



Collegial sharing sessions - O yV@ :

The sharing session is organized as one hour long session with an introduction to the theme and an around the table discussion /feedback from the participants. Participants signs in on two sessions, one before lunch and one after lunch. In forefront of LF the participants will receive an email with a link to sign in and choose which sharing sessions they would like to attend.

Tuesday 1115-1215:

1) **Title:** Using a focus group interview to learn from your students

Lead by: Mikko Syrjäsuo

Where: Festningen

Description: The UNIS course Radar diagnostics of space plasma (MSc/PhD) conducts fieldwork at the EISCAT Svalbard Radar. The students are divided into small groups and each group is allocated a few hours of "radar time" to conduct their small-scale study about the physical processes in the upper atmosphere. Controlling an actual research radar for real is something the majority of the students consider the highlight of the fieldwork, if not the whole course. At the same time, waiting for their turn at the Big Radar is the least favorite activity and does not improve learning. In 2017, we introduced a small side project for the fieldwork to fully engage all students. The ones not operating EISCAT would be building a small radar themselves! The basic idea was to strengthen the understanding of radar fundamentals. After the introduction of this hands-on part to the fieldwork, the first development round was based on the student feedback collected routinely for all UNIS courses. In 2018, a

more in-depth assessment using a focus group interview was conducted at the end of the semester, which then resulted in carefully considered changes in the implementation of the learning activity for 2019. The ideas and comments from the students helped in adjusting the practical details and, not insignificantly, reduced the teaching load and stress during the fieldwork.

The sharing session will be carried out as a focus group interview on the topic “The students are talking – how are you listening?”

- 2) Title:** How to integrate teaching resources and students into cutting edge research
Lead by: Helena Reinardy
Where: Library
Description: Many scientists, PIs, and researchers feel a conflict between teaching and research, both demanding time and much attention. From a research perspective, I am interested in using teaching, resources, and courses/activities to achieve real research, elevating student research projects up to publishable-level science, and teaching by doing research with students. This approach can be highly inspiring to students, and a way for researchers to combine teaching and research and overcome the conflicting demands.
- 3) Title:** The “Info lecture” given by logistics: How can we improve?
Lead by: Charlotte Sandmo & Marcos Porcires
Where: Skansebukta
Description: The “info lecture” is the very first lecture that most students get when they start their studies at UNIS. This lecture is held by the logistics department and focuses on safety, hazards and risk mitigation during field activities on Svalbard. The lecture might seem a bit too overwhelming for newly arrived students and we would like feedback and discuss ideas on how we could reorganize the contents and how we communicate them.
- 4) Title:** Experimenting to support learning process
Lead by: Aga Nowak
Where: OPS
Description: In this session we will discuss the importance of experimentation for improvement of the learning process and increase of the learning gain.
The experimentation refers to:

 1. teaching practices during lectures, workshops and field classes
 2. design of group work either for laboratory or field activities
 3. support of students throughout the course

- 5) **Title:** Lessons learned from organising fieldwork at unis
Lead by: Marius Jonassen
Where: van Keulen
Description: Organising fieldwork for courses at UNIS poses many challenges and in this session I will share and invite for discussion of my experience with some of these. Topics that I will cover include: How to minimize dead time and involve all students in useful learning activities in the field and how to facilitate information flow during the fieldwork so that everyone knows what is happening at what time. I will also talk about how to connect theory taught in class with data collection in the field and how to use both simple (bicycles) and advanced platforms (drones) for collecting data.
- 6) **Title:** Virtual Reality – a class room tool or attention gimmick?
Lead by: Peter Betlem
Where: Templet
Description: For a long time Virtual Field Trips have been promoted as an invaluable tool to visit otherwise inaccessible places. The rise of Virtual Reality (VR) is the natural extension of idea: students are now able to literally break the boundary between virtual and reality, and fully immerse themselves while walking through a digital reconstruction. Within the department of Arctic Geology, Kim Senger has experimented with the use of VR (using an HTC Vive headset) as a tool for PR, academia and teaching. While incredibly useful to get and focus one's attention, limitations in current software implementations remain a challenge in bringing out the technique's full potential. Here we provide a short overview of our use and summarise a brief list of tips and tricks that help adding VR as a tool to one's teaching toolkit.

Tuesday 1330-1430:

- 7) **Title:** Planning for successful fieldwork at UNIS
Lead by: Holt Hancock
Where: Library
Description: UNIS places an emphasis on offering experiential learning opportunities in Svalbard's unique environmental setting. Field activities explicitly contribute to stated learning objectives for many UNIS courses and can, when properly executed, serve as a highlight and capstone activity for students. Implementing successful fieldwork into an UNIS course requires a well-defined and well-communicated plan between multiple actors including, but not limited to, the course-responsible, guest lecturers, Logistics staff, Administration, and (most importantly) the students. In this

session, we will encourage a dialog between the various actors involved in organizing and planning fieldwork at UNIS to help answer the question “How do we best plan fieldwork at UNIS?” With input from scientific, logistic, and administrative staff in addition to student evaluations of recent courses we can discuss different approaches to planning successful fieldwork here at UNIS.

8) Title: Combined field and digital tools in geological education

Lead by: Snorre Olaussen

Where: Festningen

Description: So far no modern tools can replace the importance of geological field work and excursions in educating students in geology. Outcrops can demonstrate geological and physical processes in four dimensions in both space and time. Furthermore, students get an impression of the scale and architecture of structural elements, which is not feasible behind a computer screen. The challenge of teaching in the field in Svalbard can be subdivided into i) heavy logistic preparation ii) focus on transportation on snowmobiles or small boats iii) safety concern especially in steep hills; rock falls/snow avalanche and harsh climate and iv) sometimes *extremely* variable background of students and v) teaching with attention from students in a sometimes overwhelming exotic nature.

One of the main challenges in geological teaching in field is to awake students for curiosity and learn observation skills; i.e. *You see, but you do not observe*, (Sherlock Holmes, C. Doyle, In a scandal in Bohemia). The teaching of field geology can now be further developed by help of modern digital tools. Combining traditionally geological field work (e.g. logging, mapping, drawing sketches, use of compass and GPS) with emerging digital educational tools can bring students to next level in understanding dimensions and scale in geology, and earth science generally. Digitalizing of the visited locality through ground or drone-based photographs and videos, for instance, can be transferred to virtual outcrops. Students can thereby prepare for their fieldwork, and use the acquired or provided virtual outcrop models to complement their quantitative post-field work analysis. Needless to say, touching, smelling and sometimes even tasting the rocks can never be substituted by modern tools, and actual hands-on fieldwork is critical in educating the next generation of Arctic geologists.

9) Title: Assessment in MSc- and PhD-level courses: writing a research proposal as home exam

Lead by: Øystein Varpe

Where: van Keulen

Description: Assessment for grading is challenging and there are many ways to do this. In AB-338/838 I tried out an end-of-course exam that aimed to stimulate the students to show what they have learnt by writing a research proposal. They were particularly challenged to provide a solid background of the field and the relevant theory, identify the research frontier, formulate research questions, and select well suited approaches to answer the research questions. I will share with you how I did it, including how I prepared the students for the exam. I hope you are keen to discuss these experiences, share own related experiences, and perhaps also discuss assessment and exams more broadly.

10) Title: Safety Courses as a part of the student learning experience at UNIS – Bridging the gap between technicians and academic staff

Lead by: Sara Mollie Cohen

Where: Templet

Description: The technicians at UNIS administer a wide range of safety courses to all new students and staff at UNIS, but there is little feedback from professors as to what is actually beneficial to students and staff and what is lacking when out in the field. I will give an overview of what courses we offer from the logistics department, my philosophy on teaching students and staff, and how I see this play out in the field when I join on field excursions. I would like to encourage a discussion on getting feedback from staff on what works and what is missing, as well as address the safety courses from a pedagogical viewpoint.

11) Title: Using scientific literature in the classroom

Lead by: Emma Bland

Where: OPS

Description: In this session we will discuss ways in which peer-reviewed scientific literature can be used in bachelor- and master/PhD- level courses to achieve a range of learning outcomes. Learning activities conducted during two Arctic Geophysics courses will be presented as a starting point for the discussion. Participants will be encouraged to share their own thoughts and experiences on effective use of scientific literature to promote student learning. Note: this session is a repeat of a similar session held at the 2018 Learning Forum.