

Practical Information  
Programme  
Abstracts for Short  
Communications,  
Posters and  
Workshops

# Conference Teaching for Active Learning

7 November 2017  
University of Southern Denmark  
Campus Odense

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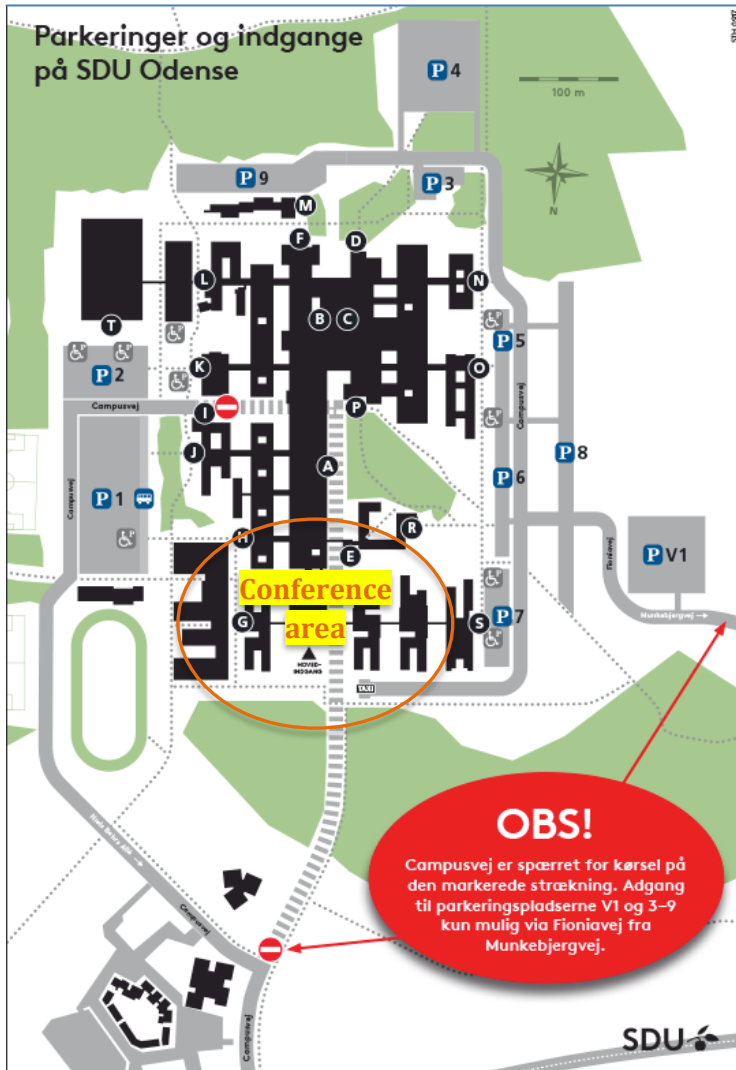
## Programme

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|                    |   |
|--------------------|---|
| <b>08.30-09.00</b> | Registration - coffee and rolls   |
| <b>09.00-09.15</b> | Welcome – O100  |
| <b>09.15-10.30</b> | Keynote speaker Dr. Tony Bates:<br><b><i>Teaching for a Digital Age: Why Blended Learning is so Important</i></b><br>The key challenge for university instructors is how best to prepare our students for a volatile, uncertain, complex and ambiguous world. This entails a shift of focus from content mastery to high level skills development. What teaching methods will facilitate such a shift? What role should technology play in making such a shift? Why is blended learning so important for this shift? This presentation will use actual cases and best pedagogical principles to suggest how this can be done. |
| <b>10.30-10.45</b> | Break   |
| <b>10.45-12.15</b> | Parallel sessions part 1  |
| <b>12.15-13.00</b> | Lunch   |
| <b>13.00-14.30</b> | Parallel sessions part 2  |
| <b>14.30-14.45</b> | Break   |
| <b>14.45-15.45</b> | Keynote speaker Dr. Tony Bates:<br><b><i>Managing institutional change: moving an institution towards new models of learning</i></b><br>All higher education institutions face the challenge of change, especially in teaching methods, where faculty have a great deal of autonomy. This presentation will explore some of the successful practices that have been used to support faculty and instructors in a shift to new ways of teaching. The challenges that still remain to be overcome will also be discussed. This will be a relatively short presentation with opportunities for questions and discussion.         |
| <b>15.45-16.00</b> | Closing statements – O100   |

## MAP – conference area and parking

University of Southern Denmark  
Campusvej 55  
5230 Odense M



# Key note speaker

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## **Key note: Dr. Tony Bates**

Tony Bates is currently a Distinguished Visiting Professor at the Chang School of Continuing Education, Ryerson University and is also a Research Associate at Contact North|Contact Nord. He has almost 50 years' experience in using technology for teaching, starting in 1969, when he began researching the effectiveness of the BBC-Open University television and radio programs as a founding staff member of the British Open University, where he became a full professor in educational media research.

In 1989, he emigrated to Canada, to take the position of Executive Director, Strategic Planning and Information Technology at the Open Learning Agency, Vancouver. In 1995 he moved to the University of British Columbia, to become Director of Distance Education and Technology. On retirement from UBC in 2003, he started his own consulting company, specializing in the planning and management of learning technologies in post-secondary education. He has worked as a consultant in over 40 countries. He has received honorary degrees from six universities for his research in distance education.

He is the author of twelve books on learning technology, online learning and distance education, including his latest online, open textbook for faculty and instructors, 'Teaching in a Digital Age'. The book, first published in April 2015, has been downloaded over 50,000 times and is being translated into ten languages.

Web site: Online Learning and Distance Education Resources ([www.tonybates.ca](http://www.tonybates.ca))

e-mail: [tony.bates@ubc.ca](mailto:tony.bates@ubc.ca); [tonybates@ryerson.ca](mailto:tonybates@ryerson.ca)

Phone: 604-733-9449 (o); 604-418-7484 (m)

## Morning from 10:45 - 12:15 - Parallel Short Communication sessions

|   |   |   |
|---|---|---|
| <b>Focus:</b><br>Teaching for Active Learning<br>Blended Learning   | <b>Focus:</b><br>Teaching for Active Learning<br>Flipped Learning   | <b>Focus:</b><br>Strategies<br>New Roles<br>Blended Learning  |
| <b>Language:</b> English  | <b>Language:</b> Danish   | <b>Language:</b> Danish   |
| <b>Room:</b> O96  | <b>Room:</b> O99  | <b>Room:</b> O100 (auditorium)  |
| <b>Chair:</b> Donna Hurford   | <b>Chair:</b> Cita Nørgård  | <b>Chair:</b> Inger-Marie F. Christensen  |
| SC 1-1<br><a href="#">Strategic efforts in English for non-native English speaking Master Students: More Languages to More Students – A Pilot Project</a><br><i>Lars Klingenberg et al.</i> | SC 2-1<br><a href="#">How to flip learning inside the classroom</a><br><i>Thomas Bernhard Kjærgaard</i>                             | SC 3-1<br><a href="#">Farvel til siloerne, goddag til nye kolleger - uden omorganisering!</a><br><i>Lise Stenbæk</i>  |
| SC 1-2<br><a href="#">Balancing quality and efficiency: the use of blended learning in large classrooms</a><br><i>Julie Emontspool</i>  | SC 2-2<br><a href="#">Encourage students to reflect on current and prior lectures with mini tests</a><br><i>Henrik Skov Midtiby</i> | SC 3-2<br><a href="#">Experiences with Blended Learning - A Student Teacher's Perspective</a><br><i>Rasmus Søggaard Hansen</i>  |
| SC 1-3<br><a href="#">Teaching global public health research on a global level</a><br><i>Gabriel Gulis</i><br><br><b>CANCELLED</b>  | SC 2-3<br><a href="#">Structured preparation prior to laboratory teaching activities</a><br><i>Magdalena Pyrz</i>                   | SC 3-3<br><a href="#">Digital mediering af undervisning medfører større spredning af læringsniveauet - et komparativt casestudium af traditionel face to face-undervisning kontra digitalt medieret undervisning</a><br><i>Mette Falbe-Hansen</i> |
| SC 1-4<br><a href="#">Experiencing and Valuing Blended Learning in the Lecturer Training Programme (LTP)</a><br><i>Donna Hurford</i>  | SC 2-4<br><a href="#">What is the cost of flipped learning and is it worth it?</a><br><i>Christian Brandt</i>                       | SC 3-4<br><a href="#">Rollen som online underviser i blended learning og fjernundervisning</a><br><i>Inger-Marie F. Christensen</i>   |

**Morning from 10:45 - 12:15 - Master class in blended learning with Dr. Tony Bates – Course design for a digital age: What methods work best?**

**Location:** Room O97

This session is for teachers, heads of studies, educational developers and others who are currently developing blended learning. During the session you can pose questions to Tony Bates on the issues involved in the development of blended learning and discuss challenges and opportunities with session participants.

The maximum number of participants for this session is 40, and the 40 seats available are allocated on a first come, first served basis. Please sign up for the master class by sending an e-mail to [agpetersen@sdu.dk](mailto:agpetersen@sdu.dk) and await confirmation email.



## Afternoon from 13:00 - 14:30 - Parallel Short Communication sessions

|  |  |
|--|--|
| <b>Focus:</b><br>Active Teaching and Learning<br>Flipped Learning<br>Blended Learning  | <b>Focus:</b><br>Teaching for Active Learning  |
| <b>Language:</b> Danish  | <b>Language:</b> English   |
| <b>Room:</b> O97   | <b>Room:</b> O99   |
| <b>Chair:</b> Christopher Kjær   | <b>Chair:</b> Lotte O’Neill  |
| SC 4-1<br><a href="#">Flipped Learning som redskab til involvering i psykologiundervisning</a><br><i>Pia Goul</i>  | SC 5-1<br><a href="#">Is blended learning another form of playful learning? A design case study</a><br><i>Emanuela Marchetti</i> |
| SC 4-2<br><a href="#">Blended Learning in part-time higher education - Using digital tools to create an ongoing and constructively aligned learning environment</a><br><i>Nete Schwennesen</i> | SC 5-2<br><a href="#">On the complexity of finding participants – the SampleMig project</a><br><i>Andrea Valente et al</i>       |
| SC 4-3<br><a href="#">Interactive eBook in clinical ultrasound are needed to ensure maximum utilization of blended learning (demo)</a><br><i>Ole Graumann et al</i>                            | SC 5-3<br><a href="#">Strategies to help students be prepared in a flipped statistics course</a><br><i>Zhiru Sun</i>             |
| SC 4-4<br><a href="#">Skal eller kan – hvordan skabes der aktivitet om e-læringselementer?</a><br><i>Kristian Nøhr Jensen</i><br><i>Christina Biber Hartz</i>                                  |  |

## Afternoon from 13:00 - 13:40 - Parallel Workshop and Poster sessions

|   |   |
|---|---|
| <b>Workshop 1</b><br>Aktiverende undervisning ved brug af videoer | <b>Poster session 1:</b><br>Active Teaching and Learning<br>Blended Learning  |
| <b>Language:</b> Danish   | <b>Language:</b> English  |
| <b>Room:</b> O95  | <b>Room:</b> O94  |
| <b>Leader:</b> Pernille Stenkil Hansen                            | <b>Chair:</b> Donna Hurford   |
| <a href="#">Beskrivelse af workshop</a>                           | PS 1-1<br><a href="#">Diverse ways to internationalise the curriculum at university</a><br><i>Donna Hurford</i>   |
|   | PS 1-2<br><a href="#">Teaching responsible conduct of research for PhD students</a><br><i>Lone Bredahl Jensen et al</i>   |
|   | PS 1-3<br><a href="#">Training of trainers in active learning methods at the Princess Nourah Bint Abdul Rahman University, Riyadh, Saudi Arabia</a><br><i>Anne Leena Ikonen et al</i>             |
|   | PS 1-4<br><a href="#">ACTING - Enhancing the learning space in large classes with blended learning: lessons and lessons learned in introductory software engineering</a><br><i>Lone Borgersen</i> |

## Afternoon from 13:45 - 14:30 - Parallel Workshop and Poster sessions

|  |   |
|--|---|
| <b>Workshop 2:</b><br>Using digital badges to motivate and engage learners | <b>Poster session 2:</b><br>Active Teaching and Learning<br>Blended Learning<br>New Roles   |
| <b>Language:</b> English   | <b>Language:</b> Danish   |
| <b>Room:</b> O95   | <b>Room:</b> O94  |
| <b>Leader:</b> Inger-Marie F. Christensen                                  | <b>Chair:</b> Søren Sten Hansen   |
| <a href="#">Description of workshop</a>                                    | PS 2-1<br><a href="#">Visuel og webbaseret understøttelse af bachelorvejledning</a><br><i>Signe Højbjerg Larsen</i>                     |
|  | PS 2-2<br><a href="#">"To Wiki or not to Wiki" – the use of Wikis in a semester project</a><br><i>Kasper M. Paasch</i>                  |
|  | PS 2-3<br><a href="#">Mere selvstudie med virtuelle læringsrum ved problembaseret læring</a><br><i>Henriette Lorenzen et al</i>         |
|  | PS 2-4<br><a href="#">Blended learning strategier - i balance mellem det boglige og det digitale mediemiljø</a><br><i>Mogens Olesen</i> |

## Abstracts

### SC 1-1: Strategic efforts in English for non-native English speaking Master students: More languages to more students – a pilot project

#### *Author*

Lars Klingenberg, Teaching Assistant Professor, University of Copenhagen, Dept. of Nutrition, Exercise and Sports

Sophie J.V. Swrts Knudsen, Academic Language Consultant, University of Copenhagen, Centre for Internationalisation and parallel Language Use

Sanne Larsen, Postdoc, University of Copenhagen, Centre for Internationalisation and parallel Language Use

Susanne Gjedsted Bügel, Professor MSO, University of Copenhagen, Dept. of Nutrition, Exercise and Sports

#### *Focus*

Design of blended learning, Institutional strategies

#### **Students' learning outcome of activity:**

Since 2010, the Department of Nutrition, Exercise and Sports has offered a pre-semester introduction course for all students in our English-based master programme (English Medium Instruction, EMI). The course presented the students with the opportunity to 1) clarify the level of their own English skills, 2) understand the level of academic English skills required in the master programme, and 3) gain strategies and tools for further development of their English proficiency. Thus, the overall aim of the course was to optimise the English proficiency of the students and thereby optimising their learning on the master programme and also to lay the grounds for the progression of the student's language competences. The department has an overall strategy to implement online blended learning broadly at the department. Moreover, the EMI has faced cut backs. Thus, the purpose of this pilot project is to continue these efforts but doing it using a blended learning design without the loss of quality.

#### **Description of activity:**

The course consists of online material (ON) presented on the learning platform and traditional teaching activities and face-to-face activities (F2F).

The following teaching activities are employed::

- 1) ON: Three online lectures (introduction to scientific English, reading, and writing).
- 2) ON: Two screencasts/voice-overs (reading an article, listening)
- 3) ON: Links to further reading and online self-assessment tools
- 4) ON/F2F: A voluntary writing assignment submitted within the platform. The assignment is based on the online material and a text example from a parallel running course.
- 5) F2F: A feedback session where consultants from the Centre for Internationalisation and Parallel Language Use will provide individual feedback on the language in the assignment.
- 6) F2F: A workshop for all students with focus on generic topics from the assignment as well as providing strategies and tools for further progression of the student's own language competences.

#### **Evaluation of and reflections on the activity:**

The pilot project is carried out in August-September 2017. The outcome and experiences from the project will be available for presentation at TAL.

As a part of the project description, the course will be evaluated by the students using both questionnaires and focus groups. A pivotal part of this evaluation is to elucidate the student's view on the blended learning design. Based on the student's evaluation and our own experiences we will adapt the format and learning material in order to optimise the course.

**Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

An online blended approach has several advantages in terms of reproducibility both for the students and the institution. However, teaching reading and writing skills via an online platform is difficult and presents a serious challenge in comparison to in-classroom teaching. We will present our experiences and reflections on the transfer from an all face-to-face language course to a blended learning design.

## SC 1-2: Balancing quality and efficiency: The use of blended learning in large classrooms

### *Author*

Julie Emontspool, Associate Professor, University of Southern Denmark, Department of Marketing and Management

### *Focus*

Design of blended learning

### **Students' learning outcome of activity:**

How to write an academic paper to answer a socio-cultural research question.

### **Description of activity:**

Blended learning is the core part of a Master course with ~150 students. Learning goal: increasing students' ability for critical and analytical writing. The contents and format of the course, as well as the examination aligned with it, require extensive feedback, which is difficult to achieve within the pedagogic hours allocated to the course. A teaching/learning format that builds on online peer learning combined with face-to-face workshops is therefore necessary:

**Part 1 - Lectures:** The lectures lead to the submission of a subject for the examination paper on a blog visible to all students. This blog format enables students to gather inspiration from their peers' ideas and to learn from the feedback given to each.

**Part 2 – online peer feedback:** Students are grouped in online groups of 3-4 people. Each student writes a 500-word summary of their examination paper on an online wiki page visible to the other group members. Group members read each other's summaries and provide feedback to each other on the wiki. On the basis of the feedback, each student submits a reworked summary of their paper to the teacher via SDU assignment.

**Part 3 – face-to-face workshops:** The students who provided feedback to each other and handed in their summaries are invited to workshops with maximum 20 students. The workshops provide additional guidance for the writing of the examination paper. At the workshop, each student briefly explains their papers, and receives feedback from the lecturer and other students.

### **Evaluation of and reflections on the activity:**

The course has been evaluated both qualitatively and quantitatively. The blended course design achieves the goal of generating high quality feedback for the students, increasing their learning. The experience of the last 5 years however indicates that the combination of online activities with face-to-face feedback is indispensable. On their own, the online peer feedback is not evaluated positively by all students, being dependent on each student's involvement. The face-to-face feedback is necessary to ensure that all students (who wish so) receive adequate feedback that advances their project.

### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

Academic lecturers have to maximize students' learning while ensuring that this does not take place at the cost of their academic research. Blended learning in large classes offers a solution to this problem.

Its usefulness is highest when it comes to courses requiring students' independent reflection. Variants of the described course design/activities have been implemented with both bachelor and master students, in the Humanities, Social Science and Technological faculties.

## ~~SC 1-3: Teaching global public health research on a global level~~ – CANCELLED

### *Author*

Gabriel Gulis, Associate Professor, University of Southern Denmark, Unit for Health Promotion Research

### *Focus*

Active teaching and learning

#### **Students' learning outcome of activity:**

To pass the module students have to submit a reduced public health research grant proposal to an individually selected Call for Proposals.

#### **Description of activity:**

The course is called "Public health research on a global scale", and it is the last course within global health specialization of the MSC program on public health research. It is an elective course open to all students, not only the global health specialization students. The content of the course includes information and knowledge on the major global public health research funding institutions, systems of preparation of research calls, and guidance on research proposal writing. In the school year 2016/17, after a couple of years of combined online/onsite teaching I moved the module to a fully online course. Students received detailed course guidance with recommendations on how to progress in proposed activities and readings. In addition to opening online discussion, there were three additional discussion virtual meetings of the group (one meeting every second week during the 8 weeks of the course). The Adobe Pro Connect platform was used to run the course. In addition to the SDU public health students, PhD students from Olomouc University, Olomouc, Czech Republic and Slovak Medical University, Bratislava, Slovakia attended the course.

#### **Evaluation of and reflections on the activity:**

Students evaluated the course extremely positively, emphasizing mostly the flexibility and their own control of time and progress in course. They welcomed the possibility to take the course even while being on an internship in different countries. As for the teacher, the most important aspect was that there was no negative change in the quality of exam papers; rather the opposite was true.

#### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

The number of students taking the course has doubled and the participation in four virtual meetings was close to 100%; this has never been the case in standard onsite teaching. The work burden to teacher was in fact larger due to extensive preparation of the course and individual e-mail or Skype consultations with the students during the course. The preference of students was clearly toward individual consultations. Having the Czech and Slovak participants in the course confirmed that online teaching can bridge over different teaching systems and schedules; the semester in both countries started 3 weeks later than at SDU, and lasted about a month longer. Overall, despite the large time burden on the teacher (might be valid for the first run only), the course was a positive experience and will be repeated also in school year 2017/18.



## SC 1-4: Experiencing and valuing blended learning in the Lecturer Training Programme (LTP)

### *Author*

Donna Hurford, Pedagogical Consultant, University of Southern Denmark, Centre for Teaching and Learning

### *Focus*

Design of blended learning, New teacher and student roles/new learning cultures

#### **Students' learning outcome of activity:**

- Review critical incidents from your teaching experiences
- Analyse critical incidents regarding teacher and student biases, expectations and beliefs about teaching and learning
- Consider their significance for your teaching and for student learning
- Decide how to address and accommodate these biases, expectations and beliefs

#### **Description of activity:**

Students as Learners was originally taught as a face to face module within LTP, however since 2016 it has been redesigned as an online module. This redesign presented a pedagogic challenge for me, the module leader, as I originally favoured an interactive, face to face teaching approach. However the redesigning process enabled LTP teachers to directly experience a blended learning module which offered alternative teaching modes and opportunities for flexible and autonomous learning. Whilst the online module retained its focus on participants' critical incidents (Tripp, 1993) from their teaching experiences and the scaffolded four step approach to tackling these incidents, the module's content was redesigned as dialogic and narrative videos and peer feedback was facilitated through the use of the blog tool. This short communication will provide insights into the module redesign and its impact on participant engagement and learning.

#### **Evaluation of and reflections on the activity:**

The online module feedback compares favourably with feedback from the face to face taught version of the module. This has led to my reflection on the value-addedness which blended learning can contribute for learners even when a teacher may pedagogically favour an interactive face to face approach. My reflections on LTP participants' experiences of the module will inform this short communication.

#### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferrable to others (subjects, students, institutions,...)**

This module was an example of pedagogic risk taking and reflective practice, both of which are relevant for all teachers who are considering adopting a blended learning approach. In addition, the module was redesigned as an online module with the guidance of an experienced blended learning module designer at SDU and exemplifies what can be achieved through collaboration with locally available experts.

## SC 2-1: How to flip learning inside the classroom

### Author

Thomas Bernhard Kjærgaard, Scientific assistant, University of Southern Denmark, Department of Sports Science and Clinical Biomechanics

### Focus

Active teaching and learning, Flipped learning

#### Students' learning outcome of activity:

Som undervisere siger vi ofte sætningen: "Det er vigtigt at forberede sig til undervisningen". Dette modsvarer dog ikke altid i de studerendes adfærd i tilstedeværelsesundervisningen.

Dette affødte en nysgerrighed hos mig, hvor jeg ønskede at stimulere til, at:

- ... de studerende kommer velforberedte til lektionerne.
- ... de studerende bliver bevidste om, hvad de ved og ikke ved om et givent, fagligt emne.

Dette kræver dog et opgør med traditionel undervisningsopbygning.

Strukturen egner sig til at understøtte opnåelsen af vidensmål på alle taksonomiske niveauer.

Nedenstående beskrivelse er anvendt i fire courses på Idræt & Sundhed, bl.a. "Projektstyring og -ledelse".

Målene har her bl.a. været:

- At opnå viden om hvordan samfundets strukturer fordrer til projekter
- At opnå viden om kendetegn ved projektarbejdsformen

#### Description of activity:

I traditionel undervisning har underviseren størstedelen af taletiden og underviserens oplæg er det centrale element. Dette vendes på hovedet i denne struktur, hvor de studerende skal på banen før underviseren, og hvor der i høj grad prioriteres tid til, at de studerende indgår i dialog med hinanden.

*Før tilstedeværelsesundervisningen:* De studerende klargør en opgave med afsæt i forberedelsen. Dette kan fx være at udvælge centrale begreber fra teksten eller nedskrive centrale undringer.

*I tilstedeværelsesundervisningen:* Her organiseres de studerende i matrixgrupper eller arbejdsgrupper jf. modulets helhed. Dette kan f.eks. være to arbejdsgrupper som sammen skal diskutere deres forståelse af udvalgte begreber. En anden form kan være "discuss and draw", hvor de studerende skal diskutere og tegne relationer mellem begreber.

Når de studerende har diskuteret i mindre grupper, samles op kollektivt. Herefter kan underviseren afholde et kort oplæg, hvor nuancer af teorier, begreber o. lign. kan præciseres.

*I slutningen af tilstedeværelsesundervisningen:* Afrund undervisningen med opsamling på udbyttet af lektionen og læg op til yderligere refleksioner.

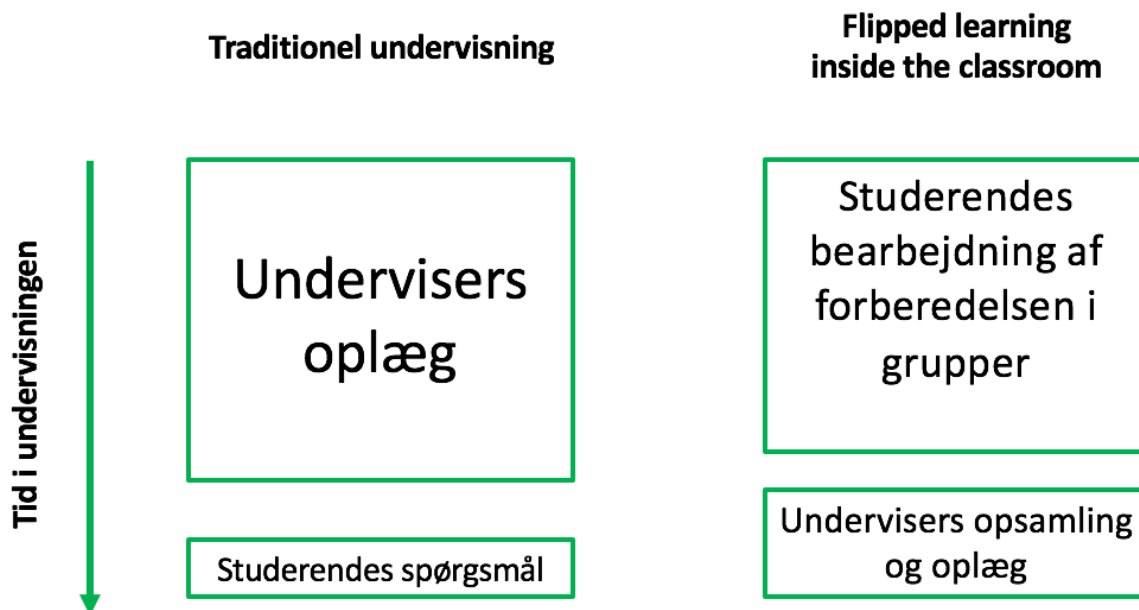
#### Evaluation of and reflections on the activity:

- De studerende oplever, at det bliver meningsfuldt at forberede sig.
- Jeg oplever, at de studerende er mere opmærksomme under mine oplæg.
- Jeg oplever, at de studerende i højere grad henvender sig til mig i pauser for faglig nuancering.

**Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

Dette undervisningsdesign passer til alle mine egne moduler med teoretisk indhold, og min antagelse er, at det også vil kunne passe på øvrige uddannelser.

Det er dog centralt, at man forbereder de studerende, så de ved, at der nu sker et skifte i betydningen af sætningen: "Det er vigtigt at forberede sig til undervisningen".



*Illustration 1: Forskellen på traditionel undervisning og flipped learning inside the classroom.*

## SC 2-2: Encourage students to reflect on current and prior lectures with mini tests

### *Author*

Henrik Skov Midtby, Assistant Professor, University of Southern Denmark, Maersk McKinney Moeller Institute

### *Focus*

Active teaching and learning, Flipped Learning

### **Students' learning outcome of activity:**

The activity is intended to encourage students to use the study techniques “practice testing”, “distributed practice” and “self-explanation”. These techniques are some of the most effective study techniques according to Dunlosky (2013).

### **Description of activity:**

Students were given a mini test consisting of two tasks after each lecture, a memory task and a calculation task. Students were given five minutes for each task. The memory task was to reflect upon and write down content and examples from the lecture on a blank piece of paper. The calculation task was to solve a small calculus problem (e.g. solve three linear equations with three unknowns). The problem type for the calculation task was revealed some days before the mini test so the students had the possibility of training on that type of problems. The mini tests were implemented in a first year calculus class for engineering students at University of Southern Denmark.

The intention with the memory task was to improve students' long term retention of the covered material (Roediger & Karpicke, 2006). The aim of the calculation task was to encourage students to train on specific types of calculations prior to the lecture.

The mini tests were then graded and returned to the students. The mini tests were graded in terms of four aspects: extent (on the memory task) and strategy, calculations and explanations on the calculation task. Each aspect was graded and awarded either 0, 1 or 2 points. The mini tests were used as a counting activity that contributed to the final grade of the course. Counting activities are elements that students complete during the semester and that contribute to the final assessment.

### **Evaluation of and reflections on the activity:**

The students preferred that the counting activities were mini tests rather than a larger midterm exam. Some students noted that the mini tests were a nice way of revising the covered material. The last 5 minutes before the mini test some of the students tuned out from the lecture to prepare for the mini test. Grading 60 mini tests took approx 90 min. Then some time was spent on giving the mini tests back to the students. As a teacher I got a very good idea of the students' understanding of the topic.

### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

The memory task can be directly transferred to any course. I think that the calculation task can be used in many classes where fluency in certain small calculations / problems are important; eg. in classes related to physics, chemistry, mathematics.

## SC 2-3: Structured preparation prior to laboratory teaching activities

### *Author*

Magdalena Pyrz, PhD, Teacher, University of Aarhus, Department of Molecular Biology and Genetics

### *Focus*

Active teaching and learning, Flipped learning

#### **Students' learning outcome of activity:**

The primary learning outcome of these supportive activities is that students are better prepared for the practical tasks as well as being more familiar with the topic under investigation when performing experiments in the molecular biological laboratory during their bachelor program. This supports development of analytical skills in relation to laboratory exercises by enabling communication at higher abstraction levels while performing experiments. Furthermore we believe that the introduced assignment set-up supports development of scientific writing skills.

#### **Description of activity:**

In order to support preparation prior to experimental laboratory activities, we have designed two mandatory online assignments to be completed before the scheduled laboratory activities. To support student preparation for practical aspects of the activities we have included a Multiple Choice Test (MCT), while we have chosen to support preparation for analyzing the experimental data by including a small half-page written assignment focusing on conceptual understanding of the biological system/mechanism investigated. The written assignment is evaluated by peer-feedback and is part of the final report. These activities have been implemented in two bachelor courses in molecular biology with app. 140 and 200 students, respectively.

#### **Evaluation of and reflections on the activity:**

Although students find these activities time-consuming, they acknowledge the supportive potential of the assignments and evaluate them positively.

The MCT brings out possible misunderstandings/uncertainties with regard to practical issues that can be addressed in lab before students start their experiments, thereby enabling smoother completion of laboratory exercises with fewer mistakes. Furthermore, as a teacher I experience better prepared students and a minimized need for clarification of concepts during in-class activities and consequently more possibilities to discuss obtained results at a higher level of abstraction.

#### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

On a general level this is an example of structured mandatory preparation prior to in-class activities. More specifically of relevance for subjects with experimental laboratory classes, this set-up can directly be transferred to increase student preparation for practical performance and conceptual understanding, respectively. This model for structured preparation prior to laboratory activities will be implemented as part of all experimental laboratory exercises in the bachelor program in Molecular Biology at Aarhus University from the summer of 2017.

## SC 2-4: What is the cost of flipped learning and is it worth it?

### *Author*

Christian Brandt, Assistant Professor, University of Southern Denmark, Institute of Clinical Research

### *Focus*

Flipped learning

#### **Students' learning outcome of activity:**

- Psychoacoustics, how the brain understands sound
- The students should understand: The different types of experiments in psychoacoustics for instance go-no go and two alternative forced choice. They should know the most common errors in psychoacoustic experiments and how to avoid them.
- The students should be able to explain: How one sound masks another in the brain. The terms, critical band, critical ratio, auditory streaming. Signal detection theory.
- The students must be able to independently use theories and methods from psychoacoustics to design and conduct experiments to investigate problems in psychoacoustics, preferably using MATLAB.

#### **Description of activity:**

The lectures in psychoacoustics was recorded and shared with the students 2-4 days before each scheduled class. With each lecture there was a list of questions for the students to answer. Each class had a fixed structure with the students first answering questions from the teacher and then the teacher answering questions from the students. The rest of the class consisted of small exercises followed by discussions. The preparation time for each activity was tracked separately.

#### **Evaluation of and reflections on the activity:**

The activity was evaluated by questionnaires and by subjective evaluation by the teacher. The time used for preparation for each class was also analyzed.

The questionnaire showed that the students appreciated the video lectures, on a scale from "not at all useful" to "very useful" all students rated the video lectures as "very useful". The subjective evaluation by the teacher showed that the students seem to ask questions on a higher level (using the SOLO taxonomy) when they had seen a video lecture compared to a traditional lecture. The time tracking showed that preparing the first class based on video lectures took almost 800 minutes while the last 4 classes of the semester took on average 200 minutes to prepare.

#### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

The main result of this activity is that time used on preparation for a flipped classroom changes dramatically over time. In the initial stages most of the time is used on converting the lectures to videos, but this is reduced dramatically with experience. In the end more time is used on preparing the in class exercises. Teachers interested in using flipped learning should not be discouraged by the time they need to prepare videos in the beginning, it is just a part of a learning process.

## SC 3-1: Farvel til siloerne, goddag til nye kolleger – uden omorganisering!

### *Author*

Jeppe Sand Christensen, E-learning Consultant, University of Copenhagen, SCIENCE

Lise Stenbæk, E-learning Consultant, University of Copenhagen, SAMF

Maria Thorell, E-learning Consultant, University of Copenhagen, SUND

Annette Pedersen, E-learning Consultant, University of Copenhagen, HUM

Ole Vanman, E-learning Consultant, University of Copenhagen, JUR

### *Focus*

Institutional strategies

#### **Projektmål:**

Fra 2014-2016 har Københavns Universitet arbejdet strategisk med Online og Blended Learning. Der blev igangsat et tværfakultært projekt, som havde til hensigt at løfte undervisernes kompetence inden for læringsteknologi, samt styrke netværk og samarbejde på tværs af universitetet.

#### **Projektbeskrivelse:**

Inden projektet var kompetencerne indenfor vejledning og support i læringsteknologi oftest isoleret til de enkelte fakulteter med begrænset faglig sparring. Den opdeltede struktur betød samtidig, at de samme løsninger blev opfundet flere steder, samt at enkelte fakulteter ikke supportede undervisernes arbejde med læringsteknologier.

Efter projektet er kompetencerne fortsat lokalt forankret på fakulteterne med de fordele, det giver at være tæt på fagmiljøerne - men nu er vi kun en chatbesked eller et opkald fra en af vores nærmeste kolleger på et andet fakultet; vi kan trække på hinanden og behøver ikke være eksperter i det hele.

Vi vil fremhæve tre årsager til, at vi i dag er lykkedes med et kollegialt samarbejde på tværs af fakulteter:

1. Strategisk satsning
2. Fælles mål
3. Forpligtende samarbejde

Den strategiske satsning skaber rammer for et bredt kompetenceløft gennem et varieret udbud af praktiske kurser i anvendelse af digitale værktøjer, tilpasset og forankret på det enkelte fakultet. Dertil kommer et fælles mål for alle enheder, om at anvendelsen af online og blended learning skal udbredes til store dele af universitetet for at fremme de studerendes muligheder for læring. Desuden skal de fælles mål være med til at skabe strukturer og netværk, der effektivt kan understøtte undervisernes udvikling af online og blended learning.

Et forpligtende samarbejde er etableret i et praksisfællesskab bestående af alle KUs e-læringskonsulenter. De er kittet sammen af en fælles mission om bedst muligt at understøtte KU underviseres udvikling af online og blended learning i en høj kvalitet. Samtidig forsøger man at reproducere erfaringer med udrulning af online og blended learning på institutter og fakulteter med forskellige erfaringsgrader og derved lære af hinandens praksis.

#### **Projektevaluering:**

Projektet har gennemgået en administrativ projektevaluering med udgangspunkt i strategiske krav samt en kvalitativ effektevaluering af undervisernes erfaring med projektet. Evalueringerne viser, at projektet har

skabt et stærkt samarbejde og netværk mellem de involverede læringsenheder, som har styrket det faglige vidensniveau blandt konsulenterne. Det har betydet, at erfaringer og viden er blevet udnyttet på tværs af fakulteterne. Mere end 2000 undervisere har deltaget i undervisningsforløb, konferencer mv og langt størstedelen (97%) oplever at de har lært noget relevant i forhold til deres undervisning; i en sådan grad at 87% af deltagerne har delt deres nye viden med kollegaer.

**Refleksioner over erfaringer til inspiration for andre universiteter:**

I den universitetspædagogiske verden er det ofte et spørgsmål, om pædagogisk udvikling på universitetet skal foregå centralt eller decentralt. På et stort universitet som KU prioriteres den indlevelse og faglige orientering, det giver at være tæt på fagmiljøerne højt. Ved at supplere den decentrale organisering med et forpligtende samarbejde på baggrund af et fælles projekt med ledelsesopbakning, fælles projektstyring både centralt og decentralt opnår man råderum og muligheder for at igangsætte aktiviteter og opnå accept af nye initiativer hurtigt og uden en lang beslutningsproces.



## SC 3-2: Experiences with blended learning – a student teacher’s perspective

### *Author*

Rasmus Sjøgaard Hansen, MD, Odense University Hospital

### *Focus*

Design of blended learning, New teacher and student roles/new learning cultures

#### **Students’ learning outcome of activity:**

Knowledge about human anatomy, physiology or biochemistry. Additionally, memorizing techniques so exams can be passed solely from memory.

#### **Description of activity:**

A combination of Face-to-face teaching, Quizzes, Online lecturing and Flashcards.

*Face-to-face teaching:* 10-15 minutes of lecturing using PowerPoint, followed by a 5-minute PowerPoint quiz about the same subject. Then, next subject of the curriculum and do the same loop. The whole PowerPoint presentation is built, so it can be used as a quiz afterwards when studying for exams.

*Online teaching:* I have recorded 96 lectures on the computer, which is available and free on youtube.com. Each online lecture is 6-15minutes in length and is about the same subjects as I teach face-to-face, so the PowerPoint quiz also can be used after the online lecture. Additionally, I have produced a few videos, designed to give an overview (e.g. “the intestinal tract”) of the subjects (e.g. “colon”, “duodenum”, ...) that will be taught in individual videos/lectures.

*Flashcards:* To exercise active recall, I have produced flash-cards to all subjects of the curriculum. These are available and free online.

#### **Evaluation of and reflections on the activity:**

Since I am a student teacher, I do not get quantitative evaluations from the students. However, my online lectures are evaluated on YouTube.com through comments and viewer statistics. At this moment, my 96 online lectures have been viewed 436.457 times, and is followed by 1.766 subscribers. The number of views spikes after each teaching seasons, and in weeks up to exams. The far majority of comments on the videos are very positive. Negative comments are mainly about a technical minor error, which could be minimized by using a manuscript when making videos. From the comments and statistics, not only medical students from SDU use the videos. Students from all fields of study at the Faculty of Health Sciences at SDU, as well as medical students from other Danish universities, and even college students, use the online lectures. This shows that the videos are inspirational and transferable to everyone with an interest in anatomy, physiology and/or biochemistry.

#### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

My blended learning design is highly transferable to all other subjects and institutions – all you need is a laptop and a headset. It is especially transferable to studies that have exams without notes, but the combination of online lectures, face-to-face teaching and quizzes can increase the attentiveness and knowledge of students in every field. My online lectures, is inspired by KhanAcademy.org, which is the teaching platform on YouTube with most views (>1 billion).

### SC 3-3: Digital mediering af undervisning medfører større spredning af læringsniveauet - et komparativt case studium af traditionel face to face-undervisning kontra digitalt medieret undervisning

#### Author

Mette Falbe-Hansen, Assistant Professor, VIA University College, VIA Byggeri

#### Focus

Design of blended learning

#### Students' learning outcome of activity:

Projektet er et komparativt case-studium af læringsniveauet udført med to hold på bygningskonstruktøruddannelsen. Studiet sammenligner de studerendes læringsniveau ved to forløb, hhv. traditionel *face to face-undervisning* (F2F) kontra *digitalt medieret undervisning* (DMU), der blev afviklet parallelt i foråret 2016.

De studerende undervises i, hvordan de beregner energirammen for et enfamiliehus. De skal derefter i deres semesterprojekt udarbejde en energiramme og energirapport.

#### Description of activity:

Opbygningen af de 2 case-forløb er skitseret i nedenstående skema:

| <i>Traditionel face to face-undervisning</i>   | <i>Digitalt medieret undervisning</i>  |
|--|--|
| <ul style="list-style-type: none"><li>• 6 undervisningslektioner i energirammen</li><li>• Opgave - løses på klassen i forbindelse med teoriundervisning</li><li>• Multiple choice-test</li><li>• Udarbejdelse af energirapport</li><li>• Vejledning (lydoptages)</li><li>• Slutprøve</li></ul> | <ul style="list-style-type: none"><li>• Alt digitalt materiale udleveres til de studerende</li><li>• Opgave - afleveres samtidig med at F2F-klassen afslutter løsning af samme opgave</li><li>• Multiple choice-test</li><li>• Udarbejdelse af energirapport</li><li>• Vejledning (lydoptages)</li><li>• Slutprøve</li></ul> |

Forløbene blev afholdt tidsmæssigt parallelt, så klasserne havde multiple choice-testen samme dag én time forskudt, energirapporten havde samme deadline, og klasserne tog slutprøven sammen

#### Evaluation of and reflections on the activity:

De studerende skulle skriftligt redegøre for deres syn på forløbet. Herudover blev 5 af de studerende interviewet.

Nedenfor ses en opsummering fra studiet:

- Summen af de studerendes taksonomiske niveau fra hhv. F2F og DMU er stort set ens
- Større spredning i læringsniveauerne ved DMU, hvor både top og bund rammes
- Spørgsmålene ved vejledningen falder senere i projektforløbet ved DMU end ved F2F
- Spørgsmålene ved vejledningen har et lavere taksonomisk niveau ved F2F end ved DMU
- Samarbejdet i gruppen ændres, så de studerende samarbejder mindre ved DMU end ved F2F
- Nogle studerende blomstrer op ved DMU, andre studerende visner
- Vigtigt med feedbackmøder med de studerende

**Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

Dette studie kan hjælpe undervisere til at forstå, hvad der sker, når undervisning ændres til at være digitalt medieret. Studiet afdækker gavnlige muligheder for struktureringen af et undervisningsforløb med digitale oplæg og nærværende vejledning, så de studerendes læringsniveau og engagement optimeres trods den mindre kontakt med underviser.

## SC 3-4: Rollen som online underviser i blended learning og fjernundervisning

### *Author*

Inger-Marie F. Christensen, Special Consultant, University of Southern Denmark, Center for Teaching and Learning

### *Focus*

New teacher and student roles / new learning cultures

#### **Students' learning outcome of activity:**

Den aktivitet, der præsenteres er moderering af online læringsaktiviteter og de studerendes læringsudbytte er af mere generel karakter. Den studerende opnår viden om:

- Det pågældende forløbs læringsmål, format, struktur, ressourcer og aktiviteter
- Krav til deltagelse og deadlines
- Det virtuelle kursusrums opbygning, og hvordan man navigerer rundt
- Hvordan man deltager i online læringsaktiviteter, herunder eksemplariske måder at deltage på

Underviserens moderering har desuden som formål at opmuntre og motivere den studerende til at logge på det virtuelle læringsmiljø og løse de stillede opgaver, herunder både bidrage individuelt og give medstuderende feedback. Underviserens moderering suppleres med konkrete indledende læringsaktiviteter, som hjælper den studerende til at opnå færdigheder i at deltage online.

#### **Description of activity:**

I denne præsentation sættes fokus på de udfordringer, der kan opstå i blended learning og fjernundervisning i relation til de studerendes engagement i de planlagte online aktiviteter. For mange studerende er det nyt at lære online, og der er en vis usikkerhed omkring, hvordan man deltager i online læringsaktiviteter. Det kan være en stor barriere at bevæge sig fra mere passiv brug af et virtuelt læringsmiljø, hvor man blot downloader materialer til en meget aktiv brug, hvor man kommunikerer fagligt online og interagerer med materialer, såvel som med andre studerende og underviseren. Der er derfor behov for fokuseret og kontinuerlig moderering online for at gøre de studerende opmærksom på konkrete aktiviteter og deadlines, give tydelige instrukser, motivere de studerende til at deltage aktivt, samt vise, hvordan denne aktive deltagelse kan finde sted. Jeg har siden 2014 designet og gennemført blended learning forløb og siden maj 2017 et online kursus (kompetenceudvikling for universitetsundervisere), og har i disse sammenhænge arbejdet intensivt med rollen som online underviser med særlig fokus på moderering af asynkron, kollaborativ læring. På baggrund af mine erfaringer har jeg udviklet denne model for modereringen, som vil blive udfoldet på konferencen.

- Velkomstbesked
- Velkomstvideo
- Mandagsbeskeder
- E-tivities
- Eksemplariske indlæg
- Q & A forum
- Feedback
- Opfølgning

**Evaluation of and reflections on the activity:**

Deltagerevalueringer viser, at mandagsbeskederne i høj grad motiverer til at logge på og deltage aktivt online. Respondenterne fortæller, at mandagsbeskederne er gode remindere, der sikrer, at man husker på, at man er i gang med et forløb, der også indeholder online aktiviteter. I efteråret 2017 foretages evaluering af onlinekurset, der startede i maj 2017 og har titlen "Setting up your course in Blackboard". Onlinekurset har til formål at give deltagerne (undervisere på SDU) viden, færdigheder og kompetencer til at opsætte brugervenlige kursusrum på SDUs e-læringsplatform Blackboard, kommunikere hensigtsmæssigt med studerende online og tilrettelægge engagerende online aktiviteter for studerende. Resultaterne præsenteres på TAL2017 sammen med underviserens oplevelser.

**Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

Modellen for moderering af blended learning og fjernundervisning kan anvendes på tværs af fag og uddannelsesniveauer, idet form og indhold for modellens forskellige komponenter kan tilpasses den aktuelle målgruppe.

## SC 4-1: Flipped learning som redskab til involvering i psykologiundervisning

### *Author*

Pia Goul, Associate Professor, UC Syd, Ergoterapeutuddannelsen

### *Focus*

Flipped learning

### **Students' learning outcome of activity:**

Den studerede:

#### *Viden:*

- har viden om og kan reflektere over betydningen af aktivitet og deltagelse i sammenhæng med livsvilkår og omgivelsernes indflydelse på menneskets fysiske og mentale sundhed og livskvalitet.

#### *Færdigheder:*

- kan vurdere samspillet mellem menneske, aktivitet og omgivelser til fremme af menneskers deltagelse i hverdagslivets aktiviteter med henblik på at optimere sundhed og livskvalitet
- kan i samarbejde med borger og patient begrunde aktivitetsbehov i relation til sundhed og livskvalitet og anvende indsatser, der understøtter og udvikler borgers og patients ressourcer og mestring af aktivitet og deltagelse

#### *Kompetence:*

- identificere ergoterapifagligt og tværprofessionelt samarbejde med udgangspunkt i aktiviteters betydning for sundhed og livskvalitet for borgeres og patienters muligheder for aktivitet og deltagelse

### **Description of activity:**

Før tilstedeværelsesundervisning søger studerende selv videoklip på nettet eller bruger de videoer, som jeg har lavet. Mine videoer er overbliksvideoer, og de videoer de kan finde på nettet, er mere dybdegående i hver teori, som vi arbejder med. Desuden får de studerende nogle konkrete forståelsesspørgsmål, som kræver, at de videnssøger på teoretikernes samfundsmæssige kontekst i et historisk perspektiv.

Ud fra de videoer som er blevet set og ud fra forståelsesspørgsmålene bliver de studerende i tilstedeværelsesundervisningen delt op i grupper, hvor de fordyber sig i forskellige cases med udgangspunkt i forskellige praksissituationer og får brug for deres teoretiske viden om udviklings- og krisepsykologi. Resultatet af deres opgaver fremlægges i plenum, hvor vi har et set up som ved en konference med samarbejdspartnere. Her skal de studerende fremlægge, hvorledes de oplever samspillet mellem menneske, aktivitet og omgivelser og de forståelsesspørgsmål som de lige nøjagtig har arbejdet med. Resten af de studerende har herefter mulighed for at kommentere eller stillespørgsmål til den konkrete konference og de studerendes fremlæggelse.

### **Evaluation of and reflections on the activity:**

De studerende har givet positive tilbagemeldinger på den måde undervisningen nu er struktureret på. Lige når semesteret starter og de studerende har arbejder med de første læringsvideoer er de fustrerede og synes at de ikke kan bruge det til noget. Når vi når ca. halvejs i semesteret ser de studerende formålet med struktureringen af undervisningen og bliver begejstrede. I stedet for forelæsninger er undervisningen blevet levende og udfordrende for de studerende og mig. Der er mange gode debatter og konstruktiv

feedback på konferencerne. Og endelig giver det mig mange gode udfordringer, da jeg ikke ved hvor vi ender i vores undervisning og derfor skal jeg også bruge hele min viden samt slå op i bøgerne med de studerende.

**Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

Jeg oplever, at de studerende i forhold til den måde undervisningen bliver struktureret på, bliver mere modige ift. at turde argumentere uden først at "slå op" om det også er det, som den pågældende teoretiker mener. Det betyder, at de er blevet bedre til at tolke og nuancere teorierne til den praksis, som de kommer til at arbejde i. Jeg tænker, at det kan inspirere andre som arbejder med undervisning, som skal være praksisnær.

## SC 4-2: Blended learning in part-time higher education - Using digital tools to create an ongoing and constructively aligned learning environment

### Author

Nete Schwennesen, Postdoc, University of Copenhagen, Department of Anthropology

### Focus

Active teaching and learning, Design of blended learning, Flipped learning, New teacher and student roles / new learning cultures, Institutional strategies

### Students' learning outcome of activity:

The most effective higher education environments are ones in which students are actively involved as part of a community of learners. Part-time higher education programs may pose particular challenges: Students often have full time jobs and the distance between students may be high. Hence, it may be difficult for the students to find the time and place to collaborate with each other outside of the classroom. Blended learning is a method for combining in-person classroom teaching with learning through online and digital media. Evidence suggests that blended courses produce a stronger sense of community among students than either traditional or fully online courses. Yet, as Biggs and Reeves emphasize, any learning environment (face-to-face or blended) must be aligned with the intended learning outcomes (ILOs) of the course, in order to support social collaboration and efficient and independent learning (Hunt & Chalmers 2012, 115). On this background this study asks; what are the potential for using digital tools to create an ongoing and constructively aligned digital learning community in higher part-time education?

The study is directed towards 3rd semester at the part-time master in Medical Anthropology at Department of Anthropology, involving students with at least a BA degree in a health related field. By the time the students finish the course, they should be able to:

| Knowledge  | Skills   | Competence   |
|--|--|--|
| <ul style="list-style-type: none"> <li>• Demonstrate in-depth knowledge on selected contemporary theories in medical anthropology</li> <li>• Demonstrate knowledge on methods for literature search</li> </ul> | <ul style="list-style-type: none"> <li>• Analyse and reflect on contemporary problem areas and theories within a selected field of medical anthropology</li> <li>• Demonstrate an overview of relevant literature within the selected field</li> <li>• Critically reflect on sources validity and relevance</li> </ul> | <ul style="list-style-type: none"> <li>• Work independently with a smaller self-chosen academic project in medical anthropology</li> <li>• Give constructive feedback to peers' academic projects in medical anthropology</li> </ul> |



**Description of your teaching activity/course:**

The study is conducted as part of the TLHE (universitetspædagogikum) at the Social Science Faculty at Copenhagen University. The study uses a combination of the following digital tools constructively aligned to the ILOs, in order to create an ongoing learning environment;

1. Reflection-logs for self-reflection on own learning shared in groups online
2. Online 'social reading' of core academic texts (Lacuna), with text-based annotations and online discussions
3. Online peer-feedback on writing exercises (Absalon).

**Evaluation of and reflections on the activity:**

The presentation will report from ongoing challenges and findings.

**Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

The study will produce knowledge on challenges and potential of using digital tools to create an ongoing and constructively aligned digital learning community in higher part-time education.

## SC 4-3: Interactive eBook in Clinical Ultrasound are needed to ensure maximum utilization of blended learning (demo)

### *Author*

Ole Graumann, MD, PhD, Associate Professor, Univ. of Southern Denmark, Dep. of Clinical Research  
Christian B. Laursen, MD, PhD, Associate Professor, Univ. of Southern Denmark, Dep. of Clinical Research

### *Focus*

Active teaching and learning, Design of blended learning, Flipped learning

### **Students' learning outcome of activity:**

Practical skills like clinical ultrasound are often taught in high-end courses with: 1) pre-course material, 2) hands-on sessions, 3) post-course supervision and 4) certification. Students' learning techniques are very different. To accommodate this, the pre-course material must include a variety of different teaching techniques.

### **Description of activity:**

We present a new interactive eBook (portal) in clinical ultrasound developed in collaboration with Munksgaard, which includes a combination of different teaching techniques. Besides the normal theoretical text with references, illustrations, cases, several demonstrations and clinical videos are available. Practical skills videos prepare the students via a visual approach. Short vodcasts summarize important key words and work as quick revision. A large media server with an easy-to-use search function gives students fast access to all the illustrations, pictures, videos, and vodcasts of the eBook. The media server also gives the teacher or student the possibility to save a specific search and export a hyperlink. In that way teachers or students can share the same "media" without having to send large data files. Classical pre- and post testing are available, and each chapter concludes with a short test to ensure active and continuous learning when completing each chapter. Finally, the eBook has a built-in personal note function, which can be attached to any text, illustration, picture or video. You can even search words in your own notes.

### **Evaluation of and reflections on the activity:**

Blended learning depends on well-designed pre-course material. The new interactive eBook in clinical ultrasound takes blended learning to a higher level. The combination of many different teaching techniques ensures that students, with different knowledge backgrounds, are maximally prepared for face-to-face activities like hands-on training. The varied content in the eBook could easily be included in all steps of high-end practical skills courses. Since the eBook can be used on several different devices it can easily be used at the bedside as a part of training or after having finished a course.

### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

This new eBook is mandatory at all pre-graduate and some postgraduate courses in clinical ultrasound at SDU and will probably also be implemented at the other universities in Denmark. The concept of this interactive eBook can easily be implemented in other courses. Especially teaching in other practical skills than Clinical Ultrasound.

<http://munksgaard.dk/Medicin/Basal-klinisk-ultralydsdiagnostik/9788762816961>

## SC 4-4: Skal eller kan – hvordan skabes der aktivitet om e-læringselementer?

### *Author*

Kristian Nøhr Jensen, e-læringskonsulent, Professionshøjskolen Metropol, Suportenhed for Digital Læring  
Christina Biber Hartz, informationsspecialist, Professionshøjskolen Metropol, Biblioteket  
Laura Glavind, konsulent, Professionshøjskolen Metropol, Digitalisering og Teknologisk Didaktisk Udvikling

### *Focus*

Active teaching and learning, Design of blended learning, Flipped learning, New teacher and student roles / new learning cultures

### **Students' learning outcome of activity:**

Vi har en hypotese om at undervisernes facilitering og formidling af et e-læringsforløb, har betydning for hvor aktive de studerende er og derved har indflydelse på de studerendes læringsudbytte. Vores konferenceoplæg tager udgangspunkt i et e-læringsforløb i informationssøgning. Intentionen med forløbet er, at de studerende indføres i og bliver gjort fortrolige med grundprincipperne i systematisk informationssøgning. Fokus vil være på forskellige didaktiske greb og stilladsering som underviseren kan foretage, der understøtter de studerendes aktivitet i et e-læringsmateriale.

### **Description of activity:**

Tidligere har undervisning i informationssøgning forløbet på den måde at der kommer en informations-specialist fra biblioteket ud, som har forelæst for de studerende om informationssøgning. Erfaringen fra disse forelæsninger var, at der ofte mødte få studerende op, og at det var svært at fange de studerendes opmærksomhed omkring dette emne gennem forelæsningen. Forelæsningen i informationssøgning er derfor som et forsøg blevet erstattet med et e-læringsforløb i informationssøgning, i første omgang på et 10 ugers tværprofessionelt modul, som studerende på alle professionshøjskolens grunduddannelser skal gennemføre i løbet af deres uddannelsesforløb. Forløbet er bygget op omkring en række beskrivelser, korte videoer samt en quiz. E-læringsforløbet er et generisk materiale, der har været ens på tværs af de 10 modulemaer, hvor det er blevet indlejret.

### **Evaluation of and reflections on the activity:**

I undersøgelsen anvendes learning analytics til at analysere LMS-data over de studerendes aktivitetsniveau. Forskellen i aktivitet på tværs af holdene undersøges for at finde markante aktivitetsudsving, og undervisere på hold med et højt eller lavt aktivitetsniveau er blevet udvalgt til interview. Gennem interviewene kortlægges det i hvor høj grad underviserne har faciliteret e-læringsmaterialet, hvad de har gjort og hvorfor de har gjort det.

Undersøgelsen peger på at undervisernes værdiladede forventningsafstemning i form af en tydelig italesættelse har betydning for om e-læringsmaterialer på digitale læringsplatforme anvendes af de studerende. Ligeledes har det betydning at underviserne transformerer e-læringsmaterialet til konteksten og bevidst iscenesætter materialet.

### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

I forhold til at få e-læringsmateriale aktiveret er det centralt at underviseren står overfor at skulle påtage sig en ny rolle som didaktisk designer frem for formidler af viden. E-læringsmateriale har et stort potentiale

fordi det kan iscenesætte undervisningsaktiviteter på nye måder i det digitale rum, men vores undersøgelse udfordrer præmissen om at et e-læringsmateriale kan stå alene.

## SC 5-1: Is blended learning another form of playful learning? A design case study

### *Author*

Emanuela Marchetti, Assistant Professor, University of Southern Denmark, Department for the Study of Culture

### *Focus*

Active teaching and learning, Design of Blended Learning, New teacher and student roles/new learning cultures, Institutional strategies

### **Students' learning outcome of activity:**

This study discusses a design inquiry in cooperation between the education of Web Development at the Erhvervsakademi Lillebælt (EAL) and the education of Occupational Therapy at the University College Lillebælt (UCL). Through this inquiry, EAL students became more reflective about their role as designers and innovators, creating new experiences and suitable digital tools for their users. In turn UCL teachers and students became aware of their own interpretation of blended learning, which they see as another approach to playful learning. Both groups reflected on the complex ecology behind the creation of tools for blended learning, combining design thinking with specific insights from the study domain.

### **Description of activity:**

EAL students had to design a tool to enrich the practice of online quizzes for UCL students and teachers, within a blended learning framework. During this inquiry we followed a User Centred Design approach, starting from interviews with teachers and students at UCL. Afterwards EAL students engaged in two design iterations, in which they developed and tested four semi-functioning prototypes with UCL.

### **Evaluation of and reflections on the activity:**

EAL students proposed three main learning scenarios:

1. Storytelling: each quiz is articulated as a story, based on a concrete case. A scenario with multilinear stories was also explored, in which right and wrong answers could branch towards different questions.
2. Simulation: quizzes about practice could show how a therapy could affect the patient through a little animation or comic stripe.
3. Reflective questions: quizzes might contain questions on ethics about therapy and interactions with patients, which do not have right or wrong answers but simply lead to further reflections.

These scenarios were appreciated by UCL students and teachers, as these embody possibilities for peer learning and engagement, such as: competition and comparing scores, individually or in groups, students' creation of new quizzes to be exchanged, critical discussions.

### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

Results from the interviews with UCL and evaluation of the learning scenarios seem to reveal a need to better define the application of blended learning within a playful framework, where simply blending in person and distant learning does not seem enough to support critical reflections. In this respect, story telling and reflective questions within quizzes were proposed as strategies to support peer-learning and longitudinal reflections on individual progress.

## SC 5-2: On the complexity of finding participants – the SampleMig Project

### *Author*

Andrea Valente, Associate Professor, University of Southern Denmark, Maersk McKinney Moeller Institute  
Gunver Majgaard, Associate Professor, , University of Southern Denmark, Maersk McKinney Moeller Institute  
Trine Sjøberg Torp, Student, University of Southern Denmark

### *Focus*

Active teaching and Learning, Design of blended learning

### **Students' learning outcome of activity:**

The goal of our project is to promote authentic experiences in multidisciplinary design-oriented peer-learning and project-based learning, by easing the often time-consuming process of connecting to new project partners, co-designers, testers, informants or experts. We want to share and invite reflections and learning on the complexity of student involvement in new initiatives like our SampleMig project, and present the strategies we devised to involve students, collect data and requirements.

### **Description of activity:**

We needed to find out how general the problem of finding participants for university students is, beyond our own technical educations, and how students look for co-designers, testers and/or experts in their projects. Surprisingly, we faced the same problems as our students in connecting with relevant participants. Of the three workshops initially planned, we could only conduct the first, which proved productive even with very few of our own students. This forced us to look at alternative strategies.

We attempted a two-front approach, leveraging on the efforts of two groups of software engineer students, who developed early prototypes of SampleMig. They were given access to our findings as soon as available, and explored the design-space in two different directions: easing the creation of user profiles, and coping with incomplete user information, i.e. inferring missing but probable profile data.

### **Evaluation of and reflections on the activity:**

Meeting with students from different programs outside formal teaching proved impossible. We sent invitations out to three different educational programs and advertised on the SDU pin-boards, but only four students from our own institute participated. Nevertheless, we had a very fruitful workshop resulting in ideas and requirements. Facing challenges similar to those our students face in their testing, we decided to collect students' experiences with testing in general, approaches used, successes or problems. We developed a short paper questionnaire and provided rewards (candies) for those who decided to participate, and in fact all approached students participated. A more qualitative form with open questions was distributed digitally. This new strategy is based on the realization that time and commitment are valued commodities for our students, and that we could take advantage of places of social gathering shared by students of different institutes (the main corridors at SDU, the library and facebook groups). Data suggests that SampleMig should be a social media, where user profiles are built implicitly, emerging from user participation in tests; the system should feel like a digital pin-board with announcements. Desertion is a major risk, and we propose to cope with it by having announcements clearly stating the commitment they require. Data also suggests interest in gamification elements like individual score attached to each user profile, and rewards (digital or physical).

## SC 5-3: Strategies to help students be prepared in a flipped statistics course

### *Author*

Zhiru Sun, Postdoc, University of Southern Denmark, Department of Business and Economics

### *Focus*

Design of blended learning, Flipped learning

#### **Students' learning outcome of activity:**

There is one final exam for the course, which is a two-day take-home project. The aim of this course is to provide students with the skills to use quantitative analysis tools to solve problems in the field of business administration. This course introduces students to fundamental techniques of data processing and presentation, and also concepts and methods used in data analysis.

#### **Description of activity:**

The course is a mandatory course for all first-year business and administration students. 78 students enrolled in the last semester's course. It is a flipped course. Students are first required to watch online lecture videos and then attend associated exercise classes every week. By design, the flipped structure places more emphasis on the importance of pre-class work to ensure that in-person class time is effective, allowing the instructor and the students to explore higher levels of application and analysis together.

#### **Evaluation of and reflections on the activity:**

Based on the survey feedback and a focus-group interview, the majority of students completed the lecture videos but did not watch them on a weekly base. Some students only picked a few videos they were interested in without watching all lecture videos. The student instructor claimed that the majority of students who went to exercise classes without watching any lecture videos. Through the analysis of learning data provided by the Blackboard system, the lecture videos were most viewed by students in the middle of the semester and before and during the final exam.

#### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

The study reviews the challenges of self-preparation from the students' perspective. Potential strategies to motivate unprepared students are proposed including making the instructor's expectations clear, building interactive engagement into pre-class content, engaging student instructors, and re-thinking participation grade credits.

## PS 1-1: Diverse ways to internationalise the curriculum at university

### *Author*

Donna Hurford, Educational Consultant, University of Southern Denmark, Centre for Teaching and Learning  
Anne Skov Jensen, Pedagogical Consultant, University of Southern Denmark, Centre for Teaching and Learning

### *Focus*

Active teaching and learning

### **Students' learning outcome of activity:**

- Equip students with intercultural competences, which will better prepare them for the complexities of changing, globalised professional and social environments
- Develop student and staff awareness of the relevance of intercultural competences
- Contribute to student engagement and retention by developing their intercultural competences during their academic studies

### **Description of activity:**

Study leaders, teachers, student services and students at SDU responded to the 'Developing students' intercultural competences project' proposal, which in turn led to seven self-initiated pedagogic project ideas in the Spring semester 2017 exemplifying how a university's internationalisation strategy is being realised pedagogically at individual, course and programme levels. The projects included: experiential workshops for teachers and students on effective intercultural group work; developing an intercultural online learning activity for Danish and Norwegian occupational therapy students and designing a flipped learning resource on intercultural understanding for software engineering students. In this short communication/poster, project partners will offer snapshots of some of the projects, which are available on [itc.sdu.dk](http://itc.sdu.dk), and review how internationalising the curriculum (ITC) and the development of intercultural competences can contribute to inclusive and effective group work and authentic group work tasks.

### **Evaluation of and reflections on the activity:**

Project partners' evaluations of their projects indicated that having access to bespoke consultancy from educational consultants provided them with relevant and timely support and guidance to get their projects started. Four projects included workshops on ITC and developing intercultural competences, attended by teachers, student services advisors and students; workshop participant feedback was positive and indicated the value of embedding such workshops in study programmes.

### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

The diverse ways in which ITC is being developed at SDU and the potential impact on inclusive and effective teaching and learning are exciting revelations, which signal 'one size does not fit all'. By sharing these ITC projects through a short communication/poster we will encourage further interpretations of ITC by students, study leaders, teachers and student services and evidence how bespoke consultancy can help scaffold diverse pedagogic ways forward.



## PS 1-2: Teaching responsible conduct of research for PhD students

### *Author*

Lone Bredahl Jensen, Research Librarian, RCR Coordinator, Univ. of Southern Denmark, Univ. Library

Kirstin Remvig, Information Specialist, Univ. of Southern Denmark, Univ. Library

### *Focus*

Design of blended learning

### **Students' learning outcome of activity:**

The overall learning objective is to contribute to PhD students' ability to conduct research in accordance with scholarly rules, principles and guidelines, as well as current practices at SDU. By completing the course, participants become knowledgeable about and understand the basic principles of responsible conduct of research (RCR) and grey zone areas, and will be able to account for their own research projects in terms of the principles, as well as actively integrate RCR principles in their future research.

### **Description of activity:**

Following conspicuous cases of research misconduct among established researchers in well-reputed universities, universities all over the world are these years strengthening their activities to enforce more knowledge in the research community of responsible research practices. SDU is in the front. One of the central initiatives is mandatory courses in Responsible Conduct of Research for all PhD students at SDU.

Initiated and coordinated by the University Library, each faculty offers courses that follow the same modular structure, but with disciplinary 'flavour'.

The first course was given in spring 2014 at Faculty of Health. Since then, the course has undergone several iterations and has also been customized to remaining faculties at SDU. The courses are taught by a combination of library personnel and faculty.

The course follows a blended learning structure. Due to the severity and frequent lack of black-and-white nature of the topic, the physical encounter of students with the lecturers is generally prioritized, as are group discussions among course participants. Different types of e-modules developed in Blackboard are also used. These are found well suited for the communication of law information and other facts-oriented course contents.

### **Evaluation of and reflections on the activity:**

Student evaluations show students to appreciate the course. Through the information given and through the various learning initiatives, students become more capable of avoiding 'stupid mistakes'. Experience shows that, because the course is mandatory, a clear commitment from PhD schools is required to avoid initial resistance to the course.

### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

We are continuously developing the course. Contents and instruments need to be in even better accordance, and resources also need to be taken into account. For instance, resources to comment and give written feedback on the mandatory student assignments are currently not allocated. Perhaps student-

to-student feedback should be facilitated? Another question is whether more blended methods should be applied?

## PS 1-3: Training of trainers in active learning methods at the Princess Nourah Bint Abdul Rahman University, Riyadh, Saudi Arabia

### *Authors*

Anne Leena Ikonen, Pedagogical Expert,  
Leena Eklund Karlsson, Associate Professor  
Pernille Tanggaard Andersen, Associate Professor, Head of Unit  
Arja Aro, Professor  
All 4 from University of Southern Denmark, Unit for Health Promotion Research

### *Focus*

Active teaching and Learning, New teacher and student roles/new learning cultures

### **Students' learning outcome of activity:**

University of Southern Denmark (SDU) conducted a cross-cultural knowledge transfer project (from SDU to Princess Nourah University - PNU) in Bachelor level education in 2013-17. The SDU BSc in Public Health curriculum was adjusted into a BSc in Health Education and Promotion and BSc in Epidemiology Programmes to fit into the Saudi context and culture and education needs. Training the PNU teachers in active learning methods was part of the knowledge transfer. The aim was to develop and strengthen the teachers' skills and competencies and enable them to develop their teaching towards active, student-centred learning.

### **Description of activity:**

In the autumn of 2016 SDU organized a 9-day Active Learning Workshop (4 ECTS) for the teaching staff at PNU. The workshop included on-site lectures, individual and group assignments, teaching auscultation, preparation of pedagogical learning diary and teaching philosophy as well as self study. Various active teaching techniques were introduced and practiced. The content was tailored to support participants' personal learning plans and teaching work.

### **Evaluation of and reflections on the activity:**

Ten teachers participated in the Workshop. According to the evaluation (collected through a survey after the workshop) the participants felt they had gained knowledge and skills to plan and carry out teaching based on the principles of active learning. The focus was on teachers' own development. They also visited colleagues' classrooms and found it useful to learn from peers. They perceived that sharing their teaching experiences in the group – both successes and challenges - was new but fruitful to them. The participants enjoyed the dialogue as a learning style used in the workshop. The feedback from participants was generally positive indicating that the participants found the workshop beneficial for their daily work.

### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

Participants described their teaching experiences and learning objectives shortly in given pre-assignment. This revealed that the workshop was the first pedagogical training for most of them and that they were lacking theoretical knowledge on teaching. E.g. the concepts of student-centred teaching, dialogue, and ownership of learning, were new for participants. The acquired knowledge of these basic approaches expanded their thoughts about teacher's role and their ideas about how they could better interact with

students. When adult learners have a possibility to participate 100%, share their learning with their peers and assimilate their expertise, they become more committed to step out of their comfort zone and achieve their competence development goals.

## **PS 1-4: ACTING - Enhancing the learning space in large classes with blended learning: lessons and lessons learned in introductory software engineering**

### ***Author***

Lone Borgersen, Associate Professor, University of Southern Denmark, Maersk McKinney Moeller Institute

### ***Focus***

Design of blended learning, Flipped learning, New teacher and student roles / new learning cultures

### **Students' learning outcome of activity:**

The purpose is to implement active teaching and learning in large classes by using enhancing blends, thereby giving room for students to become active learners. The intended learning outcome is that the students in the subject area of introductory software engineering learn to

1. Prepare effectively and efficiently for the different teaching and learning activities
2. Communicate, connect and collaborate online as part of the learning process
3. Evaluate the learning and the teaching and contribute to the improvement of both

### **Description of activity:**

Teaching for active learning using blended learning is applied in two first year software engineering courses. The first course introduces the student to software engineering as a profession. The course introduces key topics in Software Engineering and provides students with an understanding of Software Engineering as a whole. The second course enables the student to do iterative and object-oriented software development.

The individual modules in the course are organized into 5+1 stages: 1) Pre-understanding and expectations, 2) Preparation, 3) Exercises, 4) Lessons, 5) Reflection and 6) Dialogue (see figure 1 next page). The core is the "Dialogue", in which the students join an online dialogue with fellow students through discussion boards, blogs, journals or the like. The dialogue is in particular an important means as an extension of the individual preparation, but can also serve as a means before, after or during the other stages.

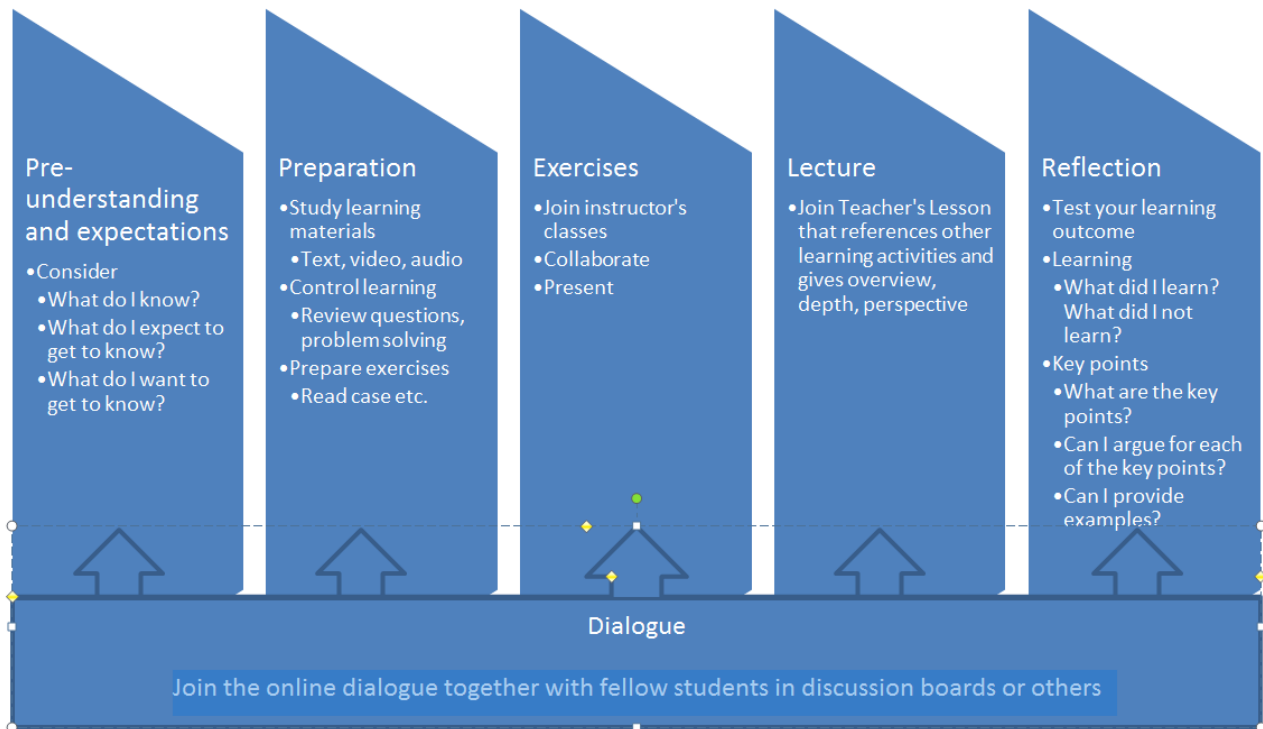


Figure 1 ACTING: The 5+1 stages in a course module with enhancing blends (The stages are not necessarily linear)

### Evaluation of and reflections on the activity:

The aim of ACTING is to

- Enhance the Learning Space with Blended Learning in Large Classes

The major issues in ACTING:

- Establishing the virtual learning environment
- Scaffolding the learning process
- Bridging the learning activities
- Time consumption across participants
- Incitements and measurements
- Freedom for individual planning

### Reflective description of experiences with activity/course as to how your practice can be inspirational/transferrable to others (subjects, students, institutions,...)

Major lessons learned:

Concerning the aim:

- Blended learning enhances the learning space.** The students do indeed get a room for expressing themselves and for being acquainted with each other. The students' preparations are improved.

Concerning the issues:

1. **The e-learning management system Blackboard** has built in limitations of which some are not obvious. They must be carefully examined and taken into account before detailed activities are implemented in large scale. Not knowing the limitations may lead to severe failures
2. **Scaffolding of the learning process** must take care of the individual stages in the learning process but also of the code of conduct, ethics, guidelines and templates
3. Roll calls among instructors, emoderators and teacher **bridge the learning activities** but students should be considered the first choice with regard to bridging the different learning activities. Students may bring questions, solutions and others from one stage to another.
4. **Time consumption** has to be carefully controlled. Estimate student activities to ensure a proper workload. Workflows with estimates for instructors, emoderators and teacher to support common expectations.
5. **Incitements** have to be designed carefully to ensure a critical mass of participation. Automatic **measurements** are critical.
6. **Freedom for individual planning**  
When online dialogue is introduced in the learning process, care must be taken not to disempower and patronize students

## PS 2-1: Visuel og webbaseret understøttelse af bachelorvejledning

### Author

Signe Højbjerg Larsen, Assistant Professor, PhD, University of Southern Denmark, Department of Sports Science and Clinical Biomechanics

### Focus

Active teaching and learning, Design of blended learning

### Students' learning outcome of activity:

Det webbaserede projektstyringsværktøj Trello har mulighed for at lette overblikket over processen og projekt(erne) for både studerende og vejleder i forbindelse med bachelorprojekt. Trello har yderligere mulighed for at lette fildeling, sparring og kommunikation mellem de studerende.

### Description of activity:

På uddannelsen i Idræt og Sundhed er vi indført en ny, fælles struktur for vejledning med varierende vejledningsformer. Overgangen tager afsæt i forskning der viser, hvordan varierende vejledningsformer kan medvirke til bedre læringsprocesser, forbedring af de studerendes formidlingsevner og mindske frafald (Floris & Andersen 2006, s.48; Jensen 2015). Som vejleder har jeg i forbindelse med den nye struktur oplevet to centrale udfordringer:

1. Det er svært at holde styr på kommunikationen og delingen af dokumenter med de studerende.
2. De studerende har problemer med at forstå processen, både i forhold til deres opgaveskrivning, men også i forhold til organiseringen af deres tid og de enkelte vejledninger.

Det er min tese, at der ligger nogle potentialer i projektstyringsværktøjet Trello til at kunne optimere kommunikationen, delingen af dokumenter og understøtte de studerendes forståelse for bachelorprojektet som en helhed.

### Evaluation of and reflections on the activity:

Evalueringen viste:

Fordele ved at bruge Trello:

- Samler al kommunikation ét sted.
- Layout giver et rigtig godt overblik.
- Super nemt at bruge.
- Checklister giver motivation og overblik.
- Indblik i de andres projekter og inspiraton.

Begrænsninger ved at bruge Trello:

- De studerende kan blive lidt for inspireret af hinandens projekter.
- Egner sig ikke til personlige, følsom kommunikation.
- Kræver at man skal bryde vanen med at sende e-mails.



**Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

Jeg vil gerne give andre mulighed for at stifte bekendtskab med et simpelt online værktøj, som er lige til at gå til, men indeholder væsentlige potentiale i forhold til vejledning. Jeg har taget afsæt i bachelorvejledningen, men programmet kan også fin bruges til mindre vejledningsopgaver, specialeopgaver eller til egne projekter som universitetsansat.

## PS 2-2: “To Wiki or not to Wiki”, the use of wikis in a semester project

### Author

Kasper M. Paasch, PhD, University of Southern Denmark, Mads Clausen Institute

### Focus

Active teaching and learning

#### Students' learning outcome of teaching activity/course presented:

De studerende skal i projektarbejdet demonstrere at de behersker anvendelsen af de grundlæggende teknologier, som de parallelt med projektet indlærer i ELEC2 (elektronik, niveau 2 kursus) og Sensor-fagene (sensortechnik, kontrol og styring af små el-motorer etc.). De skal kunne formulere en problemformulering, en projektbeskrivelse samt en plan for gennemførelse af projektet.

Færdigheder:

- De skal kunne identificere et teknisk problem og anvende ingeniørmæssige metoder til at løse dette.
- De skal kunne anvende deres tekniske viden på en konkret udviklingsopgave.
- De skal opnå erfaring med at arbejde med (for dem) ny viden.

Kompetencer:

- De studerende skal kunne sætte deres faglige viden i spil i samspil med den lokale industri.
- De studerende skal kunne frembringe innovative løsninger på givne problemstillinger.
- De studerende skal kritisk og analytisk kunne forholde sig til tekniske løsninger af et givet problem.

Overordnet skal de studerende efter kurset have en større faglig forståelse for samspillet mellem forskellige teknologiområder, forstå vigtigheden af brugerinddragelse i behovsanalysen, samt blive bedre til samarbejde og dokumentation.

#### Description of your teaching activity/course:

Det overordnede tema for kurset er ”Autonomous Intelligent Vehicles” og grupperne skal analysere behovet for et mindre køretøj efter eget valg, samt konstruere en fungerende prototype med oplæg til senere design og produktion.

Anvendelsen af en Wiki-side på Blackboard til at præsentere den enkelte gruppes projekt vil muliggøre skriftlig feedback fra andre grupper samt underviserne. Hver gruppe skal forholde sig til kritikken og har mulighed for løbende at opdatere deres Wiki-side. Wiki-siden er desuden tiltænkt at kunne anvendes til at præsentere projektet for eksterne interessenter forud for den offentlige præsentation i december. De interne Wiki-sider i Blackboard kan ikke tilgås via eksterne udenfor SDU, hvilket i den forbindelse er problematisk.

#### Evaluation of the activity/course design, from student/teacher perspective:

De ved eksamen opnåede karakterer adskilte sig ikke meget fra de karakterer, som blev opnået ved samme eksamen året før. Anvendelsen af wiki-siderne blev evalueret via en spørgeskemaundersøgelse, hvor hovedbudskabet var, at wiki-siderne i Blackboard ikke tydeligt har fremmet kommunikationen mellem grupperne. Der må konkluderes at det ikke er lykkedes at motivere de studerende til aktiv at tage brugen af

Wikis til sig. Det blev opfattet som besværlig at implementere via BlackBoards brugerflade og uden nogen klar gevinst for de enkelte projekter.

**Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

Anvendelsen af wiki-sider bør omhyggelig tilpasses kursets formål. For et kursus med meget interaktion mellem studerende, som f.eks. projektarbejde, vil wiki-sider, sammenlignet med andre allerede etablerede kommunikationsformer, kunne virke som et "påtvunget" redskab. De studerendes læreproces forbedres ikke umiddelbart ved feedback fra andre studerende via Wiki-sider, men en øget forståelse af det faglige stof kan opnås via skriveprocessen. Ved gruppearbejde mellem personer geografisk spredt vil wiki-sider kunne have en større berettigelse, men ved grupper som dagligt sidder sammen er den ikke tydelig. Et åbent wiki-værktøj vil være en klar fordel når/hvis der skal kommunikeres med aktører udenfor SDU, f.eks. den lokale industri.

## PS 2-3: Mere selvstudie med virtuelle læringsrum ved problembaseret læring

### Author

Henriette Lorenzen, lektor, Professionshøjskolen Metropol

Isa Neimann Thomasen, lektor, Professionshøjskolen Metropol, Bioanalytikeruddannelsen

### Focus

Active teaching and learning, Design of blended learning, New teacher and student roles / new learning cultures

### Students' learning outcome of activity:

Ved Bioanalytikeruddannelsen i København anvender vi Problem Baseret Læring (PBL) med den såkaldte 7-trins PBL-model (Schmidt, 1983). De studerende føres gruppevis igennem en struktureret proces initieret af en åben problembeskrivelse og opstiller egne læringsmål. Læringsmålene fungerer som guides for selvstudiet, hvor de studerende indhenter viden og besvarer gruppens læringsmål.

Vi har suppleret den eksisterende undervisningsstruktur med læringsaktiviteter i et virtuelt læringsrum med henblik på at kvalificere de studerendes selvstudie under hensyntagen til PBL-princippet om selvstyret læring.

Målet er:

- At øge de studerendes studieintensitet
- At de studerende i højere grad anvender læringsmålene som guide for deres læring
- At støtte de studerendes læring ved at understøtte deres brug af skriftligt fagsprog

### Description of activity:

Konkret arbejder de studerende under selvstudiet i et kollaborativt online dokument. Én studerende formulerer et oplæg til besvarelse af et læringsmål. En anden studerende formulerer et respons som kvalificerer oplægget. Øvrige studerende kvalificerer oplæg og respons og afslutningsvist formuleres en konklusion af en tredje studerende. Samtlige læringsmål bearbejdes efter samme princip, således at alle studerende på skift har ansvar for oplæg, respons og konklusion.

### Evaluation of and reflections on the activity:

En kvantitativ evaluering viser, at 60 % af de studerende anvender 40 timer pr. uge. Sammenlignet med baseline (6,3 % af de studerende) er studieintensiteten således øget. Ved et fokusgruppeinterview giver de studerende udtryk for, at de arbejder mere intenst, når de skal levere et individuelt produkt, som er synligt for deres medstuderende.

Ved fokusgruppeinterviewet og en kvalitativ evaluering giver de studerende udtryk for, at de gennem øget fordybelse anvender deres læringsmål som guide i deres læringsproces. Det virtuelle læringsrum har desuden skærpet de studerendes bevidsthed om, at skriftlighed understøtter deres læring. De studerende giver udtryk for, at de søger mere litteratur og fordyber sig mere, hvis de har fundet det vanskeligt at besvare et læringsmål.

**Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

Vi ser muligheder i at dele designet eller elementer af designet under forudsætning af, at dette tilpasses pædagogisk hensigt og kultur ved den enkelte uddannelse. Vi ser endvidere et potentiale i at anvende og videreudvikle det virtuelle læringsrum til en PBL-uafhængig kontekst.

Lorenzen, H. & Thomasen, I. N. (2016). Facilitering af Problembaseret læring – et læringsdesign for asynkron kommunikation. *Læring & medier*, 16

<https://tidsskrift.dk/lom/article/view/24197/22417>

## PS 2-4: Blended learning strategier - i balance mellem det boglige og det digitale mediemiljø

### *Author*

Mogens Olesen, lektor, Københavns Universitet, Institut for Nordiske Studier og Sprogvidenskab

### *Focus*

Active teaching and learning, Design of blended learning, Institutional strategies

### **Students' learning outcome of activity:**

Forløbet træner både boglige og digitale affordances, ligesom eleverne oplever en tværfaglig sammenhæng mellem mediefag, historie, samfundsfag og dansk.

### **Description of activity:**

Et tværkulturelt og tværfagligt undervisningseksempel, hvor eleverne producerer film over temaet "2.verdenskrig oplevet fra min egn", som de derefter udveksler online med en venskabsklasse i Tyskland, der har produceret tilsvarende videoer. Eleverne interviewer lokale vidner, eksperter (fx ældre eller museumsansatte). Den tværkulturelle forbindelse til den tyske klasse åbner mulighed for at diskutere 2. verdenskrig, set fra begge sider af konflikten. Herunder samfundsfaglige og historiske temaer som kriges efterspil. Endeligt trænes mediefærdighed og -kompetencer fx via filmproduktionen og onlinekommunikationen med tyskerne. Forløbet opnår nogle dimensioner, der kun vanskeligt kan realiseres i et præ-digitalt miljø. De digitale affordances kombineres med boglige i form af læsning og dialog og lignende computerfri "lommer" i undervisningen.

### **Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)**

Der opstilles generelle principper til udvikling af strategier for blended learning. Digitaliseringen giver os handlemuligheder, der afspejler tre grundlæggende digitale affordances i tre forskellige sfærer: interaktive muligheder for den individuelle bruger, samarbejde i sociale netværksrelationer og mobilitet der kan flytte læringen ud i skoleeksterne kontekster.

De digitale muligheder rummer imidlertid udfordringer, idet de interaktive muligheder kan medføre en opmærksomhedsproblematik. Netværkspotentialet kan misbruges i skjulte netværk, hvor der blandt andet deles skriftlige opgaver. Endeligt kan manglende udnyttelse af det mobile potentiale resultere i en motivationsproblematik, hvor den skolefaglige anvendelse af IT forekommer virkelighedsfjern for eleverne. På denne baggrund foreslås her en simpel didaktisk ramme, der skelner tre forskellige opgaveniveauer, opsummeret i Figur 1 på næste side:

|                    | Individuel     | Social          | Samfundsmæssig      |
|--------------------|----------------|-----------------|---------------------|
| <b>Affordance</b>  | Interaktivitet | Samarbejde      | Mobil læring        |
| <b>Problematik</b> | Opmærksomhed   | Skjulte netværk | Motivation          |
| <b>Opgavetyper</b> | Didaktiserende | Kollaborerende  | Kontekstualiserende |

*Figur 1. Digitale affordances, problematikker og opgavetyper fordelt på tre sfærer.*

De didaktiserende opgaver tager udgangspunkt i elevernes erfaringsverden, herunder fritidsbaseret brug af internettet og digitale medier. En faglig overbygning kan efterfølgende sikres på samarbejdsniveauet via diskussion og refleksion. Kontekstualiseringen sigter på at udnytte digitale affordance for mobilitet og elevstyring i form af anvendelsesorienterede og praksisnære opgaver.

## **Master Class on blended learning: Course design for a digital age - What methods work best?**

### ***Offered by***

Dr. Tony Bates

### ***Time:***

From 10:45-12:15, room O97.

### ***Target group:***

Teachers, heads of studies, educational developers and others who are currently developing blended learning. During the session you can pose questions to Tony Bates on the issues involved in the development of blended learning and discuss challenges and opportunities with session participants.

### ***Content:***

This interactive master class will ask participants in groups to examine and choose a particular approach to teaching a module or class and to discuss how best to implement such teaching, the goal being higher order skills development in students within a blended learning context.

It is suggested that prior to the master class, participants should read Chapters 1-4, 9 and Appendix 1, of [Teaching in a Digital Age \(link to pdf\)](#), if they have the time.

### ***Registration:***

Please sign up for this session by sending an email to [agpetersen@sdu.dk](mailto:agpetersen@sdu.dk) and await a confirmation email. The 40 seats are allocated on a first come, first served basis.



## Workshop 1: Aktiverende undervisning ved brug af videoer

### Leader

Pernille Stenkil Hansen, specialkonsulent, Syddansk Universitet, SDU Universitetspædagogik

#### Students' learning outcome of activity:

Videoer kan anvendes i undervisningssammenhænge på utallige måder, lige fra underviseren som producent af korte videoforelæsninger til den studerende som producent af laboratorievideoer eller videologbøger. Formålet med brug af video i undervisningen er at udnytte videomediets multimodale fordele til at understøtte og guide de lærende samt at motivere dem til aktiv deltagelse før, under og efter tilstedeværelsesundervisningen.

#### Description of your teaching activity/course:

På SDU producerer underviserne bl.a. i flipped learning forløb korte videoforelæsninger, som de studerende skal se inden tilstedeværelsesundervisningen for at give mere tid til at gå i dybden med og diskutere vigtige emner med de studerende i selve tilstedeværelsesundervisningen. Video bliver ligeledes brugt af undervisere til inddragelse af praksiseksempler fra den virkelige verden og til demonstration af laboratorieforsøg.

De studerende på SDU involveres ligeledes aktivt i undervisningen ved selv at producere videoer, hvori de bl.a. demonstrerer en specifik færdighed mhp. feedback fra deres medstuderende og underviser. I idrætsundervisningen bruges f.eks. mobiltelefoner til at optage videoer af bevægelsesøvelser mhp. efterfølgende analyse, hvor videoerne fungerer som et godt redskab til både selvevaluering og peer feedback.

Denne workshop vil hjælpe deltagerne til at undersøge videoers potentiale i forskellige undervisningssituationer. Der gives en kort introduktion til de mange [muligheder for brug af video i undervisningen](#) og til forskellige [videolayouts](#). Der tages udgangspunkt i de pædagogiske veldokumenterede set ups, hvor der foreligger velbeskrevet "Best Practice" eller "Good Practice". Deltagerne vil få mulighed for at dele erfaringer og diskutere, hvordan de kan gøre brug af video i egen undervisning.

#### Evaluation of the activity/course design, from student/teacher perspective:

De studerende på SDU har taget rigtig godt imod brugen af video i undervisningen, hvor bl.a. forelæsningsvideoer opleves som informative og forbereder de studerende til aktiv deltagelse i tilstedeværelsesundervisningen. Muligheden for at se videoerne uafhængigt af tid og sted fremhæves, og statistikker viser, at videoerne ofte er et vigtigt led i eksamensforberedelserne. SDU Universitetspædagogik oplever også en stigende efterspørgsel fra undervisere, som ønsker at bruge video i deres undervisning mhp. at udnytte fordelene ved at få mere aktive og velforberedte studerende. Fordele, som opvejer den tid, der må investeres i en omhyggelig planlægning og produktion af videoer.

#### Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)

De foreløbige erfaringer med brug af video i undervisningen har vist sig at være relevante i alle faglige miljøer på SDU og kan være en inspiration til andre undervisere ift. at komme godt i gang med aktiverende undervisning ved brug af video.

## Workshop 2: Using digital badges to motivate and engage learners

### Leader

Inger-Marie F. Christensen, Special consultant, University of Southern Denmark, Centre for Teaching and Learning

### Students' learning outcome of teaching activity/course presented:

The purpose of using digital badges in teaching and learning is to

- support and guide the learner by making visible the intended learning path
- support the learner's ability to continuously reflect on his/her own learning journey
- give the learner personal feedback
- engage and motivate the learner to complete the individual learning activities as well as the course in question

In addition, badges serve as proof of the specific learning outcomes a learner has achieved since badges show potential employers what knowledge, skills and competences each learner has acquired in a more nuanced way than an exam diploma can do.

### Description of your teaching activity/course:

A digital badge is an online, visual representation of an achieved learning outcome. Badges have strong roots in the tradition of scout organisations who distribute certificates for the accomplishment of skills, as well as in computer games where they are used as rewards and recognition. Digital badges can be connected to any type of online activity (tests, online discussions etc.) or offline activity (student presentations, practicals etc.). They can be released upon students' first attempt at an activity or be dependent upon the teacher grading the performance before releasing the badge.

This workshop will help participants' explore the potential of digital badges in education. An introduction to badges and the purposes of using these in education will be provided. Ways of integrating badges into teaching and learning activities will be explained. Participants will get the opportunity to discuss how badges can be integrated in their own context and share examples.

### Evaluation of the activity/course design, from student/teacher perspective:

Since 2014, SDUUP has studied and experimented with the use of badges in higher education and in connection with staff development for teachers. In 2016, we evaluated and disseminated the experiences and results through the LOM article [How to create a learning design that motivates and engages participants in online staff development](#) (in Danish). Learners found that digital badges motivated them to complete the course to some degree, helped them reflect on their learning journey to some degree and were a suitable way of assessing their learning outcome to some degree.

### Reflective description of experiences with activity/course as to how your practice can be inspirational/transferable to others (subjects, students, institutions,...)

Digital badges can be used for both formal learning activities across subjects and levels of education and in connection with informal learning opportunities, e.g. students' participation in courses and workshops on study or academic skills offered by the library or student services. It is important to link the individual badge to one or more specific learning goals so that the use of badges becomes meaningful and purposeful and does not side-track the learner.