SFU MAGAZINE

NEWS FROM NORWAY'S LEADING EDUCATIONAL COMMUNITIES

SPRING/SUMMER 2017

Uniting Europe

Norway is leading the way in the development of music education

Physics, film, entrepreneurship and IT:

Get to know Norway's new Centres of Excellence in Higher Education

Being a good teacher should pay off

Universities working on merit scheme

Centre for Excellence in Education

NOKUT

About the Centres of Excellence in Higher Education (SFU)

SFU IS a prestigious national initiative for higher education which was established in 2010.

SFU SHALLcontribute to further developing the quality of and initiatives relating to higher education and teaching and highlight the fact that education and research are tasks of equal value.

SFU HAS given universities and university colleges a new arena for competing in quality of education.

Centre for Excellence in Education

SOME QUICK FACTS ABOUT SFU:

- Outstanding academic environments at universities and university colleges can be granted SFU status.
- The centres receive NOK 4–8 million each year.
- SFU status is awarded for a period of five years and can be extended by five years.
- There are currently eight centres.
- The SFU arrangement is administered by NOKUT.

CENTRES ARE TASKED WITH:

- disseminating knowledge and research about education and teaching
- inspiring other communities
- promoting and using R&D-based teaching
- testing new and innovative methods in teaching and education
- involving students

In this edition of the SFU magazine, you will find news from the centres **bioCEED, CCSE, CEFIMA, CEMPE, Engage, ExcITEd, MatRIC** and **ProTed.**

Read more at **www.nokut.no/en/Centres-for-Excellence-in-Higher-Education/**

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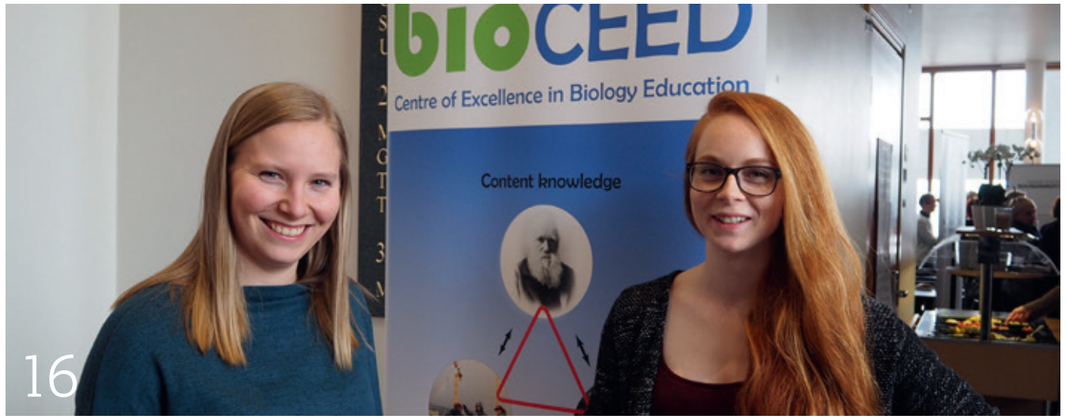

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Terje Mørland
Director General, NOKUT

The family has grown!

This edition of the SFU Magazine is dedicated to the new members of the SFU family. We now have four new Centres of Excellence in Higher Education.

Before Christmas, NOKUT hosted the event *Utdanningsfest*. We wanted to dedicate the evening to Norway's foremost higher education players through praise and awards. They really deserve to be honoured, but the event was also intended to inspire and call attention to all those who work to make higher education in Norway even better. It was simply about time we had a party!

On this special night, the venue in Oslo was packed with people who are interested in and enthusiastic about higher education. One of the highlights of the event was the announcement of new Centres of Excellence in Higher Education. Nine finalists, who were all in the running for SFU status, were in the audience. These finalists are among Norway's top academic environments in terms of education. They have invested a lot of time and effort in their SFU applications. They have shown that they have big ambitions for future education. And now the decision would finally be announced. The atmosphere in the room was like the Oscars, since no one knew who would be granted SFU status.

Four of the finalists came out on top this evening:

- CCSE – Centre for Computing in Science Education
- ExcITEd – Centre for Excellent IT Education
- CEFIMA – Centre of Excellence in Film and Interactive Media
- Engage – Centre for Engaged Education through Entrepreneurship

The environments that have been granted SFU status are among the best in the world in terms of education. They come from very different fields, but they all address important challenges faced by society through education. In addition, the international expert committee stated that the new centres share certain characteristics that were decisive for the decision to grant them this prestigious status:

The centres share an enthusiasm, passion and eagerness for education and for the projects they are about to start They also have a clear vision developed in partnership with their students. Last, but not least, all the centres that have now been granted SFU status demonstrate clear and strong management at all levels.

The new centres can receive a total sum of up to NOK 240 million over a ten-year period.

NOKUT has great expectations of the new centres, and in this edition, we will get to know the newcomers better. What are their plans and visions? How do they intend to work to achieve their goals? We will also check in with old friends and hear the latest news from CEMPE, ProTed, bioCEED and MatRIC.

Enjoy!

CCSE

$$m\frac{d^2\vec{r}}{dt^2} = -k\,\theta\left(|\vec{r}|-L\right)\frac{\vec{r}}{|\vec{r}|} - mg\hat{j}\ ,\ \theta(u) = \begin{cases} u & , \quad u > 0 \\ 0 & , \quad u \leq 0 \end{cases}$$

The solution to this equation describes the movement of a ball attached to an elastic rope, and it cannot be solved using traditional mathematical methods. Now, students are solving this equation numerically in the introductory physics course.

No students have managed to solve this equation **– until now**

Study programmes are falling behind when it comes to using computers to solve complex problems. Now students get help from the Centre for Computing in Science Education (CCSE).

'Problem-solving using computers – or computing – is now an integral part of research and development in academia as well as in working life. If we are to prepare science students for a life-long career, then we have to include computing in the study programmes too,' says Director Anders Malthe-Sørenssen of CCSE, which was granted SFU status in November 2016.

So far, computing has not been used much in study programmes in fields such as physics. CCSE wants to change this.

COMPUTING PROVIDES ENDLESS POSSIBILITIES FOR PROBLEM-SOLVING

In physics, nature is described by means of mathematics. When students solve physics exercises, they have to formulate them as mathematical problems which they then have to solve.

'Unfortunately, only a small number of carefully selected simplified problems can be solved using traditional mathematical methods. Over time, these limitations have shaped both what and how we teach, and they have contributed to the impression that physics is of little relevance to the real world – to the frustration of many students,' Malthe-Sørenssen explains.

The power of computers remove this obstacle and make it possible for students to solve any physics problem. The students learn computing

CCSE
Centre for Computing in Science Education

CCSE - Centre for Computing in Science Education

Affiliated to the University of Oslo and the University College of Southeastern Norway

The centre director is Professor Anders Malthe-Sørenssen

SFU status 2016–2021

Receives NOK 4.8 million a year

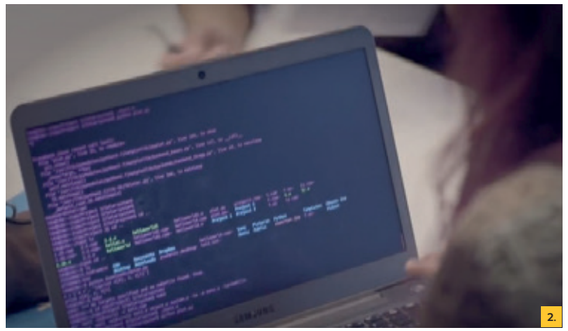
The centre shall renew the content of science education by integrating computing throughout study programmes and become an internationally leading driving force for such renewal. The centre shall lead the research-based development of new learning material and methods, study their effect on learning and the learning environment, and disseminate and adapt methods and results across disciplines together with students and partners.

> www.mn.uio.no/ccse/

Director
Anders Malthe-Sørenssen

How would you define excellence in higher education?
'Excellence in education means allowing each student to realise his or her full academic, professional and personal potential. This is what makes it so rewarding to work in education – working closely with young people who are realising their potential. An excellent education must be adapted both to the student and society. The students must develop and apply knowledge and skills, and be offered the opportunity to discover their own creativity and creative enthusiasm.'

How will you achieve this?
'We already have extensive experience of reorganising the physics syllabus. We have seen that integrating computing allows students to work with more realistic and research-oriented problems early on using more project-oriented and student-active teaching methods. We shall build on our experience from physics and adapt our methods to other institutions and disciplines. We will do this together with the students, who have been and will remain an important driving force in this development by contributing to the development of new material, new teaching methods and conducting research on the effect of our education.'



1. A group teacher and student discuss the results of a simulation carried out by the student. (Photo: Hilde Lynnebakken)

2–4. Students write programs themselves and cooperate to solve more complex physics problems in the bachelor's degree programme. (Pictures from the film by Visuello, youtu.be/T7DK0JHEnIY)

methods by making a computer program that helps them to solve the problem. This is the same work method that students will meet in research or in the workplace.

Student Daniel Heinesen is working on simulation of friction, and confirms how useful it is to do the programming himself.

'It would be more or less impossible to do this using pen and paper, but modern computers can do it in seconds. This means that we can now use the power of computers to explore things we could only speculate about before. It has been very educational to see how research and physics are done in the real world,' he explains.

COMPUTING HAS ALREADY BEEN INTRODUCED IN SEVERAL SUBJECTS

CCSE has already started to introduce computing throughout the study programmes. This will allow students to encounter current research issues and realistic and relevant assignments at an early stage of their bachelor's degree programme.

'For example, while students of mechanics could previously only calculate the trajectory of a cannonball without air resistance, they can now learn the same physics by developing a method for finding out how the wind blows inside a tornado by firing a test projectile through it,' Director Malthe-Sørenssen explains.

Heinesen and his fellow student Erlend Lima are now developing their own code to test a new model for friction, and they are enjoying working on realistic problems.

'Learning how we can use the incredible resource that computers represent so early in my studies has already helped me a lot, and will undoubtedly help me a lot in my future studies and career,' says Heinesen.

METHODS FROM RESEARCH INTEGRATED INTO TEACHING

'When each student carries out their own simulation, they will all get somewhat different results. It is in the discussion that arises when you see that the student next to you has arrived at a somewhat different result that is perhaps also correct, that learning takes place. In this way, the methods, way of thinking and ethics are naturally integrated into our teaching,' Malthe-Sørenssen thinks.

Bachelor's degree students also get the opportunity to reproduce scientific results and, in some cases, even publish scientific work themselves. This prepares students for further research work at master's degree level.

Engage

Entrepreneurship to meet the **challenges of the future**

In future, an entrepreneurial mindset and creative problem-solving will be important traits needed to solve new and more complex challenges. This is what Engage – Centre for Engaged Education through Entrepreneurship will be focusing on in the years ahead.

There was great celebration at Gløshaugen campus in Trondheim on 1 February, when no less than two centres were opened at the Norwegian University of Science and Technology (NTNU). One of these centres was Engage – Centre for Engaged Education through Entrepreneurship. The centre is a consortium comprising the NTNU School of Entrepreneurship, Nord University Business School, Spark NTNU, TrollLABS and Experts in Teamwork (EiT) at NTNU, in addition to other partners from Norway and abroad.

At Nord University, Engage will involve different academic environments to stimulate more engaged learning and research activities. Therefore, a separate celebration of the centre's opening was held at Nord University on 23 March. The event included a presentation of the centre as well as talks and video greetings from key players both at the regional and the national level.

A separate celebration of the centre's opening was held at Nord University on 23 March. From the left: Bjørg Riibe Ramskjell, Gry A Alsos, Roger Sørheim, Marianne Texmo, Michal Meyer Nilssen and Christer Hagen. (Photo: Svein-Arnt Eriksen)

'Work on the opening has already proved important in terms of making contacts and spreading information about the centre in the region,' says project manager Bjørg Riibe Ramskjell from Engage.

ENTREPRENEURSHIP – HORIZONTAL AND VERTICAL COOPERATION

The centre's objective is to educate students who are willing and able to take on the role of change agents in society. This will be done by developing entrepreneur-

engage

Engage - Centre for Engaged Education through Entrepreneurship

Affiliated to NTNU and Nord University

The centre director is Professor Roger Sørheim

SFU status 2016–2021

Receives NOK 6.8 million a year

To increase the number of students with entrepreneurial skills and a mindset that makes them change agents in many contexts, both in Norway and internationally.

> www.ntnu.edu/engage

Director Roger Sørheim

How would you define excellence in higher education?
'As student-focused education. As education that enables students to deal with future challenges when they are no longer students. As programmes that make the students even more curious about their discipline (both in-depth studies and academic breadth).'

How will you achieve this?
'By developing what we are already good at and refining and adapting it to reach the general student body. We will start at NTNU and Nord University, but we will also contribute to other institutions in Norway and abroad implementing the knowledge, methods and tools that we develop.'

1. Centre Director Roger Sørheim is giving a presentation about Engage during the opening event at NTNU. (Photo: Thor Nielsen)

2. All the Engage partners were represented when the centre was granted SFU status – the NTNU School of Entrepreneurship, Spark NTNU, Experts in Teamwork, TrollLabs and Nord University Business School. (Photo: Anette Andresen)*

ial skills and attitudes in students. The background for Engage is five partners that, each in their own way, emphasise interdisciplinary cooperation through innovation work in real projects.

'The centre allows for more cooperation across both institution and faculty boundaries. Students, professors and other stakeholders are working side by side on projects,' explains Professor Roger Sørheim, Engage's centre director.

The NTNU School of Entrepreneurship contributes to a high level of student engagement by letting the students start their own businesses in interdisciplinary teams. One example is Assistep, which has since 2012 been developing an assistive device for people who have difficulty getting up and down stairs. The enterprise has now installed its product in more than 100 institutions and private homes.

'This is precisely the kind of drive we want Engage to stimulate in the general student body,' says Professor Sørheim.

STRONG STUDENT ENGAGEMENT

Another good example of student engagement is Spark* NTNU, which is one of the consortium partners. Professor Gry Agnete Alsos from Nord University Business School describes it as follows:

'Spark NTNU is a student-run guidance service for students with an idea that they want to realise. In addition, Spark* NTNU administers the Pengesprøyten scheme, which is a grant scheme where students can apply for up to NOK 25,000 in funding.'*

Since its establishment in 2014, Spark* NTNU has considered about 300 business ideas. A group of students at Nord University is currently looking into the possibility of introducing the Spark NTNU model there and adapting it to local conditions.

'Students' learning is taking place both inside and outside the classroom. We want to facilitate an outlet for students' engagement for entrepreneurship and learning outside the auditorium too,' says Alsos.

A third example of student involvement is Experts in Teamwork (EiT), which is a compulsory course for master's degree students at NTNU. In this course, students are placed in interdisciplinary teams to solve real problems.

'This gives 160 learning assistants and 12 teaching assistants per year the opportunity to train as facilitators. Together with the lecturers, they are part of the facilitator team that plays a key role in the students' learning in this course,' says head of EiT Bjørn Sortland.

ENGAGEMENT IS A KEY WORD

Engagement is a key word and basic principle for the Engage consortium. Together, the partners in Engage will develop education that gives students the knowledge and expertise required to meet the challenges of the future, and make them change agents who are willing and able to implement changes and solve problems creatively.

Professor Martin Steinert of TrollLABS gave the following description of the research laboratory: 'This is not a think tank, it is a do-tank.' 'This is about putting thoughts into action,' Sørheim elaborates.

Two out of four new centres go to NTNU

'A result of a long-term focus on quality development through NTNU Teaching Excellence,' says Pro-Rector Berit Kjeldstad proudly.

'Getting two Centres of Excellence in Higher Education puts NTNU on the map. We are contributing to quality development in a national and international arena. These centres will also contribute to our internal quality culture. As Rector Gunnar Bovim said at the opening event for ExcITEd and Engage – the centres will take on the role of 'missionaries' in relation to the rest of NTNU. By sharing experience, they will encourage many more to throw themselves into the work of developing excellence in higher education,' says Kjeldstad.

In recent years, the university has focused on developing quality in education through NTNU Teaching Excellence (see fact box). Among other things, it supported the two academic environments from NTNU that almost achieved SFU status in connection with the 2013 call for applications. One of these was the environment behind ExcITEd, which has now been granted SFU status. The other one was TRANSark, which received the *Utdanningskvalitetsprisen* award in 2015.

Pro-Rector Kjeldstad has more advice to institutions that want to implement similar initiatives to NTNU's:

'Take a long-term perspective! Good environments need time to be able to assert themselves in competition with other excellent environments. Be aware that writing applications for funding from the SFU scheme or other calls for applications will raise awareness of quality in the academic environments and is therefore worthwhile even if the application is unsuccessful.'

She also encourages institutions to take a broad approach and develop both big and small projects. Excellence in higher education is also developed in partnership with many different players.

'It is a precondition both for high quality of education and for being awarded SFU status that all students are involved in developing the teaching. Contributions from excellent technical and administrative support systems are also important to excellence in education. Also, think about how cooperation across institutional boundaries and internationalisation can promote excellence,' is her tip.

Management support at all levels is crucial in change processes, according to Kjeldstad:

'It is incredible how many of our academic staff are inspired and motivated to work on developing their teaching, but it requires attention and follow-up by the responsible management.'

Berit Kjeldstad, Pro-Rector NTNU

NTNU TEACHING EXCELLENCE

- NTNU Teaching Excellence is an umbrella term for the Rector's comprehensive long-term quality of education initiative.
- Intended to help NTNU to achieve its goal of providing education characterised by quality at a high international level
- The initiative consists of several development measures that together are intended to strengthen teaching competence by developing innovative teaching, learning and assessment forms.
- Results that the initiative may have contributed to bringing about:
  - Two Centres of Excellence in Higher Education – three academic environments in the final round of the SFU applications in 2016 and two in 2013
  - Utdanningskvalitetsprisen award for quality in higher education 2015
  - Many publications and activities resulting from the focus on innovative projects
  - Increased interest in education and quality of education at NTNU

Sources: Pro-Rector Berit Kjeldstad and www.ntnu.no/toppundervisning

7 Seven voices on the Centre for Excellent IT Education

1. **In your opinion, what is the most important thing for the Centre for Excellent IT Education (ExcITEd) to achieve?**
2. **How can ExcITEd contribute to improving the quality of IT education in Norway and in the world?**
3. **How can ExcITEd help to recruit new groups to IT studies, for example women?**
4. **How can an SFU in IT improve quality in other disciplines as well?**

Kristin Vinje, Member of Parliament for the Norwegian Conservative Party (H)

1 There is broad consensus that future digitalisation will impact the labour market and society at large to an even greater extent than today. Therefore, we will need employees who are capable of seeing and making use of the possibilities that digitalisation presents. In my opinion, ExcITEd has an important role to play in making more people choose IT studies and raising competence both in the academic environments and individuals.

4 Digitalisation will permeate more disciplines in the time ahead, and we must therefore make sure that we leave academic disciplines' traditional silo mentality behind. It is obvious that both the IT environments and the individual discipline environments will benefit from a closer link between IT education and other disciplines environments.

Senior Research Scientist Barbara Ericson, Georgia Tech, member of the board of ExcITEd

2 ExcITEd can contribute to improving the quality of IT education in Norway and abroad by using active learning methods where students learn from each other. Problem-based learning will be important.

3 ExcITEd can test and disseminate engaging methods for introducing female students to IT. For example, many female students are interested in projects where you help others and where you can be social and creative.

Associate Professor Line Kolås, Nord University, head of a sub-project in ExcITEd

1 Research-based knowledge of didactics in IT studies and better recruitment of young people with different IT talents to IT studies.

3 By spreading knowledge about all the varied and exciting professional opportunities IT studies open up and creating educational and engaging learning situations for students. The centre must aim to reach teachers in both primary and secondary education as well as lecturers in higher education. By giving pupils positive experiences of information technology before university, we can contribute to increased recruitment in the long term.

Student Phrida Norrhall, student representative on the board of ExcITEd

2 By examining new learning methods, success factors that contribute to a good learning environment can be identified. This gives students both co-determination and a good arena for feedback on teaching activities.

4 The presence of IT in other engineering-related disciplines is growing, and raising quality in IT will therefore also raise quality in other disciplines. ExcITEd can contribute to finding new digital solutions that can be used in all types of academic environments.

Head of Department Letizia Jaccheri, Department of Computer Science, NTNU

1 It is important that the centre contributes to our social mission in the areas of teaching and research-based education. NTNU as a whole and the IT environments involved in ExcITEd are already at a high international level of quality. The goal is to improve the quality of other IT programmes while maintaining the high quality of the Computer Science programme.

4 All engineering students are offered IT subjects, and IT is part of most study programmes today. By improving the quality of IT education and increasing the use of IT in education, the quality of other programmes that include IT elements can also be improved. Think, for example, of digital exams and computer-supported learning.

Professor and Pro-Vice-Chancellor Duncan Lawson, Newman University, member of the SFU's expert committee in 2016

1 IT is everywhere, and every country needs a strong IT base in order to take advantage of the opportunities that IT brings. Despite this, the field is often considered 'nerd territory', the domain of teenage boys and men without interpersonal skills. Debunking this myth is an important challenge facing ExcITEd. The centre is therefore aptly named – its function is to excite young (and not quite so young) people and show them the value of studying IT.

2 ExcITEd can function as a role model. The centre can create a community of IT educators who can further develop IT education together. It can promote team-based projects implemented in cooperation with business and industry and demonstrate that IT is about more than programming.

MARIANNE AASEN, MEMBER OF PARLIAMENT FOR **the Norwegian Labour Party (A)**

2 IT expertise is and will become highly sought-after as society changes. It is crucial that we raise the number of IT students, and it goes without saying that a high percentage of the people who choose to study IT should be women. I am delighted that we now have a centre of excellence in higher education in the field of IT, and that the centre has made the recruitment of women a particular priority.

4 SFU status is important as a stamp of quality for the education, and enables us to achieve a strong link between education and research. Not least, the centre should be at the forefront of the work to ensure that IT and IT skills permeate all subjects and study programmes. I look forward to following ExciTEd in the future.

Excited
Centre for Excellent IT Education

ExcITEd - Centre for Excellent IT Education

Affiliated to NTNU and Nord University

The centre director is Professor Guttorm Sindre

SFU status 2016–2021

Receives NOK 6.8 million a year

ExcITEd wants to make Norway a world leader in innovative IT education and make IT an attractive study option for both genders.

> www.ntnu.edu/excited

Centre Director Guttorm Sindre

How would you define excellence in higher education?
'Education where students can realise their full potential and acquire a good basis for work and lifelong learning.'

How will you achieve this?
'We will learn from each other, from best practices worldwide, and from working with our students to develop more effective learning methods.'

Henning Camre (from left), Thomas Stenderup and Fredrik Graver on their way to the stage to accept the SFU plaque and applause during the Utdanningsfest event on 1 November. (Photo: Anette Andresen)

A tale of the unknown stories

How to prepare students for the unknown. How to understand technology that hasn't been invented yet. How to tell stories without knowing what our audience will make of them. These are some of the challenges that CEFIMA wants to find answers to.

CEFIMA – Centre of Excellence in Film and Interactive Media has an objective that is both clear and unclear at the same time: to prepare its students to tell the stories of the future. But how is it possible to prepare students for something unknown? We met student Emanuel Nordrum and CEFIMA manager, Fredrik Graver, to hear their thoughts and visions for the centre. And there is no doubt that they are very enthusiastic about 'the new'. Graver compares it with the film industry.

'Film as an art form is a hundred years old. It is well established, with established work methods and forms of distribution. What is interesting about CEFIMA using our experience from film to explore a brand new field. Games are to a certain extent old and interactive, but in light of the rapid technological development that has taken place over the past 20 years, we must ask ourselves how we at the Norwegian Film School can use this phenomenon to create something new and interesting. And, not least, how we can combine what we are good at – storytelling – with the other thing we are good at, namely technology.'

'The new thing about interactive storytelling is that it makes the story the viewer's own. They will feel a much greater sense of ownership than is possible with any other medium,' Nordrum continues.

BACK TO THE FUTURE

CEFIMA will build on the work already taking place at the Norwegian Film School: its artistic approach, building a common language, creativity, systematic evaluation of its own work and storytelling techniques. But the new technological advances demand more than that.

'In the field of interactive storytelling, there is perhaps 15 years of experience, based on some tentative attempts in the 1990s and developments in the games industry,' says Nordrum.

'The very fact that there is no established method here makes students extra important. This applies to both current and former students, who can come back to share their experience with a new generation. The staff could perhaps also learn from the students – after all, they have to break new ground here,' he continues.

Student Emanuel Nordrum (Photo: Trude Lindland)

And experimentation is at the heart of CEFIMA's work. When the methods don't exist, they must be developed by students and staff in collaboration. This is where the 'declaration of intent' is important. The students must state in advance what they aim to achieve, and then evaluate whether they achieved their goal. This makes experimentation more systematic and makes it possible to distinguish 'random' successes from planned ones.

'We are evaluated based on what we are trying to achieve, not on whether the result turned out "well". If I was trying to evoke a specific emotion in my audience, I must ask myself whether I succeeded in doing that, not whether they are feeling anything,' Nordrum explains.

ROOM FOR EXPERIMENTATION

This room for experimentation is at the core of what CEFIMA must succeed with if it is to succeed in achieving its purpose: to create an environment that develops interactive storytelling.

'We have to test what the audience is willing to accept, what they want. We must invest in exploring possibilities because we don't know what can be achieved. A lot of trial and error is needed,' says Nordrum.

'We start out with concrete projects, for example making a virtual reality film,' the centre's Manager Graver explains.

'Then we put together a group of people with technology expertise, scriptwriters, directors etc. Then we have to bring in someone who has worked in this field – this is brand new, so there are no experts, but there are people with experience. We rarely use the "apprenticeship" model where the old master tells the young apprentices how things should be done. We build much of our education on a variety of teaching methods intended to give those in the process of learning the possibility to experience and learn something from their own experience. And this is perhaps something we can share with others as well, because we use this approach more consistently than most,' Graver continues.

The centre manager and the student are in full agreement about the project's potential.

'The potential is huge, and if we do this right, it will have international ripple effects. The limits are not set, and it is challenging to get people to be creative when they are dealing with the unknown. But if we succeed, we can create something completely new,' they summarise.

Maybe Norway will be the country that cultivates a brand new art form? ■

den norske filmskolen

CEFIMA - Centre of Excellence in Film and Interactive Media Arts

Affiliated to the Norwegian Film School, Inland Norway University of Applied Sciences

The manager is Associate Professor Fredrik Graver

SFU status 2016–2021

Receives NOK 5.57 million a year

CEFIMA wants to further develop both the learning and teaching of film, by focusing on digital technology and interactivity as artistic tools.

> www.filmskolen.no

Manager Fredrik Graver

How would you define excellence in higher education?
'Education that works. And in order to achieve that, you have to find out what works. So an excellent education should be an education that is enjoyable for those involved. That is actually very important. Then everyone involved, teaching staff, students and everyone else, will invest more.'

What is the most exciting thing you will be doing this year?
'First and foremost I am looking forward to start working full-time with this. The most interesting thing will be to get these projects started and see what the students can achieve. This is something I've been thinking about for 20 years, but I know that the students will come up with things that have never occurred to me. That's what's so great!'

CEFIMA can become world-leading in interactive storytelling

'The committee was impressed by many aspects of CEFIMA, in particular the commitment to learning and the mutual respect between staff and students,' says expert Harriet Cox of the London Film School.

Expert Harriet Cox from the London Film School.

Why was CEFIMA chosen as a new Centre of Excellence in Higher Education?
'The future will continue to bring interactive platforms for filmmaking and computer games together in ways that we cannot predict, foretell or know at present how to teach. CEFIMA's proposed paradigm shift is highly relevant to film schools all over the world. The committee was particularly impressed by the commitment to learning and the mutual respect between staff and students. The students produce films of excellent quality and know the future needs they will encounter in their professional careers. The close contact with working life is hugely valuable when it comes to this, and provides favourable conditions for theoretical and relevant practical training and partnership. We appreciated the staff's "we will make it happen" attitude.'

What is the quality of education at the Norwegian Film School like compared with other international film schools?
'The school has a good international reputation for quality of education and of candidates. Teaching across the board, from production design to post-production, requires big and costly resources, and the Norwegian Film School is impressive in this way. The staff clearly enjoy both teaching and practising. This definitely contributes to promoting student ownership of their own learning and helps them in the search for future work.'

What are the three best pieces of a dvice you would give to CEFIMA?
- Continue to listen to the students' ideas when it comes to creative practice for this unknown future.
- Make use of those valuable members of staff who collaborate/work with the industry.
- Think global life-long learning.

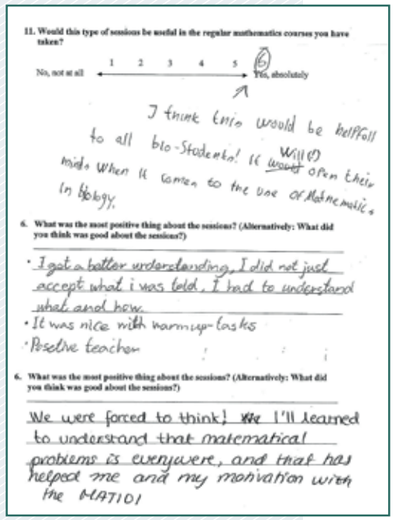
SFU cooperation gives huge gains

Cooperation across academic environments and disciplines between Centres of Excellence in Higher Education develops teaching and provides new insight in an exciting and innovative manner, as demonstrated by the cooperation between bioCEED and MatRIC.

'bioCEED benefits enormously from cooperating with another SFU, since we can draw on each other's expertise. Suddenly, there is someone else who can answer our questions. The SFUs become incubators for development. With a little money, we provide tools that make it easier to achieve change. The SFUs' roots in the academic environments allow us to see what is needed – and this gives us bottom-up instead of top-down change, which is much more effective,' says bioCEED's Centre Coordinator Oddfrid Kårstad Førland.

From the beginning, MatRIC has defined itself as coordinators in a network for developing the teaching and learning of mathematics.

'MatRIC is inspired by cooperation across disciplines and institutions. Our cooperation with bioCEED has confirmed MatRIC's thoughts concerning improvement of education and learning mathematics as a subject that provides services to other disciplines,' says head of MatRIC Simon Goodchild.


11. Would this type of sessions be useful in the regular mathematics courses you have taken?

No, not at all — 1 2 3 4 5 (6) — Yes, absolutely

I think this would be helpfull to all bio-Students! It would make When it comes to the use of Mathematics in Biology.

6. What was the most positive thing about the sessions? (Alternatively: What did you think was good about the sessions?)

- I got a better understanding, I did not just accept what i was told, I had to understand what and how.
- It was nice with warming-up tasks
- Positive teacher

6. What was the most positive thing about the sessions? (Alternatively: What did you think was good about the sessions?)

We were forced to think! We I'll learned to understand that matematical problems is everywere, and that has helped me and my motivation with the MATIO!

Maths with a touch of biology improves motivation

The biology students couldn't understand why they were being taught pure maths courses. But when they worked with examples from their own field, they understood the need to know mathematics, and both their interest and understanding improved.

Yannis Liakos is a PhD research fellow at the University of Agder who is affiliated with MatRIC – the Centre for Research, Innovation and Coordination of Mathematics Teaching. He is collaborating with another Centre of Excellence in Higher Education, namely bioCEED, which is based at the Department of Biology at the University of Bergen (UiB).

In his doctoral degree work, Liakos is researching how biology students at the University of Bergen react when they are taught maths through mathematical modelling. This means that the reality, the problem, is described using examples from biology, but mathematical language, meaning formulas and numbers. An example of this is students calculating how fast a bacteria can spread and how long it will take to achieve complete global dispersion.

The hypothesis is that when biology students are given learning examples from biology, their understanding of why mathematics is important to their discipline will improve – and thus also their motivation for learning it.

'PURE' MATHEMATICS COURSE

The background to this research is that all science students at UiB have to pass a course in basic mathematics. More than 450 students from about 17 different study programmes are taught in one common course, and most of them come straight from upper secondary school.

'Students ask themselves why on earth they need to learn maths, when they came to university to study chemistry, biology or other subjects,' says Yannis Liakos.

Students were generally highly satisfied with what they got out of being taught maths with a touch of biology, according to the questionnaire survey they completed after taking the course.

'Many want to become David Attenborough and save the world. They lose motivation when they are faced with a maths course with no obvious relevance to biology,' says Oddfrid Førland, bioCEED's Centre Coordinator.

BIO-MATHS IN SMALL GROUPS

The trial began with twenty biology students, but some dropped out during the course. In groups of four, students were given assignments such as 'how fast can an E.coli bacterium spread?'.

'Everyone had to defend their choices. It soon became clear that when you know what you're doing, meaning when you know the maths, you won't make big mistakes. It's also easy to see when a calculation is completely wrong when the result obviously doesn't agree with reality as we know it,' says Liakos.

The students felt scientifically responsible for their lines of reasoning and the results when working with biology problems.

'A good student is a competent student – and if modelling makes them more competent, then that's the way to go,' believes the PhD research fellow.

116 biology students took a basic mathematics course at the University of Bergen in autumn 2016. They were all offered extra lessons, nine one-hour sessions in groups of three or four. Yannis Liakos mostly taught groups, but also individual students. (All photos: Yannis Liakos)

MatRIC – Centre for Research, Innovation and Coordination of Mathematics Teaching

Affiliated to the University of Agder

MatRIC's vision is to be a national resource centre that encourages and supports excellence in teaching and learning mathematics in natural sciences, engineering, economics, teacher education and other higher education programmes with significant mathematical content.

> www.matric.no

Students help **students** to learn

In Bergen and on Svalbard, students run academic meeting places across courses and years. This allows for unique knowledge transfer, exchange of experience and collaboration between students.

'This is a good way for new students to get help and input from more experienced students in an informal setting, but it is also a great opportunity for us who get to participate in the planning and implementation of the project. We learn more about our subjects, because we want to be well prepared! At the same time, we gain experience of project work, including planning, execution, budgeting and cooperation.'

This is according to Ragnhild Gya and Mari Vold Bjordal, who are project managers for biORAKEL, one of bioCEED's two new student-run projects. The main objective is to help students in the transition from upper secondary school to university and strengthen academic and social integration.

LOW-THRESHOLD PROJECT

The biORAKEL project at the University of Bergen is a service for biology students where experienced students – 'oracles'– help fellow students with academic questions and challenges. The project is run by bioCEED's student representatives in cooperation with the centre.

biORAKEL provides a low-threshold arena where students can ask for help and receive informal feedback, discuss academic and study-related matters and challenges, and meet other students. Encouraging team spirit across classes and between bachelor's degree and master's degree students is an important goal, as well as giving lecturers better knowledge of what students find difficult, interesting and relevant in the courses and programme as a whole.

Project managers Ragnhild Gya and Mari Vold Bjordal tell that when they were recruiting project staff and oracles among the biology students, they were pleasantly surprised by how many wanted to help their fellow students through biORAKEL.

I FEEL THAT I MANAGED TO HELP MANY FELLOW STUDENTS TODAY, AND THAT FEELS GOOD

A core group of six people, including the project managers and a bioCEED representative, coordinates everything. After the positions had been advertised, nine oracles were hired. They will take turns helping others during the oracle sessions.

The biORAKEL oracles are followed up by bioCEED's education specialists, PhD candidates Lucas Jeno and Torstein Hole, and receive training on how to provide feedback and guidance to students who attend oracle sessions, among other things.

The first biORAKEL sessions were held in a cheerful social and academic atmosphere. Good conversation, enthusiastic oracles and waffles, fruit and coffee proved popular among the biology students. Some just came to see what this was, others came because they smelled the waffles, but most had questions and wanted feedback from the oracles on things that they were wondering about. Oracle Jenny Neuhaus told us that:

'I feel that I managed to help many fellow students today, and that feels good.'

Project manager Mari Vold Bjordal continues: *'One student exclaimed: "This is a really good set-up." All in all, this seems to be an initiative that will be used actively, and it is probably here to stay.'*

ARCTIC BIOBREAKFAST

At the University Centre in Svalbard (UNIS), student representatives Mari Engelstad and Malene Vinnes have started a project called bioBREAKFAST. The project aims to increase learning and promote closer cooperation between bachelor's, master's and doctoral degree students at UNIS. The project group will organise breakfast seminars throughout the semester on relevant topics chosen to inform and motivate biology students for their studies and future career.

'Our hope is that by pointing out future concrete opportunities in the study programme and beyond, we can help to increase motivation for and interest in further biology studies among bachelor's degree students. At the same time, master's and doctoral degree students get teaching and dissemination experience. Through dialogue and student-run academic and social meetings, we want to build an academic environment that students feel part of,' say project managers Malene Klakegg Vinnes and Mari Engelstad.

The project managers for bioBREAKFAST have already had their first meeting with the master's and doctoral degree students to plan the time and content of the seminars. At this meeting, they gave a presentation of the bioBREAKFAST concept and exchanged ideas and suggestions for content for the different seminars. All those who attended were very interested in what the project managers had to say, and they all had good ideas about what they wanted to communicate and a genuine desire to make the seminars as good as possible.

'bioBREAKFAST is an interesting student representative initiative where the aim is to share the research-based knowledge and experience that master's and doctoral degree students possess. The bachelor's degree students are particularly interested in information about what is important for them to learn and know in order to plan their own research career,' says PhD candidate Magdalena Wutkowska.

GIVE STUDENTS A CHANCE!

The biORAKEL and bioBREAKFAST projects aim to provide a safe social arena and learning platform for students where they can get to know new people across courses and classes. They are intended to serve as a learning arena both for the students who attend and for those who contribute as oracles and seminar leaders. The student-run projects are funded by grants from the Norwegian Agency for Quality Assurance in Education, NOKUT (see fact box).

Teaching and learning arenas where students are active partners and participants is one of bioCEED's main goals.

'We have long been planning to supplement our student services with precisely this type of informal oracle services and social arenas. When students were put in charge of developing them, we realised this goal quickly and in an excellent manner! Our advice to others is: give the students a chance! Give them responsibility and support – everyone will benefit!' says Centre Director Vigdis Vandvik.

Full house and hard work at biORAKEL at UiB. (All photos: bioCEED)

Ragnhild Gya and Mari Vold Bjordal are student representatives in bioCEED and project managers for biORAKEL.

Oracle Jenny Neuhaus gives good advice on how to keep laboratory journals at biORAKEL.

bioCEED – Centre of Excellence in Biology Education

Affiliated to the University of Bergen (UiB), the University Centre in Svalbard (UNIS) and the Institute of Marine Research (HI)

bioCEED aims to strengthen biology education to ensure that the biologists of tomorrow are highly qualified and well prepared for a professional career.

> www.bioceed.no

NOKUT GRANTS FOR STUDENT-RUN PROJECTS

- bioCEED, CEMPE, MatRIC and ProTed have been awarded NOK 50,000. It is up to the centres whether they give grants to one or more student-run projects.
- The purpose of these grants is to integrate students into an academic community and culture as well as to encourage students to take ownership of the development of their own education.
- The grants are intended to encourage students to become engaged in their own education and academic environment as real partners in the development of the education.
- The funds should go to student-run projects to improve the institution's own education at centre, study programme or course level.
- The projects must be implemented in cooperation with the academic staff.

BIORAKEL

- Academic and social meeting arena and oracle service for biology students where more advanced students help their fellow students.
- Aimed at basic biology courses and new students in particular.
- Intended to promote academic and social integration and cooperation and provide support in the transition from school to university.
- The project group consists of students who are responsible for planning and implementing the project.
- It is a goal to establish a permanent biORAKEL service even after the end of this project.

BIOBREAKFAST

- Meeting point for bachelor's, master's and doctoral degree students of biology
- The purpose is to promote exchange of experience and cooperation between students and to facilitate the development of skills in different topics taught by the students themselves.
- The seminars will take place once a month.
- It is desirable for the project to develop over time and for students from all programmes at UNIS to have the opportunity to attend the seminars.
- The initial project will have a duration of two semesters, and there will be an evaluation at the end of the year.

International network with student-oriented learning on the agenda

Centre Director Jon Helge Sætre (Photo: Kjetil Bjørgan)

CEMPE is leading the way internationally with a unique network for higher education in music. Institutions all over the world have been invited to a collaboration that will place students in the driver's seat of their education.

BY: Marie Strand Skånland and Aslaug Louise Slette

The network is a collaboration between CEMPE, the Norwegian Academy of Music and the AEC (see fact box). The new platform's target group is more than 150,000 students of music in Europe, but it could potentially become a global collaboration. CEMPE will head and run the international network called *Platform for Learning and Teaching in Music Performance Education*, which focuses on sharing experience of learning and teaching.

'This is very, very important to CEMPE. We can, in a more systematic manner, collect excellent experience from external parties to build on. At the same time, we have the opportunity to showcase our experience here at the Norwegian Academy of Music to the international community. This will help to strengthen our work to develop the quality of higher education in music,' says Centre Director Jon Helge Sætre, who will also be leading the network.

STUDENT-ORIENTED LEARNING ON THE AGENDA

'AEC has virtually made it a condition that the network should be based on student-oriented learning. That is interesting. This view of learning may be typical of our culture, both here at the Norwegian Academy of Music and in the Nordic countries, but there are other cultures that attach less importance to it. The role of the student and good cooperation between the student and teacher will be a key premise in the work,' says Sætre.

Taking the different cooperating institutions as the point of departure, there is a desire to take a closer look at principal instrument teaching, among other things. The apprenticeship tradition remains strong in many places, with the teacher as the master and the student as an apprentice. The wish is to acknowledge the good elements of this tradition, while at the same time looking at the possibilities for developing the teacher role. Sætre believes this approach has great potential.

SHARING ACROSS CULTURES

The network will be inclusive in that it builds on strong and capable environments while also being open to the cultural diversity that exists among the AEC institutions.

'In AEC, we can find institutions that would normally be described as conservative, as well as innovative and progressive ones. It would be interesting to build on the strengths of the conventional music academy tradition while exploring the potential of more innovative environments,' Sætre points out.

One of the network's first and most important tasks will thus be to facilitate the sharing of knowledge and experience across cultural boundaries by teachers and students alike. Hopefully, the network can contribute to creating dialogue between persons and academic environments that are unfamiliar with each other's teaching cultures and thus open up new opportunities for cooperation.

'Through CEMPE, we have learnt how important it is to build a sense of community around teaching where we have a chance to discuss our own teaching with our colleagues as well as with students. It would be great if we could contribute to such a culture of sharing through the new network,' says Sætre.

MUST LEARN ABOUT, AND CHALLENGE, EACH OTHER'S CULTURES

In some ways, the new platform can be described as a large-scale CEMPE. Until now, CEMPE has focused on developing teaching and learning at the Norwegian Academy of Music and in Norway. By launching the international platform, CEMPE is taking the SFU scheme's dissemination remit seriously and now has the chance to make a real difference internationally. The platform opens up for new topics, focus areas and ways of cooperating.

'In this network, it will be crucial to strike a good balance between the academic environments' wishes and needs concerning which topics they want to explore and creating arenas where different teaching cultures can meet and challenge each other,' Sætre specifies.

'The work will therefore require different project designs and approaches. We can envisage the same issue being investigated simultaneously by different institutions or in different countries, but it could also be a productive approach to establish collaboration groups across institutional and national boundaries that define common projects together.'

It is nevertheless an important condition for this network that student-oriented learning is a clear fundamental value in the work. At the same time, the network should contribute to constructive cooperation and exchange of experience that challenge institutions, teachers and students' awareness of learning and teaching in higher music education.

'We now have a truly unique possibility to really do something good for higher education in music worldwide. It's almost unbelievable,' Sætre concludes.

'We now have a truly unique possibility to really do something good for higher education in music worldwide. It's almost unbelievable.'

Jon Helge Sætre

ABOUT THE AEC

- AEC stands for 'Association Européenne des Conservatoires, Académies de Musique et Musikhochschulen' and is an organisation for European institutions of higher music education.
- The AEC was established as early as in 1953 in Salzburg. Today, the AEC Office is located in Brussels.
- The AEC currently has 257 member institutions in Europe with a total of more than 150,000 students.
- In addition, the association has about 50 associate members. The associate members are institutions that do not provide higher music education and institutions of higher music education located outside Europe. Several leading American and Asian institutions are among the AEC's associate members.

Read more about the AEC at www.aec-music.eu

CEMPE - Centre of Excellence in Music Performance Education

Affiliated to the Norwegian Academy of Music (NMH)

CEMPE's goal is to develop knowledge and experience that can support performance students in their search for artistic excellence. CEMPE also aims to qualify the students for a career in a rapidly changing globalised music community.

> www.cempe.no

ProTed

Students in focus

As ProTed starts its second period as a Centre of Excellence in Higher Education, it is zooming in on the students' experiences.

The beginning of 2017 marks a change for ProTed, as it is entering its second period with SFU status with two new centre directors. While the centre's work during the first period focused on innovation in teacher education and implementation of new programme structures for the five-year integrated secondary education teacher programmes, attention now shifts to the students' learning trajectories through the five-year programmes.

'We have made much progress in the development of our teacher education (years 8–13) over the past years,' says Doris Jorde, ProTed's centre director at the University of Oslo.

'The professional identity of teachers is multifaceted, and our students move between widely different learning arenas throughout their course of studies, from in-depth study of the most recent research within the various disciplines to professional practice in the classroom.'

'One of the first thing we will now do together with the students is to make a film that describes "becoming a teacher in three minutes", to highlight some of the most important aspects of the learning trajectory from student to teacher. Based on data systematically gathered from the different parts of the study programme, we will also intensify cooperation across subject areas in teacher education programmes.'

'In autumn 2017, all primary and lower secondary school teacher education programmes will become five-year master's degree programmes. UiT has experience of five-year master's degree programmes since 2010, and two classes have already graduated. I consider it my responsibility as a centre director to contribute to the joint effort that all primary and lower secondary school teacher education programmes will have to make. We know that other education programmes can learn a lot from the experience we have gained through the Pilot i Nord project,' says Siw Skrøvset, ProTed's centre director at UiT The Arctic University of Norway.

'We are currently developing a website where we will share our experience of five-year master's degree programmes. We know that many are interested in how we developed these programmes, and particularly how we have emphasised progression and integration in the programmes. The students' R&D skills as an integrating element in the education is particularly highlighted,' she continues.

'Together, we aim to develop future-oriented, student-active learning methods in our programmes,' say the two centre directors.

'Students often ask themselves: "When am I a mathematics student, when am I a student teacher, and when am I a student mathematics teacher?" New types of assignments and coursework requirements, supported by technology, can help students to put the pieces of the puzzle together and enter the workforce well prepared for the future.'

ProTed enters its second SFU period (2017–2021) with two new centre directors, Doris Jorde (right) and Siw Skrøvset (see fact box).

Doris Jorde
Comes to ProTed from the position of head of the Norwegian Centre for Science Education. She is a professor of science didactics and has dedicated her career at UiO (since 1984) to working on how science is taught and learnt in school. She has worked on curriculum development, including the development of the website viten.no.

Siw Skrøvset
Is a ***Dosent*** Professor of education management and has been a teacher, practical training supervisor for student teachers and head of a lower secondary school. She has also been a teacher education manager. In recent years, she has worked on education management, particularly in relation to the National School Principal Training Programme.

ProTed - Centre for Professional Learning in Teacher Education

Affiliated to the University of Tromsø - The Arctic University of Norway (UiT)

ProTed's vision is to educate professional, knowledgeable, confident and internationally oriented teachers for a multicultural society.

> www.uv.uio.no/proted/

EXCELLENT TEACHING PRACTITIONER – ETP

- Pilot scheme for conferring merit on the basis of educational competence at the Faculty of Mathematics and Natural Sciences at the University of Bergen (UiB)
- Established in 2016
- The purpose of the scheme is to develop a collegial and professional teaching culture
- ETP status is awarded to persons who can document systematic development of education over time that benefits benefit students and student learning
- ETP status entails an individual pay rise of approx. 50,000 a year and membership of the faculty's teaching academy
- Following the first call for applications in January 2017, 20 applications were received from different disciplines and departments. A decision will be made this summer.
- The other faculties at UiB will be introducing merit systems from 1 January 2018. Following an evaluation, UiB will decide on a merit model from 2021.

Read more in Norwegian:
www.uib.no/matnat/102333/informasjon-om-meritteringsordningen-fremragende-underviser-excellent-teaching

Centre of Excellence working to confer merit on excellent teachers

The University of Bergen has rolled out a merit system to reward excellent teachers. This would not have been possible without the help of bioCEED, the Centre of Excellence in Biology Education.

'It was bioCEED that took the initiative to introduce a merit scheme at the university. The centre is cooperating with the Faculty of Engineering LTH at Lund University, where such a scheme has been in effect since the early 2000s. Based on this initiative, the University of Bergen established a working group with representatives of bioCEED, among other entities,'

says Oddrun Samdal, Vice-Rector for Education at the University of Bergen (UiB). The university rolled out its merit system Excellent Teaching Practitioner (ETP) just after Christmas. The system is now being tested at the Faculty of Mathematics and Natural Sciences, and the university is aiming for full-scale introduction from 2018 (see fact box).

Centre Director Vigdis Vandvik at bioCEED is pleased that the centre has had the opportunity to contribute to the merit work:

'It has been very exciting! We have had great discussions in the merit scheme working group about quality of education in general, about the role and responsibilities of teachers, and about what constitutes "excellent" efforts. Matters such as how this should be documented and how such recognition can benefit the group as well as the individual have led to important discussions.'

ALL UNIVERSITIES AND UNIVERSITY COLLEGES ARE TO HAVE A MERIT SYSTEM IN PLACE WITHIN TWO YEARS

In recent years, more and more people have argued that the efforts that a teacher puts into his or her teaching should be appreciated more. This is important in order to make teaching more prestigious and recognised. More incentives relating to the education aspect will also make it easier to give these tasks priority.

The white paper on quality in higher education (*Kultur for kvalitet i høyere utdanning*) was published in January, and states that all institutions must have a merit system to reward education-related tasks in place within two years. UiB, together with NTNU and UiT, are the first to introduce such a system.

On 29 March, a NOKUT breakfast event was held at UiB. The merit system for teaching was hotly debated. From the left: Associate Professor at NTNU, Reidar Lyng, Vice-Rector at UiB, Oddrun Samdal, NOKUT's Director of Communications, Gard Sandaker-Nielsen, UiB student and op-ed writer for the regional newspaper Bergens Tidende, Mathias Fischer, and Professor at the Norwegian School of Economics (NHH), Iver Bragelien.

Samdal says that it has been important to UiB to include external partners:
'At the Faculty of Mathematics and Natural Sciences, we are currently in the process of evaluating the 20 applicants for the merit system. This work is well under way, and we are concerned with having a thorough process involving external help. We are particularly pleased that the director of another new Centre of Excellence in Higher Education, namely Anders Malthe-Sørenssen of CCSE at the University in Oslo, is involved in the work.'

IMPATIENT EDUCATIONAL INNOVATORS

'Raising the status and recognition of education-related tasks has been an important goal for the Norwegian SFU scheme. It is positive that bioCEED has been a clear voice in this development, both at UiB and at the national level,' says NOKUT's project manager for the SFU scheme, Helen Bråten.

She tells us that experience from the UK also shows that institutions that had Centres for Excellence in Teaching and Learning, which correspond to the Norwegian SFUs, were also leading when it came to implementing strategies and systems to acknowledge education.

'However, research does not provide clear answers as to whether it was the centres that had raised the status of education and made education more visible in the institutions' strategies, or whether the institutions granted status as Centres for Excellence in Teaching and Learning were institutions that already had a clear focus on education, or whether the explanation is a combination of the two,' Bråten explains.

Vice-Rector Samdal is of the opinion that bioCEED's educational innovators contribute to driving the processes forward at UiB:

'Good innovators are often impatient. They want progress and better quality of education now! bioCEED has many ideas about how to do it, with an emphasis on support in research, and they have the capacity to see things through. The prestige that SFU status confers on bioCEED and the centre's ability to function as a driving force for development definitely contributes to strengthening UiB's work on quality of education.

bioCEED's Centre Director Vigdis Vandvik is now chairing the committee that prepares UiB's action plan for quality of education, with bioCEED's Centre Coordinator Oddfrid Førland as the committee's secretary.

'We know that we will get an ambitious plan that will raise the quality of our institution's education, and that is precisely what we want,' Samdal underlines.

HAPPY TO HELP OTHERS GET STARTED

Centre Director Vandvik is more than happy to share the experience gained by UiB and bioCEED with other universities and university colleges that are about to start conferring merit for teaching activities:

'We are in favour of sharing experience and cooperating on education as colleagues. We know that we have a lot to learn from each other's experience, so we are happy to take part in development projects and cooperate with others. Feel free to give us a call!" she says encouragingly.

CONFERRING MERIT FOR EDUCATIONAL COMPETENCE

- Defined by the white paper on quality in higher education (***Kultur for kvalitet i høyere utdanning***) (Report No 16 to the Storting [2016–2017]) as *'formal systems for developing a collegial and professional teaching and learning culture and systematically documenting and rewarding efforts to develop education'.*
- Merit systems are intended to make it possible for individual employees to be conferred merit (for example promotion, qualification or pay rise) or given time to develop educational activities based on documented results in the field of education.
- The premise for the white paper was that greater appreciation will promote educational competence, which in turn, in combination with a collegial approach to education, will improve the quality of Norwegian higher education.
- This appreciation of educational competence is intended to remedy some of the imbalance caused by the many incentives for research.
- The white paper stipulates a requirement for all universities and university colleges to develop merit systems within two years.
- The University of Bergen, UiT The Arctic University of Norway and NTNU are among the institutions that already have or will soon introduce pilot schemes.

Read more:
www.regjeringen.no/en/dokumenter/meld.-st.-16-20162017/id2536007/

Paper on Merit for educational competence (in Norwegian) - www.nokut.no/Merittering-utdanningsfaglig-kompetanse-hvor-er-vi-hvor-skal-vi

NOKUT helps to assure, develop and provide information about quality of education

NOKUT contributes to securing, developing and providing information about quality in education.

NOKUT is an independent expert body under the Ministry of Education and Research with approximately 120 employees divided between five different departments.

NOKUT's main task is to document and provide information about the situation in higher education, tertiary vocational education and recognised foreign education.

NOKUT supervises, provides information about and contributes to developing the quality of Norwegian study programmes and institutions.

NOKUT has several recognition schemes for foreign education, which are intended to help to enable people with such education to use their qualifications in Norway.

NOKUT is, among other things, responsible for the national student survey *Studiebarometeret*, the incentive scheme Centres of Excellence in Higher Education, and the *Utdanningskvalitetsprisen* award (prize for quality in higher education).

Do you want to learn more? Go to **www.nokut.no/en/**

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