

Teaching Portfolio

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Formel pædagogisk uddannelse

2021	Lecturer training programme, SDU.
2020	MCQ - Construction and quality control of multiple choice (MCQ) items
2020	Interactive lecturing course
2020	Use student response systems in your teaching (Poll Everywhere)

Uddannelsesadministrative opgaver

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Erfaring med undervisning, vejledning og eksamen

2022-present	BMB550: Experimental Life Sciences (10 ECTS). Co-organiser of course and responsible for several lectures, exams and grading.
2022-present	BMB508: Advanced Molecular Biology (10 ECTS). 2 double-lectures.
2020-present	PhD course: Mechanisms and methods of basic cancer biology. Runs every second year. 1 Lecture on genomics applications in cancer.
2020-present	FF501: First-year project (10 ECTS). Supervision of first-year students for a research-based project that runs throughout most of the spring semester.
2019-present	Modul B3: Molecular Medicine (13 ECTS). Lectures, exams, grading. 4 double-lectures (out of 23) each semester.

Supervision: 1 postdoctoral lab manager, 3 postdocs, 3 PhD students, and undergraduate students.
Examiner: Internal examiner for BMB538 at SDU and evaluator of two PhD theses.

Metoder, materialer og redskaber

Courses

Type of teaching: Most of my teaching consists of lectures based on very established research that has made it all the way to the textbooks. Thus, this teaching is therefore mainly research-led teaching (Healey 2005) or teaching through research dissemination (Keidin 2010). However, in some courses (e.g. BMB508, the PhD course, and FF501), I have the possibility to occasionally engage the students more in new research using research-tutored and research-based teaching (Healey 2005), which I find very exciting.

Interactive teaching: To minimise the one-way communication characteristic of lectures and to try to engage the students in the topic, I encourage questions and discussion during the lectures. To further facilitate engagement, I include interactive methods such as PollEverywhere, and I increasingly use peer-feedback to provide elements of research-tutored teaching (Healey 2015) during the lectures. I find that this combination of teaching methods increases student engagement, which further facilitates student learning. In addition to lectures, the students also take smaller classes ('Holdtimer'), where they apply the concepts from the lectures to specific questions and exercises. This includes research-based teaching, where the students use research methods to analyse research-like questions in theory. Student evaluations show that these smaller classes are valuable for student learning. This combination of engaging lectures for many students (>100) and smaller classes focusing on exercises is the best way to teach large courses, where it is not feasible to do more hands-on activities during the lectures.

Student assessment: I have been involved in both oral and written assessment of students. I think it is important to have an element of oral assessment, as oral knowledge dissemination is a key skill for the student to learn. This does not have to be an oral examination at the end of a course, which is often difficult with larger courses. Instead, it could be elements of oral dissemination during the course, e.g. presentations of research results or a book chapter. Written knowledge dissemination is also a key skill to learn for the students, and elements of student writing should be included in student assessments. Due to the large number of students in many courses, we have moved towards also including MCQs in the examination. Although MCQs are not well-suited as stand-alone tools for assessment, I find that properly designed MCQs are a great supplemental tool to examine students in large courses. Thus, I think a combination of MCQs and essay-type questions is the best way to assess students in large courses with elements of oral dissemination during course.

Supervision

As a supervisor, I have an open-door policy to ensure easy access to support and guidance for students and postdocs. Furthermore, I try to promote collaboration within the research group as well as beyond, where everybody uses their strengths to support different projects. At the same time, students and postdocs at all levels are also encouraged to acquire new competences. I believe this kind of open and collaborative setting provides a pleasant and productive working environment that promotes the development of each individual, while maintaining a strong and positive group spirit. The main goal is to educate researchers who can develop new ideas and innovative approaches to research questions through critical and independent thinking. PhD students and postdocs in my group write the first draft of manuscripts, and I also aim to involve them in grant writing and peer review of manuscripts. I believe this is essential to support their academic development in research dissemination, which is an important skill regardless which career path they choose.

Uddannelsesudvikling og univeristetspædagogisk (følge)forskning, herunder pædagogiske priser

Development project - part of the lecturer training programme ('Pædagogikum')

For my development project, I focused on the large course for medical and clinical biomechanical students I am teaching (Modul 3: Molecular Medicine – 13 ECTS, >200 students). The main pedagogical challenges I wanted to address were 1) how can I engage a large group of students during a lecture and 2) how can I create an interactive and engaging teaching environment online (online teaching was required due to the Corona pandemic). To address these challenges, I took advantage of interactive learning methods using PollEverywhere and peer-feedback to help students understand and, more importantly, apply key concepts from the lecture. First, I designed poll-type questions at higher taxonomy levels (e.g. Blooms taxonomy) and incorporated them throughout the lectures. I think it is important to focus these polls on higher taxonomy levels to really make the student engage and interact with the topic and thereby facilitate deep learning. This was well-received by the students, and they indicated that it helps them learn key concepts. Second, I added a peer-feedback session on Zoom for a few of these high-level questions. After having answered the question themselves, the students were distributed into break-out rooms, where they discussed the question with their peers. Afterwards they answered the same question again, where they could adjust their response based on the peer-feedback. Finally, I explained the correct as well as wrong answers. For most students this seems to be helpful and facilitate a better understanding of the topic. However, there were also some students who did not enjoy this peer-feedback session. This is likely because they were part of a group that was not really interested in discussing the topic, and it therefore felt like a waste of time. I have now implemented this in my post-corona teaching with physical presence, and it works even better in this setting, where it really facilitates student engagement. I am currently building on this in my lectures and trying to expand it to include also elements of flipped-learning, where the students engage actively in the topic even more during the lecture.