in Social Knowledge Management. Academic Publishing International 2012 ISBN 978-1-908272-38-6. s. 1-21

7. Arntzen Bechyna, Aurilla Aurelie; Vold, Aud Tone. The Participatory Roles Play Simulation in a Social and Collective Learning Context. *Advances in Intelligent and Soft Computing* 2012 ;Volum 113. s. 65-77
8. Arntzen Bechyna, Aurilla Aurelie; Worasinchai, Lugkana.
9. Bechyna, Aurilla Aurelie; Hustad, Eli. Learning through the social technologies lenses: opportunities and Challenges. *The International Journal of the Computer, the Internet and Management* 2012 ;Volum 20.(1)
10. Hustad, Eli; Arntzen Bechyna, Aurilla Aurelie. Exploring the Role of Boundary Spanning in Distributed Networks of Knowledge. *Electronic Journal of Knowledge Management* 2012 ;Volum 10.(2) s. 121-130
11. Hustad, Eli; Arntzen Bechyna, Aurilla Aurelie. Gender-Related Issues in Knowledge Management: How to Promote Female Features and Qualities in KM Initiatives. I: ECKM 2012 - 13th European Conference on Knowledge Management. Academic Publishing International 2012 ISBN 978-1-908272-64-5. s. 227-228
12. Hustad, Eli; Arntzen Bechyna, Aurilla Aurelie.
13. Hustad, Eli; Arntzen Bechyna, Aurilla Aurelie. The Impact of Network Capabilities on Organizational Learning: A Study of Distributed Networks of Practice. *The International Journal of the Computer, the Internet and Management* 2012 ;Volum 20. Suppl. SP1 s. -
14. Arntzen Bechyna, Aurilla Aurelie. Game based learning to enhance cognitive and physical capabilities of elderly people: concepts and requirements. *World Academy of Science, Engineering and Technology: An International Journal of Science, Engineering and Technology* 2011 (60) s. 63-67
15. Arntzen Bechyna, Aurilla Aurelie; Dias, Albertina. Innovative enhanced learning systems: concepts and challenges. *Society for Design and Process Science* 2011 ;Volum 17. s. -
16. Arntzen Bechyna, Aurilla Aurelie; Hustad, Eli. Social Media Networking Tools (SMNT): Concepts, Challenges and Corollaries of Organisational Work Practices. I: ECMLG 2011 - 7th European Conference on Management, Leadership and Governance. Academic Conferences Publishing 2011 ISBN 978-1-908272-16-4. s. 18-26
17. Arntzen Bechyna, Aurilla Aurelie; Hustad, Eli. The Role of Social Networking Tools on Purchasing Decision Making Process. I: Proceedings of the 8th International Conference on Knowledge Management, Intellectual Capital and Organisational Learning. Academic Conferences Publishing 2011 ISBN 978-1-908272-20-1. s. 82-89
18. Arntzen Bechyna, Aurilla Aurelie; Vold, Aud Tone. The participatory roles play simulation in a social and collective learning context. *Society for Design and Process Science* 2011 ;Volum 17. s. -
19. Heierhoff, Volker; Arntzen Bechyna, Aurilla Aurelie; Muller, Gerrit. A Training model for Successful implementation of Enterprise Resource Planning. *World Academy of Science, Engineering and Technology: An International Journal of Science, Engineering and Technology* 2011 (60) s. 505-511
20. Hustad, Eli; Arntzen Bechyna, Aurilla Aurelie. A study of the ERP project life cycles in Small-and-Medium-Sized Enterprises: Critical Issues and Lessons Learned. *World Academy of Science, Engineering and Technology: An International Journal of Science, Engineering and Technology* 2011 (60) s. 110-116
21. Hustad, Eli; Arntzen Bechyna, Aurilla Aurelie. Facilitating Distributed Networks of Knowledge: A Boundary Management Perspective. I: Proceedings of the 8th International Conference on

- Knowledge Management, Intellectual Capital and Organisational Learning. Academic Conferences Publishing 2011 ISBN 978-1-908272-20-1. s. 234-242
22. Shetty, M.V.; Arntzen Bechina, Aurilla Aurelie; Radakrishnan, Kalaivani. Optimal Growth and Development of Companies through Knowledge Management Value Chain. Journal of Mobile Technologies, Knowledge and Society 2011 s. -
  1. 34. Arntzen, Aurilla Aurelie; Samuelsen, Dag Hals; Fauskanger, Tord. Using Robot Programming to Foster Learning Capability. The International Journal of the Computer, the Internet and Management 2010 ;Volum 18.(Sp1) s. 361-366
  2. 35. Arntzen, Aurilla Aurelie; Stengrimsen, Christopher. Playing and Learning: How Dyslexic People Could Learn Better. The International Journal of the Computer, the Internet and Management 2010 ;Volum 18.(Sp1) s. 231-23
  3. 36. Arntzen, Aurilla Aurelie; Worasinchai, Lugkana. The Role of Multinational Corporations (MNC's) in Developing R&D in Thailand: the Knowledge Flow Between MNC's and University. Electronic Journal of Knowledge Management 2010 ;Volum 8.(1) s. 171-180
  4. 38. Arntzen Bechina, Aurilla Aurelie. Knowledge, Technology and University Social Responsibility (USR): a conceptual framework. I: Proceedings of ECKM 2010: Proceedings of the 11th European Conference on Knowledge Management. ACI Academic Conferences International 2010 ISBN 9781906638719. s. 74-81
  5. 39. Arntzen Bechina, Aurilla Aurelie; Chumnumpan, Pattarin. Investigation of Knowledge Sharing Practices Among Expatriates in Thailand. I: Proceedings of ECKM 2010: Proceedings of the 11th European Conference on Knowledge Management. ACI Academic Conferences International 2010 ISBN 9781906638719. s. 82-89
  6. 40. Arntzen Bechina, Aurilla Aurelie; Tapeparn, Malinee. A Socio-psychological Model for Knowledge Management Adoption: The case study of a Medical School in Bangkok, Thailand. I: Proceedings of ECKM 2010: Proceedings of the 11th European Conference on Knowledge Management. ACI Academic Conferences International 2010 ISBN 9781906638719. s. 996-1003
  7. 41. Arntzen Bechina, Aurilla Aurelie; Worasinchai, Lugkana. Knowledge and Information Flows in Supply Chains in Service- Oriented Business: A Case Study of MK Restaurants in Thailand. I: Proceedings of ECKM 2010: Proceedings of the 11th European Conference on Knowledge Management. ACI Academic Conferences International 2010 ISBN 9781906638719. s. 1095-1105
  8. 43. Horn, Geir; Hartvigsen, Gunnar; Lysne, Olav; Bratbergsengen, Kjell; Arntzen Bechina, Aurilla Aurelie; Fallmyr, Terje; Prinz, Andreas; Dæhlen, Morten. Informatikkforskning —grunnleggende for moderne samfunnsutvikling. ComputerWorld Norge 2010 (37) s. 34-3

## ***Short Curriculum Vitae - Jan Capjon, Professor Dr.ing.***

<b>Address</b>	Invaco a.s, Toppåsvn. 100, N-1454 Fagerstrand, Norway.																										
<b>Family status</b>	Married to Inger, two children.																										
<b>Education</b>	<table><tr><td>1962</td><td>Graduation Litchfield High School, Minnesota, USA.</td></tr><tr><td>1964</td><td>Examen artium, Porsgrunn gymnas.</td></tr><tr><td>1964-69</td><td>Practice in Norway, Germany, Spain and France.</td></tr><tr><td>1970</td><td>Diploma, Norwegian Technical University (NTH), mechanical engineering, MSc.</td></tr><tr><td>1970-75</td><td>Courses in design &amp; data.</td></tr></table>	1962	Graduation Litchfield High School, Minnesota, USA.	1964	Examen artium, Porsgrunn gymnas.	1964-69	Practice in Norway, Germany, Spain and France.	1970	Diploma, Norwegian Technical University (NTH), mechanical engineering, MSc.	1970-75	Courses in design & data.																
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1970-75	Courses in design & data.																										
<b>Engagements</b>	<table><tr><td>1971-73</td><td>Chief of construction, Elbil a.s - Electric Vehicles.</td></tr><tr><td>1973-75</td><td>Leader of EV development, Strømmens Værksted a.s.</td></tr><tr><td>1975-84</td><td>Gruppe for Produktutvikling a.s - Development and design consultancy. Founder and development leader.</td></tr><tr><td>1978</td><td>Start as lecturer, Institute of Industrial Design, Oslo.</td></tr><tr><td>1984-2007</td><td>Founder and manager of Invaco a.s – product development and design consultancy.</td></tr><tr><td>1985</td><td>Approval as industrial designer MNID.</td></tr><tr><td>1990-2005</td><td>Professor II, Institute of Industrial Design, AHO.</td></tr><tr><td>1995</td><td>Leader of research project on fiber reinforced shells, EU Commission.</td></tr><tr><td>1999</td><td>Leader of research and doctoral project on Rapid Prototyping (RP), Norwegian Research Council (NFR).</td></tr><tr><td>2004</td><td>Doctoral defense.</td></tr><tr><td>2005-08</td><td>Professor at Institute of industrial design, The Oslo School of Architecture and Design.</td></tr><tr><td>1999-2008-</td><td>Applicant and leader of research projects (list below)</td></tr><tr><td></td><td>Appointment as professor in maritime innovation at Vestfold University College</td></tr></table>	1971-73	Chief of construction, Elbil a.s - Electric Vehicles.	1973-75	Leader of EV development, Strømmens Værksted a.s.	1975-84	Gruppe for Produktutvikling a.s - Development and design consultancy. Founder and development leader.	1978	Start as lecturer, Institute of Industrial Design, Oslo.	1984-2007	Founder and manager of Invaco a.s – product development and design consultancy.	1985	Approval as industrial designer MNID.	1990-2005	Professor II, Institute of Industrial Design, AHO.	1995	Leader of research project on fiber reinforced shells, EU Commission.	1999	Leader of research and doctoral project on Rapid Prototyping (RP), Norwegian Research Council (NFR).	2004	Doctoral defense.	2005-08	Professor at Institute of industrial design, The Oslo School of Architecture and Design.	1999-2008-	Applicant and leader of research projects (list below)		Appointment as professor in maritime innovation at Vestfold University College
1971-73	Chief of construction, Elbil a.s - Electric Vehicles.																										
1973-75	Leader of EV development, Strømmens Værksted a.s.																										
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	Appointment as professor in maritime innovation at Vestfold University College																										
<b>Professional activity</b>	<p>Diverse lecturing at conferences and design universities. Initiator and co-establisher of seven limited companies. Board member in all these and Norsk Form. 19 patent applications.</p>																										
<b>Publications</b>	<p>Numerous articles in professional magazines. Book editor: <i>Route mapping</i>. Oslo School of Architecture and Design, 2002. Doctoral thesis: <i>Trial-and-Error-based Innovation: Catalysing Shared Engagement in Design Conceptualisation</i>. Oslo School of Architecture and Design, 2004.</p>																										
<b>Awards</b>	<p>Winner of Nordic Council's design competition for plane transportation of wheelchair users, 1976. Norwegian Design Council's mark awards for Norweld Light 250 and for Bodyguard 900.</p>																										

**Memberships**

Member of NID - Norske Industridesignere.  
 Member of panel of experts, ICSID.  
 Member of Tekna – Tekn.-Naturvitenskapelig Forening

- Peer reviewed papers:**
- *Trial-and-Error based Innovation: Physical iteration Games as Collaborative strategy in Product Design.* Participatory Design Conference, Malmö, June 2002.
  - *Trial-and-Error-based Innovation: Catalysing Shared Engagement in Design Conceptualisation.* Futureground. Design Research Society Conference, Melbourne 2004.
  - *Engaged Collaborative Ideation supported through Material Catalysation.* In the Making design conference, Copenhagen, May 2005
  - *Towards an Innovative Cross-professional Interaction Process.* Nordcode seminar, Trondheim, May 2005
  - *Towards a physically catalysed collaborative design process.* Nordcode seminar, Oslo, Nov. 2006.
  - + Edeholz: *DESIGN (x) DIASPORA – implementing sustainable development in developing countries.* Changing-the-Change conference, Torino, July 2008.

**Mentoring:**

PhD student Sissel Bro, 2007-  
 PhD student Snorre Hjelseth, 2009 -

***Applications and leadership of granted R&D projects***

Innovativ PU-strategi basert på integrasjon mellom industridesign, engineering og ny utviklingsteknologi	1999–2003	NFR	6.045' NOK
Implementering av innovativ produktutviklings-metodikk basert på RP-teknologi	2004–05	NFR	1.272' NOK
Rapid Prototyping teknologi	2005–06	AHO	250' NOK
RP teknologi	2006	NFR	1.080' NOK
RP teknologi som industriell innovasjonskatalysator	2006–07	NFR	2.630' NOK
D-side Design supporting interdisciplinary environments	2009–13	NFR	6.170' NOK
MARKIS Maritime Competence and Innovation Kattegat/Skagerak	2010–12	EU	9.600' NOK
Frames in total			27.047' NOK

***Completed design & development projects by Jan Capjon (GfP a.s + Invaco a.s)***

1	Electric invalid vehicle	Strømmens Værksted a.s
2	Electric transporter for airports	Strømmens Værksted a.s / SAS
3	Electric pulling unit	Strømmens Værksted a.s / SAS
4	Electric conveyor vehicle	Strømmens Værksted a.s /SAS
5	Electric airplane stairway for invalids	Norweld a.s / Nordic Council
6	Starting aggregate, large aircraft	Ama Trykkluft a.s
7	Washing automat	Brøvig a.s
8	Cultivator	Nørø Industri a.s
9	Nord 100 and 500 Computers	Norsk Data a.s
10	Page Comp Data terminal	Sim-X a.s
11	Mycron 200 and 2000 Computers	Mycron a.s
12	Tiki 100 Computer	Tiki Data a.s
13	Avant Mobile slide aggregate	Elcon a.s
14	Treatment bench for physiotherapy	M.A. Produkter AB

15	Monitor	Sim-X a.s
16	Luggage transportation unit for DC-9	SAS
17	Norweld Light 250 welding mask	Norweld a.s
18	Bicycle / sledge	Jonas Øglænd a.s
19	Bodyguard 900 ergometer	Jonas Øgånd a.s
20	Bodygym 300 training bench	Jonas Øglænd a.s
21	Bodyguard roing machine	Jonas Øglænd a.s
22	Conference wall system	Interlobo a.s
23	Warning system against burglary	Sikkerhetssystemer a.s
24	Offset sattelite antennas 1,8 and 3,5 m	Teledirektoratet
25	Mobile earth station	Teledirektoratet / EB Nera a.s
26	Bicycle concept in magnesium	IkoInvent a.s
27	Feeding automat for aquaculture	Oppdrettsservice a.s
28	Heartstart 2000, el-hydraulic resuscitator	Medreco a.s
29	Aluminium sulky	Volotech a.s
30	Aluminium awning system	Lunex a.s
31	Radical rowing mechanism	Foilpropeller a.s
32	TSAT terminal	Normarc a.s
33	TSAT radom	Normarc a.s
34	Instrument Landing System central	Normarc a.s
35	Growing bench for vegetables	Hamax Vefi a.s
36	X-ray orientation devices	Sula Bedriftstjeneste a.s
37	Back stretcher	Mosjøen Næringselskap
38	Superlight racing skate	Habra a.s
39	Military night goggles	Simrad Optronics a.s
40	Rognald jubilee knife	Brusletto a.s
41	Deep sea offshore diving helmet	Sintef Unimed a.s
42	Armature base unit for bathrooms	Probata a.s
43	Cinderella electric catalytic toilet	Cindertech AB
44	Gas flaming device for gardens	Forskningsparken, NLH
45	Flaming device for vegetables	Forskningsparken, NLH
46	Aluminium balcony + stairs fence system	Grip Lock a.s
47	Plugin rectifier	Mascot a.s
48	Desktop rectifier	Mascot a.s
49	Large desktop rectifier	Mascot a.s
50	Waffel iron	Ventolette a.s
51	Magnetic Particle Concentrator, Small	Dynal a.s
52	Magnetic Particle Concentrator, Large	Dynal a.s
53	Mobile telephone mast	Betonmast a.s / Telenor
54	High voltage power masts 132 & 420 KV	Betonmast a.s / Statnett SF
55	Netcab cabtrack concept	Norsk Sportaxi a.s
56	Automatic feeding unit for aquaculture	Gaelforce Marine Technology a.s
57	Floating aquaculture reservoir	Gaelforce Marine Technology a.s
57	Small feeding unit	Gaelforce Marine Technology a.s
58	Device for anaesthesia	Rikshospitalet
59	Modular building system	Lightcem a.s
60	SimSam simulation and interaction lab	Vestfold University College / Markis EU

# CV (Curriculum Vitae) for Anne Haugen Gausdal



**Address:** Grønborgveien 11, 3153 Tølvsråd, Norway  
**Phone:** Private: +47 33527474 Work +47 33031222 Ccl: +47 48 06 99 98

**Family status:** Married, 2 children

## Education:

- NLP Practitioner Coach, 2011
- PhD, Bodø Graduate School of Business, 2008
- Cand.merc, Master in Strategy and Knowledge management, Buskerud University College, 2001
- Cand. mag. in organization and management, Vestfold University College, 1998
- Bio-engineer, Fysioljekirkskolen, Buskerud Central Hospital, 1979

## Employment:

- Associate Professor, Vestfold University College, 2008-till this day
- Associate Professor II, Buskerud University College, 2008-2011
- Research fellow, Vestfold University College, 2004-2008
- Assistant professor, Vestfold University College, 2001-2008
- Assistant professor, Vestfold University College, 1996-2001
- Head of external funded projects, Vestfold University College, 1995-1996
- Study executive officer, Vestfold University College, 1994-1995
- ICT consultant/ senior executive officer, Vestfold County administration, 1984-1995
- Project manager ICT, the microbiology laboratory, Vestfold Central Hospital, 1981-1984
- Bio-engineer, the microbiology laboratory, Vestfold Central Hospital 1980-1981
- Bio-engineer/nursing staff, Hørtun nursery home 1980-1980
- Bio-engineer, Buskerud Central Hospital 1979-1980

## Visiting scholarships:

CoWell research centre, Jacobs University, Bremen, Germany – The Autumn of 2012

## Project manager, R&D projects:

- VRI Vestfold, Research project. Funded by the Norwegian Research Council. 2011-till this day
- Innovation in the health sector. Funded by Oslofjordfondet. 2011-2012
- SimSam Development. Funded by several projects at Vestfold University College. 2011-2012
- VRI Vestfold, R&D project. Funded by the Norwegian Research Council. 2008-2010

## Publications:

- Gausdal, A.H. (2012) Trust Building processes in the Context of Networks. *Journal of Trust Research*, 2, 1 April 2012, 7-30
- Gausdal, A.H. and Hildrum, J. (2012) Facilitating trust building in networks: A study from the water technology industry. *Systemic Practice and Action Research*, 25, 1, 15-38
- Gausdal, A.H. and Nilsen, Eity R. (2011) Orchestrating Innovative networks. The case of "Healthinnovation". *Journal of the Knowledge Economy*, 2, 586-610
- Gausdal, A.H. (2008) Developing Regional Communities of Practice by Network Reflection: the Case of the Norwegian Electronics Industry. *Entrepreneurship & Regional Development*, 20, 3, 209-235.
- Gausdal, A.H. (2008) Hvordan Skape Innovative Netzverk? *Magma*, 11, 5, 53-63.
- Gausdal, A.H. (2008) Network Reflection – a road to regional learning, trust and innovation. *Doctoral thesis, Bodø Graduate School of Business*. Bodø, Norway, 266 pages, ISBN: 978-82-92893-04-3
- Gausdal, A.H. (2007) Developing Regional Communities of Practice – The Role of the Regional University. In Bourmistrov and Mellemvik (eds.) *Norwegian-Russian Cooperation in Business Education and Research: Visions and Challenges in Perspectives of the High North*. Chap 2. Oslo: Cappelen Akademisk Forlag

# CV (Curriculum Vitae) for Anne Haugen Gausdal

Gausdal, A.H. (2006) Towards a regional innovation system – the role of a regional university. *OLKC, International Conference on Organizational Learning, Knowledge and Capabilities*, University of Warwick, Conference proceedings: ISBN numbers: 0-902610-79-1 and 978-0-902610-79-8

Gausdal, A.H. (2005) Research perspective and Actor Concept in Systems Thinking. I Gilje, N. & Ingbråten, S. (red.), 2005. *Vitenskapsteoretiske essays i tilknytning til forskningsprosjekter ved Handelshøgskolen i Bodø*. Working-paper 11/2005, Handelshøgskolen i Bodø. ISSN 1503-383X. Bodø

Gausdal, A.H. (2005). Mechanisms for creating a regional innovation system – the role of a regional university. *Working paper No. 15/2005, Bodø Graduate School of Business*, ISSN 1503-383X. Bodø, Norway

Gustavsen, B. og Gausdal, A.H. (2005) Høgskole og Samfunn i Samhandling - HSS 05. Konferanserapport. *Rapport 13/2005, Høgskolen i Vestfold*, http://www-bib.hive.no/tekster/hiveskrift/rapport/2005-13/omtale.htm ISBN 82-7860-159-3

Gausdal, A.H. (2005) How can network education contribute to innovation in the system? *Report 14/2005, Høgskolen i Vestfold*, http://www-bib.hive.no/tekster/hiveskrift/rapport/2005-14/omtale.htm ISBN 82-7860-161-5 (paper edition) 82-7860-162-3 (electronic edition)

Gausdal, A.H. (2001) Autonomi - veien til motivasjon og kunstnarsutvikling. *HVE Report 2/2001, Høgskolen i Vestfold*, http://www-bib.hive.no/tekster/hiveskrift/rapport/2001-02/omtale.htm ISBN papirutgave: 82-7860-045-7 digital utgave: 82-7860-046-5 Hovedfagsavhandling.

Master thesis

Gausdal, A.H. (2001) Motivasjon og kunstnarsutvikling. *Hverer rapport 4/2001, Høgskolen i Vestfold*

Gausdal, A.H. (2000) Litteratursstudie om indre motivasjon i arbeidslivet. *HVE Report 1/2000, Høgskolen i Vestfold*, http://www-bib.hive.no/tekster/hiveskrift/rapport/2000-01/omtale.htm ISBN papirutgave: 82-7860-038-4

## Recently presented conference papers:

Gausdal, A.H. (2012) Methods for developing Innovative SME Networks. *RIP2012 International Seminar on Regional Innovation Policies*, 11-12 October 2012, Porto, Portugal

Nilsen, E.R. and Gausdal, A.H. (2012) Universities as intermediaries for innovation and development. Two cases of physical arenas for regional interaction. *RIP2012 International Seminar on Regional Innovation Policies*, 11-12 October 2012, Porto, Portugal

Gausdal, A.H., Hildrum, J.H. and Gustavsen, B. (2012) Knowing that and knowing how: The case of trust in inter-firm network building. *RIP2012 International Seminar on Regional Innovation Policies*, 11-12 October 2012, Porto, Portugal

Nilsen, E.R. and Gausdal, A.H. (2012) The roles of the orchestrator in innovative SME networks. The case of Healthinnovation. *IMDAM 2012, Brokering knowledge*. Valencia 20-23 March 2012. Best paper award. Track: Small Business Economics

Svart, H. and Gausdal, A.H. (2011) Network-based innovation brokering in SMEs - a road to building regional innovation systems? *International Seminar on Regional Innovation Policies*. "Constructing Sustainable Advantage for European Regions". 13-14 October 2011, Lund, Sweden

## Reviewer:

Editorial board: International Entrepreneurship and Management Journal

Entrepreneurship and Regional Development – International Journal, ROUTLEDGE

Journal of the Knowledge Economy, SPRINGER

Management Decision, EMERAD

Systems Research and Behavioral Science, Wiley online library

RENT XXV - Research in Entrepreneurship and Small Business - 25th Anniversary Conference, 2011 OLKC 2013 Organization, Learning, Knowledge and Capabilities conference April 25-27, 2013 Washington, D.C., USA.

## CV

Name	Kirsti Skovdahl
Date of Birth	3 March 1964
Academic title	RN, MSc, PhD
Position	Professor in Ageing and Health
Education	Registered Nurse, Master of Sciences, PhD in Medicine with focus on Elderly Care
Work experience	<p>Experiences as RN within care of older persons and persons with dementia – in Norway and in Sweden. Senior lecturer at Örebro University from 1 August 2004 to 1 November 2012 with experiences from education on Bachelor level, Master level as well as post graduated level. Responsible for the education at post graduation level since 1 Jan 2011 until 1 Sept 2012. Professor II (=20%) at Ålesund University College on Bachelor and Advanced level (1 Aug 2010 – 1 jan 2013) and Lovisenberg Diaconal University College in Oslo at Advanced Level.</p> <p>Professor at Buskerud University College 1 Nov 2012 -</p>
Research and development work the last 3 to 5 years	Research within the care of older persons as well as care for persons with dementia. Main topic has been on health promotion to these persons living at home and or receiving health care from the municipality. Another focus has been on younger persons (< 65 years) with dementia and their families.
Other relevant work or experience the last 3 to 5 years	Main supervisor for two doctoral students in which one on them will finish her dissertation during the spring 2013. Co-supervisor for four doctoral students where three of them probably will finish their dissertations during 2013. I am referee for four in peer review based journals; two international journals and two Nordic journals. I have participated in different national expert committees in Sweden; National guidelines for care for persons with dementia (2010), guidelines for care to persons with dementia showing BPSD (2008) and as an expert and research leader in connection to a systematic literature study commissioned by the Swedish government (2007).
Participation in relevant national network	<p>Project leader for the Swedish network at Vårdal Institute (<a href="http://www.vardalinstitutet.net/demensrummet">www.vardalinstitutet.net/demensrummet</a>) that aims to give information and education to informal and formal caregivers within dementia care.</p> <p>Participate in an informal network among researchers in the dementia care field, in which had led to two books with focus on dementia care.</p> <p>Leader for a network between two universities and five university colleges in the middle of Sweden with aim to work for guidelines and quality in connection to examination on Bachelor degree.</p>
Participation in relevant international network	The Nordic network GeroProffs that has developed an gerontological education in Advanced clinical nursing.

## PAPERS Peer review

1. Pajalic Z, Westergren A, Persson L & **Skovdahl K** (In press) Evaluation for change, the decision maker's involvement in the development of Food Distribution to home living elderly people.
2. Olsson AK, **Skovdahl K.**, Lampic C & Engström M (In press) Confirmation of self through doing and being: A sense of value and well-being of being outdoors for persons with early-stage dementia. *Journal of Advanced Nursing*
3. Pajalic Z, Westergren A., Persson L, Berggren V. & **Skovdahl K** (2012) "Being beneficiaries or victims? Older people's experiences related to food distribution from the municipality". *Journal of Food Research* Vol. 1, No. 1; February 2012
4. Pajalic Z., Westergren A., Persson L, & **Skovdahl K.** (2012) Public home care professionals' experiences of being involved in food distribution to home-living elderly people in Sweden - a qualitative study with an action research approach" Food distribution to elderly persons living in their own homes – various professionals' views" *Journal of Nursing Education and Practice*, May 2012, Vol. 2, No. 2
5. Finnbakk E, **Skovdahl K**, Blix ES & Fagerstrøm L.(2012) "Looking in the Crystal Globe" - Optimal future care for older people in the Nordic countries as viewed by top managers and politicians. *International Journal of Older People Nursing*. Feb 13. doi: 10.1111/j.1748-3743.2012.00312.x. [Epub ahead of print]
6. Alnes, RE, Kirkevold M. & **Skovdahl K** (In press) Learning outcomes from Marte Meo counselling in dementia care: depends on the learning climate. *Journal of Management and Organization*.
7. Alnes, R. E., Kirkevold, M., **Skovdahl K.** (2011) Marte Meo Counselling: a promising tool to support positive interactions between residents with dementia and nurses in nursing homes *Journal of Research in Nursing*, Sept., 16 415-43. <http://jrn.sagepub.com/content/16/5/415.full.pdf+html>
8. Olsson AK, Engström M, **Skovdahl K** & Lampic C (2011) "My, your and our needs of safety and security: relatives' reflections on using information and communication technology in dementia care" *Scand J Caring Sci*. 2011 Aug 15. doi: 10.1111/j.1471-6712.2011.00916.x. [Epub ahead of print]
9. Midtbust MH, Lykkeslett E. & **Skovdahl K** (2011) Med mobilen i lomma. *Nordisk Tidsskrift for helsefjenesteforskning*, nr 1.
10. Alnes RE , Kirkevold M. & **Skovdahl K.** (2010) Insights gained through Marte Meo counselling: experiences of nurses in dementia specific care units. *International Journal of Older People Nursing*. doi: 10.1111/j.1748-3743.2010.00229.x
11. Quell R., Kihlgren M., Lökk K. & **Skovdahl K.** (2008) Using tactile stimulation in a dementia care facility with plasma prolactin as an outcome measure. *Achieves: The International Journal of Medicine*, 1 (3):123-129.
12. **Skovdahl K.**, Fahlström G., Larsson B.-M., Winblad B. & Kihlgren M. (2008). Demanding behaviours and workload – staff assessments of older adults within a decade. *Scandinavian Journal of Caring Sciences*, 22(3):323-30. Cited by 17

## SUBMITTED

Olsson AK, Engstrom M, Lampic C & **Skovdahl K** (submitted) Passive positioning alarm used by persons with dementia and their spouses – a repeated observation and interview study

## SYSTEMATIC REVIEWS

Skovdahl K m fl (2007). Yngre personer med demenssjukdom och närlägande till dessa personer – en systematisk kunskapsöversikt. Institute for Evidence-Based Social Work Practice (IMS) at the National Board of Health and Welfare, [www.socialstyrelsen.se/IMS](http://www.socialstyrelsen.se/IMS)

**Skovdahl K & Kihlgren M (2008).** Icke-farmakologiska metoder för behandling av BPSD bland personer med demenssjukdom. Ingår i en större rapport om behandling av BPSD. [www.lakemedelsverket.se/BPSD](http://www.lakemedelsverket.se/BPSD)

**Skovdahl K.** Yngre personer med demenssjukdom i: Nationella riktlinjer vid vård och omsorg av personer med demenssjukdom. [www.socialstyrelsen.se](http://www.socialstyrelsen.se)

#### **BOOKS**

**Skovdahl K (2010)** Personer med demenssjukdom. I: Henricson M. & Billhult A (red) Taktil beröring och lätt massage från livets början till livets slut. Studentlitteratur, Lund.

**Skovdahl K. & Kihlgren M.** (2011) Beteenden som kan vara svåra att förstå och bemöta. I: Edberg AK (red) Att möta personer med demens. Studentlitteratur, Ny reviderad utgåva

**Skovdahl K. & Edberg AK (2011)** Olika metoder för kommunikation och sinnesstimulering till personer med demens I: Edberg AK (red) Att möta personer med demens. Studentlitteratur, Ny reviderad utgåva

**Skovdahl K. (2011).** Yngre personer med demens och närtstående till dessa personer. I: Edberg AK (red) Att möta personer med demens. Studentlitteratur, Ny reviderad utgåva

**Skovdahl K. (under tryck)** Demens ABC. Lindrende omsorg til personer med demens. Undervisningsmaterial fra Helsedirektoratet, Norge

## CV

Name	Bengt Karlsson
Date of Birth	26.06.1955
Academic title	Dr.polit
Position	Associate professor 2004-08, Professor from 2008.
Education	Registered nurse, 1981 – 1984, Psychiatric Nurse, 1985 – 1986, Cand. polit., Master in pedagogy 1987 – 1993, Dr.polit., 2004, Filosofisk praksis, teoretisk innføring 2005, Master in Family therapy, 2008 – 2012, International Certificate as Family Therapist, 2012.
Work experience	Diakonhjemmet høgskolesenter, assistent professor, 1989 – 1999, Høgskolen i Hedmark, research fellow, 1999 – 2002, Høgskolen i Agder, assistent professor, 2003 – 2004, University of Central England, Birmingham, Faculty of Health, Honorary Research Fellow 2006 – 2009, Diakonhjemmet Høgskole – professor II, 2008 – 2009, Professor II Universitetet i Stavanger, 2011 –, Visiting Professor, University of Salford, School of Nursing, Midwifery & Social Work, 2012-
Research and development work the last 3 to 5 years	<ul style="list-style-type: none"> <li>* 2007 – 2012: "Crisis Resolution and Home Treatment in Community Mental Health Service: Development, Practice, Experiences, and Outcomes". Prosjektet er finansiert av Norges Forskningsråd.</li> <li>* 2009 - 2012: "Mestringskurs for personer med myalgisk encefalopati – en evaluatingsstudie av et eksisterende helsetjenestetilbud ". Oslo Universitetssykehus, ME/CFS-senteret, Ullevål.</li> <li>* 2011- 2012: "Forskingsevaluering av aktivitetstilbuddet Turresepten, Den Norske Turistforening. Finansiert av DNT.</li> <li>* 2011- 2012: " Forskingsevaluering av Regionale Kompetansesentre for rus (KORUS)". Samarbeid med Rambøll Management. Finansiert av Helsedirektoratet.</li> <li>* 2011- 2012: " Forskingsevaluering av prosjektet Brobyggeren, Notodden DPS, Sykehuset Telemark, HF. Finansiert av Sykehuset Telemark, HF.</li> <li>* 2011- 2012: " Forskingsevaluering av "Forebyggende familieteam" – 2008 – 2011 - Forsøk med familieambulatoriet i Vestre Viken HF, Asker DPS. Finansiert av Vestre Viken, HF.</li> <li>* 2011: " Forskingsevaluering av felles kurstilbud for pasient og behandler innen psykisk helsevern, Sykehuset Telemark, HF, Psykiatrisk klinikk, Seksjon for rehabilitering. Finansiert av Sykehuset Telemark, HF.</li> </ul>
Other relevant work or experience the last 3 to 5 years	* 2007 - : Fou-rådgiver /Cand.paed.spec. Ellen Sæter Hansen, Sykehuset Buskerud HF, Psykiatrisk klinikk: "Samspill mellom foreldre og premature barn. En studie av triadisk interaksjon i

	<p>barnets første leveår". Dr.gradsstudent ved Universitetet i Oslo, Det utdanningsvitenskapelige fakultet. Jeg er veileder.</p> <ul style="list-style-type: none"> <li>* 2008 - : Stipendiat/Cand.polit. Hege Sjølie: "Krisehåndtering og hjemmebehandling i lokalbasert psykisk helsearbeid - implementering av tjenester som ivaretar krisehåndtering og hjemmebehandling". Dr. gradsstudent ved Universitetet i Bergen. Jeg er veileder.</li> <li>* 2009- : Munksgaard forlag, Danmark; Redaksjonsmedlem (01.01. – 01.07., f.o.m.01.07. medredaktør for "Klinisk Sygepleje" 4 utgaver pr. år. Bistilling i 10 %.</li> <li>* 2009 - : Stipendiat/Cand.polit. Kristin Ådnøy Eriksen: "Social dignity in community based mental health services". Dr.gradsstudent ved Karolinska Institutet, Institutionen för neurobiology, vårdvetenskap och samhälle, Stockholm. Jeg er veileder.</li> <li>* 2010 - : Leder av Institutt for forskning innen psykisk helse og rus (IFPR), avdeling for helsefag, Høgskolen i Buskerud.</li> <li>* 2011 - : Stipendiat/Cand.polit- Tone Elin Mekki: "Modelling av evaluating evidence based continuing education in nursing home dementia care". Dr. gradsstudent ved Ulster University, Department of Nursing Sciences, Belfast. Jeg er veileder.</li> <li>* 2012 - : Stipendiat/Cand.psych – Camilla Jensen Oanes: " STIC in clinic. An in-depth exploration of how the use of a comprehensive feedback inventory might influence therapists' perspectives and practices". Dr. gradsstudent ved Universitetet i Bergen, Psykologisk fakultet. Jeg er veileder.</li> </ul> <p># Medlem av sakkyndig utvalg til vurdering av kompetanse som professor, Høgskolen i Gjøvik. 16.08.10.</p> <p># Medlem av sakkyndig utvalg til vurdering av førstelektor og førsteamanuenskompetanse, Universitetet i Stavanger. 01.12.10.</p> <p># Medlem av sakkyndig utvalg til vurdering av professorkompetanse, Universitetet i Tromsø, 15.02.11.</p> <p># Medlem av bedømmelsesutvalg av ph.d.-grad i helsevitenskap – 2. opponent, NTNU, SVT-fakultetet. 01.03.11.</p> <p># Leder av sakkyndig utvalg til bedømming av kvalifikasjonsoppryk til førstelektor i psykisk helsearbeid, Universitetet i Stavanger, Det samfunnsvitenskapelige fakultet, Institutt for helsefag. 11.11.11.</p> <p>#Medlem av sakkyndig utvalg for å vurdere søker til postdoktorstilling ved Høgskolen i Bergen, Avdeling for helse- og sosialfag, Senter for omsorgsforskning. 21.03.11.</p> <p># Leder og ansvarlig for ph.d-kurset: "DSV360 Course in Action Research" i samarbeid med Professor Brendan McCormack, University of Ulster og Professor Lis Wagner, University of Southern Denmark. Universitetet i Stavanger, Det samfunnsvitenskapelige fakultet, Institutt for helsefag. 01- 02.12.11.</p> <p>## Medlem av Betygsnämden, Ph.d.- grad i Universitetet i Uppsala, Institutionen för pedagogikk, didaktikk och utbildningsstudier. 01.03.12.</p>
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	<p># Kommisjonsmedlem og 2. opponent ved disputas ved Universitetet i Tromsø, Det helsevitenskapelige fakultetet, Institutt for helse- og omsorgsfag. 12.10.12.</p> <p># 1. opponent ved disputasjon Ph.d.-grad ved Mälardalens Högskola, Sverige. 30.11.12.</p>
Participation in relevant national network	<p>* 2009 - : "Etablering av Nasjonalt forskningssamarbeid og forskerskole i psykisk helsearbeid". Jeg har ledet arbeidet og skrevet grunnlagsdokumentet. Har siden 2011 samarbeidet med NTNU, SVT-fakultetet, Institutt for helsevitenskap ved professor Borgunn Ytterhus for å realisere utviklingsprosjektet.</p> <p>2007 - : "Erfaringskonferanse for ambulante akutteam i psykisk helsevern for voksne ved alle landets DPS'er". Prosjektleder og faglig ansvarlig for konferansenettverket.</p> <p>* 2002 - : "Åpne samtaler i nettverksmøter – et fordypningsnettverk i lokalbasert psykisk helsearbeid". Nasjonalt nettverk for forskere og fagpersoner i psykisk helsesektoren i Norge som arbeider med nettverksarbeid.</p>
Participation in relevant international network	<p>* 2007 - Nordic Research on Social Networks (NORSNET).</p> <p>* 2009 - The International Practice Development Collaborative (IPDC).</p> <p>* 2011 – Roskilde Universitets Center (RUC) og VIHS (Videnscenter for handikappede og socialpsykiatri).</p>

#### **Publikasjonsliste for professor Bengt Karlsson i perioden f.o.m. 2010 til d.d.**

##### *Internasjonale tidsskrifter:*

1. "Double helix of research and practice - developing a practice model for crisis resolution and home treatment through participatory action research". Borg, M., Karlsson, B. & Kim. S. International Journal of Qualitative Studies in Health Well-being, 2010, 5, s.4647-4655.
2. Sjølie H. & Karlsson, B. (2010). Crisis resolution and home treatment: Structure, Process and Outcome - A Literature Review. Journal of Psychiatric and Mental Health Nursing; 17(10):881-92.
3. McCormack, B., Karlsson, B., Dewing, J. & Lerdal, A. (2010). Exploring person-centredness: a qualitative meta-synthesis of four studies. Scandinavian Journal of Caring sciences, Vol 24, side 620-643.
4. Karlsson, B., Borg, M., Eklund, M. & Kim, H-S. (2011). Profiles of and practices in crisis resolution and home treatment teams in Norway: a longitudinal survey study. International Journal of Mental Health System, 5:19.
5. Borg, M., Karlsson, B., Lofthus, A-M., Davidsson, L. (2011). "Hitting the wall" – lived experiences of mental health crisis. Int J Qualitative Stud Health Well-being, 6: 7197 - DOI: 10.3402/qhw.v6i4.7197, 9 pages.
6. Borg, M., Karlsson, B., McCormack, B. & Kim S.H. (2012). Borg,M., Karlsson, B., Kim, H.S. McCormack, B.. Opening Up For Many Voices in Knowledge Construction. Forum: Qualitative Social Research. Volume 13, No. 1, Art. 1, January 2012 FQS

<http://www.qualitative-research.net/Forum> Qualitative Sozialforschung / Forum:  
Qualitative Social Research (ISSN 1438-5627)

7. Aasgaard, S., H., Borg, M. & Karlsson, B. (2012). Emancipation or symbolic participation: How can we 'do' action research as a democratic process? *International Practice Development Journal* 2 (1) [8] <http://www.fons.org/library/journal.aspx>
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## **Research & Development strategy for the Faculty of Health Sciences (2012 - 2015)**

Research and development activities conducted at the faculty must be guided by HIBU central values; in that research & development activities must be visionary and inclusive while still characterized by efficiency, interdisciplinarity and proximity.

### **Vision**

The Faculty of Health Sciences shall be an excellent resource centre for health education, research and provision of person-centred and multidisciplinary health care with special focus on primary care.

### **Overriding objectives of the faculty during the strategy period**

The Faculty of Health Sciences shall create new knowledge for better health and health services for people with long-term health needs, and shall also be a national and international preferred partner in practice-oriented research, development and innovation within the person-centred and multidisciplinary health care, with special focus on primary care.

### **Background**

According to the university college's strategy for research and development, we shall fulfil society's goals and requirements related to Research, Development and Innovation (RDI), as expressed in the Law regarding universities and university colleges:

- Provide education of high international quality based upon cutting edge research, professional development and experiential learning
- Conduct professional research and development work at a high international level
- Help disseminate the results of research and development work
- Contribute to innovation and value creation based upon the results of research and development work
- Work collectively to ensure that Norwegian higher education and research to pursue and influence the frontier of international research and that the impact on the development of global education is sustained.

### **Research and priority areas:**

The Faculty of Health Sciences has four strategic long-term focus areas:

- Mental health and substance abuse

- Health care for elders and persons with long term and complex health needs
- Eye research with focus on development and aging
- Medical use of radiation and service development

The Faculty's Health and Technology Science Centre is a creative venue for innovation, research and learning. Research conducted within the Science centre will strengthen the faculty's above-mentioned four priority areas and thereby act as a forum for the quadruple-helix model (public sector, industry, users and academia).

Research conducted at the Faculty shall:

- Be characterized by curiosity, creativity and a critical approach
- Be guided by research ethics
- To a large extent, be practice-oriented and of high international quality
- Disseminate research-based knowledge to the public and players in the health services and be active and visible participants in the public debate
- Ensure high academic standards through research-based education at all levels
- Ensure high quality so that all health care professional education programs are characterized by broad methodological approach and use of methodological triangulation
- Be characterized by good and fruitful cooperation both nationally and internationally

#### **Secondary objectives**

In order to achieve the overriding objectives, the Faculty of Health Sciences has defined the following secondary objectives for the strategy period:

- Establish a PhD program in healthcare education, targeted at elderly health needs and people with mental health needs, based on broad knowledge vision
- Be an attractive, strong and robust research environment
- Further develop research-based teaching
- Develop educational research to promote the quality of teaching
- Further develop existing and establish new research-based academic study programs of high quality and which are adapted to society's and practice fields' needs.
- Develop the health and technology science Centre so as to strengthen the faculty's four priority long-term target areas and thereby act as a common arena after the quadruple-helix model
- Further develop existing and establish new research groups, both profession-oriented and interdisciplinary

- Integrated all research fellows, researchers and academic staff members as part of a research group
- Develop employees' research expertise and research management
- Increase external research funding
- Participate as a partner in EU projects
- Increased percentage of employees involved in R&D networks, regionally, nationally and internationally
- Facilitate increased employee and research fellow mobility at home and abroad
- Increased research dissemination to the population and players within the health sector
- Increase the percentage of feature articles through organizing annual seminars
- Increase the number of publications regarding the four long-term priority areas, with special focus on Tier II
- Increase participation in editorial work in scientific publishing channels

Drammen September 13th, 2012

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The R&D activities are organized in several research centres / research groups, 3 related to the clinical field and one related to research on education and learning processes. We will first describe the R&D activities that form the research based ground for our education programs and then we also will list the specific publications regarding education research, of which a large amount is produced by the faculty members running for "førstelektor" or docent.

Furthermore the CV's from the Professors from the Faculties of Technology from Both BUC and VUC shows high relevance and quality related to the proposed SFU.

The staff is organized in several research groups / centres, and key persons in the SFU are also among the leading researchers at the faculty.

### **The Institute for Research in Mental Health and Substance Abuse**

The Institute was established in 2010 approved by the board. The focus of the research at the institute is to contribution to the development of knowledge at the national and international levels in the areas of mental health and substance abuse.

The Institute's research activities are oriented to exploring and examining environmental conditions and practices that support the process of recovery as well as that are barriers to staying well in relation to mental health and substance abuse. In such research, cultural, social, and material contexts will be emphasized.

Researchers at the Institute have interdisciplinary background and orientation, and have expertise in a variety of research methodologies including action research and quantitative, qualitative and mixed

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methods. User involvement in research projects as consultants, co-researchers, or advisors are greatly encouraged.

The founding researchers of the Institute include those with educational, professional, and research backgrounds in nursing, occupational therapy, psychology, pedagogy, sociology, philosophy, medicine, and social work. The group has an extensive clinical and research experiences in mental health care and substance abuse services, including in working with children, adolescents, and adults as well as in family and network oriented practices. In addition, some members have experiences in management, administration, and quality development.

### **The Research Group Healthcare for Elders and Persons with Long Term and Complex Health Needs**

The research group consists of about 25 persons. The ongoing research focuses on preventive health care and health promotion strategies with a focus on the elders and persons with long term health problems such as stroke, dementia, pain, diabetes and wounds. The research focus actively on person centered healthcare and user focused-research, as well as service development, management and organization. The research groups are collaborating actively in several large projects at local and regional level as well as both nationally and internationally.

Further actions are regular dialogue with local authorities, consumer organizations, health authorities, government and industry to exchange knowledge, experiences and ideas, and the development and implementation of research projects.

### **The Research Centre Vision and Health**

At our Department of Optometry and Visual Science we have established a Center for Vision and Health at Kongsberg (2012). The Centre's focus is on the link between vision and health across all life stages. Healthy visual function is essential for healthy aging and quality of life. It is necessary for learning, communication, work, play, sports and general interaction with the environment we live in.

The Centre's overall aim is to create new knowledge to promote vision care, clinical practice and protect visual health as we age through prevention, early detection, timely referral and shared-care of eye diseases and conditions, and the use of vision rehabilitation services. The aging population implies an increasing number of people with visual impairment and eye disease. Thus, the Centre will also play an important role with regards: to promote students' and optometrists' increased knowledge and understanding of interdisciplinary aspects of aging and vision care; to provide vision care, counseling and support services; to develop ongoing relationships with regional and national collaborators for education and vision care services. Research is focused on two research programs: 1) The eyes' structures and visual function and 2) Visual ergonomics, quality of life and shared-care.

### **Research competence on high international level**

Faculty of Health Sciences at the BUC is one of the most productive and competent healthcare research environments in Norway, both according to publication statistics and recognition in the form of external research funding.

The Faculty of health sciences has recently applied for a PhD program in Health Care. The core group of senior researchers attached to the PhD program consists of 9 professors and 1 associate professor in full positions at the Faculty, and one is adjunct professor (from the UK). The members of the core group in full positions have published more than 50 articles in international peer reviewed journals in the period 2010-13 on topics relevant to the proposed PhD program (*Cristin*). According to the statistics of publishing points, our faculty is far ahead of other Norwegian university colleges.

When it comes to publication points pro faculty member on 1st level (*førstestillingsnivå including førstelektor*), which is required for PhD educations, the BUC Faculty of Health Sciences is even more

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productive than most Norwegian university faculties of medicine, in 2012 in fact the most productive of *all* faculties of medicine and healthcare in Norway (table 1 & 2, below).

Since 2006, the Faculty has received recognition in the form of 35 million NOK in funding from the Research Council of Norway to person-centred projects:

- Characteristics of post stroke fatigue and related experiences (2006-12),
- Crises resolutions and home treatment in local based mental healthcare (2007-12),
- Care for home based elders with mental health problems (2012-15),
- Care for persons with mental health problems and substance abuse (2012-15),
- Person-centred communication with older persons in need of healthcare (2013-16).

In addition the faculty has received grants for research related to optometry and vision science.

All these projects involve PhD students. Together with the Government funded PhD projects, the PhD research at the Faculty apply a series of approaches to person-centred research, both qualitative, quantitative and mixed methods, action research and e-health designs, experiential learning, simulation training and collaborative practices.

Development of innovative methods for person-centred research and practice is an integral part of several of the projects funded by the Research Council. In fact, BUC researchers are at the forefront of methodological developments in different fields of healthcare research, like

- collaborative research in mental health (i.e. co-operating with users as researchers),
- professional communication research (both simulation training and statistical methods),
- web-based, patient-centred intervention research (counselling by use of written feedback), and
- Institutional systems for measuring patient needs and care intensity (the Rafaela system).

In addition to the funding from NFR, the Faculty has received funding for person-centred research projects from a series of other sources, like the Norwegian Directorate of Health, National Competence-Centre of Mental Health and several County Municipalities.

**Table 1 Publishing points for different Faculties of Medicine and Faculties of Health Sciences (figures from DBH)**

INSTITUTION	Year	Point /FTE 1st level	Point / FTE	Points in total
University of Oslo, Faculty of Medicine	2012	2,0	1,1	679,5
	2011	2,1	1,1	679,5
Buskerud University College, Faculty of Health Sciences	2012	2,2	0,8	42,5
	2011	1,7	0,7	31,8
University of Bergen, Faculty of Medicine and Dentistry	2012	1,4	0,9	412,7
	2011	1,4	0,8	383,0
University of Tromsø, Faculty of Health Sciences	2012	1,2	0,6	314,1
	2011	1,3	0,7	347,2
University of Stavanger, Faculty of Social Sciences (including Department of Health Studies)	2012	1,4	0,7	163,8
	2011	1,2	0,6	129,4
University of Agder, Faculty of Health and Sport Sciences	2012	1,1	0,5	46,6
	2011	1,0	0,4	37,7
Oslo and Akershus University College, Faculty of Health Sciences (2011: Department of Nursing Education)	2012	0,8	0,3	86,7
	2011	1,1	0,3	37,4
Bergen University College, department of Health and Social Sciences	2012	0,9	0,3	46,9
	2011	0,9	0,3	42,2
Gjøvik University College, department of Health, Care and Nursing Science	2012	0,6	0,2	12,6
	2011	0,9	0,3	17,9
Vestfold University College, Faculty of Health	2012	0,4	0,1	7,0

Attachment. Science Centre Health and technology

Sciences	2011	1,4	0,5	25,2
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**Table 2 Publishing points and % of Level 2 for selected University Colleges (figures from DBH)**

Institution	2009 Public ation points	2009 Level 2	2010 Public ation points	2010 Level 2	2011 Public ation points	2011 Level 2	2012 Public ation points	2012 Level 2
University Colleges in Norway, in total	1646,8	10,5%	1678,3	10,5%	1736,9	11,6%	1900,4	11,6%
<b>Selected University Colleges, Faculty/ department of Health Sciences</b>								
Agder University	8,4	1,2%	11,3	8,5%	16,0	10,5%	18	3,7%
Bergen University College	39,8	16,6%	23,1	17%	42,2	32,3%	46,9	20,5%
*Buskerud University College	31,4	7,25%	23,2	9,9%	39,3	7,9%	42,5	4,9%
*Buskerud University College 2	29,9	9,2%	19,6	11,8%	31,8	6,3%	34,7	5,5%
Diakonhjemmet University College	51,3	1,03%	35,1	16,8%	70,5	8,6%	44,1	4,4%
Gjøvik University College	10,1	33,2%	11,2	12,7%	17,9	20,6%	12,6	0,8%
Lovisenberg University College	3,6	0	16,8	37,5%	15,4	19,5%	14,1	9,2%
**University of Oslo	21,7	22,8%	49,1	33,4%	192,3	27,2%	179,8	17,7%
Vestfold University College	9,5	27,0%	25,6	5,3%	25,2	43,4%	7	0,0%

\*Department of Health + Department of Optometry and Visual Sciences = Faculty of Health Sciences from 2012. The number related only to Department of Health for the same period will be different (see line two for BUC).

\*\*Ref DBH: University of Oslo, Department of Nursing Science and Health have from 2011 been a part of the larger Department of Health and Community.