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

SFU SHALL contribute 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.

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, ExclTED, MatRIC and ProTed.

Read more at www.nokut.no/en/Centres-for-Excellence-in-Higher-Education/
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. Once 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...
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 Gladsaxe 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 the Centre for Engaged Education through Entrepreneurship. The centre director is Professor Roger Sørheim.

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

 aument 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. An education that enables students to deal with future challenges when they are no longer students. As programmes that make the student 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 Nidel University, but we will also contribute to other institutions in Norway and abroad implementing the knowledge, methods and tools that we develop.

Engage – Centre for Engaged Education through Entrepreneurship

Method from research integrated into teaching

When each student carries out their own simulation, they will all get somewhat different results. It is in this 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.

Student Daniel Heinesen is working on a simulation of friction, and confirms how research and physics are done in the real world, ‘how research and physics are done in the real world,’ says Heinesen. ‘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.

1. A group roast chicken (Photo: Hilde Lynnebakken)
2–4. Students write programs themselves and simulate more complex physics problems in the bachelor’s degree programme. (Pictures from the film by Visuello, youtube.com/t7DK0JHEnIY)

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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 Tøxmo, Michal Meyer Nilssen and Christer Hagen. (Photo: Inna-Mette Frokke)

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2–4. Students write programs themselves and simulate more complex physics problems in the bachelor’s degree programme. (Pictures from the film by Visuello, youtube.com/t7DK0JHEnIY)
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 TRANSkart, which received the Utanningkvalitetsprisen 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 award-eligible to ensure 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 awarded to excellence 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/kvalitetsutvikling

SPRING/SUMMER 2017

1. Centre Director Roger Sarbuem 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)

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 Sørland.

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,’ Sarbuem elaborates.

Since its establishment in 2014, Spark*

1. Photo: Anette Andresen
2. Photo: Thor Nielsen

1. Berit Kjeldstad, Pro-Rector NTNU

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 Pregressopprettelse scheme, which is a grant scheme where students can apply for up to NOK 25,000 in funding.’

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Since its establishment in 2014, Spark*
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?

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.

2. 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.

3. Digitalisation will permeate more disciplines in the time ahead, and we must therefore make sure that we leave academic disciplines traditional into 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.

4. 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. 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

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

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.

Student Phrida Norrhall, student representative on the board of ExcITEd

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.

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.

MARIANNE AASEN, MEMBER OF PARLIAMENT FOR THE NORWEGIAN LABOUR PARTY (A)

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.

2. 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.

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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 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.

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 guide those in the process of learning the possibility to experience and learn something from their own experience. And this is intended 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?
**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.

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**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 give 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.

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**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 pure mathematics course with no obvious relevance to biology, ‘everyone had to defend their choices. It soon became clear that when you know what the future will continue to bring interaction for filmmaking and computer games together in ways that we cannot predict, forest 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 advice 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.

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**Why was CEFIMA chosen as a new Centre of Excellence in Higher Education?**

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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.

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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.

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, instructing and relevant in the courses and programme as a whole.

Project managers Ragnhild Gya and Mari Vold Bjordal told us 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 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

University Centre in Svalbard (UNIS), student representatives Mari Engelstad and Malene Venne 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 semesters, 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,” says project managers Malene Kløkka Venne 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 give the younger generation 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 careers’, says PhD candidate Magdalena Wurtkowska.

GIVE STUDENTS A CHANCE!

The bioBREAKFAST 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 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, NO-KUT (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 Vigla Vandvik.

Students to learn

‘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.

NOKUT GRANTS FOR STUDENT-RUN PROJECTS

bioCEED, CEMPE, MatRIC and ProTed have been awarded NOK 50,000. It is up to the universities 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 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 as academic partners and take part in the development of the education.

The funds should go to student-run projects to improve the institution’s student education at certain study programmes or courses levels.

The projects must be implemented in cooperation with the academic staff.

BIORAKEL

▶ Academic and social meeting arena and courses for new students where more advanced students help their fellow students.

▶ Aimed at basic biology courses and new students where more advanced students help their fellow students.

▶ 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 types of interactions.

▶ 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 this period.

Fall house and hard work at biORAKEL at UiB. (All photos: bioCEED)
International network with student-oriented learning on the agenda

By Marie Strand Salistrand and Asl og Louise Stitte

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:

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

CEMPE 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 strong and capable environments while also being open to 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.’’

Jon Helge Sætre

‘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

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 that the work will be determined simultaneously by different institutions or in different countries, but it could also be a productive approach to establish exchanges 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.

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

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.

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

WEB ▶
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 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 things 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 programmes, 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 aNord project,” says Siv 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’ RG-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,” says the two centre directors.

“Students often ask themselves: ‘When am I a mathematics student, 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.”

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 Practitioners (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 Vandrlik 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.
Bråten explains.

the explanation is a combination of the two, ‘and Learning were institutions that already
status as Centres for Excellence in Teaching
strategies, or whether the institutions granted
education more visible in the institutions’
had raised the status of education and made
answers as to whether it was the centres that
‘However, research does not provide clear
acknowledge education.
implementing strategies and systems to
SFUs, were also leading when it came to

correspond to the Norwegian
Centres for Excellence in Higher Education, name-
lvander Mathie-Sørnessen of CECSE at the
University in Oslo, is involved in the work.’

IMPATIENT EDUCATIONAL INNOVATORS
‘Raising the status and recognition of educa-
tion-related tasks has been an important goal
for the Norwegian SFU scheme. It is positive that
has a clear voice in this development, both at UiB and at the nation-
level,’ says NOKUT’s project manager, Helen Bråten.

She tells us that experience from the UK
also shows that institutions that had Cen-
tres for Excellence in Teaching and Learn-
ing, which correspond to the Norwegian
bioCEED’s Centre Director Vigdis Vand-
vik is now chairing the committee that
preparers UiB’s action plan for quality of education, with bioCEED’s Centre Coor-
dinator Oddfrid Førland as the commit-
tee’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, Sjámsaldar underlines.

HAPPY TO HELP OTHERS GET STARTED
Centre Director Vandvik is more than hap-
ny 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.

Samdal says that it has been important to
UiB to include external partners: ‘At the Faculty of Mathematics and Natu-
ral 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 Cen-
tre of Excellence in Higher Education, name-
ly Anders Mathie-Sørnessen of CECSE at the
University in Oslo, is involved in the work.

On 29 March, a NOKUT breakfast event was held at UiB. The merit
system for teaching was body-billed. From the left: Associate Professor at
NTNU, Bødker Lyng, Vice-rector at UiB, Øystein Samdal, NOKUT’s
Director of Communications, Gert Sandaker-Nielsen, UiB and editor-in-
chief writer for the regional newspaper Bergen Tidende, Mathias Fischer, and
Professor at the Norwegian School of Economics (NHH), Jørn Børgesen.

CONFERING MERIT FOR EDUCATIONAL COMPETENCE
▶ Defined by the white paper
● on quality in higher education
(White paper for quality in higher
education) (Report No 16 to the
Storting [23/16–2017]) 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/
merit - 2016-03-29/2016-04-07
Paper on Merit for educational
competence (in Norwegian) –
www.nokut.no/norskreguler/
http://www.nokut.no/norskreguler/utdanningsfaglig-kompetanse-hvor-er-vi-hvor-skal-vi

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

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

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).

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.

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

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