bioCEED midterm evaluation
committee meeting

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Universitetet i Bergen
bioCEED’s vision:
- we educate tomorrow’s biologists

- Biology emerges in the interface between theory, practice, and the needs of society

- To succeed, we must:
  - Use the triangle
  - Focus on learning
  - Exploit the research culture
Linkages between activities

WP0: bioCEED project coordination

WP2: Learning environments
WP1: Teacher culture
WP3: Active students
WP4: Activity alignment

WP5: Educational leadership

WP7: Sector/societal interaction
WP6: Spread best educational practice
bioCEED vs. the host institutions

The BioCEED consortium: Leadership of BIO, DAB, HERU and IMR

BioCEED Advisory Board

End-user panels
- Education sector
- Wider society
- Biology alumni

General Assembly

BioCEED leadership: Centre leader and steering committee

BIO
- WP0
- WP1
- WP2

AB
- WP3
- WPS

HERU
- WP4
- WP6

IMR
- WP7
## Student, staff involvement

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<th>Taught</th>
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<table>
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*but see next page...
**Student, staff involvement**

**Fig 3.** Teaching methods (occurrence) used in all BIO (Department of Biology, UiB) courses in 2012 (left, 68 courses) and 2016 (right, 70 courses). Source: course descriptions and ILOs.

**Fig 4.** Teaching methods (hours) across bachelor courses in 2012 (left, 5 courses) and 2016 (right, 5 courses) at the Department of Arctic Biology, UNIS.
Linking disciplines

bioST@TS

Home   Tutorials   Up in the R...   videoST@TS   bioST@TS in biology courses   For teachers

videoST@TS
Lær om gjennomsnitt, variabilitet og fordeling med våre videoer.

Se og lær...
The bioCEED survey
9 biology educations
752 students
231 teachers
32 administrators
>100 companies
231 biologists

(Hole m.fl. 2016)
Baseline data:

What did the professors say?

«I miss a forum of peers where we can exchange experiences and discuss about teaching and supervision. I think we have a lot to learn from each other. I have suggested this many times locally, but there is little interest from colleagues and leaders»

«There is not enough time to work on our commitments and challenges together – we work alone on our own»

«My experience with colleagues and leaders on sharing/giving feedback: no one can be bothered. We leave everything to individuals – and they either give up or try to make the best of things, but this comes at the expense of time for research (which is all that counts)»

«New teaching methods would be interesting to learn, but there is rarely time for this. So I try to learn from my own experience»

(Hole m. fl. 2016)
Building a SoTL culture bottom-up!

1. Set common goals
   - Inspire and promote change
   - Support & value development
   - Visible leadership

2. Make collegial spaces
   - Courses, workshops, seminars
   - R&D-projects

3. Develop common language
   - Let’s read!
   - Document & share
   - Disseminate, discuss!
Where to form here?

- Alignment
- Mainstreaming
- Project culture & educational R&D
University science professors preach a gospel of seeking truth through data and careful experimentation, yet when they walk into a classroom, they use methods that are outmoded and ineffective.

The overwhelming fraction of undergraduate science courses are taught by a professor lecturing to students, even in the face of many hundreds of studies showing that alternative teaching methods demonstrate much greater student learning and lower failure rates.

Carl Wieman
'Stop lecturing me', Scientific American, August 2014
The two academic cultures:

**Researcher**
- Research groups
- Social – built on trust
- Collaborate to exploit complementary strengths
- Continuous development – knowledge transfer
- The scientific method
- Share findings – open
- Write, document, publish
- Peer review
- Follow the literature
- Make use of new methods, new technology

**Teacher**
- Alone in front of the class…
- Distribute tasks – loneliness
- Everyone does everything
- ‘Flip over & start again’
- ‘Experience’
- Own experience – closed
- All documentation personal
- Student evaluations
- Trained when appointed (at best)
- Conserve methods: the lecture!
Pedagogical competence – the LU/LTH model

**PRACTICE**

- Observe
- Plan

**THEORY**

- Informed pedagogical discussion
- Pedagogical theories
- Limiting aspects
- Possibilities

**TEACHING SKILLS**

- Perspectives on teaching and learning

Olsson et al 2010. Pedagogical competence – a development perspective from Lund University.
A culture for analysis...


Summary
This year we had an integrated learning activity in BIO’s taxonomy of ecology: current status and recommendations.

Design, data, and statistics
- numerical skills for BSc-students in biology

Jenny, Jeppe, Vigdis & Sigrunn
UNIS 14.03.16

2nd Conference of the
Norwegian Ecological Society (NØF)

Ecological change, changing ecology

March 12 – 13th, 2015, Bergen

BioCEED-seminar 07 Sept
Active learning improves diversity in undergraduate science
v/ postdoc Cissy Ballen
University of Minnesota

Tid og sted:
07. September
Kl. 12:15-13:30
Seminarrrom K3/4 Biologen
A culture for debate....
Det vi studenter trenger fra dere undervisere

Meninger · Merittering. Masterstudent Ragnhild Gya ved Universitetet i Bergen slår et slag for merittering av gode undervisere.

I den siste tiden har undervisningskvaliteten på universiteter og høyskoler, og særlig meritteringsordninger for fremragende undervisere, blitt mye diskutert i media. Det har stort sett vært professorer, politikere og de som står bak disse ordningene som har uttalt seg om saken. Jeg tenkte det var på tide at vi studentene fikk en stemme i debatten.
So – what do the professors say?

«Now I am more conscious of the interaction between course content, learning activities and assessment. I understand that a well-considered course description can work as a tool. Earlier I thought of this as a purely administrative exercise – more than a useful one»

«The course made me think differently about my teaching»

«Writing a teaching portfolio was especially useful, as it made us reflect on our own teaching practice»

«Working in groups with people from other sections helped us see teaching from different perspectives, and we had some useful experiences and new acquaintances»
Summary & strategic outlook

• How is a collegial teacher culture built?
  – Common goals, meeting places, language...
  – Realistic but exciting projects!

• What is the role of institutions?
  – Inspirator, motivator, support staff, strongman?
  – To ‘see’ the teaching, and the teachers!

• How can we get our daily SoTL dose?
  – Light lighthouses, move mountains....
  – Talk about it! …internally, eksternally, little & large