SFU MAGAZINE

NEWS FROM NORWAY'S LEADING EDUCATIONAL COMMUNITIES

AUTUMN/WINTER 2017

Students as partners: **What can Norway learn from Scotland?**

Video stars: students making teaching material

Advice on how to **increase student engagement**

Centers for Excellence in Education

NOKUT

About the Centers for Excellence in Higher Education (SFU)

SFU IS a national prestige 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 discussing, collaborating and applying for funds to enhance educational quality.

Centers for Excellence in Education

SOME QUICK FACTS ABOUT SFU:

- Outstanding academic communities at universities and university colleges can be granted SFU status.
- The centers 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 centers.
- The SFU arrangement is administered by NOKUT.

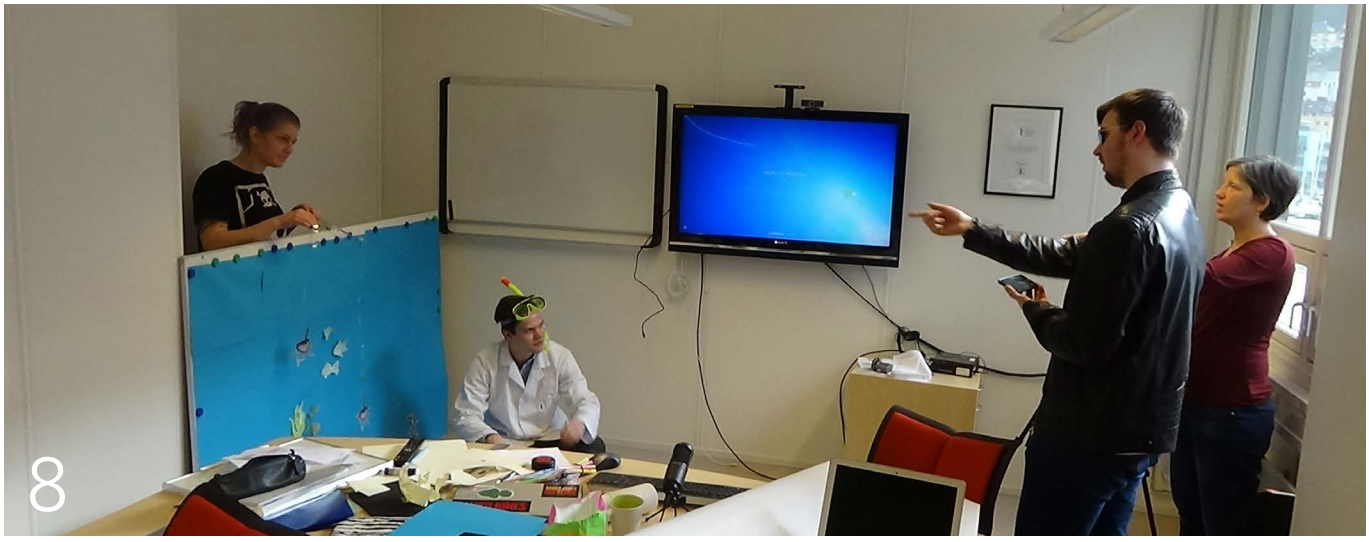
CENTERS ARE TASKED WITH:

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

The following centers have SFU status: **bioCEED, CCSE, CEFIMA, CEMPE, Engage, ExcITEd, MatRIC and ProTed.**

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

CONTENT AUTUMN/WINTER 2017



Terje Mørland
Director General, NOKUT

A partnership for better education

I often take the opportunity to point out that good education is not created in a vacuum, but in interaction with many players. The main contributors to this interaction are students and teachers.

In this edition of the SFU magazine, we celebrate student engagement and partnerships. Student engagement can be defined in a number of ways, but we know that students who are actively invested in their own learning and who are given the opportunity to influence their own study programme have better learning outcomes.

If we treat learning and teaching as a one-way transfer of knowledge and competence, we are underestimating students. Instead, we should see it as a form of interaction – a partnership between the students and the educational institution.

As one of the students in this edition of the SFU magazine puts it:

- *It's about being treated like an equal colleague. About feeling that my contributions are wanted and seen as valuable in all forums. It means that students contribute throughout the process, from the idea stage to completion. Only when this is in place do we achieve real co-creation between equal partners in the academic community.*

Students and teachers have different expertise and complement each other. Students are experts on their own learning and the times they live in, while teachers are experts on the knowledge we want the students to engage in. It is important that the students' voices and influence reach beyond course evaluations. Students must be allowed to influence the design of study programmes and the academic community.

The notion of involving students and student engagement is not a novelty in the Norwegian education system, but, seen in light of the international focus this has engendered, we are still at the starting line. Co-creation and partnerships are high on the agenda and are also the subject of extensive research, yet there is very little research conducted on this topic in Norway. I hope that the Centers for Excellence in Higher Education and others can change this.

All centers with SFU status are dedicated to involving students and creating student engagement.

bioCEED gives students the opportunity to explore research questions that will result in teaching videos made by and for students.

CCSE puts students' expertise on their own learning and their first-hand knowledge of programming to good use in summer jobs that include creating assignments for bachelor students OR BA students.

Excited gives their students the possibility of solving the problems they face in their everyday lives as students by making their own apps. You can read about these and many other examples of student engagement in this edition of the SFU magazine.

Enjoy!

Three things to consider when promoting student engagement

The importance of student engagement is increasingly being emphasised by governments and universities around the world. For example, in the recent Norwegian White Paper on Quality Culture in Higher Education, student engagement is rightly identified as a key factor in supporting students' success in higher education. In this short piece I discuss three elements that are important to consider when seeking to promote student engagement and how student engagement can lead to the development of important insights about the design of our degree programmes.

1. WHAT ARE WE SEEKING TO ENGAGE STUDENTS WITH?

Whilst student engagement is often promoted by universities, and academics, it is often less clear what students are being asked to engage with. This can be considered as the focus or 'object' of engagement. Is the object of engagement the development of student understanding through engagement with knowledge? Or is the object of engagement the curriculum, with students being asked to be involved in designing their programmes of study? Or is the object of engagement the formation of communities by involving students in the decision making processes of their university? These are all forms of student engagement, but they are quite different, and involve students in different roles and activities. When promoting student engagement it is important to be clear what kind of engagement is being sought and for what reasons.

2. WHAT DEGREE OF STUDENT ENGAGEMENT ARE WE ASKING FOR?

Often student engagement is presented as if it is an open invitation for students to become involved in their studies or universities but this is rarely the case. It can be useful to be clear whether what is intended is 'consultation', 'partnership' or 'student leadership'. 'Consultation' occurs when students are simply asked about their opinions on fixed set of options, whereas 'partnership' involves students working with staff in a more open-ended way to transform an existing object of engagement. 'Student leadership' occurs when students are asked to develop new objects of engagement.

It is important to be clear what degree of engagement is intended because, too often, students are told that they are being asked to engage as partners whereas academics or institutions are actually simply interested in consulting students about fixed alternatives. These kind of misleading invitations for student engagement can actually lead to students feeling less engaged once they realise the strict limits on their involvement in the process.

3. STUDENT ENGAGEMENT BY DESIGN

When considering student engagement in their degree programmes, it is important that this is done as an integral part of the curriculum design process. Whenever we design degree programmes, we need to take account of who our students are, what forms of knowledge we wish them to engage with, and who we want them to become through their engagement with this knowledge.

This is why engaging students in the curriculum design process can be such a powerful process. It offers an opportunity for us to discuss with our students why we have designed our degree programmes in a particular way, and to gain their insights into the effectiveness of the design. In doing so, we need to be clear about our expertise in the forms of knowledge that students are engaging with, but also to recognise that students have something important to share with us about who they are, what experiences they have of engaging with this knowledge, and what they want this knowledge to enable them do in the world. Opening up these kinds of conversations with our students can lead to important insights for both ourselves and students, which can improve the quality of our teaching and the quality of students' understanding of disciplinary and professional knowledge.

Paul Ashwin

Paul Ashwin is Professor of Higher Education and Head of the Department of Educational Research, Lancaster University, UK. Paul is currently chairing the interim evaluation of three SFU Centers for Excellence in Education. Paul's research focuses on teaching, learning and curriculum practices in higher education and how they are shaped by higher education policies.

Further reading on this topic: The ideas on the object and degree of student engagement were developed in an open access book chapter, which I wrote with Debbie McVitty : read here

The curriculum design process is examined further in Reflective Teaching in Higher Education (2015, Bloomsbury), which is designed for all those working in higher education who are interested in further developing research-informed approaches to university teaching.

High fail rate inspired math project

A forty per cent fail rate in mathematics for future economists and engineers inspired MatRIC to initiate a project to get to the core of the problem: insufficient prior knowledge.

'We were quick to get the student assistant project off the ground, because we realised we have no time to lose. We will then adjust the project as we go along and gain more experience,' says Professor Simon Goodchild, director of MatRIC.

MatRIC focuses on mathematics teaching and learning in study programmes like engineering, natural science, economics and teacher education.

MATHEMATICS IS AN IMPORTANT TOOL

In the engineering and economics programmes, mathematics is a tool that enables engineers and economists to e.g. calculate the strength of structures or exchange rate fluctuations. But many students do not understand how important this tool is until well into their study programme. The fail rate in mathematics has been stable at 40 per cent for engineering and economics students in all of Norway.

There are great variations in the knowledge of mathematics that the students have gained from upper secondary school, from mere basic knowledge, meaning that the students must now learn new things, a good knowledge of mathematics, which means that much of the mathematics is repetition.

MatRIC's project involves using student assistants to teach optional study groups. What's new is that students are primarily split into groups based on their prior knowledge of mathematics. The goal is to increase the students' insight into and understanding of mathematics and thereby reduce the fail rate.

INSPIRATION FROM CANADA

NOKUT recommended that MatRIC participate at a conference at McMaster University in Hamilton, Canada, in May to get some new impulses. In addition to the MatRIC management team, the Vice Rector for Education and two leaders from Studentorganisasjonen i Agder (the student organisation in Agder – STA) took part.

'At the conference, participants were presented with guidelines describing how to ensure inclusion of students in the design of courses in order to prevent them from failing. The fact that STA had a seat at the table where we, together, arrived at a joint understanding of the concept of partners, is without doubt the greatest benefit from the programme in Canada', says Kai Steffen Østensen, president of STA.

'It's easy to say that you have the students on board, but it's important that students have a real influence on an equal basis, and are not just included on paper. The fact that the STA leaders and the Vice Rector came along meant that we could implement measures quickly,' says Goodchild.

'The concept of "students as partners" is extremely important to create equality between students and academic staff in an academic community,' says the STA president.

REVIEW OF SYLLABUS AND COMPETENCE

After the Canada conference, MatRIC hired students with a degree in economics as interns. The goal was to find out

what knowledge the new economics students had acquired from upper secondary school and what they have to know to pass the exam.

'I analysed the actual use of mathematics in, for instance, the bachelor's programme in business administration,' says Tore Guttorm Knutsen.

'For instance, elasticity and present value are concepts that require knowledge of mathematics beyond simple addition and subtraction.'

The main goal was to make the analysis available to both students and teachers, so that the teaching – and studying – could target specific areas of use.

'That means that the course description can also state that "in this course, you will need to know differentiation and integration" – specific mathematical areas – and "next semester, you will need to know such and such mathematical concepts", says Knutsen.

'Being that specific opens up for real practical examples – which in turn promotes easier learning and understanding.'

DEVELOPED A TEST BOOKLET FOR SELF-EVALUATION

Daniel Meselu has developed a system for mapping what knowledge of mathematics individual students have acquired from different programmes at upper secondary school. The goal is to compose groups of students for student-assisted teaching. It is up to the individual student to find his/her level.

'To get everyone to pass, we need to find out the needs of the individual students and adapt the teaching accordingly,' says Daniel Meselu.

It is for this reason he designed a booklet of 50 questions that the students had to answer. Afterwards, they were tasked with assessing their own level before the programme started.

The questions increase in difficulty and cover mathematics relevant to the programme.

'The computer tells the students directly whether their answer is correct and gives them the solution. After that, it's up to the student to assess what level they are at,' says Meselu.

EVERYONE SHOULD TAKE THE TEST AT THE START OF THE SEMESTER

'The test should be expanded. Everyone should take it at the beginning of the semester and evaluation should take place immediately. It can motivate students to do something about their knowledge gaps. For students who do not know the basics, everything falls apart when the gaps start to make themselves apparent sometime into the semester.'

Knowledge of mathematics is built stone by stone, and if the foundation is weak, everything can come tumbling down.

'I added some questions from the Year 10 syllabus to get an overview of where the students are at, precisely because of how important it is to have the basics in place,' says Daniel Meselu.

After registration at the start of the semester, five groups of around 30 students each were set up – covering all levels.

The groups have been meeting for some time now. Turnout was poor at first, but has improved since the start of the semester. The exception is an 'elite group', where many students who want an A on their exam started the hunt for the holy grade early on.

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

Affiliated to the University of Agder

MatRIC's vision is to be a national centre for improved mathematics teaching and learning in the natural sciences and relevant programmes of professional study.

> www.matric.no

1. Gunnar Horn from the Educational Development Centre at UiA demonstrated the importance of body language to communication and learning – and the student assistants practised body signals, much to everyone's amusement.

2. The student assistants have weekly meetings with the teachers to discuss teaching. Here, Thea Gjerde Utheim and Ida Landgärds are talking to Professor Rolf Thomas Nossum.

3. 'We can work both individually and in groups – and get as much help as possible. Big groups are better, since the difference in levels becomes very apparent in smaller groups,' say Henriette Lunde and Lina Marie Jensen, who are helped by student assistant Daniel Meselu.

VIDEO STARS

All photos: bioCEED

UNIS, November 2016 The TE2LE team assists the students while editing their video tutorial.

Students are directors, scriptwriters, photographers and actors in bioCEED's production of video tutorials for and by students in biology.

The Department of Biology at the University of Bergen is buzzing with activity this morning, as the master's students from the Ocean Science course are preparing to produce their video.

Based on what the students have learnt so far in the course, they have been assigned a research question to study in more detail. Their work will result in a video tutorial, and have worked with the video script for several weeks. Students create the video to clarify a key scientific concept for their fellow students. Video production is an integrated part of learning activities and is also included in the assessment of the course.

A RESOURCE FOR TEACHERS AND STUDENTS

The production of the videos is part of the project Teach2Learn (see fact box). Students produce film clips that are used to teach fellow students about important scientific concepts in statistics, field and lab methods. The project's goal is that the video tutorials produced by the students will be a resource for both teachers and students.

"I have good experience of using similar videos found online, and want to help others learn in the same way," says Frida, who participated in Teach2Learn in the spring of 2016.

'Teachers can use these videos as learning tools in their teaching, while the students can use them as an additional resource before or after going to a lecture or reading the syllabus. The teaching collection of video tutorials created is of our digital platform bioSKILLS,' says project manager and postdoctoral fellow at bioCEED Anne-Laure Simonelli.

BRAINSTORMING AND PLANNING YIELD RESULTS

'When students are given the responsibility for making teaching material for their fellow students in the form of videos, they enhance their own learning,' says Simonelli. *Albert Einstein said, "If you can't explain it simply,*

you don't understand it well enough".

The students seem to explore the research question further after receiving initial feedback on their script. This helps the students build their own knowledge, even beyond what is required by the teachers. The process also strengthens the students' confidence and academic grasp of the topic. Good cooperation skills are an important quality when participating in a creative academic process in a group; Students often have to discuss things to come to an agreement on how to reach their goal.

'My lab partner and I often had different opinions about how to shoot a scene or what to write in the script. When I had to explain to her, or she had to explain to me, how we should go about it, and how this could affect the story's coherence, we learned a lot. We often started with a brainstorming session, and, eventually, we became more methodical. It was like we were thinking: we have to do this, then we can build on that later and then we don't have to repeat it... It helped to make structured plans and talk it through. In the end, we were quite efficient,' says Malvin, who participated in Teach2Learn.

SKILLS FOR THE FUTURE

Video production is also aimed at helping the students acquire skills in didactics, communication, group work, project management and creativity – all transferrable skills that are important in working life.

It is also about getting the audience involved – and this often requires creativity. Students must be given the opportunity to work creatively and allowed enough time to find the best way of explaining an academic topic to an audience.

'Creating the video tutorial was actually fun to do, it wasn't just serious; we could laugh and have a good time, but still be professional. We had to explain the topic in a way that was easy to understand, and to do this we had to be creative and use metaphors that the audience could recognise,' says Frida from BIO101 spring 2016.

SUPERVISION LEADS TO REFLECTION AND LEARNING

Students had the time to freely develop their video projects with guidance throughout the process.

Such supervision can include everything from starting creative and fruitful discussions, helping with the writing processes, assessing video-technical feasibility, or helping to maintain the focus on the topic and the end product.

'Students should have time to make mistakes and learn from them,' says Simonelli.

Malvin and his project partner chose a project in which they set up a lab experiment, where focusing on details was important.

'There's a lot going on at the same time at the start of the experiment. There are many details that are hard to catch, and some of them are important in order to understand the experiment. Then, when we review the experiment step by step, it becomes clearer: "Aha, that's why we did this, and this is how it works" [...] The supervisors' feedback made us visualise the video again. We understood that something was missing, but we couldn't quite put our finger on it on our own,' says Malvin.

Experience from the project shows that the students learn a lot from the formative feedback they receive during the process, and this can lead to reflections resulting in a deeper understanding and increased confidence and knowledge – in their education and with regard to their future studies and careers.

TO THE EDITING TABLE

The shooting of the film is over. Now the final part of the video production starts - editing the film. In this phase of the production, students have to select a few vital clips from all the video material recorded during the day. By the end of tomorrow, they must be ready to (proudly) present a concise teaching video to their teacher. A video that is intended to help their fellow students answer the question: 'How do we measure environmental variables in the ocean?'

The University of Bergen, April 2017. Filming of a student acting for the creation of her video tutorial.

TEACH2LEARN

- Teach2Learn is part of the project PRIME in bioCEED (How implementation of PRactice can IMprove relevance and quality in discipline and professional Educations).
- The teaching videos are part of bioCEED's digital platform bioSKILLS and is available to everyone.
- Teach2Learn activities are systematically evaluated to find out how the digitalisation of course material prepared by for fellow students contributes to student learning at different levels.
- The Teach2Learn team: Anne-Laure Simonelli (Project Manager) and Jonathan Soulé (Chief Engineer). Visit us here.

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

Sebastian Winther-Larsen has a summer job working at CCSE. Photo: CCSE

Letting the students **update** teaching

Sebastian Winther-Larsen is one of 19 students who spent summer 2017 making new assignments and examples of integrated use of programming and computing.

'We are totally dependent on help from students. Their skills are up-to-date and they can make new assignments appropriate to students' backgrounds. They are experts on their own learning.'

This is according to Anders Malthe-Sørenssen, centre director of CCSE – Computing in Science Education. He continues:

'We often say that you only learn a subject once you teach it. That is why we believe that the students who make assignments also gain deeper insight into the field.'

Professor Knut Mørken agrees with him.

'We use students as partners to change the way we teach. By letting students work for us and using them as resources, we encourage our staff to make changes. It becomes easier for them. And the students are deeply involved in the changes. Often, the students actually train the staff, because the students have up-to-date programming and computing skills. Meanwhile, the staff have the necessary experience and insight to select good problems for study. In this way, both students and staff benefit from the collaboration.'

ADVOCATES PROGRAMMING IN TEACHING

Sebastian Winther-Larsen is a master's student in Computational Physics, but also has a master's degree in finance. His background makes him the perfect candidate for developing teaching assignments in economics. He has prepared assignments that teach students how to use

'It is especially fun to walk around the department and hear students discussing the assignment I helped to make.'

Jonas Fløde

Python to solve finance assignments. Using simple basic programming, it is possible to link the subject to real data and make it more practical, so that the methods students learn are immediately applicable.

Sebastian emphasises that he also learns a lot himself from teaching or coming up with examples and assignments.

'The biggest test of whether you have learned something is when you have to explain it to someone else. You have to think a lot when making assignments for others, which can be compared to teaching/explaining something to someone face to face. Of course, you don't get to witness people's response and see whether your explanation was good or not.'

Sebastian really enjoys being a part of the 'computing in science' project at the University of Oslo, because, in his own words: *'I'm an advocate for programming in teaching. When I work on developing assignments, like in this summer job, I have to write something that the reader will understand. I really have to think about how I learned the material myself.'*

PARTNERSHIPS LEAD TO BETTER ASSIGNMENTS

Bachelor's student Jonas Fløde has also had a summer job with CCSE. His job was to develop a project assignment for the students. This project counts as an exam in the course.

'We were tasked with adding the theory of relativity to the project, which was not included last year. Since I took this course myself last year, I knew what the students found difficult, and I knew what took a long time and was frustrating. Now I had the chance to do something about this,' Fløde says.

Frode Hansen, who is responsible for the course, is very grateful for the students' contribution:

'The project shows how we can both influence teaching by using summer students, and give summer students the opportunity to teach their skills to others. And that shows how students' competence complements that of the person with course responsibility.'

Furthermore, the students knew just where they were in their academic development, and the project could be adapted accordingly. One of the basic challenges of teaching, and one of the important principles of learning, is being able to give the students assignments that are difficult enough to challenge them, but that they are still able to solve. Here, we demonstrate that a team comprising a student and a teacher can make well-adapted assignments.

And what does the student himself think?

'I thought it was useful and very down-to-earth. It is especially fun to walk around the department and hear students discussing the assignment I helped to make. It is enjoyable and feels important. The project was so specific that I could contribute, and I knew that if I did a good job, the project would be good.'

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 goal of the centre is to renew the content of science education by integrating computing throughout study programmes and become an internationally leading driving force for such renewal.

> www.mn.uio.no/ccse/

Knut Mørken

Anders Malthe-Sørenssen

Music students shadowing their role models at work

The job shadowing project gives the students at the Norwegian Academy of Music an opportunity to visit a former student in her or his current job. The goal is for students to gain insight into the work situation of one of their role models and to strengthen contact between the professional field and the education community.

WRITTEN BY: Aslaug Louise Slette

The job shadowing project is inspired by the Norwegian University of Science and Technology's (NTNU) alumni work and got started when NOKUT offered the Centers for Excellence in Higher Education NOK 50,000 as grants for student-run projects. The goal of the grants is to get the students invested in their own learning and education. The job shadowing project at the Norwegian Academy of Music (NMH) is therefore student-run, and is funded by NOKUT and CEMPE.

'The call for proposals encouraged us to develop a project in cooperation with the Student Committee,' says Jon Helge Sætre, centre director of CEMPE. He underlines that CEMPE adds extra money to the pot to give the students enough space and time to develop a good project.

CONTACT BETWEEN THE PROFESSIONAL FIELD AND THE EDUCATION COMMUNITY

The white paper on quality in higher education (*Quality Culture in Higher Education*), emphasises the importance of students receiving an education that is relevant to working life and that trains them to be flexible, reflective, critical and socially aware professionals. Job shadowing can give students valuable experience of what is required in their field in today's society, but can also contribute to important experience from working life being brought back to NMH as an educational institution.

'The project is a good contribution to CEMPE's work on giving the students an education that prepares them for a labour market that is continuously changing, precisely because it is about meeting the real world out there. Job shadowing complements our work on strengthening and expanding the students' practical training opportunities, but will to a larger extend focus on the informal meeting with a professional,' says Sætre.

SHADOWING A FREELANCE SINGER WITH EUROPE AS HER WORKPLACE

Guro Utne Salvesen is a master's student in Voice and Vocal Studies at NMH, Vice President of the Student Committee, and has chief responsibility for the project. She will be the first to test job shadowing in practice.

'I look forward to seeing how someone handles life as a freelancer after a few years' experience. I hope to have inspiring conversations and hear about how the former student worked during her studies and in the following years to get ahead and make a name for herself – and get a job. I think this will trigger a thought process that can help me to study in a more targeted manner,' says Salvesen.

Salvesen will be shadowing singer and former NMH student Tora Augestad, who has studied in both Oslo and Germany. For the past ten years, she has been working 40–70% of a full-time position outside Norway, and calls herself a freelancer with all of Europe as her workplace.

EXCITED ABOUT VISITS FROM STUDENTS

Augestad takes a positive view of students being given a chance to gain some insight into workplaces that are unfamiliar to them, for example musical theatre, which is something she herself has worked a lot with. Augestad also points out that very few people work as full-time freelance singers in Norway, and that it can be a good idea for students to familiarise themselves with professional life.

'I think I can contribute, among other things, by deglamourising professional life. I make a living as a soloist, which not many people do. So I think that this project is partly about portraying the real picture. At the same time, I think I can contribute by showing that there are many ways of being a musician. This is not just one profession, it is multifaceted.'

Augestad is excited about receiving visits from current students. *'Perhaps I can learn to appreciate things about the profession that I've become blind to. By being asked questions that might seem banal, I can reflect on issues I've started taking for granted,'* she says.

EXPANDING THEIR HORIZON

One important part of the project is to give the students a sense of ownership of their own education and, not least, the possibility to exert more influence over the educational institution by providing input on how the content of the study programmes tally with the needs of the professional field. Salvesen believes that the project can expand students' horizons and inform them about the possibilities in the labour market.

'Many students have clear ideas about where they want to go, but I think that the music industry has lots more to offer than many students are aware of. I also believe this will make it easier for students to come into contact with working life both during and after their studies, because it will seem less scary to reach out. It's very important that there are close ties between NMH and the music industry, and I think this project is a big step in the right direction!'

EDUCATION THAT PREPARES STUDENTS FOR THE REAL WORLD

Augestad looks forward to having someone shadow her in her job and thinks that NMH alumni can make important contributions.

'I think that modern music life depends on an education that prepares students for the real world. Life as a musician today requires enormous flexibility. Having students shadow performers who demonstrate great flexibility in their work can compensate for a lack of flexibility in music education,' Augestad concludes.

1. Tora Augestad, freelance singer in Europe, NMH alumni. Photo: Thomas Olsen

2. Guro Utne Salvesen, master's student in Voice and Vocal Studies at NMH, Vice President of the Student Committee, and responsible for the job shadowing project. Photo: Kristoffer Moene Røed

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

Start-up with **STIL**

The primary and lower secondary teacher education programme at UiT kicked off the school year in a new way this year: by asking the students what sort of teacher they want to become and how.

The first-year students started directly on a start-up programme lasting for 1.5 weeks. As soon as the formal welcoming speeches were over, they started to discuss their career choices. This was the first part of a programme we have called *Oppstart med STIL* ('Start-up with STIL' – study-intensive learning methods).

'We know that all the teacher education programmes find it challenging that the students spend too little time on their studies,' says Siw Skrøvset, director of ProTed in Tromsø.

'Our assumption is that teacher education can become too fragmented and subject-oriented, and that there are few meeting places that focus on the role of the teacher and how to shape this role across subject boundaries,' she continues.

This problem led to the development of the start-up programme, the first part of a project that runs throughout the year. The purpose of the project is to strengthen students' professional identities and at the same time trigger a desire and need to learn from day one. The students were divided into groups and were sat around coffee tables. A member of the academic staff hosted each table. The students discussed and wrote down the answers to three questions: Why do you want to become a teacher? What sort of teacher do you want to be? What will it take to become such a teacher? 'I have waited a long time for this!' says Tord-Mikael Berglund (front right). He and fellow student Anh Duc Nguyen (right) are happy to be involved in their own learning from the very beginning.

The café dialogue was followed up by various workshops focusing on communication and dissemination. There were also workshops with arts and crafts and music for the Years 1–7 programme students, while the Years 5–10 programme students participated in a total of nine subject presentations, each lasting for one hour. These were the subjects they could choose to specialise in.

In the first week, all students also had one day of teaching practice. All eight of the University of Tromsø's university schools in Tromsø welcomed the new students during the first week after the summer holiday when their own pupils returned to school. There was a set programme for each day, all of them focusing on the role of the teacher and what it takes to be a teacher. In conclusion, the start-up programme was evaluated by the students, and the following question was asked: What do you think about becoming a teacher now that you hadn't considered a week ago? The students answered individually in Padlet, and the answers were gathered in a word cloud.

'The words "exciting" and "challenging" in the word cloud indicate that we're on the right path,' says ProTed Director Skrøvset, and tells us that part two of the project, which will be ongoing for the rest of the year, is about precisely this. The team meetings, where both student representatives and lecturers will attend, will, among other things, be used to discuss how to involve and get students invested in their education, and the first team meeting in September dealt specifically with these issues.

Photo: Stig Brendløo, UiT.

What does it take to inspire engagement and a good learning environment?

Big questions and small examples in the STIL project.

The Ministry of Education and Research has assigned ProTed the task of heading a joint project to find good examples of study-intensive work methods in the primary and lower secondary teacher education programmes. Through sharing experience and documentation, five parallel development projects aim to help to provide good examples of activities that promote learning in the study programmes.

Study intensity is not understood as a challenge that can be solved by thinking in terms of quantity; all sub-projects are working to stimulate students' involvement and participation.

'*Study-intensive work methods are work methods that promote students' learning outcomes in the best possible manner,*' says Doris Jorde, centre director of ProTed.

Literature concerned with student engagement refers to a broad range of approaches. We have to work on everything from developing a personal sense of mastery in the students to democratic participation and citizenship.

'ProTed's task in the main project will be to highlight the qualities of the various sub-projects, while also focusing on the big question of what leads to good learning for student teachers. We hope that this project can contribute to finding good approaches to student-active learning through good examples. This is an excellent opportunity for exchanging experience across the primary and lower secondary teacher education programmes in a period in which they are undergoing major changes,' says Jorde.

THE TASKS OF THE STIL PROJECT

The project is intended to promote examples of feasible measures in the primary and lower secondary teacher education programmes that have a documented effect on students' efforts. The measures are aimed at maximising learning outcomes.

ProTed (the main project) shall:

- Announce a call for applications among universities and university colleges offering primary and lower secondary teacher education programmes.
- Consider submitted applications and allocate funds to four or five sub-projects.
- Be responsible for the overall running of the main project, including academic supervision.
- Analyse results, evaluate the project and report to the Ministry of Education and Research.
- Disseminate knowledge of effective measures so that they can firstly benefit all primary and lower secondary teacher education programmes In the next round, they will be made available to all teacher education programmes and science of education programmes.
- The project must be able to experiment with new methods, coursework requirements and activities. It should include digital and practice-related work methods. The project will be completed in autumn 2018.

ProTed - Centre for Professional Learning in Teacher Education

Affiliated to the University of Oslo (UiO) and UiT the Arctic University of Norway

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

> **www.uv.uio.no/proted/**

Student-run **engagement** in Engage

Megatrends and global challenges are terms we often hear about. These are challenges that require development and innovation. The Norwegian University of Science and Technology (NTNU) recognises this need and wants to face the challenges by establishing change agents among the students.

WRITTEN BY: Responsible editor Felix Seifert at Engage

- Since Spark's start-up in 2013, they have mentored more than 300 projects.
- They have allocated a total of NOK 2.4 million to student start-up companies.
- 40 mentors (students) have helped other students.
- Engage wants to spread the concept.
- Experts in Teamwork (EiT) is a compulsory course for all master's degree students at NTNU.
- About 2,000 students will participate next semester.
- The course comprises a total of 84 different villages.

Source: Synne Marie Sollie and Marte Konstad

As a Centre for Excellence in Higher Education (SFU), the five partners are the very essence of Engage. SPARK NTNU is a good example of students being involved in the organisation. The other partners are Experts in Teamwork (EiT), TrollLabs, the NTSNU School of Entrepreneurship and Nord University.

Spark's main task is to mentor students for free. They want to give you the little push you need to dare to go after your idea. What's unique about Spark's model is that the Spark mentors are also students.

THEORY AND PRACTICE EQUALS HARMONY

The Spark mentors reach a great number of students since they are students themselves and 'speak their language'. They inspire engagement in students' own learning.

'It's interesting to see how they connect theory and practice in their work on their own start-up companies,' says Engage project manager Frode Halvorsen.

One of Engage's clear goals is for the students to participate in their own education. Spark gives them the opportunity to do so, which also gives us the chance to study how theory and practice work together in harmony.

'When the students feel a sense of ownership of their own education, they become engaged. That creates a drive that turns them into change agents for their own learning outcomes,' says Halvorsen.

ENTREPRENEURIAL THINKING

Spark has a big network with extensive expertise from the NTNU School of Entrepreneurship, one of the five Engage partners. They can help students into existing start-up teams and increase the core competence of the various projects. Engage wants to further expand their horizon.

'We want to help Spark develop a network across the partners. I hope we can help to create a broader context and spread the message,' says the Roger Sørheim, centre director of Engage.

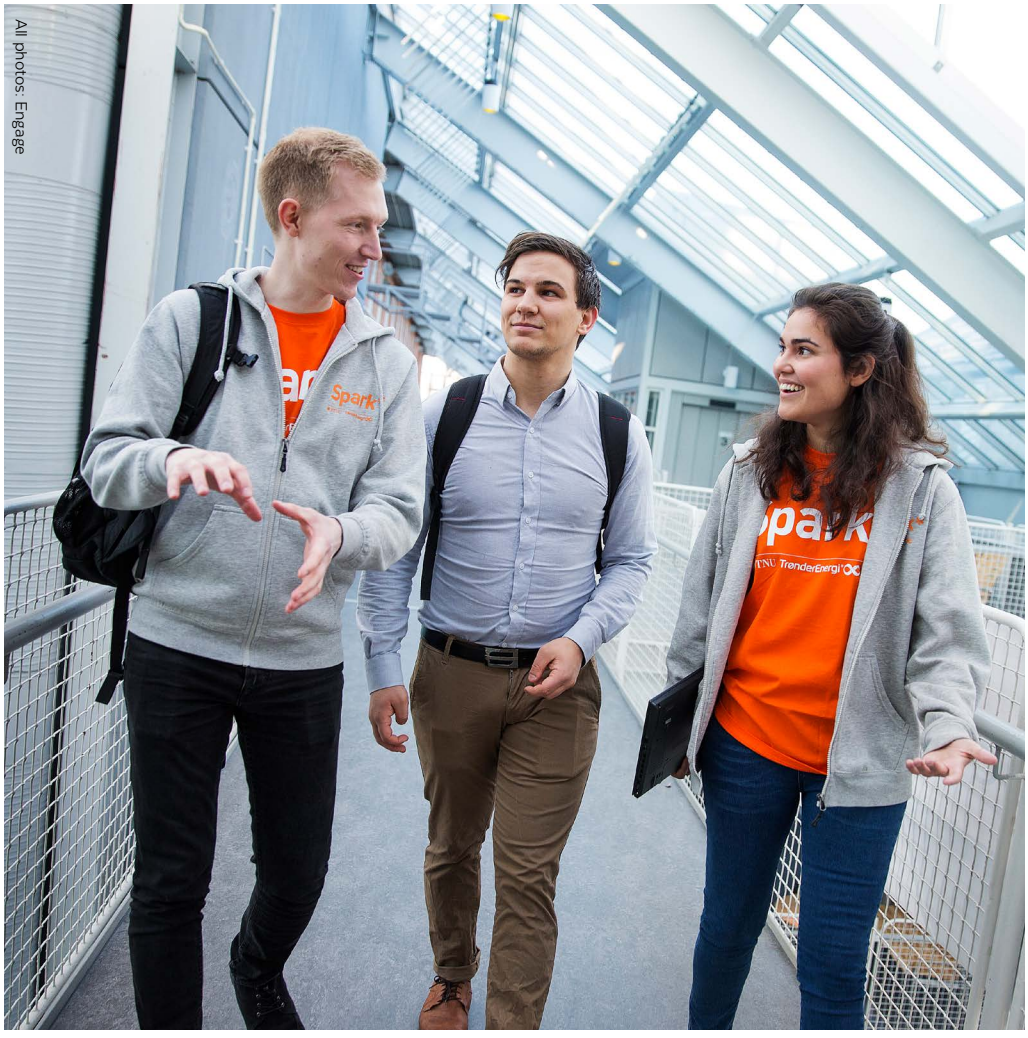
For Sørheim, this also entails spreading the Spark model to other universities, where students' participation in designing study programmes is a key concept.

'The traditional form of teaching with lectures and exercises doesn't activate students. The students is where the magic is,' Sørheim believes.

As the rest of the SFU's, Engage's goal is to influence education. To do so, it is important to include the students.

'A Spark student is on the management team which participates in all discussions and

All photos: Engage



The Spark employees are real driving forces, both in their studies and otherwise. Walking the halls of Gløshaugen NTNU. From the left: Joar Harkestad, Alexander Funch and Valentina Sørlie.

strategies. They pull us in the right direction. If we are to influence the course of study, it's the student's voice that makes it student-relevant.'

THE CHALLENGES OF THE FUTURE

We talk about changes to the climate and the environment, centralisation and urbanisation, demographic challenges, globalisation and technology that is taking over manual work. These are the megatrends and global challenges society is facing.

'Meeting the challenges of the future requires entrepreneurial attitudes and skills. By focusing on entrepreneurship, future students can act as change agents, regardless of whether they operate in the private or public sector.'

EiT, one of the five Engage partners, is highlighted as a good example. This course is compulsory for all master's students at NTNU, regardless of their faculty or campus. The students choose which topic, also called village, they want to study in-depth.

'Theory is important, but it's just as important to do something about the problems, which is what EiT is concerned with. There doesn't have to be a conflict between theory and the practical application of theory. This is the kind of entrepreneurial thinking we want to encourage in education,' Sørheim concludes.

The undersigned describes the course as both demanding and fun; it is a challenge to work across programme options to solve a problem. The course is similar to Spark with respect to combining theory and practice. Both are important to learning.

engage

Engage - Centre for Engaged Education through Entrepreneurship

Affiliated to NTNU and Nord University

Engage aims 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.engage-centre.no

100 apps to improve learning

At the Norwegian University of Science and Technology (NTNU), students are identifying what problems they face in their everyday lives and solve them by building their own apps.

Software Engineering is a course for second year students in several IT-related study programmes. Around 400 students take the course each year. The main goal of the course is to teach the students to plan, manage and complete a software engineering project.

In the Software Engineering course, students are given clear responsibility for their own process and learning. In the project, the students create mini-companies with a different role assigned to each student, and they work on both soft skills and hard skills.

In spring 2017, Excited was recently awarded SFU status, and the students were given an assignment in the SFU's spirit: 'How can we revolutionise university education using software?' The students' response to the challenge comprised 100 apps.

LEARNING THROUGH CONSTRUCTION (LTC)

Using the development of a product as a method for learning and assessment in a subject is called 'Learning through construction' (LtC). The method is used in IT education programmes to stimulate motivation in students through the practical application of theory and knowledge, rather than through studying for an ordinary written exam. This learning method also means that the students develop software engineering skills that are in demand in the labour market. LtC gives the students a chance to follow the process from the idea and design state to implementation, testing and launching. Since the 1970s, IT students at NTNU have been required to do project work as part of their studies, which is a teaching method that requires students to get involved and take responsibility.

FROM IDEA TO LAUNCHED PRODUCT

The problems the students chose to work on can roughly be divided into three categories: solutions for communication between the lecturers and students, tools for personally adapted information and time management, and tools for use during lectures.

The students believe that with a little engineering and innovative thinking, robots and software can, if not revolutionise, then at least help to improve education.

'The good thing about this course was that we had the chance to make all sorts of different things, as well as an opportunity to solve some of the problems we have experienced during our time as students. This motivated us to work harder, and the fact that NTNU might use our idea or product was always at the back of our minds,' says the team behind QueMe.

They made an app Excited found promising enough to hire them in a summer job to complete and release it. NTNU has now started using the app. QueMe solves the problem of unstructured queues of students waiting for the student assistant to help them with assignments.

STEEP LEARNING CURVE

Using the development of a product as a method for learning and assessment in a subject is called 'Learning through construction' (LtC). Through LtC, the students are thrown into a development project meant to be similar to the projects they will face in their professional lives. What did the students behind QueMe think of this way of learning?

'The course was different from the courses we had taken previously, which was both positive and negative. We were free to more or less choose how much work we wanted to put into the project. This meant that we worked a little too much at times. We had to learn most things ourselves, which of course meant that we really learnt a lot.'

'There was a lot more practical training than theory, which was a different challenge from previous courses. You had to google the answers to everything, which we think is extremely relevant in any job, and which is a very good tool to know how to use. We all agree that the learning outcome from the course was really good, and we strongly recommend it if you want to learn more about software engineering and programming in general.'

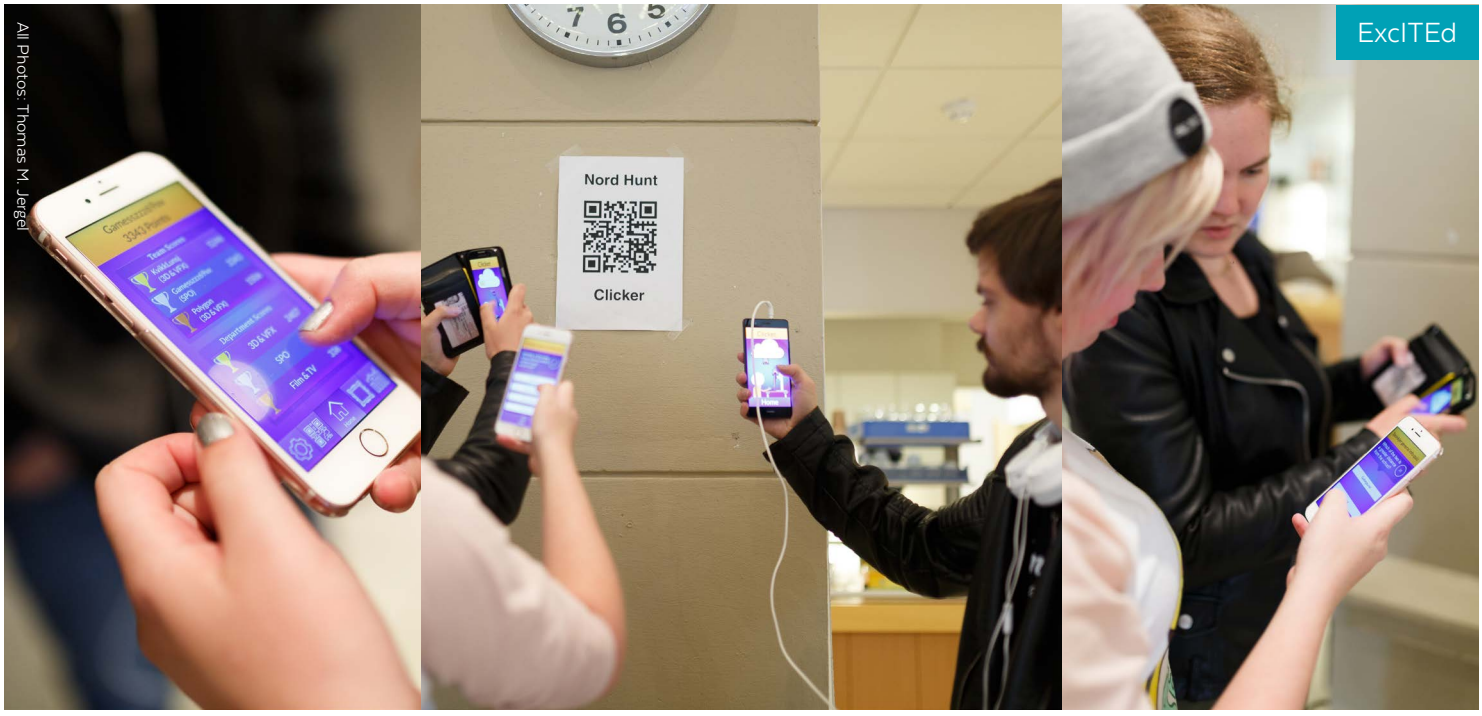
EXAM TURNED INTO CONFERENCE

One new aspect of the course this year was that the assessment was exclusively based on the project, poster and documentation. The course concluded with a conference day where the students presented their projects to each other and a jury handed out prizes.

'We think it's important to have varied forms of assessments, and not just the traditional written exam. That is why the course's exam form was changed so that the assessment was fully based on the project, presentation and documentation,' Professor Jaccheri explains.

The students felt that this form of assessment was very inspiring.

'The concluding conference was a fitting way to end to the course, and it was fun to present our project and be able to see and test the things our fellow students had been working on.'



'NordHunt was social – it made it easier to get to know the other students,' says first-year student Kine Olsen. She played NordHunt together with Jonathan Moe, Joakim Berg and Iris Martinsen.

Gamified study start

The bachelor's students in media technology become acquainted with student life through the smartphone game NordHunt – developed by students.

'It was completely natural for us to look into how we could introduce students to the idea of games as serious and useful, since the students will be creating such 'serious games' themselves during the course of their studies. The plan was for the students to use the game to become better acquainted with each other, the academic staff and the campus,' says Trond Olav Skevik, lecturer at Camp Steinkjer at Nord University.

Therefore, when Excited wanted to further develop the game, they had no doubt that the students were the right persons to carry out the task in the best possible manner. The new version, NordHunt, was developed by and for students.

Despite some technical challenges, the first-year students found the game to be a positive thing. They liked the fact that it triggered their competitive instinct and created a social arena, also outside the auditorium and classrooms.

'This was a relevant game to use at the start of our studies, since we're going to study games and entertainment technology,' says student Joakim.

The game comprises several parts, for example quizzes that had to be found by physically looking for QR codes. *'We learnt to find our way around campus, since NordHunt had posts everywhere, and the quizzes included topics on the programme student associations and the teachers,'* say the students.

For other tasks, the team had to put their heads and mobile phones together to find an answer. The final post was at the 'base' in the canteen, where you were likely to meet others on the same mission. This was a good way of starting a conversation and new friendships.

Excited
Centre for Excellent IT Education

ExcITEd - Centre for Excellent IT Education

Affiliated to NTNU and Nord University

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

1

-Students as partners improve the **quality of education**

Through formal agreements and training of students and staff, Scotland has really put quality of education on the map.

It's a late Saturday afternoon at a conference hotel in Asker, and Hannah Clarke of the Scottish agency sparqs is standing in front of a group of Norwegian students. Despite the long day behind them, she and the students are bubbling with enthusiasm. No wonder, as Clarke has an important message to impart to the students: with students as equal partners, the quality of education improves.

Sparqs (student partnerships in quality Scotland) is all about including students as partners in all aspects of education. The organisation's goal is for students to be equal participants when decisions are made on how teaching should be structured, and, not least, how teaching shall be managed and quality assured (see fact box).

'To me, student engagement is about students being heard and that they can help to shape their own learning experience. That's the most basic explanation of what student engagement entails. The key is then to support both students and institutions to help them to achieve this,' says Hannah Clarke.

She works on this issue full-time. Together with her colleagues in sparqs, her goal is to raise the profile and importance of student engagement in the Scottish educational system by means of many different measures.

'Student engagement is wide-ranging; it's about what happens in the classroom, as well as about the extent to which students are represented in different forums at the institutions and at the national level. Sparqs is less focused on what takes place in the classroom itself, and more on the bigger picture at the institutions and nationally,' says Clarke.

CLEAR AGREEMENTS ON PARTNERSHIPS

In Scotland, many of the educational institutions have introduced 'student partnership agreements'. They control how the students and the institution will cooperate on quality of education.

The agreements regulate the areas in which the quality of education shall be improved by the students, staff and management, and how to do so. More and more university colleges and universities are introducing such agreements. When the institutions are evaluated externally, the agreements are seen as important documentation of student engagement.

THE STUDENTS ARE EXPERTS ON THEIR OWN EDUCATION

The idea behind sparqs's work is that quality of education can improve through constructive dialogue between students and staff.

'Criticism is an important part of this, but the most important aspect is remembering that the students are the experts on their own education. They're not necessarily experts on the subject matter itself, but they're experts on what student life is like and their experience of their studies here and now. As partners in the conversation about the best possible way to learn, they are very important,'

All photos: NOKUT/Pål Aam

2

3

1. NOKUT gathered students from all over the country for a student seminar in Asker.

2. The goal of the seminar was for the students to learn more about how they can be confident partners in education.

3. Hannah Clarke from sparqs.

says Hannah Clarke enthusiastically.

She is working to create a culture where staff and students work together on an equal footing to create the best possible educations.

TRAINING OF STUDENT REPRESENTATIVES HAS A VERY POSITIVE EFFECT

Sparqs has implemented several measures to make students more visible at the institutions.

'One of the first things we did when we were founded in 2003 was to start a course for student representatives to ensure that their training was the same all over the country. We train around 4,000 representatives each year. We do this by training students to become instructors, who in turn teach other students,' says Clarke.

'This systematic training has had a very positive effect. The students receive good training and they have a defined role. The institutions notice this, and expect more of the student representatives,' says Hannah Clarke.

In addition, sparqs organises courses together with education specialists to make educational staff better at accepting students' feedback and input. As a result, the student representatives are the focus of much greater attention than in the past. In Scotland, it is now given that students shall be represented on all types of committees and councils at the institutions and nationally. This means that students participate in all aspects of education. It is also important to sparqs to get the students more involved in internal course and programme evaluations.

'This has been on the agenda for a long time. We keep pushing for it, and feel that we are progressing more and more. We want the institutions to regard the students as real partners, and not just let them sit in on the occasional meeting,' the Scottish expert concludes.

SPARQS - STUDENT PARTNERSHIP IN QUALITY SCOTLAND

- Scottish national agency for student engagement founded in 2003
- works to put students at the heart of decisions being made about quality and governance of the learning experience
- supports students, institutions and the sector to develop a culture for student engagement and partnership
- makes educational issues and information available to students

Read more

STUDENTS AS PARTNERS

- A concept concerned with how and to what extent students are involved and heard in the development of their own learning, study programmes and academic environments
- Partnerships are a process where students are not just asked for advice or to evaluate, but where they work actively alongside the staff to promote students' learning and their own engagement in learning and teaching. According to Healey et al. (2014), it's more a way of doing things than a result
- Terms such as 'partnerships' and 'co-creation' dominate the international conversation about quality of education
- Little research has been conducted on this topic in Norway (see e.g. Lycke and Handal, 2016)

3 Questions for the students

1. **What does 'students as partners' mean to you?**
2. **Do you have any tips regarding how the universities and university colleges can become better at forming partnerships with the students?**
3. **What can you do to inspire more student engagement?**

Christine Alveberg
Master's student in Political Science and Management at the University of Agder

1 To me, students as partners is a goal, more than a description of reality. It's about being treated like an equal colleague. About feeling that my contributions are wanted and seen as valuable in all forums. It means that students contribute throughout the process, from the idea stage to completion. Only when this is in place, we achieve real co-creation between equal partners in the academic community.

2 You can make procedure and rules etc., but that doesn't change attitudes and cultures. That will require some getting used to on the part of both students and staff at the institution. Just jump in feet first! Invite students to join in on all processes and approach things with a positive attitude. Send people on courses. Sometimes researchers need other researchers to tell them why forming partnerships with the students is important, and the right thing to do.

3 Students have to dare to perceive themselves and their input as important. Often, they're faced with more gratitude than they would believe. I also think it's important to change the student environment culture as well.

Aleksander B Jakobsen
Studies renewable energy engineering at the University of Agder

1 To me, student engagement means being allowed to help to form and develop my study programme. It's about putting in work that creates positive results for my fellow students, the teachers and myself.

2 The universities and university colleges can become better at taking steps to ensure that students are given more responsibility for their own education. They should include students in the revision of courses and learning processes.

Kine Nossen
Subject-specialisation and research policy spokesperson, the National Union of Students in Norway (NSO)

2 Student engagement forms the basis for partnerships. Universities and university colleges have to take responsibility for inviting the students along and creating a culture for this.

3 At the national level, NSO is working to create a culture for student engagement and highlights the importance of including students. For example, NSO can contribute by referring to the SFUs as best practice examples in the national and international forums in which we participate.

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 Centers for 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/**

NOKUT

THE SFU MAGAZINE
AUTUMN/WINTER 2017

PUBLISHED BY:
NOKUT in cooperation with the SFU centers bioCEED, CCSE, CEFIMA, CEMPE, Engage, ExcITEd, MatRIC and ProTed.

EDITOR:
Helen Bråten

CO-EDITOR:
Emilie Valebjørg

FRONT PAGE PHOTO:
Students as partners

Photo: NOKUT

DESIGN AND PRINT:
NXT/A2N Reklame & Digitalbyrå

NOKUT