

## Undervisningsportfolio

1. Undervisnings-CV: Oversigt over undervisnings- og vejledningsopgaver med angivelse af fagområder, omfang, niveau (BA, kandidat, EVU, Ph.d) samt evt. censoropgaver.

**Kurser, vejledning og censor gennem de sidste ca. 20 år:**

**Ph.d.-studerende:** 5 færdiggjorte i matematik-/ erhvervsskole- eller ingeniørdidaktik. 4 nuværende ph.d.-studerende i matematikdidaktik i Uganda og Tanzania (MATH4SDG), 2022-2026.

**Specialestuderende:** 8 færdiggjorte i matematikdidaktik i Norge. 5 færdiggjorte i Danmark. 2 forventes færdige i 2025 på AAU. 1 forventes færdig i 2025 i Norge (Bergen) og endnu en i 2026.

**Projektvejledning:** Bivejleder (PBL) for 35 grupper på 2. semester matematik eller fysik, AAU.

**Facilitator:** 2 grupper med matematiklærere fra grundskole- og gymnasieområdet i LabSTEM Nord.

**Adjunktvejledning:** Vejledt 41 adjunkter på AAU og 7 grupper af adjunkter på AU ifm. Adjunktpædagogikum.

**Læreruddannelse:** *Supervised/observed 16 graduate og 29 undergraduate students i secondary math education program, USA. Praksisbesøg af 5 lærerstuderende, Norge. Observation af 3 lærerstuderende i praktik, Danmark.*

**Kurser:** Undervist utallige kurser i matematikdidaktik på bachelor- og masterniveau, Danmark, Norge, USA.

**Workshops:** Givet utallige kurser, workshops og præsentationer af PBL til studerende, nationale og internationale forskere.

**Censur:** Næstformand i censorkorps på universiteterne, Matematik, 2010-2026, censor siden 2006. Utallige censuropgaver i matematikdidaktik, matematikhistorie, videnskabsteori på alle niveauer. Desuden tidl. censor på læreruddannelsen i matematik.

2. Studieadministration: Oversigt over studieadministrative opgaver, eksempelvis medlem af studienævn, studieleder, semesterkoordinator, fagkoordinator, akkreditering m.v.

**Semesterkoordinator:**

Master in Problem Based Learning (MPBL). 1st sem. coordinator: E2014

**Kursuskoordinator:**

- Master in Problem Based Learning (MPBL). Course 2, Semester 3: E2015
- Problembaseret læring (PV/PBL). 1st sem, E2015-E2019. Igen fra E2022
- Fagdidaktik i matematik. E2017-

**Committee chairing:**

Vice-chair of the Corps of University External Examiners in Mathematics (Censorkorps): 2010-2026

#### **Chair Ph.D. Assessment Committee:**

- Ph.D. thesis by Annette Grunwald, Dept. of Development and Planning: Naturfagenes og ingeniøruddannelsernes attraktivitet - set fra et inter-organisatorisk læringsperspektiv: 2015
- Chair Ph.D. Assessment Committee: Ph.D. thesis by Mahyuddin Bin Arsat, Dept. of Development and Planning: Effectiveness of Sustainability Incorporation in Engineering Curricula: A Framework for Course Design: 2014

#### **Dommer:**

- Master Class, Mærsk Mc-Kinney Møller Videncenter, Sorø (2010);
- FIRST LEGO League (2015, 2010, 2008, 2003);
- Projekt Edison, Fonden for Entreprenørskab (2021, 2018).

#### **Udvalg ifm. uddannelsesområdet:**

2022-2024 *Faggruppen for Folkeskolens Fag: Matematik*. Undervisningsministeriet  
2020- Formand, *Ekspertgruppen for Erhvervsskoler*. Nationalt Center for Udvikling af Matematikundervisning (NCUM)  
2020 *Lektoruddannelsesudvalget* (Planlægning af læreruddannelse, trin 6-12). Universitet i Bergen

### **3. Universitetspædagogiske kvalifikationsforløb: Oversigt over gennemførte universitetspædagogiske kursusforløb, PBL-kurser, workshops, udviklingsprojekter, kollegial supervision o.l.**

#### **Aalborg University:**

Ways of supervising assistant professors ½ dy: Learning Lab Training for Pedagogical supervisors: 2013

#### **Stanford University, USA:**

Center for Teaching and Learning offers workshops for faculty. Sat in on these while being a visiting scholar: E2011  
- Effective Public Speaking in Academic Settings ½ dy  
- Fundamentals of Leading Effective Discussions ½ dy

#### **Aarhus University:**

Mentored by Associate Professor Poul V. Thomsen while being an Assistant Professor. Got feedback on my teaching. 2007-2008.

#### **Virginia Tech, USA:**

Course: Supervising Student Teachers, 1 US credit ≈ 2 ECTS  
Faculty Development Institute (FDI) workshops:  
- Motivating Your Stud: Strategies for Design & Implementation ½ dy  
- Test Creation for Distance Classes Brownstone Diploma ½ dy  
- Blackboard 6: Create Web-based Courses, Question Pools 1 dy  
- eLearning Assessment Methods ½ dy  
Center for Excellence in Undergraduate Teaching (CEUT) workshop:  
- Using Acting Techniques in the Teach & Learning Process ½ dy  
All: 2004-2006

### **4. Anden form for kvalificering: Konferencedeltagelse, debatindlæg, oplæg m.v. i relation til uddannelse, "Undervisnings dag", o.l.**

#### **Project Management:**

'Project management 1', part of management BA 6 ECTS. Business College BI, N: 2003

For publications, please consult the list of publications at the general website of Aalborg University

### **5. Undervisningsudviklingsforløb og undervisningsmateriale: Oversigt over medvirken til udvikling af nye moduler, undervisningsmateriale, uddannelser, e-learning, samarbejde med eksterne samarbejdspartnere o.l.**

### Teaching material/books:

1. Dahl, Bettina & Troelsen, Rie (2015). Lecturing. In (Eds.) Lotte Rienecker, Peter Stray Jørgensen, Jens Dolin & Gitte Holten Ingerslev (pp. 179-188). University teaching and learning. Frederiksberg: Samfundslitteratur. ISBN: 978-87-593-1960-4.
2. Andersen, Hanne Leth; Dahl, Bettina; & Tofteskov, Jens (2015). Assessment and Exams. In (Eds.) Lotte Rienecker, Peter Stray Jørgensen, Jens Dolin & Gitte Holten Ingerslev (pp. 369-408). University teaching and learning. Frederiksberg: Samfundslitteratur. ISBN: 978-87-593-1960-4.
3. Dahl, Bettina & Krogh Lone (2015). Teaching portfolios. In (Eds.) Lotte Rienecker, Peter Stray Jørgensen, Jens Dolin & Gitte Holten Ingerslev (pp. 445-454). University teaching and learning. Frederiksberg: Samfundslitteratur. ISBN: 978-87-593-1960-4.
4. Dahl, Bettina & Troelsen, Rie (2013). Forelæsning [The lecture]. In (Eds.) Lotte Rienecker, Peter Stray Jørgensen, Jens Dolin & Gitte Holten Ingerslev (pp. 177-187). Universitetspædagogik [Textbook university teaching]. Frederiksberg: Samfundslitteratur. ISBN: 978-87-593-1637-5.
5. Andersen, Hanne Leth; Dahl, Bettina; & Tofteskov, Jens (2013). Eksamen [The examination]. In (Eds.) Lotte Rienecker, Peter Stray Jørgensen, Jens Dolin & Gitte Holten Ingerslev (pp. 369-408). Universitetspædagogik [Textbook university teaching]. Frederiksberg: Samfundslitteratur. ISBN: 978-87-593-1637-5.
6. Dahl, Bettina & Krogh Lone (2013). Undervisningsportfolio [Teaching portfolio]. In (Eds.) Lotte Rienecker, Peter Stray Jørgensen, Jens Dolin & Gitte Holten Ingerslev (pp. 445-455). Universitetspædagogik [Textbook university teaching]. Frederiksberg: Samfundslitteratur. ISBN: 978-87-593-1637-5.
7. Dahl Søndergaard, Bettina (2007). Diagnostiske tests og deres anvendelse i matematikundervisningen: Et eksempel på formativ evaluering [Diagnostic tests and their use in the teaching of mathematics: An example of formative assessment]. In (Ed.) Bodil Christensen, Faglighed, test og evalueringskultur (Series): Evaluering og test i matematik. Vejle: Krogh, pp. 61-76. ISBN: 978-87-624-0855-5.

### Teaching videos:

8. Video recording about the PBL model at AAU (in Danish) (2015). For use in high school teaching in connection to AAU On Demand. Recorded by Ahmed Hussain. 17 February 2015.

Five teaching videos (in Danish) on PBL (2015). Mikkelsen, Beni Maroc (photograph).

- Hvordan håndterer man problemer med et gruppe-medlem?
- Hvad kendetegner en god projektgruppe (med rektor Johansen, Per Michael)?
- PBL-eksperten: Om forventningsafstemning i projektarbejdet.
- PBL-eksperten: "Disse problemer er de mest typiske i projektarbejdet".
- PBL-eksperten: "Dette skal I huske på under gruppedannelsen".

Recorded 30 January 2015

[https://www.youtube.com/watch?v=HH1sdj\\_WMn4](https://www.youtube.com/watch?v=HH1sdj_WMn4)

<https://www.youtube.com/watch?v=UsTvn9rX0Gw>

<https://www.youtube.com/watch?v=fHPJLDZLYjw>

<https://www.youtube.com/watch?v=OysrjXGEuRo>

<https://www.youtube.com/watch?v=EzR5pMnQuyg>

Teaching Video – Oral exam (2012). With Karen Lauridsen & Ole Lauridsen. Aarhus University, DK:

<http://vimeo.com/intluniversity>

### Curriculum development:

I was in charge of the secondary mathematics education program Virginia Tech.

At Aarhus University I took part in planning and organisation of the adjunkt-pædagogikum. I also developed the course in mathematics and computer science education.

At Aalborg University I took part in revision the Study Plan of the MPBL (Master in Problem Based Learning) together with Mona-Lisa Dahms and Erik de Graaff.

I also took part in the revision of the Bachelor of Mathematics Study Plan (of September 2015) as I reformulated the learning objectives of the existing course: Problem Based Learning in Science, Technology and Society (PV) and formulated learning objectives and course description of a new course in Matematikkens Fagdidaktik (The Didactics of Mathematics).

## **6. Nominering til og/eller modtagelse af undervisningspriser.**

Skriv dit svar her...

## **7. Evt. personlige refleksioner og initiativer: Personlige overvejelser knyttet til undervisning og vejledning, ønsker til og planer for pædagogisk videreudvikling, planer for opfølgning på undervisningsevalueringer m.v.**

### **Teaching Philosophy:**

My teaching philosophy is based on my experience as a teacher as well as the knowledge I have gained as a researcher in education, particularly within learning psychology. Students learn in various ways and it is therefore important to use a range of teaching methods and thus alter between for instance lecturing and other activities. A typical experience for a teacher is that one approach can work well with one class, but the following year it seems not to go as well with an otherwise similar class. Also things such as time of day/week have an impact. Through using a variety of teaching styles, one can reach more students. However, this has to be balanced with what is possible in practice. I believe that good teaching may also happen in lectures to several hundred students if one for instance uses the peer instruction techniques of the Harvard physicist Mazur and/or techniques from theatre actors such as physically move around to underline important points. Another technique which I use a lot, is to simply ask the students not only if they understand what I talk about, but also if there is something in the style of teaching that appeals more, or less, to them. My experience is that showing this interest into the students' learning in itself creates more attention. Overall, I also believe that it is important to remember that teaching at universities is 'research-based'. This means that active researchers teach, they teach the newest knowledge, and equally important that the teaching style should be research-like. This means that, whenever appropriate, the students should work with the subjects' primary artefacts, sources and data, and not only textbooks. This also means that students should also experience the processes of research on a suitable level, which is done to a large extent during the project and problem based learning (PBL) teaching style at Aalborg University.

## **8. Andet.**

For access to full Teaching Portfolio (67 pages, anno 2022): please send me an email ([bdahls@plan.aau.dk](mailto:bdahls@plan.aau.dk)).