



# **bioCEED midterm evaluation committee meeting**

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UNIVERSITETET I BERGEN

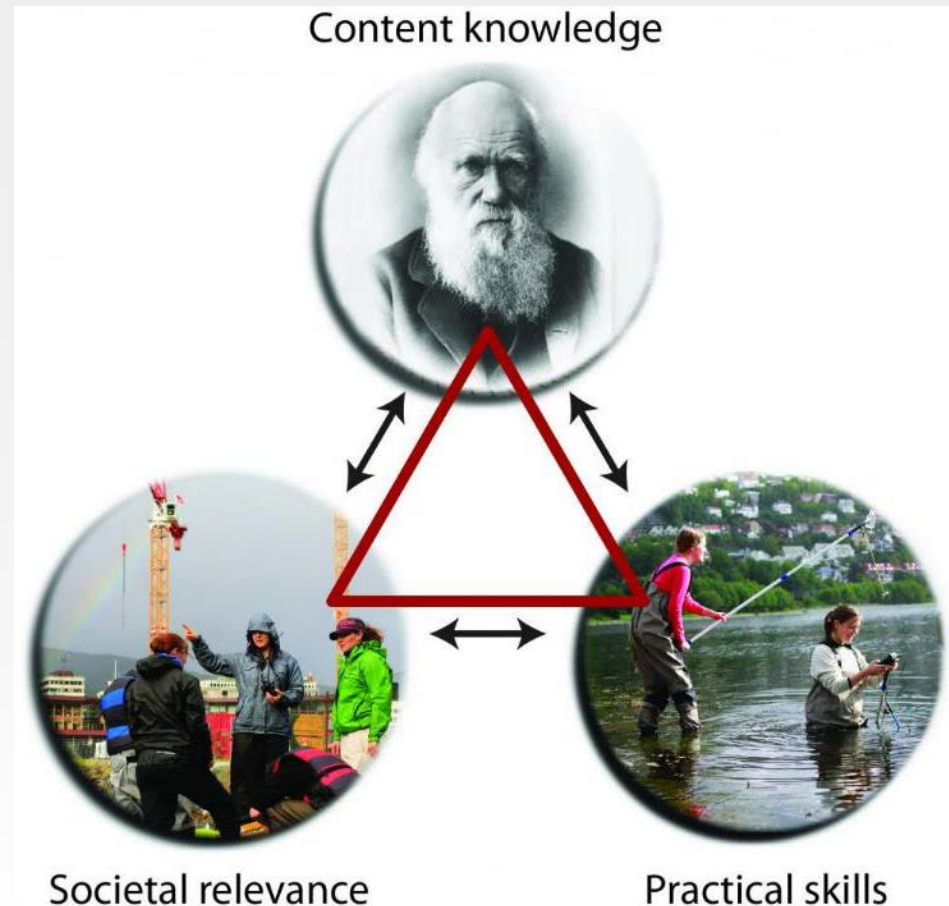


# bioCEED's vision:

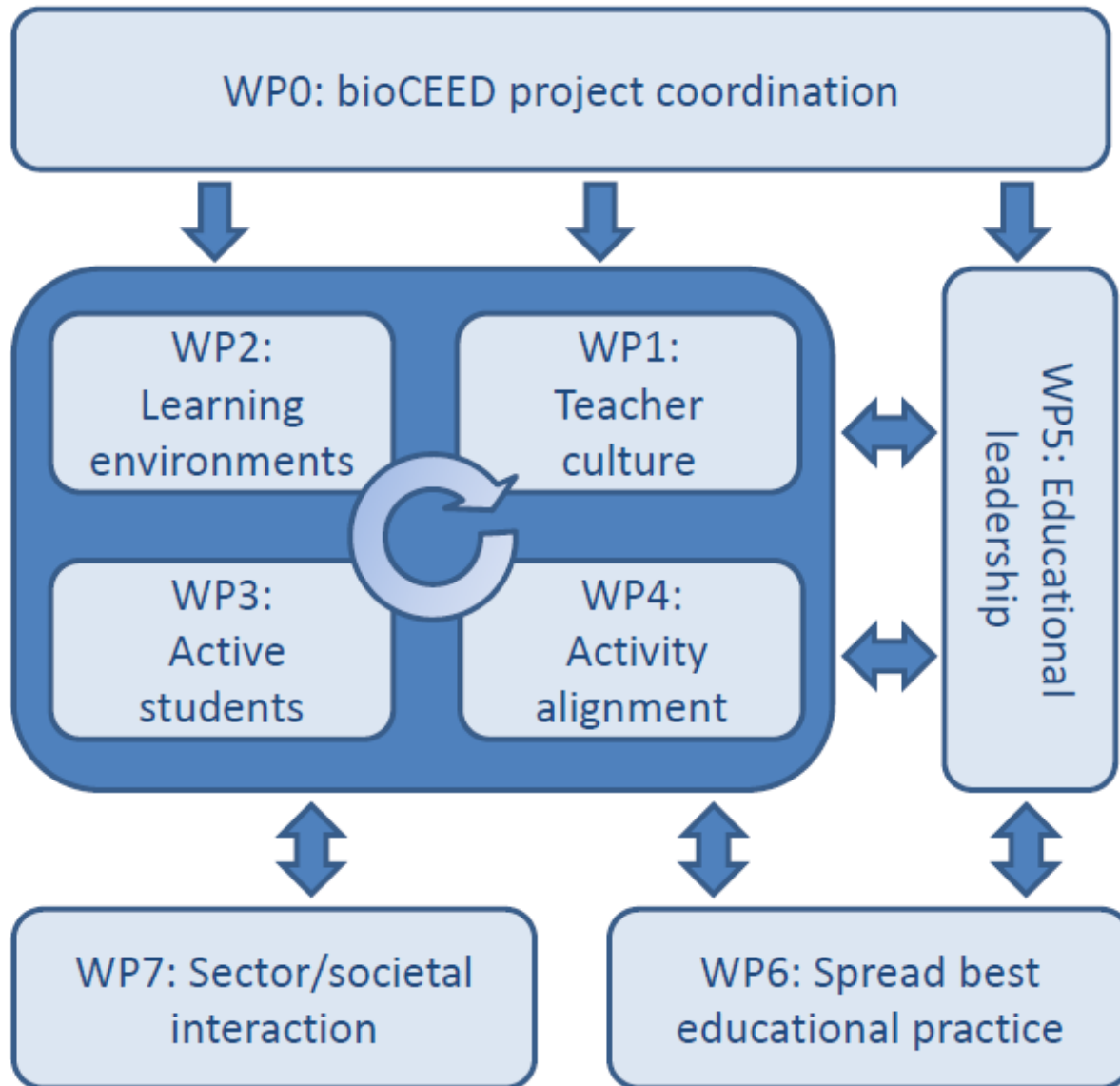


## – we educate tomorrow's biologists

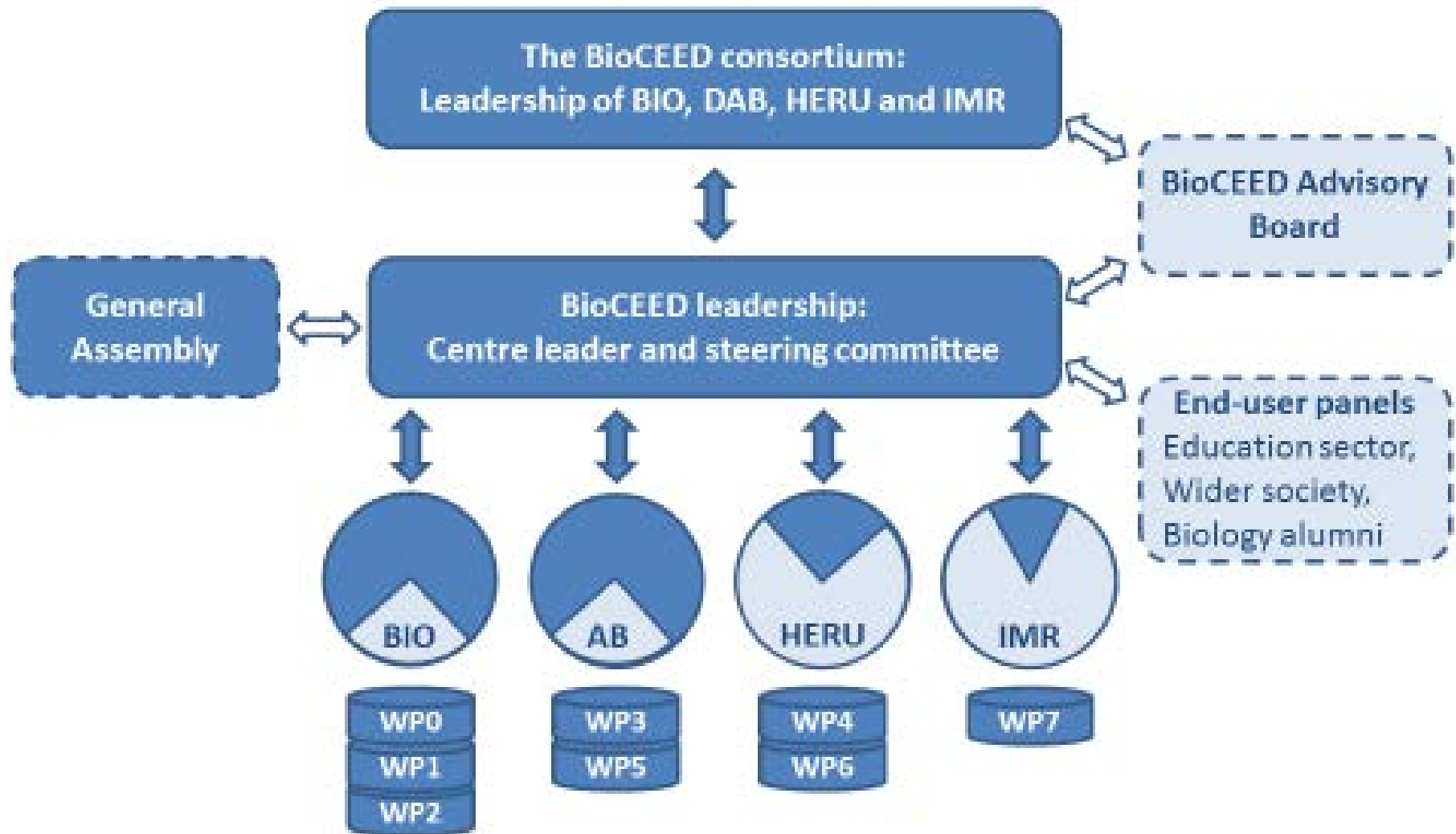
- Biology emerges in the interface between theory, practice, and the needs of society
- To succeed, we must:
  - Use the triangle
  - Focus on learning
  - Exploit the research culture



# Linkages between activities



# bioCEED vs. the host institutions 💧❤️●



# Student, staff involvement



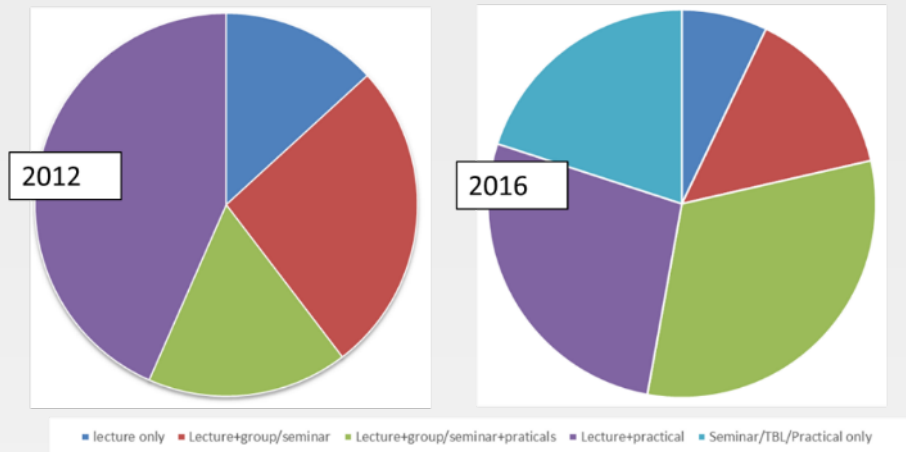
Students	Leading	Doing R&D	Taught
Educational R&D	8	122+	550+
bioCEED courses		66	45
Student to student	11	29	100+

Staff	Leading	Doing R&D	Taught
Educational R&D	35	36	
bioCEED courses			31 Profs 18 PhDs

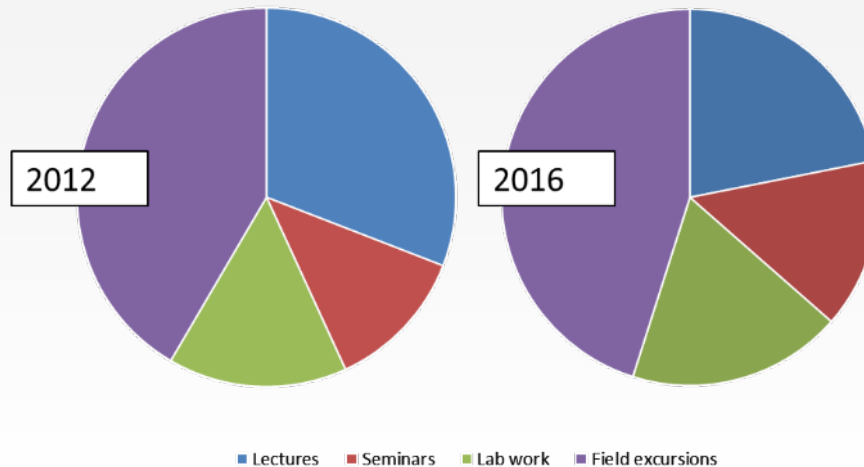
Courses		Doing R&D	
Educational R&D		25*	

\*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

*When biology adds up, at last...*

[Home](#) [Tutorials](#) [Up in the R...](#) [videoST@TS](#) [bioST@TS in biology courses](#) [For teachers](#)

**Normalfordelingen**

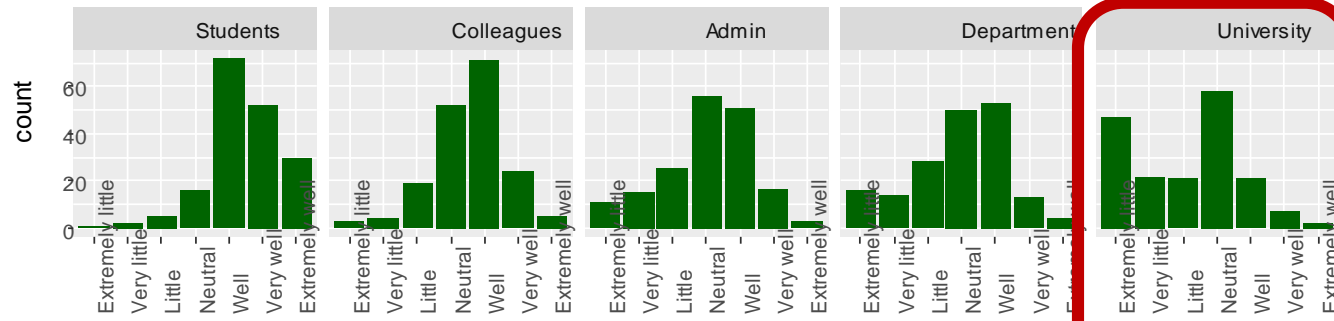
**Poissonfordelingen**

**Binomialfordelingen**

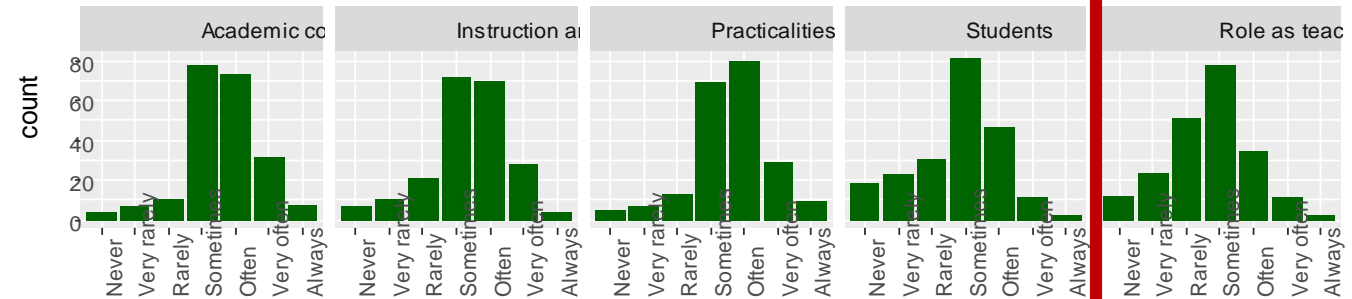
**videoST@TS**  
Lær om gjennomsnitt, variabilitet og fordeling med våre videoer.

[Se og lær...](#)

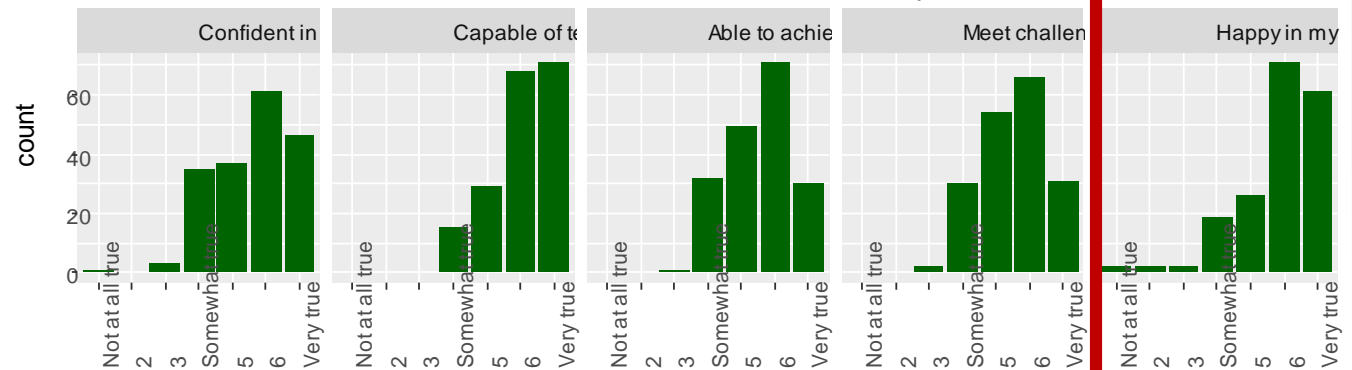
## Perceived appreciation



## Discuss with colleagues



## Teacher efficacy



## The bioCEED survey

9 biology educators

752 students

231 teachers

32 administrators

>100 companies

231 biologists



## 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»*

# Building a SoTL culture bottom-up!



## 1. Set common goals

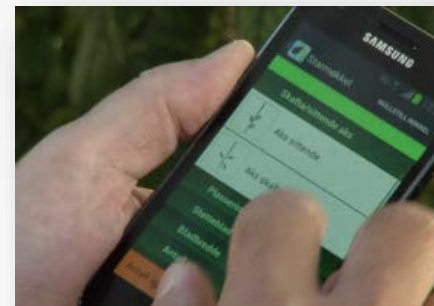
- Inspire and promote change
- Support & value development
- Visible leadership

## 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.***

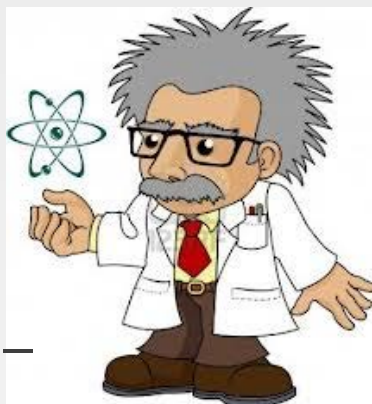
**Carl Wieman**

**'Stop lecturing me', Scientific American, August 2014**

# The two academic cultures:

## Researcher

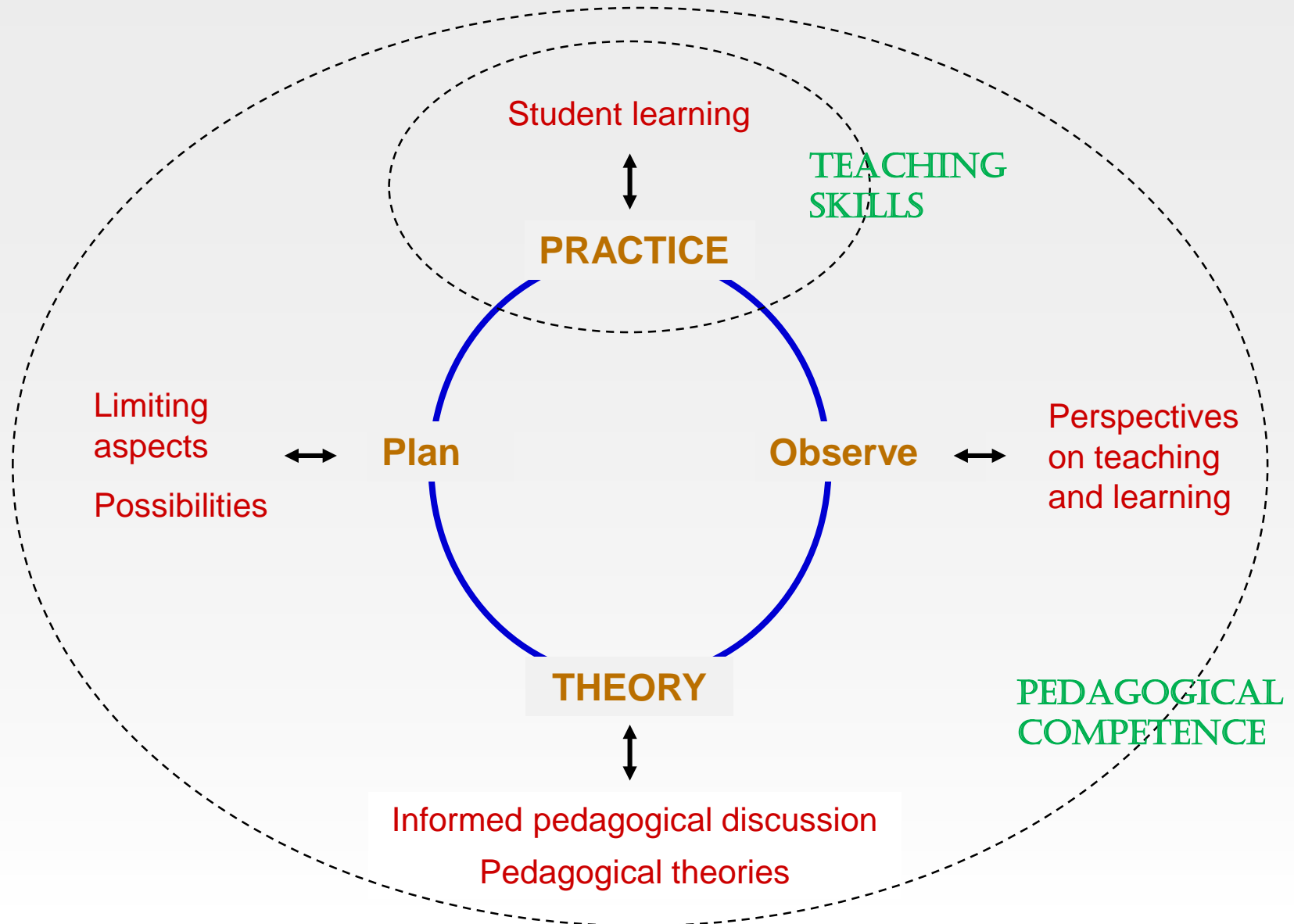
- Research groups
- Social – built on trust
- Collaborate to exploit complementary strengths
- Continuous development – knowledge transfer
- The scientific method
- Share findings – open
- Write, document, publish
- Peer review
- Follow the literature
- Make use of new methods, new technology



## 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



# A culture for analysis...



## Report on BIO201 Ecology 2016

### Summary

This year we had  
assessment, but c  
outcomes were re

1. be able to obtain
2. know how ecol
3. use some statis  
processes

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

Jenny, Jeppe, Vigdis & Sigrunn  
UNIS 14.03.16



## 2<sup>nd</sup> Conference of the Norwegian Ecological Society (NØF) Ecological change, changing ecology

March 12 – 13<sup>th</sup> 2015, Bergen



## an integrated learning activity in BIO's

## biology: current status and recommenda

ersen\*, Oyvind Fiksen, Lawrence Kirkendall, Sig

Biology, University of Bergen, Norway

nd Botanical Gardens, University of Bergen, Nor



bioCEED-seminar 26 Nov, 12-13



## How Can the Scholarship of Teaching and Learning Improve my Teaching?

What kinds of new strategies, techniques, or other innovations can individual instructors implement into their teaching practice?

How can the effectiveness or impact of these changes can be measured and shared using approaches from SoTL?

Strategies to support each other in these efforts moving forward.

The seminar will be given by **Robert Gray Jr.**, Associate Professor of University Pedagogy in the Department of Education at the UIB.

**Time and place:**

**26 Nov, 12:00-13:00, Biologen, Seminar room K1/2**

bioCEED - Sentre for fremragende utdanning i biologi



Sentre for  
fremragende  
utdanning

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**

**Seminarrom K3/4 Biologen**

bioCEED - Sentre for fremragende utdanning i biologi





# A culture for debate....



DEBATT / AKADEMIA 00:00 - 17. juni 2016

## En kultur for utdanningskvalitet

*Professorens to personligheter, forskeren og læreren, må finne sammen. Og vi må skape inkluderende fellesskap for læring. Slik bygger vi fremragende utdanning.*

Vigdis Vandvik, Øystein Varpe og Oddfrid Førland



Det står visst ikke så bra til på landets universiteter og høyskoler. Utredninger, det årlige Studiebarometeret, studentorganisasjonene, og personlige vitnesbyrd i mediene tegner et dystert bilde av en studiehverdag preget av dårlig kvalitet, irrelevant lærestoff,

### KVALITETSMELDING

Våren 2017 skal regjering frem en stortingsmelding om utdanningskvalitet i høyere utdanning. Ambisjonen er å stimulere som

Bergens Tidende BT Magasinet Sport Kultur Meninger



KOSMETIKK: Utviklingen av teknologi og utstyr har i liten grad bidratt til endringer ut over visse kosmetiske tilpasninger i forelesningsrommet. ARND/FOTO: JAVETTE KARLSEN/UT

## Vi bør gjøre noe med undervisning

Studenter vil ha forelesninger, og at de legges ut på nett. Men hva da – egentlig?

ARILD RAAHEIM Professor, Det psykologiske fakultet, Universitetet i Bergen 30. mai 2016 05:00, oppdatert 28. mai 2016 15:02  
BYVIN I RIKSEN, LUCAS JENØ



Stillingsannonser  
se alle stillingsannonser



# A culture for debate....

Khrono<sup>®</sup>

Ny innsikt. Hver dag.

Søk

## Det vi studenter trenger fra dere undervisere

PUBLISERT TIRSDAG, 31. JANUAR 2017 - 10:16 - OPPDATERT TIRSDAG, 31. JANUAR 2017 - 10:16

[6 \(/debatt/en-students-perspektiv-pa-meritering-av-undervisning#disqus\\_thread\)](#)

3/20/2017

Det vi studenter trenger fra dere undervisere | Khrono



RAGNHILD GYA  
Masterstudent, UiB, og  
studentrepresentant i  
bioCEED

### 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.

For å lykkes må du bruke forskerhodet ditt i undervisningen, ikke entertaineren.

**Ragnhild Gya**  
Masterstudent, UiB,  
og  
studentrepresentant i  
bioCEED

# 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*

