

Practical Informations  
Programme  
Abstracts for Short  
Communications and  
Workshops



# Conference Teaching for Active Learning

3rd November 2015  
University of Southern Denmark

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## Programme

### Danish

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<b>08.45-09.15</b>	Kaffe og rundstykker
<b>09.15-09.30</b>	Velkommen
<b>09.30-10.15</b>	Keynote speaker <a href="#">Jonas Nordquist</a>
<b>10.15-10.30</b>	Refleksioner over keynote
<b>10.30-10.45</b>	Pause
<b>10.45-12.15</b>	Parallelle sessioner del 1
<b>12.15-13.00</b>	Frokost
<b>13.00-14.30</b>	Parallelle sessioner del 2
<b>14.30-14.45</b>	Pause
<b>14.45-15.30</b>	Debat
<b>15.30-16.00</b>	Afsluttende kommentarer

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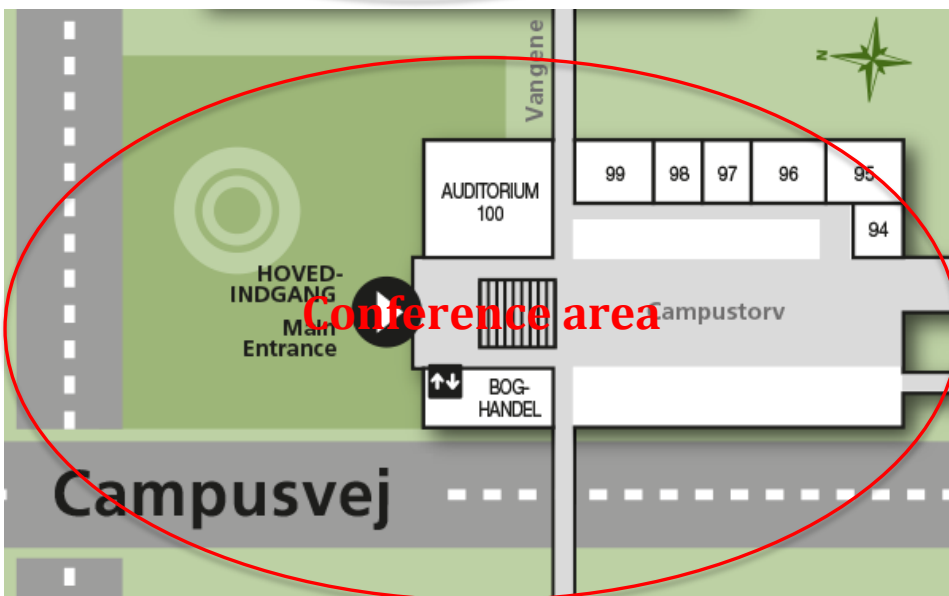
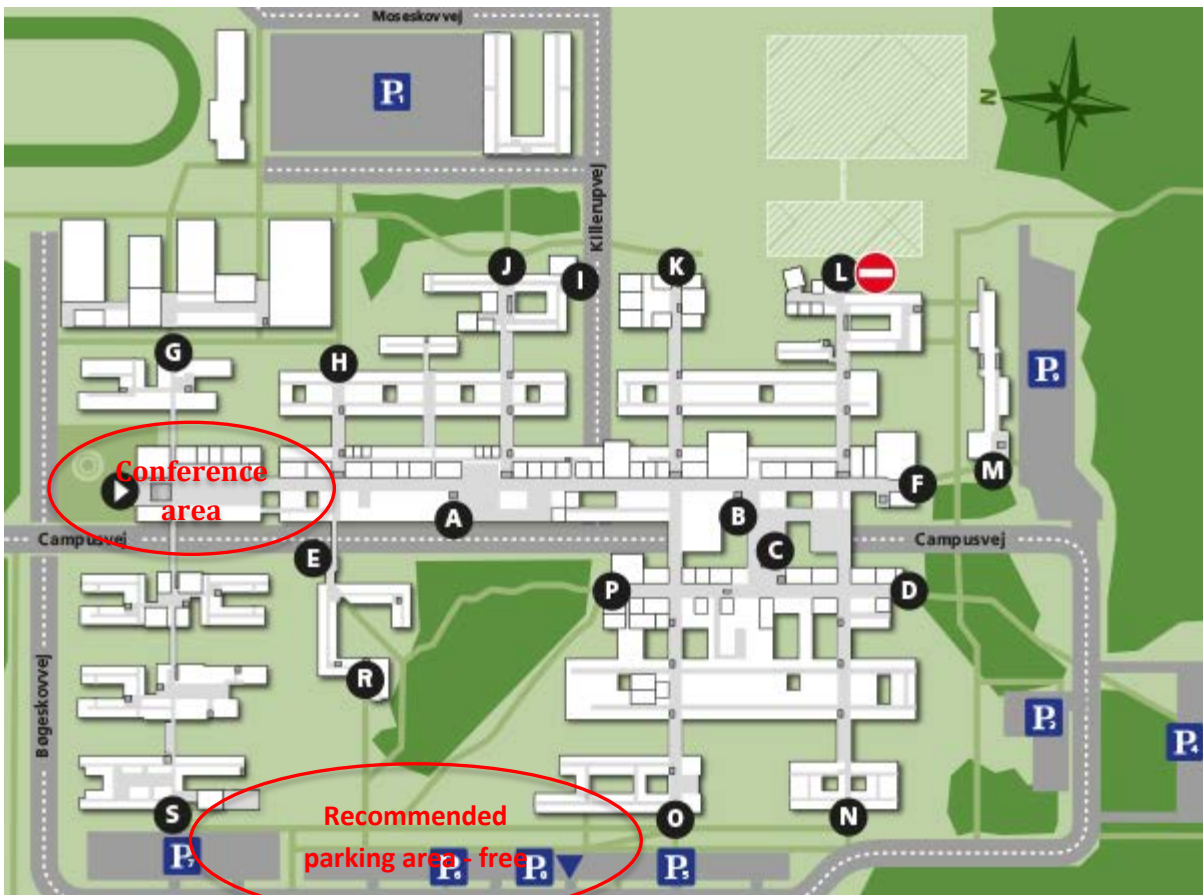
### English

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<b>08.45-09.15</b>	Coffee and rolls
<b>09.15-09.30</b>	Welcome
<b>09.30-10.15</b>	Keynote speaker Jonas Nordquist
<b>10.15-10.30</b>	Reflections over keynote speaker
<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>14.45-15.30</b>	Debate
<b>15.30-16.00</b>	Closing statements

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## MAP - conference area



## Using twitter

At the conference we will use Twitter (**#talnov15**) and online student response systems to create interaction and debate, therefore we encourage you to bring your own device (smartphone, tablet or laptop) so that you will be able to participate fully in the conference. If you don't already have a Twitter account, we suggest that you create one before the conference, so that you are ready to contribute online. You can sign up for Twitter via this webpage: <https://twitter.com/>

Please also install the app on the tablet or smartphone you bring.

# Key note speaker

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## Jonas Nordquist



Jonas Nordquist, PhD, is the director of the Medical Case Centre at Karolinska Institutet and he is the associate DIO, in charge of the strategic educational development for the residency programs at the Karolinska University Hospital.

He received his PhD in political science from Stockholm University in Sweden in 2001 and joined Karolinska Institutet in 2003.

He has been in charge of the Future Environment Learning Project at Karolinska Institutet and also been in charge of the redevelopment and production of more than 400 physical learning environments.

He is widely engaged as an international consultant in developing building programs in health professions education around the world.

Dr Nordquist has many international publications and papers in the field of how space impacts on learning and is currently i.e. writing the AMEE Guide on Aligning Curriculum and Physical learning spaces in health professions education.

### **Directions for change in design of learning spaces in higher education**

Physical space has been neglected in its impact on the success of learning. Health programs and higher education in general are accommodated in traditional didactic learning spaces: lecture theatres, seminar rooms, and separate buildings for academic disciplines.

Hospitals have limited provision for student learning. Yet learning patterns and educational methods have been transformed.

What are the trends globally in providing high performance learning spaces that respond better to emerging needs?

What are the key design features?

What can we learn from the innovative work and learning spaces in the corporate and other sectors?

This session will address the overall issue of aligning the curriculum with physical learning spaces.

## Parallel Short Communications sessions – MORNING – from 10:45-12:15

Room: O95	Room: O96	Room: O98	Room: O99
<b>Language:</b> Danish	<b>Language:</b> Danish	<b>Language:</b> English	<b>Language:</b> English
<b>Chair:</b> Cita Nørgård	<b>Chair:</b> will follow	<b>Chair:</b> Nina Bonderup Dohn	<b>Chair:</b> Donna Hurford
SC 1-1 (Learning spaces): <a href="#">Design af læringsrum – hvorfor og hvordan?</a>  <i>Rie Troelsen</i>	SC 2-1 (Teaching Methods): <a href="#">Tangible Literature Review - A collaborative student/researcher learning activity</a>  <i>Louise Buch Løgstrup</i>	SC 3-1 (Teaching Methods): <a href="#">Teaching Practical Aesthetics</a>  <i>Richard Herriott</i>	SC 4-1 (Evaluation): <a href="#">Bringing feedback in from the outback via a generic and preference-sensitive instrument for course quality assessment: MyCourseQuality</a>  <i>Mette Kjer Kaltoft</i>
SC 1-2 (Teaching methods/ Learning spaces): <a href="#">Social Technology Lab – a learning space that motivates innovation</a>  <i>Jacob Nielsen</i> <i>Lasse Juel Larsen</i>	SC 2-2 (Teaching Methods): <a href="#">Computerøvelser under forelæsninger i statistikkurser på Sundhedsvidenskab</a>  <i>Søren Möller</i>	SC 3-2 (Teaching Methods): <a href="#">Speech-line - a method for teaching oral presentation</a>  <i>Henrik Juel</i>	SC 4-2 (Evaluation): <a href="#">The Role of Self-regulation on Students' Learning in an Undergraduate Flipped Math Class</a>  <i>Zhiru Sun</i>
SC 1-3 (Teaching methods/ Learning spaces): <a href="#">Brug af video og peer-feedback i færdighedstræningen på Klinisk Biomekanik - hvad har de studerende lært?</a>  <i>Henrik Hein Lauridsen</i> <i>Rie Castella Toftgaard</i>	SC 2-3 (Teaching Methods): <a href="#">Aktivering af opgaveskrivere i undervisnings- og vejledningsforløb</a>  <i>Hanne Nexø Jensen</i>	SC 3-3 (Teaching Methods): <a href="#">It mediated role play activities</a>  <i>Nina Bonderup Dohn</i>	SC 4-3 (Evaluation): <a href="#">An Online Approach to Testing</a>  <i>Jarl Tuxen</i>
SC 1-4 (Teaching methods): <a href="#">Let's Co! Samskabelse som aktiv læring for sygeplejestuderende</a>  <i>Line Zimmer Rasmussen</i>	SC 2-4 (Teaching Methods): <a href="#">Rammer for vejledning</a>  <i>Vitus Vestergaard</i>	SC 3-4 (Teaching Methods): <a href="#">Stimulating job-market desired characteristics in students</a>  <i>Karol Jan Borowiecki</i>	SC 4-4 (Evaluation): <a href="#">Learning from history: Activating teaching methods from 40 years of experience</a>  <i>Bjarne Toft</i>



## Poster and Workshop sessions – MORNING - from 10:45-12:15

<i>Poster session</i>	<i>Workshop</i>
<b>Room:</b> O97	<b>Room:</b> Kuben
<b>Chair:</b> Søren Sten Hansen	<b>Workshop leader:</b> Pernille Stenkil Hansen
P 1-1 (Danish – Teaching Methods) <a href="#">Med et fælles mål: Fra socialkonstruktivistisk læringsteori til –praksis</a> Anne Klara Bom	Tema for workshoppen: <b>”Idégenerering om fleksible læringsrum i et fleksibelt læringsrum”</b>  Kuben er et fleksibelt læringsrum på SDU, der er indrettet med flytbart interiør og it-faciliteter, hvilket gør det nemt at tilpasse rummet til forskellige behov og pædagogiske praksisser.  Kuben bruges bl.a. til: <ul style="list-style-type: none"> <li>• projektudvikling</li> <li>• idégenerering</li> <li>• afholdelse af workshops og seminarer</li> <li>• digitale postersessioner</li> <li>• præsenteringslokale/amfiteater</li> <li>• et pædagogisk laboratorium</li> <li>• fredagsbar med mulighed for præsentation af faciliteter og fagfolk</li> </ul> Kom og vær med til en spændende workshop, hvor vi lader os inspirere af Kubens rammer til at generere idéer om fleksible, tidssvarende læringsrum.  <b>Praktisk information</b> <ul style="list-style-type: none"> <li>• Maks. 20 deltagere</li> <li>• 5 min. gang til Kuben - fælles afgang fra Campustorv kl. 10.45 (tilbage kl. 12.15 til frokost)</li> </ul>
P 1-2 (Danish – Teaching Methods) <a href="#">Simulationstræning for 3. års sygeplejestuderende i akut og kompleks sygepleje</a> Anne Frandsen Pernille Kjær Svendsen	
P 1-3 (Danish – Teaching Methods) <a href="#">Experiences with flipped classroom</a> Anders Brandt Christopher Kjær	
P 1-4 (Danish – Teaching Methods) <a href="#">Aktiverende læring i audiologisk praktik</a> Ågot Møller Grøntved	
P 1-5 (Danish – Teaching Methods / Learning Spaces) <a href="#">Jura på deltid – Flipped Classroom og distance læring</a> Lone Hansen Michael Håhr Larsen	

## Parallel Short Communications sessions – AFTERNOON - from 13:00-14:30

<b>Short Communications</b>	<b>Short Communications</b>	<b>Short Communications</b>
<b>Room:</b> O95	<b>Room:</b> O96	<b>Room:</b> O98
<b>Language:</b> English	<b>Language:</b> English	<b>Language:</b> Danish
<b>Chair:</b> Torben Damgård	<b>Chair:</b> Inger-Marie F. Christensen	<b>Chair:</b> Birgitta Wallstedt
SC 5-1 (Learning Spaces): <a href="#">Agora Labs [Open Learning Spaces]: first impressions</a> <i>Rocio Chongtay</i>	SC 6-1 (Teaching Methods): <a href="#">Learning Activities for the Reflexive Designer</a> <i>Kathrina Dankl</i>	SC 7-1 (Teaching Methods): <a href="#">Udvikling af de studerendes dybe læring</a> <i>Hanna Barbara Rasmussen</i>
SC 5-2 (Learning Spaces): <a href="#">The use of virtual laboratories as preparation for and supplement to real laboratory exercises</a> <i>Alexander Treusch</i>	SC 6-2 (Teaching Methods): <a href="#">Portfolio - a short cut to defining own learning objectives</a> <i>Lise Agerbæk</i>	SC 7-2 (Teaching Methods): <a href="#">Kulturformidling I praksis / Cultural Communication in practice</a> <i>Bo Skøtt</i>
SC 5-3 (Learning Spaces): <a href="#">DesignLab in Sønderborg</a> <i>Maria Vanessa aus der Wieschen</i>	SC 6-3 (Teaching Methods): <a href="#">Organizing learning when teaching 200 students. A reflexive design to teaching large groups of students</a> <i>Line Revsbæk</i>	SC 7-3 (Teaching Methods): <a href="#">Problem Based Learning – an undergraduate course in research in molecular biology</a> <i>Katja Dahlgaard</i>
SC 5-4 (Learning Spaces): <a href="#">Learning spaces as ‘perforated tubes’</a> <i>Jesper Piihl</i> <i>Kristin Munksgaard</i>		SC 7-4 (Teaching Methods): <a href="#">New medias – new ways: when students learn mathematics at university level through publishing their own mathematical products</a> <i>Tinne Hof Kjeldsen</i>

## Poster and Workshop sessions – AFTERNOON - from 13:00-14:30

<i>Posters – AFTERNOON session</i>	<i>Workshop – AFTERNOON</i>
<b>Room:</b> O97	<b>Room:</b> See below
<b>Chair:</b> Anne Skov Jensen	<b>Leader:</b> Cita Nørgård
P 2-1 (Danish – Learning Spaces) <a href="#">Studieturens faglige og pædagogiske kvalitet</a> <i>Henrik Juel</i> <i>Sine Carlsen</i>	<b>Theme:</b> "Tour de chambre"  This Tour de Chambre will take you to some of SDU's more untraditional classrooms, that have been developed over the past few years with support from the project Learning Spaces and Teaching Technology. In each classroom we will give a brief presentation of the ideas behind the development, and there will be time for questions.  13:05 – "Harvard Case " room 13:20 – "Kuben" – Reflection and innovation 13:55 – "Oasen" – A modern scientific educational environment. Karin Hjernø will give us a guided tour of the area.  <b>Practicalities:</b> Max. 20 participants Departure at 13:00 from Campustorvet You must be able to walk 1,2 km at a brisk pace. We will return to the conference area at 14:30
P 2-2 (English – Teaching Methods / Target Groups) <a href="#">Using podcasts and blended learning for meeting the needs of students with diverse geographic and educational background</a> <i>Christiane Stock</i>	
P 2-3 (English – Learning Spaces) <a href="#">DevLab – a student driven prototype laboratory at TEK, SDU</a> <i>Søren Jensen</i>	
P 2-4 (English – Learning Spaces) <a href="#">DesUni: University teaching through Design Thinking</a> <i>Pia Storvang</i>	
P 2-5 (English – Teaching Methods) <a href="#">Blended Learning Design – The potentials and pitfalls designing blended learning courses in a professional bachelor context</a> <i>Lise Lau Pedersen</i>	
P 2-6 (English - Evaluation) <a href="#">Assessment Methods and Grading Practices in Higher Education: An Interdisciplinary Experience</a> <i>Jalila Zouhair</i> <i>Farah Obaid (co-author)</i>	

## Abstracts

### SC 1-1: Design af læringsrum – hvorfor og hvordan?

#### *Author*

Rie Troelsen, Associate professor, University of Southern Denmark, Department for the Study of Culture

#### *Focus:*

Learning Spaces

#### **Description of your paper:**

I litteraturen beskrives læring primært ud fra relationer mellem studerende, underviser og indhold (Biggs & Tang, 2007; Marton & Saljö, 1976; Ramsden, 1999; Trigwell, Prosser, & Taylor, 1994) og sjældent som relateret til de fysiske (og/eller virtuelle) omgivelser, hvori læringen foregår. Der er dog gennem de seneste 15 år sket en gradvis ændring; bl.a. arkitekter og universitetspædagoger finder i stigende grad sammenhængen mellem rum og læring interessant (Temple, 2008). Samtidig har tænkningen om læring og undervisning ændret sig til en mere aktiv og studentercentreret tilgang. Undervisningen foregår imidlertid i lokaler, som er designmæssige svar på en forældet lærerstyret og informationsoverførende tænkning om læring og undervisning.

Fokus i dette oplæg vil ligge på nationale og internationale erfaringer med at designe fremtidens læringsrum, som bedst muligt understøtter aktiv læring og aktiverende undervisning. Jeg vil gruppere erfaringerne som

- i. Det fleksible rum (både hjul på bordene og samtænkning af fysisk og virtuelt rum), som svar på behovet for variation i undervisningsformer og læringsmål
- ii. Det inkluderende rum (døgnåbent, mulighed for differentiering, ejerskab), som svar på de studerendes forskellige læringsstile og -forudsætninger
- iii. Det brugerinddragende rum (dvs. brugere af rummet skal være med i designprocessen), som svar på den øgede bevidsthed hos både undervisere og studerende om rummets betydning for læringsprocessen

Konkrete eksempler på fremtidens læringsrum og begrundelserne for deres udformning vil være væsentlige elementer i oplægget.

#### **Reflective description of how this can be inspirational/transferable to others (subjects, students, institutions,...)**

Erfaringerne med på hvilken måde fremtidens læringsrum kan indrettes, kan naturligvis anvendes i situationer, hvor læringsrum skal indrettes på ny. Erfaringerne kan dog også give anledning til at blive opmærksom på, hvordan eksisterende læringsrum påvirker opfattelsen af hvilken undervisning, der kan finde sted – og hvordan man evt. kan gøre mindre ændringer i eksisterende rum, så den ønskede undervisningstilgang i højere grad understøttes.

## SC 1-2: Social Technology Lab – a learning space that motivates innovation

### *Author*

Jacob Nielsen, Associate professor, University of Southern Denmark, Maersk Mc-Kinney Moller Institute, Lasse Juel Larsen, PhD, mag. Art, University of Southern Denmark, Department for the Study of Culture

### *Focus*

Teaching Methods / Learning Spaces

#### **Learning outcome of activity:**

With Social Technology Lab we want to create a space that inspires and motivates innovation, so that the learning that takes place is centered on objects and technologies to think with.

Within the design and development process the students found inspiration in our robot construction kits, MOSS, Little Bits, Lego, Our Arduino Library and our standard set of paper prototyping tools. At the end of the teaching activity, the students demonstrated fully implemented prototype robots consisting of Lego parts, Arduino components and a game platform created from paper prototyping parts. With the examination of their project, the students demonstrated insight superseding the individual modules used in the built prototypes.

#### **Description of your teaching activity:**

In Social Technology Lab we are focusing on interdisciplinary collaboration in order to do user-centered design and development of technologies. Our students engage in projects related to themes such as e.g. computer games, technologies that motivate physical or rehabilitative activities or technologies related to learning or play in general. We create a library of technologies, tools and materials and encourage students to use these as an inspirational platform that they can experiment with. Through this hands-on experimentation they both find inspiration for new ideas as well as create a common understanding and language of the design and development activity in which they are about to engage. This constructionist approach is heavily inspired by e.g. Seymour Papert. The concrete activity from which we gained our first experience is a project where the students built a multi-agent system of robots that had to engage in a pass-the-bomb game as a dynamic between designing hardware robot design together with programming robot functionality.

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

Our activities and methodologies are broadly applicable to support all kinds of development processes involving design and development of physical products. It is our belief that a physical and tangible inspirational catalogue of different physical objects to think can and with will support innovative processes in general.

## SC 1-3: Brug af video og peer-feedback i færdighedstræningen på Klinisk Biomekanik - hvad har de studerende lært?

### Author

Henrik Hein Lauridsen, Associate professor, University of Southern Denmark, Department of Sports Science and Clinical Biomechanics

Rie Castella Toftgaard, Research assistant, University of Southern Denmark, Department of Sports Science and Clinical Biomechanics

Cita Nørgård, Pedagogical Consultant, University of Southern Denmark, Centre for Teaching and Learning

### Focus

Teaching Methods / Learning Spaces

#### Learning outcome of activity:

Formålet med brug af video og peer-feedback i færdighedstræningen var at:

- Udvikle nye didaktiske undervisningsmetoder ved undervisning i færdighedstræning
- Fremme synkron og asynkron feedback på de studerendes færdighedstræning
- Facilitere de studerendes studieaktiviteter *før, under og efter* undervisningen
- Styrke 'just-in-time' instruktioner til de studerendes individuelle behov
- Udnytte lærerressourcerne i tilstedeværelsestimerne mere hensigtsmæssigt

#### Description of your teaching activity:

Brug af video og peer-feedback blev implementeret i færdighedstræningen på to fag i foråret 2015. Før undervisningen blev der produceret et antal undervisningsvideoer med demonstration af anatomiske landemærker eller kiropraktiske teknikker. De studerendes forberedelse til undervisningen var at se en eller flere undervisningsvideoer. I undervisningen blev de studerende inddelt i grupper af 8 med en underviser tilknyttet hver gruppe samt en storskærm. Instruktionsvideoerne blev afspillet således, at de studerende 2 og 2 kunne udføre instruktionerne *real-time* på en medstuderende og samtidig få feedback fra den tilknyttede underviser. Instruktoren har ansvaret for hver 8 studerende – altså 4 grupper af 2 studerende. Specialtilfælde af en klinisk tilstand blandt de studerende eller variationer på specifikke teknikker blev vist og diskuteret ved at lave *live streaming* til storskærmene undervejs i lektionen. Mellem lektionerne fik de studerende hjemmeopgaver med dels at videofilme en specifik færdighed og uploade den til MediaSDU og dels at give specifik feedback til andre medstuderende på de uploadede demonstrationsvideoer. Individuel specifik feedback fra underviserne blev givet på videoer produceret som hjemmeopgaver samt videoer produceret til den formative evaluering (supervision).

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

Fagene blev efterfølgende evalueret med et elektronisk spørgeskema udviklet til at evaluere brug af video og peer-feedback i undervisningen. Resultaterne af evalueringerne samt underviserens egne erfaringer med brug af video og peer-feedback vil blive præsenteret og diskuteret. Oplægget er direkte eksemplarisk for færdighedstræning i f.eks. andre medicinske og naturvidenskabelige discipliner, og elementer af både det didaktiske og det tekniske set-up kan være eksemplarisk for visse humanistiske fag f.eks. i forhold til skrivekompetencer og sprogfærdigheder.

## SC 1-4: Let's Co! Samskabelse som aktiv læring for sygeplejestuderende

### *Author*

Line Zimmer Rasmussen, cand.cur., PhD student, UC Lillebælt/University of Southern Denmark, Sygeplejerskeuddannelsen i Svendborg/Institut for Sundhedstjenesteforskning, Enheden for brugerperspektiver

### *Focus*

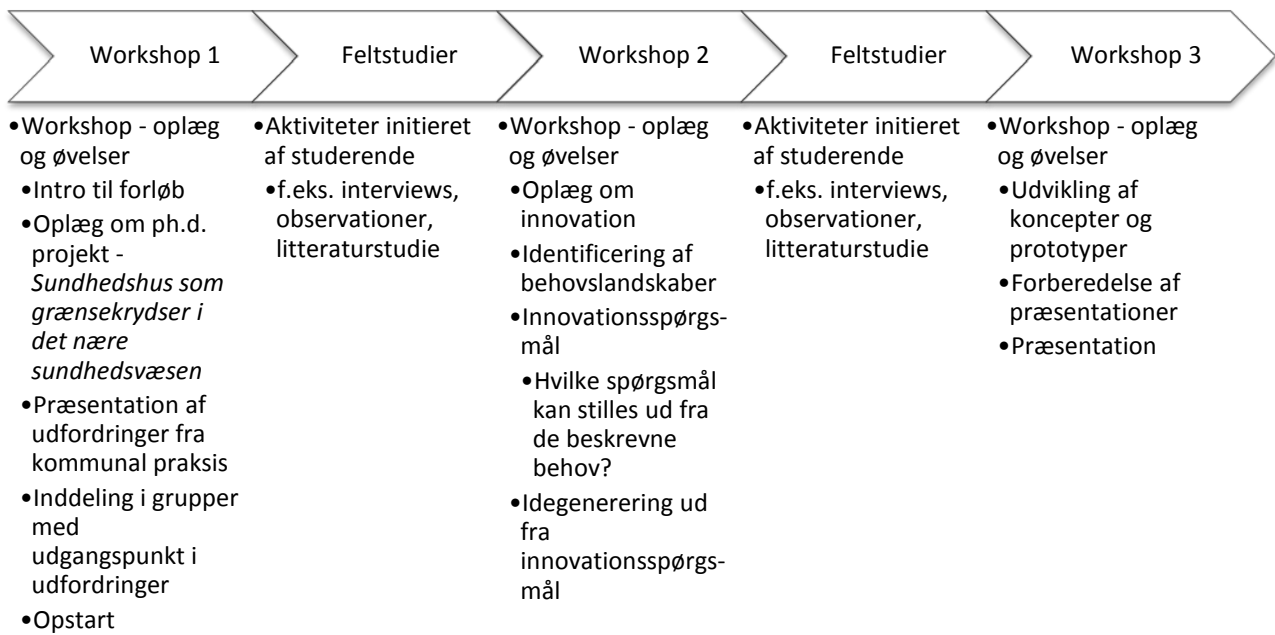
Teaching Methods

### **Learning outcome of activity:**

Et omdrejningspunkt i University College Lillebælts Strategi 2020 er øget fokus på udvikling af nye professionelle roller i ny velfærd. Det fordrer, at dimittender fra UCL er i stand til at samskabe løsninger til gavn for den enkelte borger og for udviklingen af velfærdssamfundet. Som en del af mit ph.d. projekt i et samarbejde mellem SDU, UCL og Langeland kommune har sygeplejestuderende et undervisningsforløb, hvor der gennem co-creation/samskabelse sættes fokus på serviceydelser på tværs af sundheds- og arbejdsmarkedsindsatser i relation til borgere i ressourceforløb. Forløbene fordrer en sammenhængende og tværfaglig indsats grundet borgernes komplekse problemstillinger. Samskabelse bygger på ideen om, at gensidigt afhængige aktører, som mødes i horisontale arenaer, kan løse problemer sammen, som ikke kan løses af dem enkeltvis. Dermed relaterer undervisningen sig til Sygeplejerskeuddannelsens tværprofessionelle modul, som retter sig mod professioners forskelligartede bidrag til at fremme kvalitet, kontinuitet og tværfagligt samarbejde.

### **Description of your teaching activity:**

Undervisningsforløbet er bygget op omkring tre workshops. De afholdes i Sundhedshus Langeland og på Sygeplejerskeuddannelsen i Svendborg. Mellem workshops er der dage til feltstudier, hvorefter ny viden sættes i spil på workshops. Der veksles mellem korte oplæg og øvelser, hvor de studerende sammen med borgere og aktører fra Sundhedshuset skaber bud på løsninger. Som underviser handler det primært om at sætte rammerne samt facilitere processerne undervejs: (se oversigt på næste side)



### **Reflective description of experiences with activity as to how your practice can be inspirational/transferable to others**

Forløbet giver et bud på, hvordan fokus samt samarbejde i ph.d. projekter giver anledning til inddragelse af studerende i en praksisnær kontekst, hvor undervisning understøtter strategier på organisatorisk niveau samt konkrete læringsmål på uddannelsesniveau. De studerende engageres aktivt i egen læring i mødet med borgere og aktører og de udfordres på at trække viden ud af deres faglige forankring og anvende den i andre sammenhænge. Det giver anledning til refleksion over egen og andres profession i mødet med borgere.



## SC 2-1: Tangible Literature Review - A collaborative student/researcher learning activity

### *Author*

Louise Buch Løgstrup, Assistant professor, University of Southern Denmark, Mads Clausen Institute

### *Focus*

Teaching Methods

### **Introduction**

In the spring semester 2015 I taught a course called: Apprenticeship. It is a course at the master education in IT Product Design. The idea behind the course is to involve students in research activities based on the students' preferences according to professor and subject matter. I had a group of two students following me, which gave me the opportunity to experiment with new ways of learning. One of the challenges that this group of master students have is that they lack theoretical references and habits of reading. They might be able to discuss based on theory but the element of the literature review process is often insufficient for the level we as academic educators at the Institute wish for. It made me think of the educational quality that might lie in making something very literate (and therefore potentially scary for specifically these type of students) into something 1) collaborative and 2) tangible. The value of collaboration and tangibility in relation to learning is one aspect, which I am occupied with in my academic research and have experienced as a powerful way of learning.

### **Description of activity**

We met four times where we presented the theory to each other and mapped in in a collaborative map in the process of presenting. During this exercise the students were asking me questions if there was something they did not understand, and sometimes I knew the answer and sometimes I had to read their appointed article to know how to answer them. We did this exercise two times. The sessions were long because it took a lot of time to go through the literature (4-7 hours). The next literature review exercise was to make a tangible map out of the written map, where we placed our specific interests according to the literature and also where we mapped tangible how design and anthropology could contribute to a policy process. The method that I use when I experiment with different learning methods is action research.

### **Intended learning outcome of activity**

The value of this experience is that because I only had two students I was able to experiment without the risk of 'loosing' the students in the process. In this sense this way of teaching literature review can be seen as a pilot study for others to be inspired by or as something it would make sense for me to execute in a context with a bigger amount of students. In a bigger class of students this activity could be made in study groups. Also it could be an alternative way of learning academic writing. It might even be made into a more standardised tool to learn to make a literature review.

## SC 2-2: Computerøvelser under forelæsninger i statistikkurser på Sundhedsvidenskab

### *Author*

Søren Möller, Assistant professor, University of Southern Denmark, IST - EBB/Epidemiology, Biostatistics and Biodemography

### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

Vi tilstræber at de studerende i højere udstrækning end tidligere kan opfylde kursets læringsmål "Modulet kvalificerer de studerende til at kunne anvende relevant software til analyse af data fra simple designs" og samtidigt øger alignment mellem forelæsninger og dette mål.

#### **Description of your teaching activity:**

I et statistik- og epidemiologikursus på den sundhedsfaglige kandidatuddannelse har vi, modsat tidligere år, i foråret 2015 bedt de studerende om at medbringe deres egne computere til forelæsningerne i statistik.

Under forelæsningerne er de studerende, ved mange eksempler, blevet opfordret til selv at afprøve eksemplerne i den statistiske software STATA. Efter nogle minutters selvstændigt arbejde, blev eksemplet diskuteret i plenum. Her blev ikke kun den statistiske fortolkning af resultaterne, men også den mere praktiske fortolkning af softwarens output diskuteret. I løbet af den tid, de studerende fik til selv at afprøve eksemplerne, prøvede forelæseren at hjælpe med praktiske problemer der opstod undervejs.

De studerende har udover dette, ligesom i tidligere år, haft specifikke øvelser i den statistiske software.

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

Formålet med aktiviteten var et ønske om, på den ene side at øge sammenhængen mellem de teoretiske og praktiske aspekter af kurset og på den anden side yderligere at træne de studerende i brugen af den statistiske software. Vores erfaringer siger at mange af de studerende ikke tidligere har brugt kommandobaseret software. Mens vi har opnået en stærkere sammenhæng mellem de praktiske og teoretiske aspekter i kurset, har afstemningen af computerøvelserne i forelæsningerne og i de specialiserede øvelsestimer været for løs. Desuden mangler eksamensformen i kurset at blive bedre afstemt med de praktiske dele af kurset, da der på nuværende tidspunkt kun kræves fortolkning af output fra, men ikke selvstændig anvendelse af statistisk software. Computerøvelser i forelæsningen vil også være relevant i andre kurser, der kombinerer praktiske beregninger med teoretiske emner. Dog er computerøvelser bedst egnet til undervisning på relativt små hold.

## SC 2-3: Aktivering af opgaveskrivere i undervisnings- og vejledningsforløb

### *Author*

Hanne Nexø Jensen, Associate professor, University of Copenhagen, Department of Political Science

### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

Studerende, der skal skrive en længere skriftlig opgave (med selvvalgt problemstilling) modtager ofte individuel vejledning. Jeg sætter fokus på, hvordan flere individuelle bachelorprojektskrivere, specialeskrivere eller syv masterafhandlingsskrivere kan blive vejledt i en klynge (evt. på et hold), hvor de bliver aktiveret og får skrevet på deres opgave. Dvs. at læringsmålet er, at de får viden om og værktøjer til at skrive en universitetsopgave. Det sker bl.a. ved, at de via øvelser får skrevet videre på deres opgave og samtidig får indblik i, hvordan fx et teorikapitel eller et spørgeskema kan udformes, en konklusion forfattes osv. Læringsmålene bliver derudover tilpasset det konkrete fag.

#### **Description of your teaching activity:**

I mine undervisnings- og vejledningsforløb bliver fx bachelorprojektskrivere inddelt i klynger med 2-7 studerende i hver. Jeg holder oplæg om relevante emner, fx metode, teorikapiteludformning, analyse osv. Feedback på skriftlige oplæg er et væsentligt omdrejningspunkt, og den får og giver de studerende til hinanden i klyngen, hvor jeg også deltager. *Derudover* indlægger jeg aktiverende øvelser, der sigter på, at de studerende får skrevet udkast til udvalgte dele af deres opgave i undervisningen/ til vejledningen. Af eksempler kan nævnes: udfyldning af pentagonen på baggrund af hurtigskrivning, øvelser til at skærpe problemformuleringen, brug af tjekliste til at skrive udkast til metodekapitel, prøveinterview af medstuderende og skrivning af udkast til konklusion.

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

Aktivering af opgaveskrivere i forbindelse med undervisning og vejledning er generisk. De enkelte aktiveringsøvelser skal tilpasses de studerendes niveau, fag, opgaveformat osv., men eksemplerne burde kunne inspirere alle uanset fag og niveau.

## SC 2-4: Rammer for vejledning

### *Author*

Vitus Vestergaard, Assistant professor, University of Southern Denmark, Department for the Study of Culture

### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

Målet er mere effektiv vejledning i projekt-, BA- og specialeforløb gennem brugen af dokumenter, som synliggør vejlederens praksis. Synliggørelsen kan bruges i forventningsafstemning mellem den studerende og vejleder, allerede inden vejledningen begynder. For den studerende medfører de klarere rammer, at der bruges mindre vejledningstid på at planlægge vejledningen, samt at risikoen for misforståelser mindskes. For vejlederen betyder det, at det bliver lettere at genbruge vellykkede dele af praksis og revidere mindre vellykkede dele, ligesom det bliver lettere at sammenligne og drøfte praksis med kolleger.

#### **Description of your teaching activity:**

Rammesætningen af vejledningsforløb er typisk meget vag i modsætning til kursusforløb, hvor man har studieordninger, semesterplaner, midtvejs- og slutevalueringer etcetera.

Baseret på data fra min egen vejledningspraksis (spørgeskemaer og observation), samt litteratur om vejledning, har jeg indført en praksis, som bygger på brugen af to rammedokumenter: Vejlederbrev og vejledermemo. Vejlederbrevet forklarer kort vejlederens syn på eksempelvis formatet for møder, tekstvejledning og brugen af e-mail og Skype i vejledning. Vejledermemoet er en intern "huskeliste" til vejlederen selv, som f.eks. rummer forløbsstrukturer og uddrag af studieordninger. Begge dele er levende dokumenter, som kan revideres i takt med at man får nye erfaringer og input. Min model for vejledningsforløb integrerer evaluering af forløbet, og meningen er, at resultatet af evalueringerne skal give anledning til løbende justering af hhv. vejlederbrev og vejledermemo.

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

Denne model for rammesætning af vejledningsforløb egner sig til både projekt-, BA- og specialeforløb. Den enkelte vejleder udformer dokumenterne individuelt, og der kan tages hensyn til de praktiske eller faglige omstændigheder, som måtte vedrøre en specifik disciplin, vejleder eller institution. Det er således en meget fleksibel og generel model.

Modellen er mindre relevant i meget lange forløb, såsom ph.d.-vejledningsforløb, eller i våde fag, hvor der er et meget tæt samarbejde mellem studerende og vejleder.

## SC 3-1: Teaching Practical Aesthetics

### *Author*

Richard Herriott, Assistant professor, Design School Kolding, Industrial Design

### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

To make students aware of the cognitive and physical aspects of form giving; to attune their senses to what constitutes a high level of aesthetic refinement in industrial designed objects. The students will learn to see past their natural tendency to “correct” for deviations from good line quality and to see what is actually on the page or in space. The students gain a vocabulary for concepts and thus are equipped to identify high-quality forms and to identify faults in forms’ expression. It makes students aware of how a semantic approach to aesthetics can provide a useful, practical tool box for approaching form giving.

#### **Description of your teaching activity:**

It uses lectures, discussions and role plays to raise awareness of the formal qualities of objects; model making and flexible-tape drawings link the abstract notions of form and line to motor skills and visual awareness. The role play takes the form of a host/interview subject situation. In one format, the lecturer takes the role of the host and the student the guest. They are asked to discuss the item they have selected as an example of good or bad design. They have brought the object with them. The advantage of this format is that it is informal, rapid and entertaining rather than using an “academic” mode of discussion. This allows the students to feel at ease about talking about something they know a little about. Psychologically, the student is relating to the lecturer and not to the class directly. This reduces the sense that a very formal and “correct” mode of discourse is required. In a variant, the students alternate the role of host and guest. Student 1 starts as host and student 2 as guest. Then student 2 takes the role of host and student 3 replaces student 1; this is repeated until the entire class has both asked questions and defended their choices. The role plays allow a well-paced forum to discuss good and bad design; it gives the students a means to internalize design expertise and allows a two-way discussion between the class and the tutor or peer to peer.

The foam modelling and flexible tape drawings then allow students to create forms and to self-critique them while also showing a link between the visual and the kinesthetic. In particular, the two-dimensional tape drawings make very clear the variation in curvature across large spans. This can then be used by analogy in three-dimensions in the foam modelling. Key to this is showing how the student can see past what they think is a correct form and see what is actually there on the page or in space.

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

The teaching method uses a variety of formats to help learning. Students have an active involvement in the discussion; it shows teaching methods which combine abstract ideas of formgiving with practical crafts

skills so that abstract and practical ideas are linked. The students get a first hand understanding of what makes a professionally resolved design object distinctively, qualitatively different.

The 2-D and 3D dimensional modelling can be used for students of industrial design, engineering, fine arts and aesthetics. In all three areas it is necessary to have an understanding of form. For students of engineering who will work with product designers or take on this role in a limited capacity, it is helpful to gain an insight into a matter often viewed as “subjective”. Classically, engineers underestimate the value of form and this class can address that attitude. For students of aesthetics, the class forms a bridge from the theoretical to the sensory and links abstract concepts of line and form to tangible, material exercises.

## SC 3-2: Speech-line - a method for teaching oral presentation

### *Author*

Henrik Juel, PhD, Associate professor, Roskilde University Centre, Communication, CBIT

### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

The Speech-line method aims at improving the active rhetorical skills of students, i.e. their ability to present academic subjects in a clear and convincing manner. This is relevant not only for everyday classroom work, but also for oral exams, for presenting research projects, and for addressing colleagues at conferences - as well as for job-interviews and for pitching professional ideas.

#### **Description of your teaching activity:**

The students develop their speaking skills through direct *actio* exercises without the detour of writing. To be specific: two lines of students stand on the floor. Each one in line A gives a short draft version of their individual idea/speech to a partner in line B. The line B students then retell what they heard and add suggestions to their partner in line A - and vice versa. Then the lines move, so that each participant gets a new partner. The short speeches are repeated in improved versions and the feedback process and development continues. The instructor adds new elements and challenges from the toolbox of rhetorical skills (e.g. a specific example, a metaphor, a counter-argument). Through these *actio* exercises the participants learn how to overcome nervousness and awkwardness at the same time as they acquire a variety of rhetorical tools enabling them to clarify their points and their communication with an audience.

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

Mastering oral communication is important - also in the age of digital online media - and a prerequisite for democratic citizenship and participation. Teaching speech as a critical and productive competence should in my opinion be taught and practiced more efficiently and in its own right at all levels of education. The Speech-line method is based on a phenomenological approach to language, knowledge, and communication ensuring an efficient way of teaching oral presentation. The method has been thoroughly tested and evaluated (bachelor, master, and Ph.D.-level, Roskilde University 2010-15); further documentation is in print (Juel, *proceedings* NKRF Lund 2014).

### SC 3-3: ICT-mediated role play

#### *Author*

Nina Bonderup Dohn, Associate professor, University of Southern Denmark, Department of Design and Communication

#### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

General outcome: Deeper, more reflected understanding of a given position and its relation to other positions. 'Position' can be theoretical, socio-cultural, organizational etc. depending on type of role play

#### **Description of your teaching activity:**

The basic setup is a script for discussion in an asynchronous discussion forum with different discussion roles assigned to the students (alone or in groups), with an explication of

- *when* they have to submit a post
- *who* they should reply to
- with *what* focus, attitude or motivation

Students typically submit two or three posts over a period of 3-5 days.

I use several types of role play, e.g.:

- A. *Rhetoric roles*: Class divided into groups of 6-8. Students read a text. Groups subdivided into two subgroups: "Pro text" and "Against text". Subgroups have to find viable arguments for their position against the other subgroup's arguments.
- B. *Theoretical roles*: The students are presented with a case, described in a text or shown in a video. A theoretical position from the course (e.g. 'behaviorist', 'cognitivist', 'socio-culturalist') is assigned to each student. They then have to evaluate the case from the assigned theoretical perspective
- C. *Social/organizational/job/societal roles*: Students are presented with a case and assigned a role e.g. as employer, manager, employee in production line, etc. They have to discuss or play out the case from their role.

I often combine B and C so some students have organizational roles and some have theoretical roles to concretize the case's possibilities and challenges.

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

The advantage of asynchronous ICT-settings is that students have time to think about their response. Role play activities can be used in any course where students need to engage with different theoretical positions and/or need to consider humanistic, social or organizational aspects of a case scenario or theoretical recommendation. It can be used in any class size, provided students are split into smaller groups, perhaps with different cases/texts. It is not necessary that the teacher read all posts from all students.



## SC 3-4: Stimulating job-market desired characteristics in students

### *Author*

Karol Jan Borowiecki, Associate professor, University of Southern Denmark, Department of Business and Economics

### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

The conducted experiments simulate real-work environments and stimulate the development of characteristics desired by the labor markets (i.e., presentations in (small) groups, problem-solving under time pressure and creativity).

#### **Description of your teaching activity:**

First, group presentations of exercise solutions in tutorials – this was extremely successful and students were even complaining that the presentations finished once all have presented once. Second, “quick exercises” that were to be solved in tutorials without preparation time, under some time pressure. Third, a creative exercise, where students had to design their own exercise, building on material discussed in class (this was part of a compulsory assignment). The exercises and methods can be applied in a variety of teaching environments and various contexts. I think it is more about the lecturer’s realization whether he/she wants to target (or not) qualities of students that are desired by potential employers.

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

It is a recurring subject in the media that university education does not sometimes stimulate job-market required skills and abilities. The conducted activity here stimulates these requirements. Furthermore, students’ involvement in this activity, in my experience, increased also their motivation for the subject and made the learning process more interesting. The trained skills (working under time pressure, presentation skills and creativity) are demanded by a variety of employers, not only within business and economics, hence the activity may be found of interest also by teachers in other fields. It is transferable to other domains, albeit one needs obviously to adjust appropriately the nature of the conducted exercises.

## SC 4-1: Bringing feedback in from the outback via a generic and preference-sensitive instrument for course quality assessment: MyCourseQuality [1]

### *Authors*

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Jesper Bo Nielsen, University of Southern Denmark, Public Health  
Glenn Salkeld, University of Sydney, Public Health  
Jo Lander, University of Sydney, Public Health  
Jack Dowie, LSHMT, London, UK, Public Health & Policy

### *Focus*

Evaluation

#### **Learning outcome of activity:**

Cognitive and reflective benefits from student participation in a Multi-Criteria dually-personalised self-assessment exercise.

#### **Description of your teaching activity:**

The dually-personalised course assessment instrument (MyCourseQuality) forms a Student Reported Outcome Measure for formative and summative use. It is integrated in the course rather than being a marginal, terminal, and optional add-on as 'feedback'.

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

The instrument is generic and independent of course topic, setting, or duration. Dissatisfaction with standard forms of student feedback in teaching led to MyCourseQuality (MCQ). MCQ is an e-instrument where respondents enter their importance Weight on 10 course criteria (Content, Organisation, Perspective, Presentations, Materials, Relevance, Workload, Support, Interactivity, Assessment) before the course, and their Ratings on the same criteria at the end of the course. Their Ratings and Weightings (both on a 0-100% scale) are combined in an expected-value calculation to arrive at a dually-personalised and decomposable MCQ score. Completion of MCQ contributes 10% of the course marks. For ethical reasons, the students receive their marks for all other assignments and hence are able to predict their course grade with certainty before doing their Ratings.

The student benefits from personalised breakdown of their MyCourseQuality score for their future course selection as well as benefitting during the current course from reflection on their criteria Weightings. The MCQ results will be compared with the standard feedback questionnaire to be subsequently completed (anonymously) by the same students. MCQ is being piloted in the seven week e-course Translational Health at the University of Sydney. Thirty-three students have entered their Weightings, and their Ratings and MCQ scores will be available late September 2015. We present the summary results from this pilot.

[1] *JMIR Research Protocols*, 4(1), e15. 2015.

## SC 4-2: The Role of Self-regulation on Students' Learning in an Undergraduate Flipped Calculus Course

### *Authors*

Zhiru Sun, Doctoral Candidate, The Ohio State University, Education Studies

Kui Xie, Associate Professor, The Ohio State University, Education Studies

### *Focus*

Evaluation

#### **Learning outcome of activity:**

The traditional lecturing model of the calculus course has been continuously criticized for some of its limitations, including the impossibility to accommodate students' different learning characteristics and knowledge backgrounds, the limited interaction between instructors and students, and the difficulty for students to see and hear in the back of a large lecture hall. To solve these limitations, the flipped model was proposed and practiced in this course. Based on the review of the flipped classroom literature, it is assumed that flipped learning requires students' high degree of self-regulation to study the content prior to class and be prepared for the in-class learning activities. Therefore, this evaluation study investigated the relationship between students' self-regulation and their academic achievement.

#### **Description of your teaching activity:**

Two major teaching activities are practiced in the flipped course, including 1) designing and delivering online content for the pre-class learning; and 2) developing and facilitating group-based activities for the in-class learning. As for the pre-class learning, the instructor develops and assembles relevant learning resources (e.g. lecture videos, textbook chapters, exams etc.), creates a site for the course in a learning management system (e.g. blackboard), uploads the learning content to the site, and shares the site with students who enroll in the course. As for the in-class learning, the instructor develops the group work projects based on the pre-class online learning content, organizes students in different groups to work on the projects, checks students' learning process, and provides immediate feedback to students while they meeting challenges.

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

This research study showed that there was a strong positive relationship between students' self-regulation and their achievement. Specifically, three major implications are concluded from this study: first, pre-class learning matters to their in-class engagement; second, students need the confidence of learning math to succeed in the course; and last, students who are more skilled to seek help from the instructor and tutor are more likely to succeed in the course. These implications suggest that the instructor should integrate design strategies to support students' pre-class online learning, their learning confidence and skills in order to help them succeed in the flipped math course.

## SC 4-3: An Online Approach to Testing

### *Author*

Jarl Tuxen, Lecturer, Copenhagen School of Design and Technology, Digital/Software Development

### *Focus*

Evaluation

#### **Learning outcome of activity:**

To improve long-term memory of the syllabus, testing is used in class. In previous courses multiple choice tests were used in the class. That limited the test activities to those seated in class sessions.

With the introduction of the online tool PeerWise, the students to some degree use the system continuously, which is beneficial for long-term memory. This is an improvement to the previous setup with test activity limited to the class. Furthermore some of the students are actively using the tool when preparing for exams by using the tool for re-testing as part of the exam review.

The students not only answer the questions but they also formulate their own questions. This helps the students to get a more profound understanding of the subject they create questions on. To be able to pose a question the students must first do an abstract conceptualization, and the active experiment with the acquired knowledge to formulate the question, and thus get feedback on their conceptualization.

#### **Description of your teaching activity:**

In this abstract, I describe a learning experiment done in the PBA Software Development courses. Instead of in-class multiple choice tests on paper, the students used an online tool called PeerWise. In PeerWise, the students create assessment questions and explanations based on the course syllabus. They also answer and discuss questions from their peers.

The students were introduced to PeerWise, the reasoning behind the use, and how to make good questions.

A small activity requirement was put on the students. It was evenly distributed over the course period to promote continuous usage.

To help kick-start the use, a few questions were seeded in the beginning.

The usage was monitored and irrelevant questions were removed. It was chosen not to moderate the student activity.

No grading was done on the activity – only pass/no pass based on participation.

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

The learning setup promoted a more continuous testing than what was achieved by in class multiple-choice tests. Research suggests that this increases learning, which will need further investigation to confirm.

Online Multiple Choice Tests are well suited for learning goals of the category Knowledge. For very simple examples it can be applied to the category skills as well. This is not a shortcoming of the used tool, but rather a general characteristic of multiple-choice tests. Thus the tool should be seen as a supplement to other learning activities.

PeerWise offers means for improving quality of the questions. Indeed the quality of questions is in some cases low. Even though some students give feedback, others do not work to improve quality, but rather pass with the least possible effort. How to ensure good quality of questions is part of the on going investigation.

## SC 4-4: Learning from history: Activating teaching methods from 40 years of experience

### *Author*

Bjarne Toft, Associate professor, University of Southern Denmark, Department of Mathematics and Computer Science

### *Focus*

Evaluation

Forty years ago students were less disturbed in teaching situations than they are now, where they simultaneously have to keep track of what goes on in class and on their computers, tablets and phones.

Having taught at SDU for more than 40 years I shall present four snapshots, making the point that active learning has been around all the time under different names and conditions:

1. Teaching in 1974 – no electronic devices or resources were available then, so students showed up for lectures and were more focused on the teacher's presentation since this was the main source of information (although mostly one way) – the pedagogical buzzword then was “adfærdstermer” (instructional terms)
2. The Moore method in mathematics was and is a way to activate students in a research oriented direction (dating back to at least 1920) – I experienced it in Canada in 1973 and later tried it in Odense in the mid 1990'ies ,
3. Active learning became an issue already in 1998, where I was member of a group, led by Peter Dahler-Larsen, writing a 17 page report (“Activating forms of teaching”) with simple ideas for active learning, and
4. Teaching now – where active learning is needed more than ever – I have experienced classes where students very actively use their computers and mobile phones, including earphones, during whole lectures.

How do you tackle situations like that?

## SC 5-1: Agora Labs [Open Learning Spaces]: First impressions

### *Author*

Rocio Chongtay, Assistant professor, University of Southern Denmark, Department of Design and Communication

### *Focus*

Learning Spaces

The Agora Labs are visible open learning spaces at SDU campus Kolding, which are equipped with cutting-edge technology such as brain computer interfaces, hand gestures trackers, eye trackers, full body trackers, Immerse Virtual Reality headsets, etc. The main goal of these learning open spaces is to ease students' participation in engaging learning experiences and to promote their creativity.

### **Learning outcome of activity:**

The Agora Labs didactic considerations are based on the flexibility of the open learning spaces and their variety of equipment, where different models of instruction can be applied, e.g. "Active Learning", "Collaborative Learning", etc.

The learning outcome depends on the model of instruction; here I present as a use case a semester project (2<sup>nd</sup> Semester Cand. IT in Web Communication):

1. Students learn to actively engage in problem oriented work, including: establishing a problem formulation, select the relevant study field theories, literature and methods and take a critical and analytical position.
2. In the specific use case, a student used the Brain Computer Interface to explore its use in the assessment of a "Multimedia Learning Design", to evaluate how people concentration levels change if they review a topic using Text-Video material or if they use Video-Text material. In this use case the student learnt that the design of the learning setting is crucial to the outcome.

### **Description of your teaching activity:**

The Agora Labs are newly established and were not available before last semester started, except from a brain controlled tower During July and August 2015 demo-cases will be prepared to be presented to teachers and students so they can learn their potential use in their courses or personal projects.

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

During the setting up of the Agora Labs, there have been many curious and enthusiastic students and teachers trying the equipment and asking when they can make use of the Labs. Given the expressed interest I could imagine that once in use, these spaces can inspire more students and teacher from SDU and other institutions.

## SC 5-2: The use of virtual laboratories as preparation for and supplement to real laboratory exercises

### *Authors*

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### *Focus*

Learning Spaces

Virtual laboratories give students the possibility to train experimental methods and analytical workflows that would be too costly or time-consuming in a real teaching laboratory setting. We will report on findings from a study in which two courses used the virtual laboratory programme Labster as a supplement to laboratory exercises. The aim was to intensify the pre-laboratory preparation and have the students on a similar level of knowledge when entering the laboratory.

**Learning outcome of activity and description of your teaching activity:** When Labster was used in preparation of the laboratory exercises, the students' self-efficacy beliefs about laboratory exercises increased. Significant increases were also observed in the confidence to conduct the used methods and in how comfortable the students felt to operate apparatuses. The students felt better prepared for the practical parts of the laboratory work. Further, the students' attitudes towards Labster were evaluated and generally they displayed a broad range of stances.

Labster was used in two mandatory courses at SDU in the spring of 2014 as a supplement to the laboratory exercises. Course 1 is taken by pharmacy students that are taught the main principles of human toxicology and analytical techniques. The course takes upon itself to familiarise the students with laboratory work and technical equipment. Course 2 is for biology students and introduces the students to basic concepts in microbiology and microbiological techniques. The specific learning goals that are supported by Labster are the ability to understand both general theories within the fields and specific experimental methods as well as manipulating equipment and assess laboratory results. The students completed the Labster cases as homework and thus at their own pace and at a time of their choice. Completing the cases was mandatory prior to entering the laboratory in one and prior to the written exam in the other course.

### **Reflective description of experiences with activity as to how your practice can be inspirational/transferable to others:**

The results indicate that virtual laboratories can be used as a mean to increase pre-laboratory preparation in experimental courses. Having completed the relevant experiments virtually might be a way to reduce the cognitive load associated with laboratory work in courses, and thereby improve the conditions for understanding the subject matter. In courses where time and cost restrictions prohibit hands-on experiences, one could speculate whether conducting virtual experiments would give a better learning outcome than only teaching the theory. Our results may be transferred to (experimental) courses at all levels in the educational system.



## SC 5-3: DesignLab in Sønderborg

### *Authors*

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### *Focus*

Learning Spaces

#### **Learning outcome of activity:**

Our students wish to be able to collaborate with companies in the region for their projects, but the companies expect our communication design students to be competent users of professional video-recording/-editing and graphic design software. However, since these students were not able to learn and use the right software as part of their curriculum, collaborations were very difficult. The DesignLab in Sønderborg gives our students a space to acquire professional skills through active learning of how to use design-related technology, such as the Adobe Creative Suite. Courses are taught by design professionals. Our students learn to use the software by solving real design problems of real companies from the region.

#### **Description of your teaching activity:**

In the first semester the project offers open lessons in which experts in video-recording/-editing and graphic design help the students get started with their projects and teach them basic and advanced functions – depending on the individual student's needs. Towards the end of the semester, some of the students will be given the opportunity to facilitate advanced skills to their fellow students. After the first semester we expect the students to have created a learning environment in which they can do group work. Lecturers are asked to encourage their students to make use of the DesignLab by giving students relevant tasks. For example, Kerstin Fischer arranged an interdisciplinary collaboration with the Univ. of Helsinki: our communication design students and the video-education students in Finland are going to create and exchange videos about their semester projects.

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

The Lab is mainly to be used by the students for their project work, but can also be used for teaching if the teaching allows for group work or its learning outcomes are learning a practical skill. The Lab is a learning space where the students learn from and teach each other.

## SC 5-4: Learning spaces as 'perforated tubes'

### *Authors*

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### *Focus*

Learning Spaces

Universities are increasingly faced with requests for raising students 'employability'. Quality and relevance are highlighted as means, to achieve this. Here learning spaces are discussed as 'perforated tubes', where relevance and quality is achieved through research-based knowledge production in learning activities including active training in cooperation with external stakeholders. This paper argues for ways to take learning activities in higher education to a next level, by letting practice infuse and seep more into curriculum activities at the university.

**Learning outcome of activity:** 'Perforated tubes' raise students' ability to put knowledge into play in relation to the real-life challenges that external stakeholders perceive as important. To achieve this, learning spaces are to develop not only students' understanding and skills, but also their efficacy and metacognition (Knight and Yorke 2004).

**Description of your teaching activity:** Experiences on using 'perforated tubes' in three courses are presented:

- Marketing (2<sup>nd</sup> semester bachelor course): students work with local firms' challenges and as part of their exam come up with suggestions for solutions
- Collaboration in clusters and networks (master elective course): students work with different stakeholders from invited clusters and networks throughout the course to analyze challenges and engage in discussion on solutions
- Camp GetCloser (co-curricular week-long camp event): 500 students from different semesters and academic fields do real-life problem solving for participating firms

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

Challenges for building relevance leads to rethinking teaching in general: How to understand the university research base in the light of new requirements for relevance? How to translate this into learning goals for education? How to translate into an overall program of study? How will it impact on the learning activities and spaces in specific courses?

These are necessary reflections if the general foundation of university learning activities is to take a leap to a next level of embracing both quality and relevance. Based on specific experiences from concrete learning activities this paper invites for further reflections for general as well as specific development.



## SC 6-1: Learning Activities for the Reflexive Designer

### Author

Kathrina Dankl, Assistant professor, Design School Kolding

### Focus

Teaching Methods

#### Learning outcome of activity:

The goal of the three activities has been to provide students with reflexive learning opportunities. By turning students' experiences from their own design practice into a *Designers' Theatre* (1), their implicit knowledge was externalized. It strengthened students' trust in their particular tactics and skills. (2) By integrating texts from design research, a critical discourse transcended their own experiences and introduced a diversity of possible approaches to the given brief. (3) By introducing a design brief in cancer health care, students were able to synthesize learnings.

#### Description of your teaching activity:

The teaching activity was developed for *Designing Health*, a two-week design methods course for 1<sup>st</sup> year design master students. The course structure is based on 3 assignments:

- (1) Designer's Theatre: Students chose their favourite design project in their career so far and interviewed each other about methods, conflicts and learnings. Each pair had to choose an image per theme that encapsulated the experience. Simultaneous projections and short speeches (the theatre) enabled a comparison of different positions at a time, while traditional project presentations perceive each position as an enclosed entity.
- (2) Drawing Design Theory: Contemporary writings in design research were read and its theory was visualized in poster-size. This teaching format argues for a stronger usage of particular 'designerly ways' of understanding theory.
- (3) Getting Practical: Students visited hospital and cancer ward. In pairs they were asked to develop design scenarios based on shared decision making.

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

Design research admits that designers generate knowledge by interacting with other people and disciplines in a reflexive manner. The curriculum though offers little opportunities for equipping designers with questioning, analysing and synthesizing skills on an equal footing with traditional design expertise. The 3 teaching activities work with a seamless integration of design theory and practice; it has potential for all subject areas/professions where reflexivity is required.

## SC 6-2: Portfolio - a short cut to defining own learning objectives

### *Author*

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### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

Being a student at university can be a confusing experience. Students are presented with curriculums filled with promised outcomes of courses divided in to knowledge, skills and competences. This level of description is necessary, but for some students it does not have a direct relation to what they hope to achieve with their studies. For other students they attend the education with a very vague notion of why they start.

This Short Communication wishes to present a teaching experience of helping students to formulate their own learning objectives through the practice of creating a learning portfolio. It will be a reflection on my elective course called “Portfolio” which took place in Autumn semester of 2014 at the faculty of Humanities at the University of Southern Denmark.

For the attendees of “Teaching for active learning” I will present examples of reflective exercises. The purpose of these is to make the students write down reflections of why they started the education and what they hope to achieve. I will also present a number of ways to evaluate the student’s work.

#### **Description of your teaching activity:**

The course was divided into two tracks: One, which was reflective and discussed theories in relation of portfolio and self presentation more generally. Outcome of this first track was for the students to reflect upon and define their own learning objectives and express them in writing. The second one was practical, teaching the students to create portfolios either as websites or as interactive PDFs.

The benefit of this double strategy was that the students were “forced” to reflect on their hopes and dreams for their future based on their choice of education. These reflections were then used as content in their portfolios which were published either online or in a PDF. This expression of their choices meant that it left the domain of the private and became something tangible with an audience. At the same time the practicability of the hands-on creation of the portfolio in Dreamweaver, Photoshop and InDesign helped mask the fact that we were dealing with very personal matters.

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

This experience showed me that there is an element of play to creating your own portfolio, which makes it bearable to answer questions like: Why did you choose this particular study? What do you hope to “become”? These types of questions are generally not asked of students, and they become almost painful

to answer, if they are. The process of answering them is on the other hand vital for any student, if they are to become masters in their own learning houses. Following the course a number of students expressed that this course had given them insights into their learning and their goals that they would not have had, if they had not attended the course.

Teaching to create a portfolio does not have to be dependent on graphical knowledge – or access to specific software. It can be done very low key – both using analogue means or easy to use digital software. This Short Communication will present ways to work with this in a short and achievable format.

## SC 6-3: *Organizing learning when teaching 200 students Organization Theory. A reflexive learning design to teaching large groups of students*

### *Author*

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### *Focus*

Teaching Methods

#### **Learning outcome:**

When linking theory to practice in the teaching of large groups it is often done by asking students to reflect on a prewritten case from either the public media, the curriculum or the teacher's own research. Instead, I present organizing a cohort of 230 students as 'an organization of enquirers' with the intention to link the experience of the *students* (as members of the ad hoc organization) to the theory in the course curriculum. Anticipated learning outcomes: From the course practice of reflection-in-practice continuously relating theoretical concepts to lived experience (both that expressed by interview persons and that of the students themselves) the students are expected to more readily apply the course theoretical concepts in their analysis when they are faced with real life organizational situations in either cases at the course exam or in future employments. A learning outcome is thus expected to be more applied use of the course theoretical concepts as opposed to mere concept repetition.

#### **Description of the teaching design:**

To drive the students' learning, and to have a production to organize for and be reflexive about, the students are asked to choose, contact and interview a representative of a public or private sector company and work out a written case. 230 students are organized in 46 groups of five students. All groups belong to a cohort of nine or ten groups, and five instructors work as facilitators in the cohorts. Instructor cohorts are integrated in the lecturing design, and instructors act as process consultants as well as traditional expert students. Each week focus on a theoretical theme from the course curriculum and is designed as an interplay between lecturing, student teamwork, student peer inquiry, and student-teacher summaries. Throughout the semester the 'organization of enquires' produces 46 written cases on real life organizations and develops a shared wiki on the outlined themes from the course curriculum. As a resource for learning (bringing the concepts and theories of the curriculum into use) the course draws on the ongoing experiences of students, instructors and teacher from working in this educational setup as 'an organization of enquires', to explore and understand the curriculum theory on organizational behavior and design.

#### **How the practice can be inspirational/transferable to others:**

A reflexive teaching design gives authority to the lived experience of the inquirer, while at the same time educating the students about the traditions of thought and the cultural knowledge base within a field. Reflexive learning is most often practiced in smaller groups of students. This presentation will present the large group education design and sum up some of the first experiences from running the program in order to reflect on what inspirations might be deduced and suggested for teaching similar large cohorts in different disciplines.

## SC 7-1: Udvikling af de studerendes dybe læring

### *Author*

Hanna Barbara Rasmussen, Postdoc, University of Southern Denmark, Centre of Maritime Health and Society

### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

Formålet med faget var, at de studerende skulle være i stand til kritisk at forstå og kommunikere begreber og teorier indenfor feltet og reflektere over dem og at være i stand til at beskrive, forklare og diskutere udvalgte problemer indenfor faget.

#### **Description of your teaching activity:**

Undervisningens form er inspireret af den konstruktivistiske læringsteori, som tager udgangspunkt i, at opbygning af viden foregår i samspil med omgivelserne og at ny viden bygger på eksisterende viden; Blooms taxonomi og læringspyramiden. Formål med undervisningen bl.a. var at hjælpe de studerende til at opnå bedre læring og bedre forståelse af deres pensum og bruge deres viden gennem diskussioner og formidling til andre. Meningen var, at de studerende skulle præsentere forskellige cases i forhold til det pensum, som de har gennemgået under forelæsningerne. Under forelæsningerne har de studerende brugt tid til at diskutere nogle elementer fra forelæsninger ved hjælp af SRS. Ud over det skulle de studerende også beskrive de gennemgåede cases på wiki.

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

De studerende var glade for præsentationerne, men de synes, at arbejdsbyrden for wiki var for stor og de synes også at de fik mere ud af at præsentere end skrive på wiki. De redskaber som blev brugt til undervisningen, har hjulpet de studerende med at opnå den dybe læring, hvilket også kunne ses under eksamen. De studerende under eksamen kunne reflektere og argumentere over de forskellige emner og var i stand til at formidle det på videnskabelig niveau. Det er dog vigtigt at finde balancen, så der ikke bliver for mange aktiviteter, som forvirrer de studerende og ikke gavner deres læring.



## SC 7-2: Kulturformidling i praksis (KIP)

### Author

Bo Skøtt, Assistant professor, University of Southern Denmark, Department of Design and Communication

### Focus

Teaching Methods

#### Learning outcome of activity:

Hovedresultatet af KIP-projektet er, at de studerende, gennem beskrivelse, planlægning og gennemførelse af et kulturformidlingsarrangement i praksis, får legitime, perifere positioner hvorfra de kan gøre sig erfaringer med projektarbejde på folkebiblioteker. Ifølge målbeskrivelsen for faget, skal de studerende bl.a. erhverve sig:

- viden om kultur og kulturel identitet i en globaliseret verden samt forståelse af medborgerskabsbegrebet
- viden om historiske smagskulturer i Danmark og om sammenhænge mellem samfundsgrupperinger og interesse- og smagsdannelse
- viden om og færdighed i at anvende metoder til materiale- og aktivitetsvalg samt valg af kommunikation og formidlingsformer...

De studerende anvender både teoretiske, metodiske og operative aspekter (herunder 'tavs viden') af disse læringsmål i udførelsen. Af samme grund virker KIP studiemotiverende, idet de studerende fra begyndelsen ved, at de eksponeres for et rigtigt publikum.

Igennem KIP skærpes de studerendes bevidsthed om rækkevidden af egne formående, egne faglige kvalifikationer og afklaring af faglige interesser (jf. tilbagemelding og afrapportering), hvilket forhåbentlig skaber en mere sømløs overgang mellem studietid og erhvervskarriere (employabilitet).

#### Description of your teaching activity:

De studerende vælger, på baggrund af en teoretisk og metodisk introduktion til målgrupper, kulturopfattelser og kulturformidling, en målgruppe, de ønsker at arbejde med (f.eks. børn, unge, ældre). De *teoretiske* og *metodiske* introduktioner er bygget op som forelæsninger, diskussioner og studenteroplæg. *Planlægning* og *refleksion* gennemføres som underviserinitierede workshops med lejlighedsvis deltagelse af ekstern repræsentant for Kolding bibliotek, mens *gennemførelse* finder sted 'on location' på Kolding bibliotek.

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

KIP-projektet har en række karakteristika, jeg finder velegnede i forhold til kortere kurser, der har et aspekt af færdighedsopøvede element og hvis teoretiske og metodiske indhold hurtigt kan få abstrakt karakter. KIP-projektet er inspireret af casestudier (teori og analyse), problemorienteret projektarbejde (samarbejde og metode) og egentlige praktikbaserede forløb (praksiserfaring), men omsat til en læringskontekst, hvor ressourcerne er begrænsede, for at imødegå uheldige konsekvenser af 'situeret læring' – og hvor kontakten med praksis er studenterinvolverende og -motiverende.

## SC 7-3: Problem Based Learning – an undergraduate course in research in molecular biology

### *Author*

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Tinne Hoff Kjeldsen, Associate professor, Roskilde University Centre, Department of Science, Systems and Models

### *Focus*

Teaching Methods

#### **Description of your teaching activity:**

The activity will give ideas to how students' professional skills can be developed within a course (here on methods in molecular biology) as an integrated part of teaching the subject matter. It was done through problem based learning where students worked in groups with specific cases, and with various jobs assigned to each group member. It was inspired by a course in medicine at the VU University Medical Center in Amsterdam. The pedagogical setup was designed to challenge the students to think about what makes someone a professional researcher and how they themselves can learn professional behavior. The students made a profile of the ideal scientific professional. For each subject of the course, each group worked with a case. For each case there was in each group one student who was assigned as the leader, one who was the secretary, one who was responsible for introducing the case study, one who had to give a presentation of the group's solution to the problem, one who had to give feedback to another group's presentation. A rotation scheme was set up so the students in a group took turns on the various jobs throughout the six case studies, they worked with. We will give examples from the students' work and discuss some of the results from the students' evaluation of the course and their reflection paper. We will discuss the learning potentials of this kind of problem based courses with respect to learning research methods and develop professional research skills in molecular biology.

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

The idea behind the course was (besides teaching the specific content matter) to improve the students' professional skills as academic scientific professionals through problem based learning. This objective is neither tied to the context nor to the discipline. It can be transferred to other educational institutions and disciplines, where it makes sense to develop students' skills as professionals.

## SC 7-4: New medias – new ways: when students learn mathematics at university level through publishing their own mathematical products

### *Author*

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### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

To be able to present a mathematical argument in problem solving in a coherent way with precise use of the mathematical concepts; to be able to orally and visually explain the use of a mathematical technique in problem solving; to be able to plan, design and present explanations for solutions of mathematical problems.

#### **Description of your teaching activity:**

The presentation will focus on how iPads were used in the teaching and learning of a calculus course for first year students at Roskilde University. The idea was to make the students produce and publish their own mathematical products through the use of various app's and video-recordings. The students' publications combined oral and written explanations and presentations of their mathematical product with visual elements. The students worked in groups of two-four. Their work was supported by various requirements such as given requirements and specifications for their publications and for their work flow during the production phase. Besides the students' published products, we collected data in the form of audio recordings of some groups of students while they were producing and publishing their mathematical work. In the presentation, the supporting materials from the teacher, the students' products and the audio-recorded data will be used to explore and discuss the multi-faceted learning possibilities that arise when students are actively engaged in producing and publishing their own mathematical products using new media, oral, written and visual elements in an innovative and entrepreneurial learning environment.

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

The idea was to have students produce and publish their own products in order to enhance their competence in explaining and using mathematical concepts and problem solving strategies. This is not limited to the specific subject matter of the course, but can be transferred to other mathematics courses and to other subjects (e.g. chemistry, physics, biology) as well.

## PS 1-1: Med et fælles mål: Fra socialkonstruktivistisk læringsteori til -praksis

### *Author*

Anne Klara Bom, Assistant professor, University of Southern Denmark, Department for the Study of Culture

### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

Hvilke udfordringer og muligheder opstår, når studerende i et undervisningsforløb på et **socialkonstruktivistisk fundament** aktiveres som **medansvarlige** for undervisningens indhold, struktur og forløb, mens underviseren bevidst indtager rollen som **rammesætter** og deltager?

#### **Description of your teaching activity:**

Der var otte kandidatstuderende tilmeldt faget. Det faldt i to dele: En fælles udvekslingsrejse og fem heldagsseminarer – et før afrejse og fire efter hjemkomst. Oplægget her koncentrerer sig udelukkende om afviklingen af heldagsseminarerne, hvor undervisningens socialkonstruktivistiske fundament bestod af disse elementer:

- De studerende **bidrager til ny og aktuel forskning**
- Seminarerne er **workshops** med oplæg fra underviser og studerende
- Forud for oplæg **finder de studerende tekster til fagets fælles pensum**, samt skriver et **blogindlæg** om indhold og ønsker for feedback
- Under hele undervisningsforløbet blev en **lukket facebookgruppe** brugt som diskussionsforum
- De studerende kommunikerede med mig i **journals** på blackboard om deres eksamensopgaver

I min opbygning af faget var jeg særligt inspireret af begrebet ”**stilladsering**” (Good & Brophy 1997; Meyer 1993, 50), hvor underviseren både byggede stilladset og skabte en fælles forståelsesramme med de studerende, der gav dem lyst til at tage ejerskab, arbejde selvstændigt og bidrage til undervisningen på kvalificeret vis.

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

##### **Udfordringer:**

- Rammerne skal sættes skarpt op
- Underviseren skal være på hele tiden
- Alle er afhængige af at alle overholder deadlines

##### **Muligheder:**

- Gode diskussioner på tværs
- Aktiv deltagelse med stort engagement

- Fælles generering af viden på et højt niveau

### **Perspektiver**

Holdets størrelse er afgørende for afviklingen af denne undervisningsform, men flere tiltag kan bruges i andre sammenhænge:

- En indledningsvis meget eksplicit rammesætning af faget
- Eventuelle online-redskaber eller oplæg præsenteres som afgørende for, at faget kan lykkes på den måde det er tænkt.
- De studerende påvirker form og indhold i undervisningen, hvor det giver mening.
- Underviser står til rådighed for de studerende

Dele af undervisningen lægges i de studerendes hænder.

## PS 1-2: Simulationstræning for 3. års sygeplejestuderende i akut og kompleks sygepleje

### Authors

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Pernille Kjær Svendsen, Clinical teacher, Rigshospitalet, HovedOrtoCentret

### Focus

Teaching Methods

#### Learning outcome of activity:

- At kunne anvende systematisk klinisk vurdering efter ABCDE principper (A=airway, B= Breathing, C= circulation, D= disability, E= Exposure) og kommunikationsprincipperne ISBAR( I= Identifikation, S=situation, B= Baggrund, A= Analyse, R= råd) i akutte og komplekse scenarier
- At opnå handlekompetencer og en vis sikkerhed og tryghed i forhold til prioritering i akutte situationer
- At træne kommunikative kompetencer i relation til patient og pårørende

#### Description of your teaching activity:

##### Introduktion:

Simulation er en læringsmetode, som giver optimale muligheder for at træne og styrke både kliniske og kommunikative kompetencer i et trykt læringsrum, med mulighed for gentagelse, eksperimenter, og hvor det er acceptabelt at fejle uden at det går ud over patientsikkerheden ( Aggerwal et al.2010, Lewis et al.2012, Zigmont et al. 2011, Rutherford- Hemming et al 2014, Mould et al 2011). Undersøgelser viser, at simulationsøvelser øger studerendes selvtillid, særligt når man gentager scenarierne 2. gang( Ironside et al.2009, Jeffries., Mould 2011). I dette klinikforløbet er der fokus på kompleks klinisk virksomhed (Professionshøjskolen Metropol), hvorfor det vurderedes relevant at give studerende mulighed for at træne akut og kompleks sygepleje i simulationsscenarier.

**Metode:** 15 studerende pr. semester opdeles i 2 hold af henholdsvis 7 og 8 studerende, hvert hold deltager i en undervisningsdag bestående af 3 akutte scenarier.

Dagen indledes med repetition af ABCDE principperne og ISBAR.

Hvert scenarie består af 3 faser:

- **Briefing:** De studerende vises tilrette i rummet og præsenteres for det udstyr der er til rådighed.
- **Scenariet:** I scenariet indgår en akut dårlig pt, en anden pt. som også har brug for hjælp samt et forstyrrende element (en telefon ringer, en pårørende spørger om et bækken). To studerende er aktive som sygeplejersker, de resterende er observatører. Undervisere spiller patienter, læge, portør og pårørende.
- **Debriefing;** Scenariet analyseres og reflekteres over med fokus på læringsmålet

- **Gentagelse af scenariet** med samme rollebesætning

Holdene er små, alle studerende når at være de aktive

Undervisningen er gennemført i flere år.

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

Studerende evaluerer undervisningen særdeles positivt. De oplever scenarierne meget realistiske, og fremhæver at det at prøve scenariet 2. gang gør, at man får en succesoplevelse. Desuden fremhæves det positivt, at underviserne også spiller roller.

## PS 1-3: Experiences with Flipped Classroom

### *Authors*

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### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

The flipped classroom approach is a relatively new educational form. It means that the traditional lessons with lectures are partly replaced by students watching recorded video lectures at home typically supplemented with other learning activities. It frees lesson time to instead be used for more in-depth discussions and live demonstrations of the substance, which are supposed to promote higher order thinking skills and student understanding.

The learning goal (outcome) of the activity was to enhance the students' knowledge, skills and competencies within the subject.

#### **Description of your teaching activity:**

The teaching activity: For the 12 sessions that were spread over the semester, the students were guided via the following preparation guide lines:

“Prior to this lecture you should:

1. Finish the home assignment (if there is one) from previous lecture
2. Read the chapter(s) for next lecture in the course book
3. Watch the video(s) for the next lecture on YouTube
4. Solve the problems at the end of the chapter(s)
5. Check the chapter examples for the chapter(s) (in the ABRAVIBE toolbox)”
6. Solve a home assignment

During the lecture

1. The teacher started to carry out a number of polls via Poll Everywhere that should serve as threshold polls to indicate if students were ready to proceed to the next level and motivation drivers for the students watching the videos.
2. Next, each student or a peer of students should present the solved home assignment which also served as a point of departure for further discussions and collaborative work
3. After working with the home assignment, additional exercises were conducted.



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

The subsequent interviews with the teacher and students revealed among other things that:

- Students' need time to change of the culture from the traditional classroom to the flipped classroom
- That the videos were appreciated by students but were used very differently
- That there could be conducted more exercises in class time
- That there were considerably more in-depth discussion during the lessons

## PS 1-4: Aktiverende læring i audiologisk praktik

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### *Focus*

Teaching Methods

#### **Learning outcome of activity:**

Studerende er ansvarlige for valg af undervisningsemne, udarbejdelse af materiale til medstuderende samt undervisning af, og feedback til, medstuderende. Det kræver selvstudier, refleksioner og oparbejdning af evner til at give og modtage feedback. Sammenlagt sigter dette mod dybdelæring indenfor en række faglige og kommunikative emner. Koblet med en praksisnær udvikling og fremstilling af en faglig problematik rammer projektet således alle fire dele af FAIR-principperne; Feedback, Aktivitet, Individualisering og Relevans. FAIR principperne udtrykker den pædagogiske strategi på SDU's sundhedsvidenskabelige fakultet.

#### **Description of your teaching activity:**

De studerende er i deres praktik på audiologisk afdeling ansvarlige for at finde, udforske og præsentere et fagligt emne for medstuderende. De medstuderende er ansvarlige for at sætte sig ind i en faglig problematik og give feedback til den der forbereder casen.

De studerende laver videooptagelser med optagelser af 1)undersøgelsessituation (måling af høreprøver og/eller behandling med høreapparat), 2)håndtering af hjælpemidlet(høreapparatet), 3) print fra undersøgelseskærm. De studerende arbejder sammen om optagelserne to og to. De optager, gennemser videoer, udvælger optagesekvenser, undersøger, et fagligt relevant emne og udarbejder små skriftlige oplæg med opgaver. Video og oplæg demonstreres for og diskuteres med medstuderende, og underviser i fællesseance. Der er fokus på faglighed, på interaktion og/eller kommunikation med patient. Hver af de fire studerende der er i praktik samtidig, medbringer en udarbejdet case med opgaver i alt fire gange. Cases slettes efter fælles seancen.

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

Aktiviteterne kan klart anbefales, og kan umiddelbart overføres til fag på andre uddannelser, hvor der gennemføres praktik, og hvor viden og klinisk færdighed skal udvikles i sammenhæng. De studerende melder tilbage om stor tilfredshed og øget udbytte af klinikopholdet. Etableringsprocessen har været kompleks. Godt samarbejde med den kliniske afdeling, og mulighed for teknisk support afgørende.

## PS 1-5: Jura på deltid - Flipped Classroom og distance læring

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### *Focus*

Teaching Methods / Learning Spaces

Med afsæt i jurauddannelsens kompetenceprofil vægtes i særlig grad undervisningsformer, der medvirker til at udvikle de studerendes evner til at tilegne sig og forstå de forskellige retskilder og den juridiske teori. De valgte undervisningsformer skal give de studerende færdigheder i at kunne anvende juridisk metode med henblik på at kunne identificere, analysere og argumentere for en løsning af juridiske problemstillinger samt formidle disse mundtligt såvel som skriftligt.

Formålet med ændringen af undervisningsformen til Flipped Classroom er at sikre, at universitetets bærende principper om aktiverende undervisning og aktiv læring føres ud i livet for samtlige studerende – såvel de fjernstuderende som de fremmødte studerende.

### **Description of your teaching activity:**

Distance læring og flipped classroom går, på Jura på Deltid, hånd i hånd. Det har været vigtigt både at have fokus på de tilstedeværende studerende og dem for hvem fremmøde ikke er muligt.

Derfor har det været et fokuspunkt at kombinere fremmødeundervisningen med andre læringsaktiviteter så som f.eks. filmklip, e-læringsværktøjer, gruppediskussioner på internettet, elektroniske skriveøvelser, hvor de studerende får redskaber til at give hinanden feedback, arbejds spørgsmål og cases.

Integrationen mellem fjern- og fremmødeundervisningen giver anledning til en række udfordringer. For at sikre de studerende det optimale læringsudbytte er undervisningen fra 1. september 2014 for 1. og 3. semester tilrettelagt som blended learning. Denne undervisningsform indføres herefter løbende således, at undervisningen på alle årgange er tilrettelagt som blended learning i 2018.

Samtidig har det været nødvendigt at udvikle undervisningsfaciliteter til Live Streaming.

Som et eksempel på fag, hvor undervisningen foregår som Flipped Classroom kan nævnes EU-ret og Familie- og arveret. Her er den klassiske forelæsning, hvor fagets emner gennemgås, erstattet af 1.) filmklip, hvor centrale dele af fagets emner gennemgås, 2.) diverse arbejds- og tjekspørgsmål, som de studerende arbejder selvstændig med mellem undervisningsgangene, 3.) skriftlige og mundtlige feedbackøvelser, 4.) dybdegående vejledning i analyse, refleksion og løsning af fagets problemstillinger.

Fremmødeundervisningen benyttes til uddybning af udvalgte emner, besvarelse af spørgsmål og dialog og drøftelse af de studerendes løsningsforslag til eksamenslignende opgaver. Læringsudbyttet forventes styrket gennem et samspil mellem de forskellige læringsaktiviteter

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

Det vurderes, at de erfaringer, der er opnået dels vedrørende undervisningsfaciliteter dels vedrørende udvikling af læringsaktiviteter kan bidrage til den pædagogiske udvikling af undervisningen ikke blot på de juridiske uddannelser, men som helhed styrke undervisningen på fakultetet og evt. også på andre institutioner. Med udgangspunkt i de erfaringer, vi har gjort os, er der implementering af distancelæring på udvalgte valgfag under Institut for Statskundskab.

Det forventes endvidere, at der vil kunne ske vidensdeling/erfaringsudveksling af distance læring og flipped classroom ud fra to vinkler: 1. de tekniske udfordringer mht. undervisningsfaciliteter og 2. de pædagogiske udfordringer og erfaringer vedrørende distance læring og flipped classroom.

Afslutningsvis bemærkes, at der i øjeblikket arbejdes på at implementere Flipped-Classroom-baseret undervisning på hhv. Institut for Marketing og Management og Institut for Virksomhedsledelse og Økonomi.

## PS 2-1: Studieturens faglige og pædagogiske kvalitet

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### *Focus*

Learning spaces

#### **Learning outcome of activity:**

En studietur i forbindelse med et fag eller kursus på universitet har et omfattende læringspotentiale, når den organiseres på rette måde.

Den gode studietur lægger op til en høj grad af aktiv, problemorienteret og eventuelt direkte produktiv deltagerinvolvering, og til et medansvar for både for den praktiske gennemførelse, det sociale læringsmiljø og det faglige indhold.

En studietur er ikke en afslappende turistrejse eller et frikvarter fra det "rigtige" studiearbejde, men udfordringer i et anderledes realistisk læringsrum, nemlig det konkrete sociale, historiske og institutionelle sted, som man opsøger aktivt for at sætte sin faglighed og sine metoder på spil, og hvor man trækker på alle sanser, følelser, færdigheder og intelligenser.

#### **Description of your teaching activity:**

De utraditionelle fysiske rammer og udfordringer og deltagernes uformelle fællesskab skaber anderledes faglige dialoger, som fortsætter langt ud over de enkelte programpunkter. Der bliver snakket og reflekteret fag døgnnet rundt. Fagligheden bliver konstant koblet til virkelighedsnære situationer, som ikke ellers opstår i klasserummet.

På baggrund af talrige evalueringer og mere end 10 års erfaringer fra RUC med forskellige typer studieture - indenlands og udenlands - vil vi gennemgå nogle af de væsentligste pædagogiske og faglige forhold, der skal til for at kvalitetssikre studieture som fremragende undervisning.

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

Teoretisk er både Lev Vygotsky og John Dewey relevante med begreber som: "Zonen for nærmeste udvikling" og "learning by doing". Men en studietur kan også betragtes som læring, der lægger sig i krydsfeltet mellem følelse, oplevelse, perception, erfaring og kognition. Også den sociokulturelle læring og begreberne om praksisforankring, situering og kollaborativ læring kan ses som teoretisk grundlag.

## PS 2-2: Using podcasts and blended learning for meeting the needs of students with diverse geographic and educational background

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### *Focus*

Teaching Methods / Target Groups

#### **Learning outcome of activity:**

The Master of Sciences in Public Health Programme offers admission for national and international students with diverse health science backgrounds and some of the students admitted to the programme are in need for increasing their knowledge and skills in epidemiology and biostatistics. The learning activity aims at developing fundamental knowledge and skills in epidemiology and biostatistics.

#### **Description of your teaching activity:**

The course consists of 8 weeks of e-learning followed by one week of 'on campus' teaching. The e-learning is divided into two parts; epidemiology and biostatistics. First students will be provided with literature on epidemiology, links to video podcasts and must complete hand-in exercises each week on various topics like; study designs, measures of association, standardization, bias and confounding, screening and critical reading. The hand-in exercises will be followed up by general feedback from the teacher on a shared internet platform. During the biostatistics part students watch video podcast on basic descriptive and inferential biostatistics and do 10 different practical statistical exercises in the software STATA. The biostatistics part is hosted on blackboard and students must upload their answers to the Stata exercises in order to receive correct answers and interpretations in return. The entire e-learning programme is completed by the on campus teaching where questions will be answered as well as further teaching and exercises in Stata will be conducted.

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

The use of podcasts and blended learning together with the student activating element of completing home exercises with teacher feedback offers good options to qualify and prepare students for our Master of Science programme while they are still in their home countries or still in employment. The students expressed in the evaluation that the video podcasts were very useful in understanding the theory and helped many of them to conduct the exercises. Students also in general liked the exercises and that they quickly received correct answers in return.

The timely planning of the online teaching is essential and students need to be informed in advance about the time they need to allocate to follow the course. It is also essential to support exercises using the statistical package STATA is accompanied by podcast instruction on how to handle the STATA programme.

## PS 2-3: DevLab – a student driven prototype laboratory at Faculty of Engineering, SDU

### *Authors*

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Thomas Lambertsen Binzer, Student

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### *Focus*

Learning Spaces

#### **Learning outcome of activity:**

By offering engineering students access to a facility like DevLab the intended outcome is to inspire them to work with prototyping technologies. Moreover it is a way for the students to get acquainted with working in a laboratory. The skills and competencies hereby developed prepares the engineering students for the job market. We also encourage the students to work on their own, not necessarily university related projects, as a source for new entrepreneurial spin offs. DevLab is a learning process in it self, both for the students and the university. The choice of equipment is based on inputs from active users, which means that there is a continuous process going on.

DevLab provides an environment where professors and students can meet outside scheduled activities and perform informal “teaching” which under these circumstances is a two way learning process. The interaction, between different engineering specialties is also valuable to the students, who experience the power of interdisciplinary teamwork

#### **Description of your teaching activity:**

DevLab is a prototype workshop open to students 24/7. Allowing students to work on any type of project. Beside these free activities DevLab is also used as basis for two newly developed courses. The students also develop and execute “student to student” mini courses, in various subjects related to the tools available.

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

DevLab has shown us that giving students access to tools leads to very high student engagement where learning is driven by inspiration and curiosity. A facility like DevLab supports the student’s possibilities to prove the validity of their ideas and suggested designs and ultimately their learning.

To have a Lab facility that to a high extend is open and student driven is a challenge and it is interesting to study and monitor growth of the Lab and workshop culture. One key task is to ensure that the level of quality, safety and capability match the level expected by the university.

The main task and difficulty related to the development and growth of DevLab is to ensure the drive and engagement of the students.

## PS 2-4: DesUni – a model for designing university teaching

### *Author*

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### *Focus*

Learning Spaces

#### **Learning outcome of activity:**

The DesUni model is about using Design Thinking to supporting students' in their learning. The intension is to change the student's expectations from being passive receivers of theoretical knowledge to be active creators of knowledge and primary agents in the teaching process.

To support teachers, we suggest a teaching model named the DesUni model. With this model in hand, we hope to help teachers choose the right didactic tools; teaching strategies; environments; and ways of interacting with their students to bring forward design thinking in their students.

#### **Description of your teaching activity:**

Seelig (2012) she suggests that in order to boost transformative changes in students, one has to consider both internal and external processes that are highly interconnected. In similar ways, the DesUni model comprises certain factors related to the inner processes of students, which place awareness of putting students in a designerly frame of mind in their actions, imaginations and mind-sets in their work with the curriculum.

Inspired by the processes and methods in the design literature, we have further developed a Des-learning model, which can be used by the teacher to prepare 'how' to plan the education. The DesUni learning process can be applied as an overall course structure, or separate elements of the model can be applied in different phases of education depending on the aim.

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

Since it is already tested in various courses and different learning situations we believe, that the model can be applied in various disciplines, across disciplines, and in different phases of educational activities. However we also believe that the DesUni model is in the danger of running into many structural problems when implemented at universities with their strong, historically rooted, academic values, logics and structures (Bourdieu, 1988).



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## PS 2-5: Blended Learning Design – The potentials and pitfalls designing blended learning courses in a professional bachelor context

### *Author*

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### *Focus*

Teaching Methods

#### **Description of your teaching activity:**

The presentation will introduce to a Blended learning design model. The Model focus on how digital learning resources can support study activities. The model invites to a dynamic and iterative planning process where you can move between the themes and choose, design, revise, redesign until you have your course. The presentation will introduce to the use of the model in University College Lillebaelt, Denmark.

#### **Learning outcome of activity:**

The model is of high importance because of two typical pitfalls I our learning design. First we often spent the time we have got with the students in the physical space to teach in a knowledge level instead of helping the professional bachelor Students to practice skills. Second when we decide to blend our learning design we focus only on the technology and forget all about reflecting and planning. This blended learning design model can help to avoid that.

The Learning outcome of using the model is to make the lecturer an expert in blended learning. The lecturer must master the analysis and a large scale of learning technologies associated with the design process. The lecturer must be capable of developing and implementing new blended learning designs and must be capable of evaluating their utility in the concrete teaching practice. The lecturer must have a deep understanding of the newest educational and learning research within blended learning and he must carefully reflect on this knowledge in his design process.

From the students' perspective the use of the model should lead to learning by

- working in the most suitable learning style
- working independently without the lecturer's presence
- practicing skills

## PS 2-6: Assessment Methods and Grading Practices in Higher Education: An Interdisciplinary Experience

### *Author*

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Farah Obaid, Prince Sultan University, Saudi Arabia, Computer Science

### *Focus*

Evaluation

This paper offers a case study from within the Kingdom of Saudi Arabia (KSA) experience, as an example of how effective formative and summative assessments can impact the students learning, in ways that students' progress can be measured and detected at early stage of the course.

#### **Learning outcome of activity:**

- How ongoing feedback of formative assessment can help instructors to improve their teaching and their students learning.
- How to use feedback of formative assessment to improve the quality of summative assessment.
- How to provide personalized learning environment using formative assessments
- What the student has learned up to a certain point in time to determine if students are meeting learning standards set by the course and the university.

#### **Description of your teaching activity:**

Our teaching activities involve teaching undergraduate students at different college levels. The introduction to operating system course is offered to the Junior and senior students in the computer Science department while professional development course is taught by general science department for freshmen and sophomore students.

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

The purposes of this report were to illustrate how to implement formative assessments and to share our experience of this approach within two undergraduate interdisciplinary courses. Our assessments start from the early lectures in which we prepare informal activities to monitor and evaluate the students understanding of the content.

Another mean of reflective teaching is the use of item analysis. We record student's responses on bubble sheets. After calculating response of each question we are able to evaluate the clarity of concepts to students and also able to sort out ability groups in the classroom.

The above mentioned activity helps us to design the formal test activities for assessing knowledge, and in order to determine the level of difficulties of the questions and their validity, we map questions to the level of taxonomy set in our course objectives.