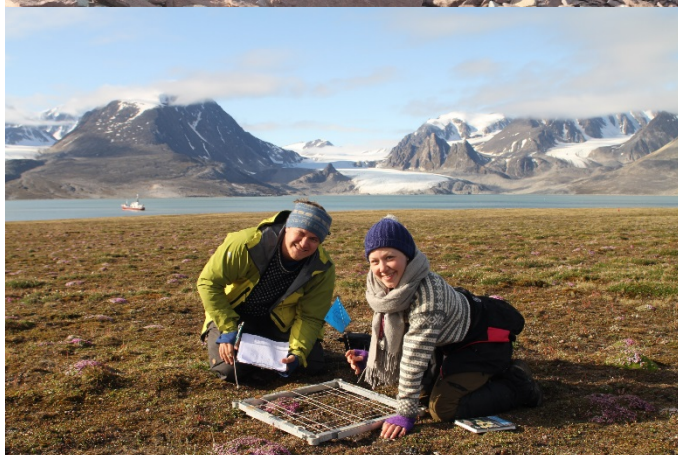




Senter for  
framifrå  
utdanning



# Annual report 2017



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## ABSTRACT

In 2017, bioCEED has continued its work to develop biology education. Guided by our vision and the bioCEED triangle, linking scientific knowledge, disciplinary and transferable skills, and the societal applications of biology, we have contributed to the development of curricula, as well as teaching and learning methods throughout course portfolios and programs. Our research on teaching and learning in biology has provided new knowledge and interesting results.

A main focus for the Centre in 2017 has been on the interim evaluation where we have been extensively evaluated by NOKUTs expert committee. In the evaluation process through the year bioCEED was evaluated on both its results so far, and the plans for the future. After a positive evaluation outcome we have been granted five additional years as a Centre for Excellence in Education.

Within our four main focus areas, teacher culture and educational leadership, innovative teaching, practical training, and outreach we have completed projects which are ready for becoming part of the daily operation at our institutions and in the biology courses and programs. Other projects are pilots in the completion phase that should soon be taken up a step for broader implementation.

National and international collaboration and dissemination have led to recognition and development of new projects and external funding. bioCEED is now a very visible part of the growing Norwegian SoTL community and will host an international teaching and learning conference in Bergen in 2018.



## HIGHLIGHTS FROM 2017

For bioCEED, this has been a year where the interim evaluation has taken much attention, but given us opportunity to take stock of our achievements so far, and to reassess and further develop our future plans.

We would like to draw particular attention to these 2017 highlights:

- 🔑 Our 'community approach' to educational development is bearing fruit – and we are seeing the emergence of a true 'community of practice' among our teaching and teaching support staff.
  - Changes in teaching and assessment seen in our courses and programmes<sup>1</sup>.
  - At the institutional level, a merit system for Excellent Teaching Practitioners (ETP) and a Pedagogical Academy are established at the MN-Faculty. UNIS will join the UiB system from 2018. bioCEED is still an active partner for the MN-Faculty in developing, running, evaluating and disseminating the merit system. Using this in our educational development and assessing the impacts on individuals and communities will yield new insights.
- 🔑 The bioSKILLS platforms are being developed, and in 2017 Teach2Learn has been a main focus and have produced a set of teaching videos.
- 🔑 The two student led projects biORAKEL and bioBREAKFAST have been running with great success during 2017, and will continue also after the project period as permanent offers to the students at BIO and UNIS. Further student led projects will be launched in 2018, and the students will also increase involvement in other bioCEED projects, teaching and learning environment development and sector contact.
- 🔑 bioCEED's international collaboration is growing and expanding. In 2017 we have been granted more Internationalisation projects, initiated joint research projects with international partners, done international outreach by visiting abroad and receiving visitors at home, and we will host a major international conference in 2018 (ISSOTL2018).
- 🔑 Our research is being published! We have several new scientific publications in 2017, a completed PhD thesis, two master degrees - and more planned for 2018<sup>2</sup>.

... have created an exceptionally strong community of practice in the area of biology teaching. This community brings together educators, innovators and communicators to not only pass on best practice, but to stimulate original thinking in the area of biology teaching.

In addition, they have promoted and overseen a large number of successful and innovative projects that focus on improving the student experience and aspects of the biology curriculum.

*Interim evaluation – Final report and recommendations of the Expert Panel*

<sup>1</sup> See bioCEED self-evaluation page 5.

<sup>2</sup> See Dissemination and Outreach.

## INTERIM EVALUATION

As part of the interim evaluation of the SFUs, we were asked by NOKUT and the evaluation committee to write a self-evaluation report. Looking back on 3 years of activity and summing up was a challenging but rewarding exercise!

All the official documents in the interim evaluation process has been gathered and published on our web site.

1. [The template for the self-evaluation](#), by NOKUT Jan 20<sup>th</sup>
2. [bioCEED's self-evaluation](#), delivered on April 3<sup>rd</sup>
3. [Feedback to bioCEED from the evaluation panel](#), received on 3<sup>rd</sup> May 2017.
4. [bioCEED's replies to the panel's requests for additional information](#), 10<sup>th</sup> May 2017.
5. [The programme for the site visit 16<sup>th</sup> May 2017](#), by NOKUT 07<sup>th</sup> April 2017.
6. [Data from Studiebarometeret and DBH](#) provided by NOKUT to the Evaluation Panel in connection with Site Visit 16<sup>th</sup> May 2017.
7. [Panels](#) with informants to be interviewed by Evaluation Panel at site visit 16<sup>th</sup> May 2017.
8. [Panel](#) briefing document from bioCEED, 11<sup>th</sup> May 2017.
9. [bioCEED short presentation](#) at site visit 16<sup>th</sup> May 2017.
10. [Evaluation Panel report](#) following site visit, received on 29<sup>th</sup> June 2017.
11. [Final Action Plan Structure](#), by NOKUT 4<sup>th</sup> July 2017.
12. [bioCEED Action Plan Draft](#), 1<sup>st</sup> September 2017.
13. [Evaluation Panel feedback on action plan draft](#), received on 11<sup>th</sup> September 2017.
14. [bioCEED reply to Evaluation panel on the feedback on action plan draft](#), 28<sup>th</sup> September 2017.
15. [bioCEED Action Plan Phase 2](#), 28<sup>th</sup> September 2017.
16. [Final report from expert panel](#), 21<sup>st</sup> December 2017.

Highlights from the Self-evaluation and Action plan can also be read in a selection of our newsletter posts:

1. [bioCEED's interim evaluation is soon to begin!](#)
2. [Looking back at 3 years with bioCEED](#)
3. [bioCEEDs mid-term evaluation – where to from here?](#)
4. [Midterm evaluations go OpenScience!](#)
5. [To 2018 and beyond!](#)

The Self-evaluation provided an opportunity to look back at bioCEED's first years and summarize our progress and results, while the Action plan for Phase 2 points the way forward. The Expert Panels feedback and recommendations have been much appreciated and have guided us while planning for the future. The bioCEED Board and international Advisory Board have also provided valuable feedback and recommendations, as well as the consortium partners and our institutions.

Our four focus areas – teacher culture, innovative teaching, practical training, and outreach – will continue to guide and focus our activities. bioCEED continues to develop relevant biology educations that fill future needs in science and society. And we still believe that this can best be achieved by linking scientific knowledge, disciplinary and transferable skills, and societal applications of biology. This biological triangle will continue to guide the development of curricula as well as teaching and learning methods throughout course portfolios and programs.

Our three most important priorities for the second period are:

**Alignment** – we will make optimal use of our platforms, within-course initiatives, strategic program development, and quality assurance systems to develop truly constructively aligned study programs, focusing on developing key skills and competences through the curriculum.

**Mainstreaming** – we will develop mechanisms for mainstreaming successful innovations into our decision-making structures and programmes. This will ensure that good practices are implemented and exploited optimally, and also make room for new development projects.

**Project culture and research** – we will build on and further develop the emerging project-based collegial SoTL culture within our host institutions. This will benefit educational development, student learning, teacher job satisfaction, collegiality, and departmental outcomes. In particular, a collegial SoTL culture will promote educational excellence, development and documentation of teaching and learning outcomes, and research-based education (i.e., student research experiences; evidence-based best practice; and up-to-date course content).

## PRIORITIES FOR 2018 AND BEYOND<sup>3</sup>

### VISION & STRATEGIC FOCUS AREAS

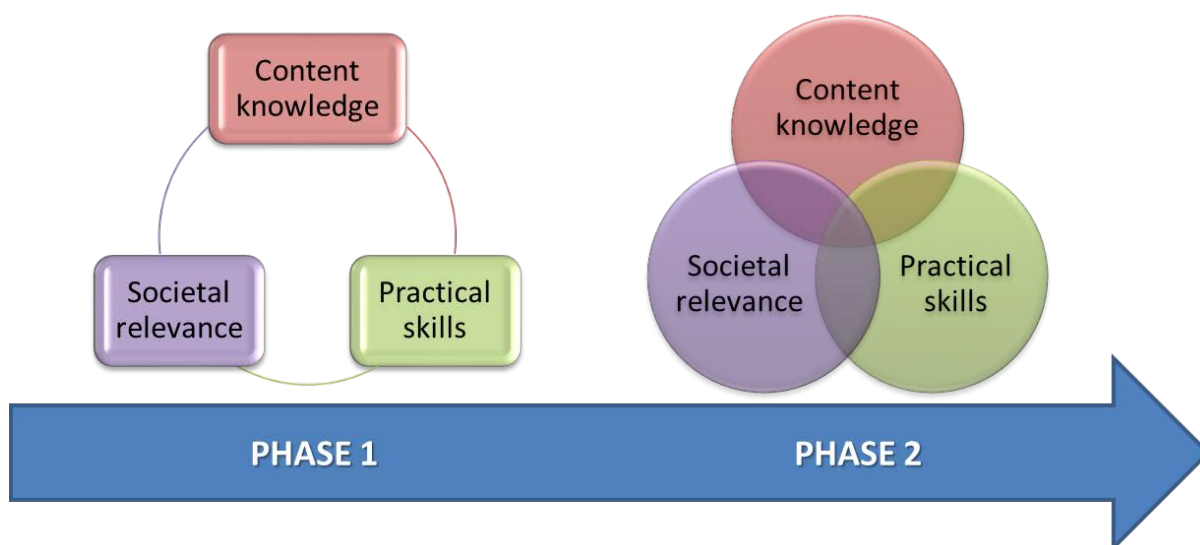
bioCEED's vision is to develop relevant biology educations that fill future needs in science and society by connecting scientific knowledge, practical disciplinary and transferable skills, and societal applications. These connections should guide the development of curricula as well as teaching and learning methods throughout course portfolios and programmes.

bioCEED has been a catalyst, initiating projects that facilitate the interplay between the corners of the biological triangle: biological theory, practical skills, and societal relevance (Phase 1, Fig. 1). The interactions have created tensions and feedback loops, which have facilitated content curriculum development (i.e., a movement towards a more integrated triangle; Phase 2, Fig. 1). bioCEED has thus progressed from a focus on “how” to teach and learn biology towards a focus that also concerns “what” biology education is and should be.

bioCEED's main approach towards achieving this vision is through developing a scholarly quality culture among teachers and learners. This means that educational innovations and practices are founded in relevant biological and educational theory, and that learning outcomes are documented, tested, and critically assessed. Such a culture will both allow innovations and innovators to flourish, provide an ideal testing ground for those innovations, and allow critical assessment of their role in an aligned curriculum. This integration process will be continued and strengthened in Phase 2. Many of the actions set out for Phase 1 are completed, allowing us to mainstream these into the daily operation. This creates room for new priorities and higher-level contributions, allowing us to focus more on integration across the three ‘corners’ of the triangle and on developing external collaborations and contributions.

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<sup>3</sup> Text mainly from Action Plan Phase 2



**Figure 1.** The evolution in how the bioCEED triangle has been understood and used – from the early-stage focus on interlinking three different and distinct aspects within the domain of biology, to the later-stage more holistic approach expanding the scopes of each of the three aspects, while also integrating and linking them more closely with each other.

### Focus area 1: Teacher culture and educational leadership

During Phase 2, bioCEED will step up to take a leading role in transforming the perceived roles and functions of the teacher culture and educational leadership in higher education. The development of a collegial teacher culture, based on SoTL and inspired by the research culture, has been a major success of bioCEED Phase 1. We will now take this outcome to the next level. Locally, we will act to broaden and deepen, assess, document and disseminate, and institutionalize activities and processes towards strengthening the collegial SoTL teacher culture. Nationally and internationally, we will move from case-based sharing of experiences with various actors towards more general and wide-reaching impacts. We will research and publish new knowledge on critical success factors, and we will communicate our experiences via various more general channels to achieve HigherEd community, and policy impact.

An important bioCEED outcome is to stimulate and guide the development of strong educational leadership that recognizes and explicitly values effective teaching practices and high-impact contributions to the teacher culture. Based on realized and documented impacts on local practices within bioCEED's partner institutions and on institutional and national policies, we will work to strengthen evidence-base, identify success factors, and promote development of similar mechanisms across the HigherEd sector in Norway and internationally.

Specific actions are described in the Action plan<sup>4</sup>.

<sup>4</sup> [https://bioceed.uib.no/dropfolder/bioCEED/15\\_%20Final\\_Action\\_plan\\_bioCEED\\_Phase\\_2.pdf](https://bioceed.uib.no/dropfolder/bioCEED/15_%20Final_Action_plan_bioCEED_Phase_2.pdf)

## Focus area 2: Innovative teaching

In Phase 2, bioCEED will use experiences from pilot studies and associated research from Phase 1 to establish a model for an integrated biology education at program-level, with **constructively aligned curriculum and assessment** focusing on key skills and competences in biology.

We will achieve this through new transdisciplinary projects, and further integration and development of established skills platforms. We will involve students and stakeholders in building and updating the models, ensuring relevance for both the biologists to be and their future employers. We will facilitate and support the institutions by generating and sharing our knowledge. An important outcome from focus area 2 is published research on the impact of innovations on student motivation and learning.

A key success criterion is involving students as partners in educational development and assessment of success. The ambitions of bioCEED also range beyond educational development within our host institutions. We will continue to collaborate with external partners, both within biology and beyond, to generalize approaches developed and lessons learned. We aim to establish ourselves as a model for educational transformation and curriculum development. Towards this, bioCEED will focus on connecting different projects and innovations into a holistic framework, aiming to support and facilitate course and program-level curriculum development vs. key skills and competences in biology education (i.e., alignment). This requires moving beyond the ‘coalition of the willing’. bioCEED’s role is in developing a teacher culture and collegium that is able and motivated to do this, and to keep doing it, rather than as a ‘service provider’ that conducts the programme transformation (Focus area 1).

Specific actions are described in the Action plan.

## Focus area 3: Practical training

At the core of the bioCEED vision is that our students should be exposed to a wide range of authentic learning experiences. These come in many forms, and can occur when students engage with ‘real’ biology in the field or lab, when they train in performing and applying biological skills and competences in relevant contexts, or when they participate alongside ‘real’ biologists working in research or in the workplace. Towards this end, bioCEED will continue to build a conscious and well-developed relation with society, stakeholders, and biological research.

Developing and implementing such training components, both through full-on work placement courses with external partners and through in-house courses<sup>5</sup> (see also Focus area 2), is a bioCEED priority. In particular, our work placement course offer unique opportunities for student involvement in curriculum development, course planning and execution, as students develop, document and report on their work and learning outcomes in close collaboration with the practice hosts and their university tutor. Through blogs and workshops, the students communicate directly among each other and with external user groups. This enhances students’ future career trajectories by fostering their ability to

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<sup>5</sup>We offer practical training that contributes to build subjects and transferrable skills through our Work placement, Research practice and Dissemination practice courses, as well as in our more standard in-house biology courses, where lab, field, writing, communication, and numerical analyses components are integrated.

make informed choices about career opportunities, learning strategies, key skills, and interests – ensuring useful outcomes for both students and employers.

During Phase 2, we will make more systematic use of our practice courses and components<sup>3</sup>. To better exploit their impact and role in learning we will make practice courses an integral part of the biology programme. We will develop a manual for work placements in disciplinary educations to share experiences. We will develop a consistent strategy for dialogue with stakeholders, including establishment of meeting places between HigherED, students and workplaces to exchange information and experiences. We will repeat the bioCEED Survey in 2018 and 2022 to assess changes in student, staff and sector experiences and attitudes, and we will explicitly research the impact of different forms of practice on student outcomes and educational quality in higher education.

Specific actions are described in the Action plan.

## Focus area 4: Outreach

bioCEED has a well-developed and ambitious outreach strategy<sup>6</sup>, that describes who (bioCEED, our staff and students), how, why, and what we will communicate to different audiences and through different communication channels. Outreach is also key outcomes and assessment criteria of many the specific actions in Focus areas 1-3. In Phase 2, we will continue to develop our communication platforms, summarize and monitor the overall output from, usage of, and impact of bioCEED's platforms, research, and activities.

Specific actions are described in the Action plan.



<sup>6</sup> For more information see Annual report 2016 (pp 19-20) and Self-evaluation report

## ORGANISATION AND MANAGEMENT

The main organisational and management structures in bioCEED will be continued through Phase 2. The **Steering Committee** oversee daily operation, ensure that centre objectives are met, and allocate resources and responsibility. **Students** are involved as active and responsible partners. **bioCEED's Board** oversee centre activities, and contribute to develop collaborations within our consortium and with external partners, and they will be used actively in Phase 2. The international bioCEED Advisory board (AB) is an important resource in strategic matters. Activities and outcomes are evaluated and summarized through the Annual Reports as one of many tools for monitoring and evaluating progress and success. The organisation, including the four strategic focus areas will be evaluated and adjusted, if necessary, during Phase 2. A large fraction of bioCEED activities are related to externally funded projects, and a key priority will be to increase the project portfolio while achieving a good balance of activities between partners. Appropriate mechanisms are in place for dealing with challenges relating to organisation, projects, collaboration, personnel and student relations. bioCEED has strong **institutional support** from UNIS and UiB. This support entails allocation of staff resources and PhD positions, funding, and involvement in and impact on institutional processes and policy development. Our host institutions will continue this level of support in Phase 2.

Student and stakeholder involvement in bioCEED is already strong<sup>7</sup>; they participate in leadership and management, and as co-creators of and active participants in our R&D projects, panels, meetings, and innovations. These aspects are further strengthened and profiled in Phase 2 through specific actions within all focus areas, supported by quantitative targets, and hence assessment criteria, associated with student and stakeholder involvement. Several bioCEED projects involve collaboration and partnerships with other biology educations in Norway and abroad, with other SFUs, and across HigherEd more generally<sup>8</sup>. International collaboration is ensured through our two adjunct professors<sup>9</sup>, staff and student exchange, through leadership of and participation in joint projects and networks<sup>10</sup> and through incoming and outgoing mobility with relevant partners internationally.

Reports from the student led projects bioBREAKFAST and biORAKEL funded by NOKUT are attached.

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<sup>7</sup> See Self-Assessment, including additional information, and Annual reports for details

<sup>8</sup> See Self-Assessment and Additional Information for specific information

<sup>9</sup> R&D and policy development projects (including INTPART, FINNUT proposals, and bioCEED funded projects)

<sup>10</sup> E.g. RIVA institute, ISSOTL

## bioCEED steering committee/core team

### **Vigdis Vandvik**

Centre leader, Professor,  
Department of Biology, UiB

### **Ørjan Totland**

WP leader (1), Professor,  
Head of Education  
Department of Biology, UiB

### **Tove Gabrielsen**

WP leader (3), Ass. Professor,  
Arctic Biology, UNIS

### **Øystein Varpe**

WP leader (5), Professor  
Arctic Biology, UNIS

### **Torstein Nielsen Hole**

PhD candidate, bioCEED/PRIME

### **Roy Andersson**

Ass. professor II, bioCEED,  
LTH, Lund University

### **Sehoya Cotner**

Ass. Professor II, bioCEED,  
University of Minnesota

### **Mari Vold Bjordal**

**Ragnhild Gya**  
Student representative bioCEED  
BIO, UiB

### **Jonathan Soulé**

Chief engineer, bioCEED  
Dept. of Biology, UiB

### **Tina Dahl**

Teaching adviser  
Arctic Biology, UNIS

### **Jorun Nylén**

Associate Professor  
Dept. of Biology, UiB

### **Pernille Bronken Eidesen**

Deputy Centre leader, Ass. Professor  
Arctic Biology, UNIS

### **Sigrunn Eliassen**

WP leader (2), Ass. Professor  
Department of Biology, UiB

### **Arild Raaheim**

WP leader (4, 6), Professor  
Department of Education, UIB

### **Gro van der Meeren**

WP leader (7),  
Institute of Marine Research

### **Lucas Jeno**

PhD candidate, bioCEED

### **Gaute Velle**

Project leader, PRIME  
Prof II BIO, UiB/Researcher, Uni Research

### **Cissy Ballen**

Postdoc, associate researcher  
University of Minnesota

### **Malene Vinnes & Mari Engelstad**

**Ingvild Eldøy & Sven Kaiser**  
Student representative bioCEED,  
Arctic Biology, UNIS

### **Anne Laure Simonelli**

Post doc, PRIME  
Dept. of Biology, UiB

### **Oddfrid Førland**

Project coordinator, adviser, bioCEED  
Dept. of Biology, UiB

## APPENDICES

### The bioCEED community – internal seminars, meetings, courses

bioCEED seminar series		
Topic	Speaker(s)	2017
Lunch seminar: Higher Education for Sustainable Development	Astrid Sinnes, NMB	01 Feb, UNIS
Lunch seminar: PhD learning hurdles in STEM disciplines – mirrored by student talks and manuscripts	Anders Ahlberg, LTH Lund	07 Feb, UNIS
Workshop: How to write a well structured Teaching Portfolio	Anders Ahlberg, Arild Raaheim, Roy Andersson	09 Feb, UiB
UiB SoTL Seminar – A scholarly approach to teaching	Roy Andersson, Yael Harlap & UiB teachers	10 Feb, UiB
Lunch seminar: Course-Based Undergraduate Research Experiences (CUREs) – Turn All Students Into Scientists	Sehoya Cotner	20 March, UNIS
Breakfast seminar: Merit systems for teaching - NOKUT (streamed from Bergen)	NOKUT	29 March, UNIS

bioCEED Teacher development activities		
Collegial Teaching and Learning in Biology	Bergen & Svalbard	Oct 2016-June 2017
Collegial Teaching and Learning in STEM	Bergen & Svalbard	Oct 2016-June 2017
Learning Forum	UNIS, Svalbard	Oct 2017
Teachers retreat	Bio, Bergen	30 Nov-01 Dec
Seminar: PhD learning hurdles in STEM disciplines – mirrored by student talks and manuscripts	UNIS, Svalbard	March 2017
PhD Workshop: How to become a better teacher	UNIS, Svalbard	March 2017
Workshop: How to write a well structured Teaching Portfolio	UNIS, Svalbard	March 2017
Internal seminar for teachers at the AB-department: Results from CURE at Bergen	UNIS Svalbard	March 2017 (d.22)

bioCEED Student meetings & seminars			
Topic	Where	Who	2017
biORAKEL	BIO UiB	The Oracles	Weekly through the semester
Info about bioCEED	UNIS	Tina Dahl	09 Jan
Gender-Equity in STEM: Do They Exist in Norway?	UNIS	Sehoya Cotner	23 March
bioBreakfast: Info meeting for master and PhD students	UNIS	Student representatives (Marit Engelstad and Malene Vinnes)	24 March
<a href="#">Gender matters!</a>	UiB	Panel: Sehoya Cotner, Cissy Ballen, Ole-Petter Hansen. Hosts: bioCEED students and Studentersamfunnet UiB	27 March
Bird seminar	UNIS	Bachelor student Christian Stoltz	02 May
bioBreakfast	UNIS	Student representatives and PhD student Maja Hatlebakk	02 May
Writing seminar	UNIS	Professor Kit Kovac at NP, Mari Engelstad og Malene Vinnes	05 May
bioBreakfast	UNIS	Student representatives and master student Vanessa Pitusi	18 May
Info about bioCEED	UNIS	Tina Dahl	09 Aug
Student meeting: Introduction to bioCEED	UNIS	Student representatives Sven Keizer and Ingvild Eldøy	07 Sept
bioBreakfast	UNIS	Student representatives and PhD student Zoe Burr	03 Oct
Jobbsøkerkurs for biologer	UiB	Ragnhild Gya, Mari Vold Bjordal, Ørjan Totland, Karrieresenteret	26 Oct
Student meeting: Plastic pollution and research communication to the public	UNIS	Student representatives Sven Keizer and Ingvild Eldøy	02 Nov
bioBreakfast	UNIS	Student representatives and PhD student Mathilde Le Moullec	07 Nov

The SFU family			
Title	Where	Contribution	2017
SFU-network meeting	Oslo	Workshop	13 Feb
Action plan workshop	Bergen	Workshop with Advisory Board and Board	12 Sept
Mathematics in biology – collaboration with SFU Matric	Bergen/Kristians and	Project collaboration	2017
SFU-network meeting: Students as partners	Oslo	Workshop	14-15 Oct

## Dissemination and outreach – bioCEED in the media

Monthly bioCEED Newsletter: <http://bioceednews.b.uib.no/>

bioCEED Web pages: <http://bioceed.b.uib.no/>

Twitter: @sfubioceed @VVandvik @OysteinVarpe @lucas\_jeno @Frueidesen @bioCEED\_JS @oddfriidforland

Facebook: <https://www.facebook.com/bioceed/>

Snapchat: bioCEED on Snapchat

SFU Magazine [SFU Magazine](#)

See also our web archive for press: <http://bioceed.b.uib.no/category/outreach/all-media-articles/>

## Dissemination and outreach – bioCEED platforms

bioST@TS : <https://biostats.b.uib.no/>

bioPRACTICE student blogs: <https://biopraksis.b.uib.no>

Teach2Learn: <http://teach2learn.b.uib.no/>

## Dissemination and outreach – bioCEED publications

### Op-Eds and articles in the media:

- Gya, R. (2017). [Det vi studenter trenger frå dere undervisere](#). *Khrono*
- Jeno, L. M., Raaheim, A., Vandvik, V. & Førland, O. (2017). [Belønning og økt status kan gi bedre forelesere](#). *Forskning.no*
- Raaheim, A. (2017). [Å trollbinde publikum er ikke nok](#). *Bergens Tidende*
- Raaheim, A. (2017). [Gode og dårlige undervisere](#). *Dagbladet*
- Raaheim, A., Vandvik, V., Jeno, L.M. & Førland, O. (2017). [God undervisning kommer ikke fra hjertet](#). *Studvest*
- Raaheim, A. (2017). [Hva trenger vi universitetene til?](#) *Khrono*
- Raaheim, A. (2017). Til forsvar for studentene. *Forskerforum 2017*
- Raaheim, A. (2017). Eksamen, karakterer, motivasjon og læring. *Bergens Tidende*
- Raaheim, A. (2018). [Er underviserne egentlig så oppgitt over sine studenters forkunnskaper?](#) *Khrono*

### Scientific publications and conference papers:

**bioCEED publications can be found in [cris.tilburguniversity.edu](https://cris.tilburguniversity.edu/) (project bioCEED 468879)**

**In addition we would like to mention the following:**

**Hole, T. N. & Raaheim, A. (2017).** Blogg som lærings- og vurderingsredskap.  
<https://norgesuniversitetet.no/digital-vurdering>

### **EuroSoTL-paper by UNIS and UiB teachers from CPC 2016/17:**

- Bjune, A., Grung, B., Holst, B. & Olsen, L. (2017). Testing the impact of active learning in first year undergraduate natural science courses. TALK & PAPER at The 2nd EuroSoTL Conference 2017, Lund, June 8<sup>th</sup>
- Borstad, C., Forchhammer, M., & Gabrielsen T. M. (2017). Active learning and course alignment in thematically complex courses. TALK & PAPER at The 2nd EuroSoTL Conference 2017, Lund, June 8<sup>th</sup>
- Damsgård, B., Strømseng, E., & Varpe, Ø. (2017). Are learning outcomes affected by course intensity and workload? TALK & PAPER at The 2nd EuroSoTL Conference 2017, Lund, June 8<sup>th</sup>
- Jørgensen, C., Goksøyr, A., Hjelle, K.L. & Linge, H. (2017). Exams as learning arena: A criterion-based system for justified marking, student feedback, and enhanced constructive alignment. TALK & PAPER at The 2nd EuroSoTL Conference 2017, Lund, June 8<sup>th</sup>
- Keers, H., Salvanes, A.G., Grytnes, JA & Waagbø, R. (2017). How Technologies Motivate and Enhance Student Learning. TALK & PAPER at The 2nd EuroSoTL Conference 2017, Lund, June 8<sup>th</sup>

Papers at the **MNT conference 2017** by **bioCEED** and **UNIS/UiB** teachers, students and education support staff:

- Andersson, R., Eidesen, P. B., Fiksen, Ø., Førland, O., Stefansson, S. & Vandvik, V. [Korleis få professorar med på ein kollegial SoTL-kultur? \(2017\)](#) TALK & PAPER at MNT-konferansen “Transformative education”, Oslo, March 30<sup>th</sup> – 31<sup>st</sup>
- Andersen, H.L., Fiksen, Ø., Kirkendall, L. & Stefansson, S. (2017). [Collegial evaluation of writing as a learning activity in a bachelor programme](#). TALK & PAPER at MNT-konferansen “Transformative education”, Oslo, March 30<sup>th</sup> – 31<sup>st</sup>
- Cotner, S., Jenø, L. & Ballen, C. (2017). [Strategies to document active learning practices in biology](#). TALK & PAPER at MNT-konferansen “Transformative education”, Oslo, March 30<sup>th</sup> – 31<sup>st</sup>
- Eidesen, P. B., Vader A. & Søreide, J. E. (2017). [Utnytter vi potensialet for læring og personlig utvikling i feltundervisning?](#) TALK & PAPER at MNT-konferansen “Transformative education”, Oslo, March 30<sup>th</sup> – 31<sup>st</sup>
- Jenø, L., Grytnes, J.A. & Vandvik, V. (2017). [Hvordan teknologi bidrar til biologi-studenters motivasjon og læring](#). TALK & PAPER at MNT-konferansen “Transformative education”, Oslo, March 30<sup>th</sup> – 31<sup>st</sup>
- Velle, G. & Hole, T.N. (2017). [Developing work placements in a discipline education](#). TALK & PAPER at MNT-konferansen “Transformative education”, Oslo, March 30<sup>th</sup> – 31<sup>st</sup>
- Eliassen, S., Kolding, J., Smedmark, J. & Vandvik, V. (2017). [Numerical competence and quantitative skills in biology education](#). TALK & PAPER at MNT-konferansen “Transformative education”, Oslo, March 30<sup>th</sup> – 31<sup>st</sup>
- Soulé, J., Førland, O. & Dahl, T. (2017). [Sense and sensibility in workload calculation](#). TALK & PAPER at MNT-konferansen “Transformative education”, Oslo, March 30<sup>th</sup> – 31<sup>st</sup>
- Ballen, C., Danielsen, M., Jørgensen, C., Grytnes, J.A. & Cotner, S. (2017). [Norway’s gender gap: classroom participation in undergraduate introductory science](#). TALK & PAPER at MNT-konferansen “Transformative education”, Oslo, March 30<sup>th</sup> – 31<sup>st</sup>
- Gya, R. & Bjordal M.V. (2017). [Kan integrering i fagmiljøet øke motivasjon hos studenter?](#) TALK & PAPER at MNT-konferansen “Transformative education”, Oslo, March 30<sup>th</sup> – 31<sup>st</sup>



PhD dissertations and master theses			
Who	Degree	Title	When
Lucas Jenø	Doctoral degree	The antecedents and consequences of students' autonomous motivation. The relation between need-support, motivation and academic achievement	2018
Sara Madeleine Kjellsdatter Kristensen	Master degree in pedagogy	<a href="#">Veier til frafall. En kvantitativ studie av psykisk helse og frafallsintensjoner i høyere utdanning: Et selvbestemmelsesteoretisk perspektiv</a>	2017
Kjell Daniel Berg Kristensen	Master degree in pedagogy	<a href="#">En kvalitativ undersøkelse om trivsel og motivasjon i høyere utdanning: Et selvbestemmelsesteoretisk perspektiv</a>	2017
Sondre Lode	Master degree, Teacher programme	<a href="#">Praksisens betydning for utvikling av profesjonell kompetanse. En kvalitativ studie på læring i praksis ved Profesjonsstudium i fiskehelse</a>	2016
Henrik Handal Dørum	Master degree, Teacher programme	<a href="#">Motivert for å lære –en studie av biologistudenters syn på egen læring</a>	2014

### Commissioned reports/Committee work:

- Handlingplan for kvalitet i utdanning, UiB (2017-2022) - leadership of working group for action plan for Quality in Education at UiB. Action plan: <http://www.uib.no/strategi/110057/handlingsplan-kvalitet-i-utdanning-2017%E2%80%932022>
- *Education strategic plan* for the department of AB at UNIS 2017-2020 – working group
- Steering group for merit system Excellent Teaching Practitioner MN-UiB – Vigdis Vandvik, Oddfrid Førland, <http://www.uib.no/pedagogiskakademi>
- Chairing [ISSOTL 2018](#), the annual conference of the International Society for the Scholarship of Teaching and Learning, in collaboration with Department of Education, UiB. October 2018
- Programme committee of EuroSoTL 2017 (Lund, Sverige, 8-9. Juni 2017) (Oddfrid Førland)
- Working group for active learning classroom MN-UiB

## Dissemination and outreach – bioCEED at external events

The majority of bioCEED presentations are listed in [cristin.no](https://cristin.no) (project bioCEED 468879). Below we list a selection of the presentations not present there:

### Participation at seminars, workshops, conferences, working groups, etc.

#### Dissemination for awareness – the role and existence of bioCEED and SFUs

Title	Occasion	Contribution	2017	Speaker
Arctic ecology and seasonality	Arctic ecology for skilled high-school students on a program on research and active-learning at Vanderbilt University, US	Skype lecture and discussion	January	Øystein Varpe

#### Dissemination for understanding – the outcomes of our strategic focal areas and projects

Title	Occasion	Contribution	2017	Speaker
<i>Teach2Learn (Active learning creating video tutorials)</i>	<i>National conference: Digitalization in higher education. Norgesuniversitetet and UiB</i>	Invited talk	23-24 Nov	Anne-Laure Simonelli
<i>bioCEED – Centre of Excellence in Biology Education</i>	<i>Learning Forum, UNIS</i>	Talk	24 Oct	Pernille Bronken Eidesen
<i>Active learning creating video tutorials</i>	<i>Learning Forum, UNIS</i>	Invited talk	24 Oct	Anne-Laure Simonelli
<i>Hvordan fremme mer studentinvolvering</i>	<i>Student conference, Helseklyngen i Bergen</i>	Invited talk	18 Oct	Ragnhild Gya, Jenny Neuhaus
<i>The collegial project course: Building a collegial scholarly culture scholarly</i>	<i>ISSOTL2017, Calgary</i>	Talk	15-18 Oct	Roy Andersson
<i>Studentaktivitet og forskningspraksis - nye læringsarenaer og samarbeid med Læringslabben</i>	<i>University Board, UiB</i>	Talk	25 Oct	Sigrunn Eliassen
<i>Flipped assessment – an alternative to the traditional university exam.</i>	<i>The Jagiellonian University Cracow</i>	Invited talk	Sept	Arild Raaheim
<i>Digital vurdering – når læring er det viktigste</i>	<i>Digital fagdag, HiOA</i>	Invited talk	07 June	Arild Raaheim
<i>Innovative undervisnings- og vurderingsformer</i>	<i>Personalsamling, HiOA</i>	Invited talk	15 June	Arild Raaheim

<i>Om sammenhengen mellom vurdering og læring; utfordringer og muligheter</i>	HiOA	Invited talk	22 May	Arild Raaheim
<i>Alternative assessment – why and how? Assessment of, for, and as learning</i>	Coimbra WG Education Innovation seminar, Aarhus	Invited talk	28 March	Arild Raaheim
<i>Hva er god undervisning og hvordan kan vi merittere undervisningskvalitet?</i>	“Spis deg vis” SV-fakultetet, UiB	Invited talk	16 March	Arild Raaheim
<i>Om sammenhengen mellom læring, undervisning og vurdering</i>	“Sykepleie 2019 HiOA”	Invited talk	13 March	Arild Raaheim
<i>Undervisning, læring, vurdering.</i>	Workshop, HiOA	Invited talk	30 Jan	Arild Raaheim
<i>Active learning - what is it and how do you get there?</i>	Symposium Nye utdanningsmetoder, Biokjemisk Kontaktmøte, Finse	Invited talk	19-22 Jan	A. Goksøyr
<i>The effects of technology on learning</i>	3rd Conference of the Norwegian Ecological Society	Talk	12-13 Jan	L. Jenø
<i>Numerical competence and quantitative skills in biology education</i>	3rd Conference of the Norwegian Ecological Society	Workshop	11 Jan	S. Eliassen, J. Soulé & M. Petit-Bon
<i>Om sammenhengen mellom læring, undervisning og vurdering</i>	Høyskolen Kristiania	Invited talk	Jan	A. Raaheim
<i>Om sammenhengen mellom læring, undervisning og vurdering</i>	Juridisk fakultet, UiB	Invited talk	Jan	A. Raaheim

## Dissemination for action – contributing to policy and the public debate

Title	Occasion	Contribution	2017	Speaker
Læring, undervisning og vurdering	<i>Konferanse om helhetlige studieprogrammer, KD, HiOA.</i>	Invited talk	21 nov	Arild Raaheim
Kvalitetskultur	Forum for Educational Leadership	Talk	21 March	Øystein Varpe
Excellent teachers? Rewarding individuals? Measuring teaching practice?	<i>Learning Forum, UNIS</i>	Invited talk	24 Oct	Øyvind Fiksen
Hvorfor endre styringssystemet? Om sammenhengen mellom LUB, undervisning og vurdering	<i>Oppstartskonferanse – styring av læringsutbytte i helse- og sosialfagutdanninger</i>	Invited talk	Sept	Arild Raaheim
<i>Debate session: Do merit-rating systems enhance the role of teaching in higher education?</i>	Conference: "Enhancing the role of teaching and learning in higher education". Norwegian Ministry of Education and Research, the Nordic Council of Ministers and NOKUT.	Debate/Panell	19 June	Chair: Roy Andersson

## Awards

Awards			
Who	Title	Occasion	When and where
Øyvind Fiksen	<a href="#">Excellent Teaching Practitioner</a>	Through the merit system <i>Pedagogical Academy</i> at UiB	1 June 2017, UiB
Tove Gabrielsen Chris Borstad & Mads Forchhammer	<a href="#">The Joanna Renc-Roe Award – for pushing the boundaries of SoTL</a>	EuroSoTL 2017	9 June 2017, Lund University

## bioCEED Personnel

Name	Function in bioCEED	Position	Unit
Vigdis Vandvik	Centre leader	Professor	BIO, UiB
Pernille Bronken Eidesen	Deputy Centre leader	Ass. professor	AB, UNIS
Oddfrid Førland	Coordinator	Adviser	BIO, UiB
Jonathan Soulé	Technical support (education)	Chief engineer	BIO, UiB
Tina Dahl	Administration and technical support	Adviser	AB, UNIS
Torstein Nielsen Hole	PhD candidate		bioCEED/PRIME
Lucas Jenö	PhD candidate		bioCEED
Anne Laure Simonelli	Post doc		bioCEED/PRIME
Roy Andersson	Ass. Professor II	Academic developer	bioCEED
Sehoya Cotner	Ass. Professor II	Academic developer	bioCEED
Ørjan Totland	WP1 leader	Professor, Head of Department	BIO, UiB
Sigrunn Eliassen	WP2 leader	Ass. professor	BIO, UiB
Tove Gabrielsen	WP3 leader	Ass. professor	AB, UNIS
Arild Raaheim	WP4&6 leader	Professor	PED, UiB
Øystein Varpe	WP5 leader	Ass. Professor	AB, UNIS
Gro van der Meeren	WP7 leader	Senior scientist	IMR
Gaute Velle	PRIME project leader	Researcher, Prof II	Uni /BIO, UiB
Jorun Nylén	Steering group member	Associate professor	BIO, UiB
Adèle Ménnerat	PRIME researcher	Researcher	BIO, UiB
Cissy Ballen	Associate researcher	postdoc	University of Minnesota
<b>Student representatives</b>			
Mari V. Bjordal	student representative	Student	BIO, UiB
Ragnhild Gya	student representative	Student	BIO, UiB
Malene Vinnes	student representative	Student	AB, UNIS
Mari Engelstad	student representative	Student	AB, UNIS
Ingvild Eldøy	student representative	Student	AB, UNIS
Sven Keizer	student representative	Student	AB, UNIS

## ACCOUNTING 2017

		Budget	Result	Deviation
		2017	2017	2017
<b>Personnel</b>	<b>BIO</b>	2 290 512	2 816 043	-525 531
	<b>UNIS</b>	457 000	582 331	-125 331
	<b>Inkind BIO*</b>	5 566 286	5 566 286	0
	<b>Inkind MN*</b>	1 826 400	1 826 400	0
	<b>Inkind AB</b>	1 000 000	1 000 000	0
	<b>Inkind IMR</b>	140 000	140 000	0
	<b>Inkind HERU*</b>	272 298	272 298	0
<b>Expenditures</b>	<b>BIO</b>	364 000	127 754	236 246
	<b>AB</b>	30 000	26 205	3 795
	<b>IMR</b>	20 000	0	20 000
	<b>Inkind BIO**</b>	0	77 758	-77 758
<b>Development WP1-5</b>	<b>BIO</b>	1 314 409	375 931	938 478
	<b>AB</b>	274 000	122 487	151 513
	<b>Inkind BIO**</b>	0	40 953	-40 953
	<b>Inkind AB</b>	100 000	100 000	0
<b>Dissemination WP6-7</b>	<b>BIO</b>	114 382	155 979	-41 597
	<b>Inkind BIO**</b>	0	91 082	-91 082
<b>Total</b>		13 769 287	13 321 507	447 780
<b>NOKUT</b>		4 864 303	4 206 730	657 573
<b>Inkind</b>		8 904 984	9 114 777	-209 793

BioCEED		Budsjett	Resultat	Avvik
		2017	2017	2017
<b>Personnel total</b>		11 552 496	12 203 358	-650 862
<b>Expenditures</b>		414 000	231 717	182 283
<b>Development</b>		1 688 409	639 371	1 049 038
<b>Dissemination</b>		114 382	247 061	-132 679
<b>Total</b>		13 769 287	13 321 507	447 780

BioCeed		Budsjett	Resultat	Avvik
		2017	2017	2017
<b>Inkind</b>		8 904 984	9 114 777	-209 793
<b>NOKUT</b>		4 864 303	4 206 730	657 573
<b>Total</b>		13 769 287	13 321 507	447 780

\*Egeninnsats regnskapsføres ikke i på prosjekt lenger da pengene kommer fra KD og vi derfor er nødt til å regne dette som grunnbevilgning

\*\*Cash funding from UiB

## Externally funded projects

Granted by	Project title	Project period	Funding	PI/partners
Research Council of Norway-FINNUT programme	<i>Educational value of combining Field work and Authentic Research Experiences</i>	2018-2021	Under review	Pernille Bronken Eidesen, AB, UNIS, Partners: Department of education UiB, University of Minnesota, University of Otago – New Zealand
Research Council of Norway-FINNUT programme	<i>ENIGMA: The hidden structures and processes promoting and hindering educational transformation</i>	2018-2021	Under review	Vigdis Vandvik, BIO, UiB,. Partners: University of Minnesota, Faculty of Engineering, Lund University
Research Council of Norway/SIU-Intpart	<i>Research and Education Partnership in Climate Change Impacts on Terrestrial Ecosystems</i>	2018-2020	4500 KNOK	Vigdis Vandvik, BIO, UiB
Research Council of Norway/SIU-Intpart	<i>Connecting hands-on-PRactice and Innovative MARine ecological sampling methods and analysis tools for enhancing student LEARNING</i>	2018-2020	4497 KNOK	Anne-Gro Veia Salvanes, BIO, UiB
Research Council of Norway- FINNUT programme	<i>ArtsApp:Hvordan teknologi påvirker motivasjon og interesse for innlæring av biologiske arter</i>	2018-2021	8002 KNOK	John-Arvid Grytnes, BIO, UiB
Research Council of Norway/SIU- Intpart	<i>Norway-Japan Partnership for Excellent Education and Research in Aquaculture</i>	2017-2019	4500 KNOK	Ivar Rønnestad, BIO, UiB
Research Council of Norway/SIU - Intpart	<i>Connecting Field work and Laboratory experiments to numerical MOdeling in a changing marine environment</i>	2017-2019	3960 KNOK	Øyvind Fiksen, BIO, UiB
Thon Stiftelsen	<i>Numerical Competence and Student-Active Research</i>	2017-2019	1400 KNOK	Sigrunn Eliassen, Øystein Varpe, Jonathan Soulé

SiU -Intpart	<i>IScope (integrating Science of Oceans, Physics and Education)</i> Project number 249718	2016-2018	4345 KNOK	Karin Pittman, Dept. of Biology, UiB
Thon Stiftelsen	Research project student-active research: <i>Økosystem, klima og variasjon i eit «mini-havøkosystem»: ein vestnorsk fjord</i>	2016-2018	1137 KNOK	Anne Gro Salvanes, Dept. of Biology, UiB
SiU - High North Programme	<i>TraitTrain Comparing climate change impacts on High North vs. Alpine ecosystems through research and training in trait-based approaches</i> HNP-2015/10037	2016-2018	1500 KNOK	PI: V. Vandvik. Partners: BIO UiB, UNIS, University of Arizona, and Chinese Academy of Sciences (CN)
Norgesuniversitetet	Artsapp: En applikasjon for enklere artsidentifikasjon	01.01.2015-30.12.2017	550 KNOK	PI: John-Arvid Grytnes Partners: bioCEED, Centre for Science Education and the Norwegian Biodiversity Information Centre
Skibsreder Jacob R. Olsens og Hustru JG Olsens Legat	<i>Effekten av ArtsAPP på studenters læring og motivasjon</i>	2015-2016	47 KNOK	L. Jenø
Thon Stiftelsen	Excellent Teaching Award	2015	500 KNOK	Christian Jørgensen
Thon Stiftelsen	Excellent Teaching Award	2015	500 KNOK	Karin Pittman
UiB	Learning environment Award	2015	50 KNOK	Christian Jørgensen
WUN Research Mobility Programme.	Research stay at University of Rochester, USA,	Sept-Oct 2015	36 KNOK	Lucas Jenø
Universitets- og høyskolerådet	Contribution to for talk at MNT-conference 2015 (technology and science)	18-19.03.2015	75 KNOK	Øyvind Fiksen, John-Arvid Grytnes
Research Council of Norway- FINNUT programme	PRIME - <i>How Implementation of PRactice can IMprove relevance and quality in discipline and professional</i>	01.08.2014-01.08.2018	7000 KNOK	PI: Gaute Velle Partners: bioCEED, Uni Research

	<i>Educations (knowledge building project). NFR</i> Project number: 238043			
SIU- UTFORSK	TRANSPLANT. Student research experience linked to an international research project.	2014-2016	1109 KNOK	PI: V.Vandvik. Partners: BIO UiB, NMBU and Institute of Mountain Hazards and Environment, Chinese Academy of Sciences (CN)
Research Council of Norway- FINNUT programme	ArtsApp: En applikasjon for enklere artsidentifikasjon (pre- project). NFR Project number: 237821	01.05.2014- 30.04.2015	287 KNOK	PI: JA Grytnes. Partners: bioCEED, Centre for Science Education and the Norwegian Biodiversity Information Centre.
UiB, PEK- programme	<i>Sammen for bedre læring</i>	03.04.14- 03.04.15 (continued after funding period)	280 KNOK	PI: A. Raaheim Partners: TVEPS, Dept of Education, UiB, Grieg- akademiet, bioCEED, CEMPE
Research Council of Norway- FINNUT programme	Travel scholarship for developing projects – University of Otago	autumn 2014	160 KNOK	Pernille Bronken Eidesen