

## Teaching Portfolio

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## Educational Training

2018                   Lecturer training programm, SDU

## Current Teaching

BB537                Biology from molecules to ecosystems  
FF503                Biology from molecules to ecosystems  
BB534                Seminar in Biology  
BB850                Tropical ecology  
BB540                Microbial ecology and global biogeochemical cycles  
FF501                First year project

## Administrative tasks related to education

2019                Member of the Nat faculty Gender Equality Board  
2015                Member of the Gender equality team at Helholtz Center for Ocean Research- GEOMAR, Kiel, DE

## Experience with teaching, supervision and examination

Supervision of 8 BSc students, 4 MSc students, 4 PhD students (co-supervisor) and currently 2 PhD students as main supervisor

## Methods, materials and tools

Teaching is a part of my job in a way that it is essential to not only generate scientific results but to transfer knowledge, opinions and philosophies to other minds, and to inspire young students to follow up on their interests and passion. I understand my major task as teacher as providing my students with the toolbox to succeed with their goals, this, I think, is much easier achieved by showing enthusiasm. From my own experience during my Master and PhD studies I know how important enthusiastic and inspiring teachers can be - I would like to acknowledge Hermann Bange and Arne Körtzinger, who were such inspiring academic teachers to me, as well as Doug Wallace, Julie LaRoche and Marcel Kuypers. Thus, I am particularly dedicated to good teaching as part of transfer of knowledge and supervision activities in order to make my students confident in what they are doing. A key requirement of good teaching is obviously the transfer of knowledge. This requires from me as the teacher a broad understanding of the material and the ability to make it interesting to the students. This means that I always want to have an eye on the latest developments in my field, but also to select for good teaching examples- both of which I enjoy. As gain of knowledge is of such high importance, students are often exposed to massive loads of information. Learning is largely dependent on repetition and iteration (e.g. Guthrie et al. 2004; Hmelo-Silver et al. 2007), thus it is critical to develop lectures building up on previous knowledge (Sweller 1988; Mayer 2004; Meyer 2013). It is thus important for me to have a good understanding of what had been covered in previous lectures. Through collaborating with other instructors and lecturers, I constantly repeat relevant aspects of previous teaching. I believe, presenting content from different perspectives builds a strong foundation, which can then be used to further add specific knowledge. Here, the implementation of the right language is a particular challenge (Polkinghorne, 2005), as students are on different levels. To make the content of my teaching available to the students after the lecture, I offer them to come by my office for direct feedback to their questions. A major importance has also the selection of literature for the students. To make content most understandable, I always combine a selection of science history/ philosophy with classical teaching material and current research highlights. This enables the students to understand how science works and what the acquired knowledge can be applied to, while it promotes self-education. In my lectures, I am often confronted with large numbers of students, all of them obviously different regarding their learning preferences and abilities. Different people learn in different ways, i.e. they pick information up through different presentation forms. To address this, I usually combine different teaching styles, e.g. classical presentations, blackboard outlines of major points, with more active approaches. I believe, learning should not be passive only. Thus, I constantly seek to activate students by direct discussions in my lectures. I perceived it as a successful strategy to further engage students for example via group discussions, peer-to-peer review and subsequent presentations of thoughts and results.

My belief is supported by evidence (e.g. Freeman et al. 2014) that learning is more efficient when done actively rather than a passively. Besides the accumulation of knowledge, for me an essential point is enabling students to critically look at what they are learning or what data they are looking at. In a seminar series on Earth evolution and ecology I fostered the ability to critically interpret hypotheses by handing out controversial studies and guiding the students through a discussion of this. This form of seminar was very well appreciated and combined information gain with acquisition of a key scientific method, which is the critical evaluation and interpretation of data, which is a fundamental tool for students to develop (Jonson & Christensen, 2008).

#### References

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## **Educational development and educational research as well as educational awards**

I took part in the lecturer training program at SDU as a formal education.