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Der findes ingen undervisning, der i sig selv er god

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DIDAKTISK LABORATORIUM

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The Annual Cycle of Work

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“DET ER GODT TÆNKT AT DEDIKERE ET HELT LABORATORIUM TIL DIDAKTIK”

“DEDICATING AN ENTIRE LABORATORY TO DIDACTICS IS A GOOD IDEA”



har en tidligere kollega udtalt, da han hørte, at jeg skulle starte i et nyt job som koordinator for et helt nyt tiltag på Arkitektskolen Aarhus: et Didaktisk Laboratorium. Og jeg er helt enig. Min kollega har sikkert haft en fornemmelse af, hvad et Didaktisk Laboratorium kunne være. Ligesom jeg! Men mange har spurgt mig: Hvad er et Didaktisk Laboratorium? Og på en måde er mit svar ligetil: Et Didaktisk Laboratorium er et sted for undervisningsudvikling. Samtidig er det også et vældig svært spørgsmål at svare på. For det Didaktiske Laboratorium på Arkitektskolen Aarhus er noget, der først skal udvikles og finde sin form og virke – og arbejdet er først lige gået i gang. Spørgsmålet lægger også op til at spørge videre: Hvad er didaktik? Og hvorfor kalder vi det et laboratorium?

Det første år er gået – det første år i Didaktisk Laboratorium. Jeg er i mit virke som koordinator så småt ved at finde mit fodfæste, og et årshjul er etableret med henblik på at blive udviklet og udfyldt. Der er sket meget i det forgangne år, og det vil jeg præsentere i denne publikation. Jeg vil i artiklen herunder tillade mig at reflektere over, hvad didaktik og undervisning kan være. At inddrage læring, som også må betragtes som en vigtig del af det uddannelsesvidenskabelige felt, vil føre for vidt i denne omgang, men jeg berører refleksion og herunder erkendelse. Og så nærmer jeg mig den arkitektfaglige undervisning, der foregår her på stedet. Det sidste kommer ikke til at stå alene. Det er det, det hele fremadrettet handler om: Hvordan undervisere og forskere – alle ansatte – sammen identificerer, dokumenterer og udvikler de bedste rammer for de studerendes læring inden for feltet arkitektur, så de studerende opnår det højeste mulige læringsudbytte. Det Didaktiske Laboratorium er os alle sammen! Og alle vil få en stemme. Jeg håber således, at denne publikation vil give en indsigt i, hvad det Didaktiske Laboratorium er og kan være.

Og med disse ord vil jeg byde VELKOMMEN i det Didaktiske Laboratorium – og ønske god læselyst!

Mette Volf, Cand. Arch. Ph.d.
Koordinator for Didaktisk Laboratorium

This was what a former colleague of mine said on hearing that I was about to take up a new job as the coordinator of an entirely new initiative at Aarhus School of Architecture: A Didactic Laboratory. And I completely agree with him. My colleague could probably imagine what a Didactic Laboratory might become. So could I! But many people have asked me: What is a Didactic Laboratory? In a way, my answer is quite straightforward. A Didactic Laboratory is a place where we can develop teaching. On the other hand, it is also a very difficult question to answer. The Didactic Laboratory at Aarhus School of Architecture is something we first have to develop, and it needs to find its right form and function. This work has only just begun. The question also invites further questions: What is didactics? And why do we call it a laboratory?

The first year has now passed - the first year in the Didactic Laboratory. I am beginning to find my footing as a coordinator, and I have drawn up an annual cycle of work that is just waiting to be realised. A lot has happened in the past year. This is what I will present to you in the publication. In the article below, I will take the liberty to reflect on what didactics and teaching might be. To involve the concept of learning, which should also be regarded as an important part of the field of educational science, would be going too far at the moment. I will, however, touch upon reflection, including knowledge creation. I will also touch on the topic of teaching of architecture. With an eye to the future, this is what it is all about. How teachers and researchers - all employees - can together identify, document and develop the best frameworks for student learning in the field of architecture, enabling students to achieve the highest possible learning outcome. The Didactic Laboratory is all of us! I therefore hope this publication will provide an insight into what the Didactic Laboratory is and might become.

With these words, I would like to WELCOME YOU to the Didactic Laboratory. I hope you all will enjoy the reading.

Mette Volf, Cand. Arch., PhD,
Coordinator of the Didactic Laboratory

NOTEACHING IS IN ITSELF GOOD

DER FINDES INGEN
UNDERVISNING, DER
I SIG SELV ER GOD¹

NOTEACHING IS IN
ITSELF GOOD¹

1— Meyer p.11

2— Hilbert Meyer (1941), a German didactic and one of the most influential educational researchers of recent times.

3— See, for instance, Jank and Meyer p. 18, Roelsgaard and Sørensen p. 75

Ovenstående citat stammer fra Hilbert Meyer.² Og jeg er tilbøjelig til at give ham ret. For jeg læser det, som om der ligger en implicit påstand om, at undervisning er kontekstbestemt og situationel. Med det forstår jeg, at det altså ikke er ligegyldigt, i *hvad, hvem, hvornår* og *hvordan* man underviser. Det kræver med andre ord didaktiske overvejelser, hvis man fx skal undervise i universitetsstof på en arkitektskole og omvendt, og fx om en given undervisning skal tilrettelægges som gruppearbejde eller individuelt arbejde, og hvor lang tid der er afsat til undervisningen. Sagt med andre ord: God undervisning indbefatter ikke blot overvejelser om, *hvad* der skal læres, men også *hvem* der skal lære – af og med *hvem, hvor, hvornår, hvordan, hvorfor*, og *hvordan vi bedømmer læring*. Pudsig nok så definerer det ret præcist didaktikkens opgave og genstandsfelt.³

Der er vist ikke meget tvivl om, at undervisningen på Arkitektskolen Aarhus i mange år har været en succes. Vi uddanner arkitekter i verdensklasse, og det ønsker vi at blive ved med. Men ved vi, hvad og hvordan vi gør – og hvorfor? Og er det overhovedet vigtigt at vide det?

Og for at dvæle ved det sidste spørgsmål først: Er det vigtigt, at vi ved, hvad vi gør, når vi rent faktisk allerede uddanner arkitekter i verdensklasse? Svaret herfra er: Ja – det er vigtigt! Men hvorfor er det vigtigt? Det er det af flere grunde. Og for at starte et sted – og det er måske det kedeligste svar:

Fordi vi skal!

Because we have to!

Vi er forpligtet til det rent lovgivningsmæssigt.

The above quote is by Hilbert Meyer.² I tend to agree with him. The way I read it, it makes the implicit claim that teaching is context-specific and situational. What I mean is: it does matter *in what subject, who, when or how* you teach. Whether you, for instance, teach university subjects at a school of architecture, or vice versa, or whether teaching should be organised as group work or individual work, and how much time should be set aside for teaching - all this requires didactic reflections. In other words: good teaching not only involves reflection on *what* needs to be taught, but also on *who* should learn - from and with *whom, where, when, how, why, and how we assess learning*. And if you think about it; this is a rather precise definition of the task and subject area of didactics.³

There can be no doubt that for many years teaching at Aarhus School of Architecture has been a success. We train world-class architects, and we want to go on doing so. But do we actually know what we do and how we do it - why? And is this even important to know? To dwell on the last question first: Is knowing what we are doing important when we are, in fact, already training world-class architects? My answer is:

Yes - it is important!

But why is it important? It is important for several reasons. And to start somewhere - and this is perhaps the most boring answer:

It is a purely legal obligation.

DER FINDES INGEN UNDERVISNING, DER I SIG SELV ER GOD

“Arkitektskolerne i København og Aarhus har altid haft stærke faglige miljøer, der ofte på godt og ondt har værnet om sig selv og egne konventioner, og hvor underviserne, det vil sige arkitekterne, har haft stor individuel frihed i undervisningen. Det er imidlertid først i nyere tid, at læringsmål og målbare læringsresultater for alvor er kommet på arkitektuddannelsens politiske dagsorden.”⁴ skrev en kollega og jeg i en artikel omhandlende didaktiske overvejelser om undervisning af arkitekturstuderende. Det, vi refererede til, var aftaler, som blev indgået i slutningen af 1990’erne. Her indgik Danmark i Bolognaaftalen med andre europæiske lande i EU. Vi underlagde os et undervisningspolitisk system, som giver os mulighed for – på tværs af EU – at undervise, forske og studere i andre EU-lande. Arkitektskolen Aarhus fik indført karaktergivning og ECTS-point, så vi kunne vurdere og sammenligne os med andre og hinanden – på godt og ondt. Vi gik fra traditionel mesterlære⁵ til målstyret undervisning.⁶

Jeg tror, at de fleste er glade for muligheden for at studere og arbejde i andre EU lande – for at vi kan rejse ud og arbejde med, undersøge og opdage nye sider af arkitektur i andre lande og sammen med andre kulturer. Men lige som med så meget andet, så har det også en pris: at vi må udvikle – og underlægge os – et system, der gør, at vi kan forstå, sammenligne og vurdere indsatsen på tværs af lande og kulturer. Systemer ensretter i et vist omfang. Og vi er i den forbindelse underlagt et system, der gør, at vi skal undervise og bedømme målstyret. Ifølge undervisningsbestemmelser er vi underlagt nogle alment didaktiske regler. Vi skal fx opbygge en transparent læringsbeskrivelse, så vores studerende kan gennemskue, hvad der forventes af dem. Vi skal kunne fortælle de studerende, hvad

“The schools of architecture in Copenhagen and Aarhus have always had strong professional environments, which have often, for better or worse, protected themselves and their traditions, and where the teachers, i.e. the architects, have experienced great individual freedom in their teaching. However, it is only in recent times that learning objectives and measurable learning outcomes have really become part of the political agenda for architectural education.”⁴

These are the words of a colleague and myself in an article about didactic reflection on teaching architecture students. We were referring to agreements entered into in the late 1990s. That was when Denmark joined the Bologna Agreement alongside other European countries in the EU. We then submitted to a system of educational policy that allows us - across the EU - to teach, research and study in other EU countries. Aarhus School of Architecture introduced grading and ECTS credits to make it possible for us to assess and compare ourselves with others and among ourselves - for better or worse. We went from traditional ‘mesterlære’ (apprenticeship) teaching⁵ to goal-oriented teaching.⁶

I think most people are happy to have the opportunity to study and work in other EU countries - which allows us to travel abroad and work with, explore and discover new aspects of architecture in other countries alongside other cultures. But, as with so much else, there is a price to pay. We have to develop - and submit to - a system that enables us to understand, compare and evaluate efforts across countries and cultures, and systems to a certain extent bring about standardisation. In this connection, we are also subject to a system that requires us to teach and assess in a goal-oriented manner. According to the teaching regulations, we are subject

4— Toft and Volf p. 11, Poulsen p. 215

5— Today, the concept of the apprenticeship has returned in a new and more project-oriented form. See, for example: <https://www.ug.dk/uddannelser/artikleromuddannelser/omhvervsuddannelser/ny-mesterlaere>

6— Poulsen p. 215

vi vil bedømme dem på, så de ved, hvad de kan gøre fremadrettet for at forbedre sig.

På mange måder giver det jo god mening. Samtidig kolliderer det også på en måde – i hvert fald i udgangspunktet – med vores faglighed, der opererer i et felt, hvor det ukendte, forandring til det bedre og det nye er det, vi tilstræber. Det store spørgsmål er derfor: Hvordan underviser og bedømmer man målstyret i en kreativ undervisningssituation, hvor det uforudsigelige og endnu ukendte er kærkomment?

Det er ikke en ny problemstilling, og det er langt fra alene kreative undervisningsinstitutioner, der står med den udfordring. I 2010 skrev Hanne Leth Andersen en artikel, som netop omhandler den målstyrte læring og risikoen for kvalitetsnedsættelse. Her skriver Andersen bl.a.:

“Jo mere detaljeret målene er beskrevet, jo mindre frihed bliver der til personlige tilgange og nytænkning og dermed rum til underviseres og studerendes egne refleksioner og løsninger. På områder, hvor selvstændighed, kreativitet eller kritisk tænkning er væsentlige dele af uddannelsernes mening og udbytte, kan det være vanskeligt – og uhensigtsmæssigt – at målformulere meget konkret, fordi det lukker for kritisk og selvstændig stillingtagen og metodisk udvikling og vurdering. Selvstændige, kreative og originale præstationer er ikke altid forudsigelige og kan ikke målbeskrives som andet end rammer eller kompetencemål.”⁷

Rammer og kompetencemål kan tilsyneladende være en måde at håndtere problemstillingen med målstyret læring. Målet med undervisningen behøver ikke at være beskrevet som det

to a number of general didactic rules. We are, for instance, required to create a transparent description of learning that permits our students to understand what we expect of them. We need to be able to tell students on which basis we will be assessing them, so they know what they could do to improve themselves in the future. In many ways this makes good sense. But it also, in a way, at least in principle, clashes with our professional approach: an approach that involves operating in a field where the unknown, change for the better, and the new are what we strive to achieve. Consequently, the big question is: How do you teach and assess students’ performance in a creative teaching situation that welcomes the unpredictable and, as yet, unknown?

This is not a new issue and it is far from only creative educational institutions that face this challenge. In 2010, Hanne Leth Andersen wrote an article that deals specifically with goal-oriented learning and the risks of reducing quality. Andersen writes as follows:

“The more detailed the goals are described, the less freedom for personal approaches and innovative thinking, and thus there is also less room for reflections and solutions from students and teachers. In areas where independence, creativity and critical thinking are essential parts of the meaning and outcome of educational programmes, it may be difficult - and inappropriate - to formulate very specific goals, as this prevents critical and independent opinions and the development and assessment of methods. Independent, creative and original achievements are not always predictable and can, as goals, only

produkt, de studerende skal udfærdige – vi kan definere det mere eller mindre åbent. Målet kan derimod defineres som *den viden*, vi ønsker, de studerende skal opnå, og *de færdigheder og kompetencer*, de skal opøve. Og dermed kan vi også bedømme de studerende på, *hvordan* de arbejder og bringer den viden, de vælger og bliver præsenteret for, i spil. Selvfølgelig spiller selve resultatet også en rolle: Det er svært at bedømme en proces og arbejdsindsats uden et produkt – og omvendt. Men fokus kan altså flyttes til måden, hvorpå de studerende arbejder og udvikler viden og produkter.

Og ser man på de krav, der stilles til os som undervisere på undervisningsinstitutioner – så er det netop sådan kvalifikationsrammerne⁸ og læringsmål i studieordninger⁹ er bygget op.

”Den gode skole”¹⁰ er ude på en rejse, og vi skal forsøge at sikre, at skolen på én gang skal tilpasse sig nye tider og udvikle sig selv og synet på verden – uden at tabe det, vi er så gode til.

Det er her, det Didaktiske Laboratorium kommer ind i billedet.

Det var ét svar på, hvorfor det er vigtigt, at vi undervisere ved, hvad vi gør – at vi gør os klart, ikke bare *hvad* vi underviser i, men også *hvorfor* og *hvordan*. Et andet svar herfra kunne være:

be described by means of the frameworks or competencies you aim at.”⁷

Frameworks and competence objectives are apparently a way of dealing with the problem of goal-oriented learning. The aim of teaching need not be described in terms of the product the students have to create. We can define it more or less openly. The goal may, on the other hand, be defined as the *knowledge* we want the students to acquire and *the skills and competencies* they must achieve. In this way, we can assess the students in terms of *how* they work and bring into play the knowledge they choose and are presented with. Of course, the result itself also plays a role: It is difficult to assess a process and efforts without a product - and vice versa. But you can shift the focus to the way the students work and develop knowledge and products. Further, if you look at the requirements imposed on us teachers at educational institutions - this is precisely how qualifications frameworks⁸ and the learning objectives stated in the academic regulations⁹ are constructed. ‘The good school’¹⁰ is going on a journey. And we must try to ensure that the school adapts to new times, continues to evolve, and goes on developing its view of the world - without losing what we are so good at. This is where The Didactic Laboratory comes in.

This is one answer to the question why it is important for us teachers to know what we do - not just *what* we teach, but also *why* and *how* we teach it. I might give another answer:

7—Andersen p. 32

8—<https://ufm.dk/uddannelse/anerkendelse-og-dokumentation/dokumentation/kvalifikationsrammer/om-kvalifikationsrammen>

9—See, for instance, the academic regulations for the undergraduate degree programme at Aarhus School of Architecture: https://s3-eu-central-1.amazonaws.com/aarchdk/wp-content/uploads/2019/09/05101136/2019-Studieordning-BA_05092019.pdf

10—“Den gode skole” refers to the book of the same title written by the former Rector of Aarhus School of Architecture, Mogens Brandt Poulsen, who in a historical and chronological narrative describes the significance of the Bologna Agreement to the changes the school has undergone, p. 217

Fordi det giver god mening!

Because it makes sense!

11—Keiding et al. p. 32

12—Keiding et al. p. 48 my translation

13—See: <https://s3-eu-central-1.amazonaws.com/aarchdk/wp-content/uploads/2018/10/04225925/Studiemiljøundersøgelse-20181.pdf>

Jeg tror, at de fleste af os undervisere har prøvet det at gå fra en undervisningssituation og tænke noget i retning af: “Det gik bare godt. De studerende forstod virkelig, hvad jeg sagde – og kunne bruge det til at komme videre.” Men hvordan ved vi egentlig det? Det ved vi vel ikke rigtigt?

En stor dansk forskningsundersøgelse fra Aarhus Universitet, som undersøger og sammenligner studerendes og underviseres oplevelser af undervisningen, peger i hvert fald på, at det ikke altid er det samme, underviseren oplever, som den studerende oplever. Eksempelvis viser undersøgelsen, at 89% af undervisere mener, at de tydeligt definerer læringsmål i undervisningen, men at kun 59% af de studerende mener, at underviserne gør det.¹¹ Forfatterne konkluderer på baggrund af undersøgelsen, at “det ikke er tilstrækkeligt, at undervisere underviser i et fag. Resultaterne påviser vigtigheden af at undervise *i studiet af et fag*, da det netop er gennem de studerendes *studie* af faget, de tilegner sig viden, færdigheder og kompetencer inden for det specifikke fagområde.”¹²

Nu er Arkitektskolen Aarhus jo ikke Aarhus Universitet, og fagligheden, kulturen og undervisningen på de to undervisningsinstitutioner er meget forskellige. Og der findes ikke et lignende forskningsstudie her på stedet. Men mon ikke at der er en del, der alligevel kan sammenlignes?

Hvis vi ser på undersøgelser fra vores egen institution, fx studiemiljøundersøgelsen fra 2018, kan vi se, at 69% af de 158 respondenter føler sig stressede pga. usikkerhed om faglige forventninger.¹³

Der kan være mange gode grunde til, at de studerende oplever det, de gør, og det er en god idé at være kritisk overfor undersøgelsesdesign og resultater, men måske giver det under alle

I think most teachers have tried walking away from a teaching situation and thinking something along the lines of: “That really went well. The students really understood what I was trying to say - and were able to use it to progress.” But how can we really know? We cannot really know, can we?

An extensive Danish research study carried out by Aarhus University, which examined and compared how students and teachers experienced teaching, at least indicates that what a teacher experience is not always identical to what a student experiences. For instance, the study shows that 89% of teachers believe they clearly define the learning objectives when teaching, but only 59% of the students find that the teachers do so.¹¹ Based on this study, the authors conclude that “it is not sufficient for teachers to teach a subject. The results demonstrate the importance of teaching *how you study a subject*, as it is precisely through the students’ *study* of the subject they acquire knowledge, skills and competencies within the specific subject area.”¹² Well, Aarhus School of Architecture is not Aarhus University. The professional knowledge, culture and way of teaching at the two educational institutions are very different, and no similar study has been carried out at this school. But maybe we can still make some comparisons?

If we look at studies from our own institution, e.g. The Study Environment Survey from 2018, we see that 69% of the 158 respondents experienced stress due to uncertainties about academic expectations.¹³ There may be many good reasons for students’ experiences. And it’s a good idea to be critical of a study’s design and results. Nevertheless, it may still make good sense to

omstændigheder god mening at tage sådanne undersøgelser alvorligt.

Hvis kravet om målstyret læring engang bliver ændret, vil ønsket om klarhed om læringsmål og bedømmelse sikkert forandres, men indtil videre – og under de givne vilkår – giver det god mening at lytte til vores studerende og følge Andersens opfordring: "Klare mål og velbeskrevne kompetencer er gode principper, og arbejdsformerne skal spejle mål og prøveformer."¹⁴ Igen: Her kommer det Didaktiske Laboratorium ind i billedet.

Et tredje svar herfra kunne være:

take such studies seriously.

If the requirement for goal-oriented learning should ever be changed, the desire for clarity about learning objectives and assessments will surely also change. But so far - and under the given conditions - listening to our students and following Andersen's appeal makes good sense: "Clear goals and well-described competencies are good principles. And working methods should reflect the goals and forms of examination."¹⁴ Once again, the Didactic Laboratory enters the picture. A third answer could be:

Fordi det er en god idé!
Because it's a good idea!

At gøre sig klart, hvordan man vil undervise, og være i stand til at formidle ens undervisningsstrategier over for andre er simpelthen en god idé – både for vores egen og for andres skyld.

Vi kan rent faktisk noget her på skolen, når det kommer til undervisning.¹⁵ Vi har topmotiverede studerende, som arbejder mere, end vi forventer, og som er dedikerede til faget og til at være studerende på skolen. Det er der ikke så mange undervisningsinstitutioner i Danmark, der kan bryste sig af. Vi har i årevis vejledt og undervist dialogbaseret og projektorienteret – noget, som universiteterne verden over i disse år er i gang med at implementere. Vi har en lang og særfaglig erfaring med at undervise, som vi gør. Og vi vil kunne få anerkendelse for det og samtidig bidrage til resten af undervisningssektoren nationalt og internationalt, hvis vi dokumenterer, gør os vores viden bevidst og videreformidler den.

Being aware of how you want to teach and being able to communicate your teaching strategies to others are simply a good idea - both for our own sake and for the sake of others.

We actually know something here at the school when it comes to teaching.¹⁵ We have highly motivated students who work more than we expect them to and who are dedicated to the discipline and to being students at the school. Not many educational institutions in Denmark can say the same. For years, we have supervised and taught in a manner that was dialogue-based and project-oriented - something universities around the world are currently implementing. We have longstanding and specialised experience in teaching the way we do. And we might be acknowledged for this and also contribute to other parts of the educational sector, nationally and internationally, if we were to document and

14— Andersen p. 34
my translation

15— See: <https://ufm.dk/publikationer/2020/inspirationskatalog-gode-eksempler-pa-videregaende-uddannelsers-arbejde-med-studieintensitet>, a publication about a brand new study into how at different educational institutions, including Aarhus School of Architecture, work is being done to improve the intensity of studies. Aarhus School of Architecture is commended for project work, but if you read the report, you will see that many of the initiatives described as teaching formats are also formats that Aarhus School of Architecture does - and has done for years.

Hvis vi ikke gør det – så er der andre fagligheder, der vil beskrive vores faglighed udefra (som det allerede ses). Uden egne oplevede erfaringer. Vi kan lige så godt gøre det selv og få den fortælling og præcision frem, som vi selv ønsker og oplever. Vi har noget unikt! Og vi er stolte af det!

Det giver så anledning til at spørge igen: Ved vi så, hvad vi gør og hvordan og hvorfor?

Jeg er ikke i tvivl om, at vi som fagpersoner har internaliseret en praksisviden og således (tavst) VED, hvad vi gør – intuitivt! – hvordan og måske også i nogle tilfælde hvorfor, hvilket nedenstående citat vidner om:

"Eftersom designerne har svært ved at forklare, hvad det er, de gør, og hvad de tænker, når de designer, er der (...) noget der tyder på, at disse metoder, strategier og roller (...) er intuitive og således en del af en habitus, designerne er socialiseret ind i.

Jeg formoder, at det er gennem uddannelsesinstitutionerne, at designene har lært denne tavse viden - disse metoder, strategier, roller og hvordan man som designer begår sig i designprofessionen. Men hvordan? Hvordan undervises der i tavs viden på design- og arkitektskolerne i Danmark?"¹⁶

Denne viden er netop ofte internaliseret og dermed ikke (længere) bevidst, og derfor giver det i nogle tilfælde problemer for os undervisere at beskrive vores undervisning og konkretisere og bevidstgøre den over for os selv og andre – hvilke formål og intentioner der ligger bag – og hvad de studerende skal lære – hvilken viden de skal opnå – og hvilke færdigheder og kompetencer de skal udvikle og kunne anvende – og sidst, men ikke mindst: hvad de studerende skal bedømmes på.

Samtidig kan der vel heller ikke være tvivl om,

be aware of our knowledge, and communicate it to others. If we do not, other disciplines will describe our professionalism from the outside (as is already the case), but without including our experienced knowledge. It would be better if we did this ourselves and told the story we experience with the precision we want. We have something that is unique. And we are proud of it!

This then gives rise to a question again: Do we actually know what we do, how we do it, and why? I have no doubt: we, as professionals, have internalised knowledge about practice and therefore (tacitly) KNOW what we do - intuitively! - how, and perhaps also, in some cases, why. The following quote shows this:

"Since designers find it difficult to explain what it is they do and what they think when they design, there are (...) some things that indicate that these methods, strategies and roles (...) are intuitive and, consequently, part of a habitus the designers are socialized into

I assume that designers have learnt this tacit knowledge through the educational institutions - these methods, strategies, roles, along with how designers should behave in the design profession. But how? How is tacit knowledge taught at Danish design and architecture schools?"¹⁶

This knowledge has precisely often been internalised and is thus no (longer) conscious - which is why, in some cases, it is problematic for us teachers to describe our teaching, render it more concrete, and make ourselves and others more aware of it. To concretize what purposes and intentions are behind our teaching plans - and what the students should learn - what knowledge they should acquire - and what skills and

at vi, uanset hvordan vi i øvrigt tilgår, planlægger og udfærdiger undervisning, *reflekterer* mere eller mindre bevidst over vores undervisning. Man kan måske sige, at den arkitekturfaglige refleksion er forankret i fagets viden – teoretisk og praktisk.

Vi ønsker også, at vores studerende skal arbejde reflekteret. Og vi er under alle omstændigheder forpligtet på at undervise de studerende, så *de* arbejder reflekteret og reflekterer over egen læring.¹⁷

De fleste, der arbejder med refleksion i praksis eller refleksionsteoretisk, står i gæld til John Dewey¹⁸, og mit umiddelbare bud er, at vi også her på skolen – mere eller mindre bevidst – trækker på Deweys pædagogiske grundtanke og praksisepistemologi. Dewey er måske mest kendt for begrebet:

Learning-by-doing

Ganske enkelt, at man lærer ved at gøre. Det er måske dog en kende for simpelt.

Deweys udgangspunkt er, at refleksion er fremadrettet tænkning, der sammenkæder handling og tænkning.¹⁹

Ifølge Dewey reflekterer vi, når vores sædvanlige handlinger ikke længere fungerer, eller når vores handlinger er blokeret. Når vi ikke kan realisere vores intentioner, befinder vi os i en situation, der ofte giver os en følelse af usikkerhed og af at være ude af balance. Udgangspunktet for refleksion er forstyrrelse, usikkerhed og ubalan-

competencies they should develop and be able to apply - and last but not least: on what the students should be assessed.

There can also be no doubt that, no matter how we approach, plan and prepare for teaching, we *reflect* more or less consciously on our teaching. One might also say that architectural reflection is rooted in the knowledge of the architectural profession - the theoretical as well as the practical. We also want our students to work in a reflective manner. We are, in any case, obliged to teach the students in a way that makes them reflect on their own learning.¹⁷

Most people who work with reflection in practice or in theory are indebted to John Dewey.¹⁸ And my guess is that here at the school, we too - more or less consciously - draw on Dewey's basic pedagogical ideas and epistemology of practice. Dewey is perhaps best known for the concept of:

Simply, that you learn by doing things. However, this may be just a bit simplified. The basis of Dewey's approach is that reflection is a forward-looking way of thinking that connects actions and thinking.¹⁹ According to Dewey, we reflect when what we usually do no longer works or when our actions are blocked. When we are unable to realise our intentions, we find ourselves in a situation that often gives rise to a sense of insecurity and of being out of balance. Reflection begins with disturbance, uncertainty and imbalance.²⁰ Dewey writes as follows:

17—See, for instance, the learning objective for the undergraduate programme in Architecture at Aarhus School of Architecture: https://s3-eu-central-1.amazonaws.com/aarchdk/wp-content/uploads/2019/09/05101136/2019-Studieordning-BA_05092019.pdf

18—John Dewey (1859-1952), pedagogue and philosopher

19—Høyrup and Pedersen p. 130, Keiding and Wieberg p. 350, Dewey p. 24

20—Dewey p.20, Høyrup and Pedersen s. 130, Schön p.57

21—Jank and Meyer p. 264

22—Keiding and Wieberg p. 343

23—Donald A. Schön (1930-1997), philosopher

24—Høyrup and Pedersen p. 139

ce.²⁰ Dewey skriver: "At lære gennem erfaringer betyder, at vi bringer det vi gør med tingene, og de følger det får for os, i forbindelse med hinanden, både tilbage og fremad i tid".²¹ Dewey præsenterer endvidere arbejdet med redskaber og materialer som afgørende for at lede til de videnskabelige og eksperimenterende arbejdsmetoder, som Dewey ser som didaktisk princip for tænkning.²²

En anden teoretiker, der ofte bliver refereret til i læringsmæssige sammenhænge, er Donald A. Schön.²³ Schön udvider vores opfattelse af refleksion på to fronter. Det er tidligere nævnt, at han gør op med det klassiske paradigme med, at professionelle handler på grundlag af deres videnskabelige, teoretiske og rationelle viden. "Schön mener, at de handler på grundlaget af en erfaringskabt viden, der er kropsbundet og ofte ikke kodificeret i sprog og begreber. (...) Refleksion og handling kan forløbe parallelt; vi træffer beslutning om og korrigerer handling under handlingens udførelse, eller der kan blot være et splitsekund med refleksion-i-handling udskilt fra handlingen."²⁴

Især i arkitektfaglige sammenhænge er Schön blevet brugt til at beskrive den tænkning, som finder sted i *design*processer. Men det er vigtigt at pointere, at Schön ikke som sådan er optaget af den *arkitektfaglige* tænkning. Han benytter den som et eksempel blandt mange (fx terapeut og ingeniøren) til at præsentere sit ærinde: en praksisepistemologi, herunder begreberne viden-i-handling, refleksion-i-handling og refleksion-over-handling.

Det er således strukturen i refleksionen, Schön er optaget af – det generiske – og ikke den lokale

"Learning through experience means that we connect what we do with things and the consequences this has to us both backwards and forwards in time."²¹ Dewey also states that working with tools and materials is crucial in leading to the scientific and experimental methods Dewey regards as a didactic principle for thinking.²²

Another theoretician who is often referred to in learning contexts is Donald A. Schön²³. Schön expands our perception of reflection on two fronts. It has been previously mentioned that he breaks with the classical paradigm that professionals act on the basis of their scientific, theoretical and rational knowledge. "Schön believes that they act on the basis of an experiential knowledge that is tied to the body and often not codified in language or concepts. (...) Reflection and action may be parallel; we decide on and correct our actions during the execution of the action - or there may be just a split second of reflection-in-action that is separate from the action."²⁴

Especially in architectural contexts, Schön has been used to describe the thinking that is part of *design* processes. But it is also important to point out that Schön is not interested in the thinking of the *architectural* profession as such. He only uses it as one example of a number (e.g. the therapist and the engineer) to state his errand: an epistemology of practice, including the concepts of knowledge-in-action, reflection-in-action, and reflection-on-action.

Schön's interest is, therefore, the way reflection is structured - the generic aspect - and not the local professional knowledge - which is why he is not interested in the knowledge of the *architectural* profession either. And, as in

faglighed og således heller ikke den *arkitektfaglige*. Og eftersom vi i en moderne tid er forpligtet til livslang læring og herunder refleksion, ses Schön da også i mange curricula og læses af mange forskellige fagligheder (fx Dramaturgi og Kunsthistorie på Aarhus Universitet og sundhedsfaglige professionsbacheloruddannelser på University College Lillebælt) for at forklare og give et bud på en mulig praksisepistemologi.

Også Jank og Meyer beskæftiger sig med handlingsorienteret undervisning og henviser til Dewey: "Handlingsorienteret undervisning er en helhedsbetonet og elevaktiverende undervisning, hvor udformningen af undervisningsprocessen bliver styret af de handlingsprodukter, som læreren og eleverne aftaler med hinanden, således at håndens og åndens arbejde kan afbalanceres i et fornuftigt forhold til hinanden."²⁵ Og man vil vel med rette kunne sige, at det synes at ligne udgangspunktet for den undervisning, der bliver bedrevet på Arkitektskolen Aarhus. På det uddannelsespolitiske og pædagogiske område ses det at reflektere som eftertanke til at lære, at lære ved at forbinde teori til praksis samt til at kvalificere handling og læring.²⁶

Men hvis vi vil høste anerkendelse for vores undervisning internt og eksternt og samtidig bidrage til resten af undervisningssektoren, kræver det, at vi ikke blot *reflekterer* over vores undervisning med henblik på at forfine og præcisere egen personlig undervisning, men at vi gør os vores refleksion og viden bevidst og videreformidler den.

modern times we are committed to lifelong learning, including reflection, Schön's ideas also figure in many curricula and many different disciplines read his works (e.g. Dramaturgy and Art History at Aarhus University and in health professional undergraduate programmes at University College Lillebælt), using them to explain and present a possible epistemology of practice. Jank and Meyer also deal with action-oriented teaching and refer to Dewey:

"Action-oriented teaching is a holistic and student-activating mode of teaching in which the design of the teaching process is controlled by the products in terms of actions the teacher and students mutually agree on, in order that the work of the hand and the spirit can be balanced in a sensible way."²⁵

You might well say that this appears to be very similar to the starting point of the teaching that is carried out at Aarhus School of Architecture. In the field of education policy and pedagogy, reflection is seen as food for thought for learning, connecting theory to practice and aiming at informing actions and learning.²⁶ But, if we want to gain acknowledgement for our teaching, internally and externally and also contribute to the rest of the teaching sector, we not only need to *reflect* on our teaching in order to refine and make more precise our own personal teaching, we also need to be aware of our reflection and knowledge and communicate it to others. Other people have to be able to be understand and verify our research and development work. Therefore, our teaching must be subjected to reflection and we must make an effort to convey our experiences, insights and reflections in a

25—Jank and Meyer p. 254

26—Høyrup and Pedersen p. 128

Hvad er didaktik?

What is didactics?

27—See, for instance, Qvortrup and Wieberg.: Læringsteori og didaktik, Hans Reitzels Forlag, 2013

28—See, for instance, Jank and Meyer p. 19, Roelsgaard and Sørensen p. 75, Qvortrup and Wieberg p.19

29—Jank and Meyer p. 17

30—Jank and Meyer p. 148

31—Jank and Meyer p. 136

Forskning og udviklingsarbejde skal kunne forstås og efterprøves af andre. Så derfor må vores undervisning gøres til genstand for refleksion, og vi må gøre en indsats for at formidle vores erfaringer, erkendelser og refleksioner i et sprog, som både er vores eget (visuelt og verbalt), men også forståeligt for andre.

Også her kommer det Didaktiske Laboratorium ind i billedet.

Ovenstående giver jeg nogle bud på *hvorfor* Didaktisk Laboratorium er blevet etableret, men *hvad* er Didaktisk Laboratorium? Som jeg skriver i forordet, så er der flere der har spurgt mig om det. Og man kan i forlængelse heraf spørge: Hvad er didaktik? Og hvorfor kalder vi det et laboratorium? Didaktik er et stort fagområde, et stort felt med sine egne teoretiske positioner og skoler.²⁷ Og der er forskel på, hvad det betyder, og hvilken position man indtager i fx amerikansk og tysk kontekst. Der er dog generelt enighed om, at didaktik handler om at beskrive, hvad man underviser i, og hvorfor man underviser i det. Hvilken form undervisningen har, herunder hvilke metoder der benyttes, og hvordan undervisningen gennemføres – og endelig, hvordan læringen bedømmes.²⁸ I hverdagstale bruges begrebet som et samlet udtryk for alt, hvad der har med undervisning og læring at gøre.

Jank og Meyer definerer didaktik som følger: "Didaktik er undervisningens og læringens teori og praksis."²⁹

Teori er netop de forskellige skoler/positioner, som den enkelte undervisning bevidst er bygget op omkring, og som er blevet udviklet trin for trin gennem teoretiske studier.³⁰ Og i undervisningen på Arkitektskolen Aarhus omfatter det både arkitektfaglig og didaktisk teori. 'Praksis' definerer Jank og Meyer som "menneskers måder at udføre opgaver på ved hjælp af tænkning, følelser og handling. Den kan være reproduktiv eller skabende. Den er knyttet til bestemte historisk-politiske betingelser. Den forudsætter menneskers evne til selvstændig og ansvarlig handling."³¹ Jank og Meyer påpeger, at praksisviden ikke er en fortyndet udgave

language that is our own (visually and verbally), but which can also be understood by others.

This is another issue that underscores the relevance of the Didactic Laboratory.

In the above, I suggested some possible reasons for why the Didactic Laboratory was established. But *what* is the Didactic Laboratory? As I mentioned in the preface, several people have asked me this question. And you might follow this up by asking: What is didactics? And why is it called a laboratory?

Didactics is a large subject area - a large field with theoretical positions and schools of its own.²⁷ The terms of the meaning and the position you take also differ from one context to another: e.g. from the United States to Germany. However, there is general agreement that didactics is concerned with describing what you teach and why you teach it, which form the teaching takes, including which methods are used, how the teaching is conducted and, finally, how learning is assessed.²⁸ In everyday language, we use the term as a collective expression of everything that has to do with teaching and learning.

Jank and Meyer define didactics as follows:

"Didactics is the theory and practice of teaching and learning."²⁹ Theory is precisely constituted by the different schools or positions around which the individual teaching is deliberately built, developed step by step through theoretical studies.³⁰ Teaching at Aarhus School of Architecture comprises both architectural and didactic theory. Jank and Meyer define practice as "the way people perform tasks through thinking, feelings and action. This may be reproductive or creative. It is connected with specific historical and political conditions. It presupposes the ability of people to act independently and responsibly."³¹ Jank and Meyer point out that practical knowledge is not a diluted version of theoretical knowl-

af teoretisk viden, men en selvstændig vidensform, fremstillet af praktikerens selv.³² I denne forbindelse synes det interessant at dvæle lidt ved *praksis* og *praksisviden*. Jank og Meyer gør nemlig opmærksom på, at *praksisviden hos erfarne lærere kun ændres radikalt under ganske særlige omstændigheder* (fx tvang pga. krise, gennem intensivt teamarbejde eller grundlæggende ændringer i arbejdsituationen.)³³ De går så langt som til at konstatere:

edge, but an independent form of knowledge and one that is produced by the practitioner him or herself.³² In this connection, it might be interesting to dwell a little on practice and practice knowledge. Jank and Meyer point out that the *practice knowledge of experienced teachers only changes radically in very special circumstances* (e.g. coercion due to crisis, through intensive teamwork, or fundamental changes in the situation at work.)³³ They even state that:

“Practice knowledge is astonishingly stable and all too often resistant to learning.”³⁴

“Praksisviden er forbavsende stabil og alt for ofte ”belæringsresistent.”³⁴

Jeg vil lade citatet stå ukommenteret og lade læseren reflektere og danne sig sin egen mening... Men vil dog tillade mig at referere til flere kollegaer, der har givet udtryk for, at det at gennemgå et pædagogikum flytter noget i forhold til tidligere undervisningspraksis; at problemer forbundet med egen undervisning ofte løser sig, og at det giver stof til eftertanke og inspiration til at udvikle egen undervisning.

Det kan være relevant at tale om *almen* didaktik og *fagdidaktik*. “Almen didaktik er en videnskab, der udforsker og strukturerer forudsætninger, muligheder, konsekvenser og grænser for læring og undervisning på en måde, der er teoretisk sammenhængende og anvendelig for praksis. Fagdidaktik er særlige videnskaber, der udforsker og strukturerer forudsætninger, muligheder, konsekvenser og grænser for læring og undervisning

I leave the quote without commenting on it, allowing the reader to reflect on it and form his or her own opinion... I will, however, refer to several colleagues who have stated that going through a teacher training course makes a difference in relation to previous teaching practice, that problems associated with teaching often resolve themselves and that such a course provides food for thought and inspiration that can be used to develop one's teaching.

It may be relevant to talk about *general didactics* and *discipline-specific didactics*.

General didactics is a science that explores and structures the preconditions, possibilities, consequences and limits of learning and teaching in a way that is theoretically coherent and applicable to practice. Discipline-specific didactics is comprised of special sciences that explore and

32—Jank and Meyer p. 140

33—Jank and Meyer p. 140

34—Jank and Meyer p. 140

35—Jank and Meyer p. 34

36—See <https://ufm.dk/uddannelse/anerkendelse-og-dokumentation/dokumentation/kvalifikationsrammer/begreber>

37—Jank and Meyer p. 33

38—Jank and Meyer p. 18

inden for et fagligt felt i eller uden for skolemæssige sammenhænge.”³⁵

Hvis vi for en kort stund vender tilbage til de lovgivningsmæssige bindinger, undervisning er underlagt, så vil man kunne betragte de af Uddannelses- og Forskningsministeriet beskrevne kvalifikationsrammer³⁶ som en del af den almene didaktik. Som den form for beskrivelse undervisning på tværs af fagligheder er underlagt. Og som fortolkes og omsættes i og til en *fagdidaktik*. Sagt lidt populært:

“Almen didaktik er som at strikke uden garn.”³⁷

“General didactics is like knitting without yarn.”³⁷

Lad os også vende tilbage til citatet i artiklens begyndelse: “Der findes ingen undervisning, der i sig selv er god.” I forlængelse heraf vil Jank og Meyer mene, at udvikling af didaktiske kompetencer er nødvendig for at undervise godt.³⁸ Skal man tage deres ord for pålydende, vil det ikke være muligt at udføre god undervisning uden at udvikle didaktiske kompetencer. Måske vil det være muligt på et rent praksisniveau, men ikke på professionelt didaktisk niveau. Professionel didaktisk refleksion kræver didaktisk viden og kompetencer. Måske har de ret? I hvert fald er det det, der forsøges gjort gældende i både national og international sammenhæng, når man gør det til et krav at gennemgå et pædagogikum for at kunne få en fastansættelse som underviser på højere læreanstalter. Også højere læreanstalter, som er professionsrettede som fx arkitektskolerne. På pædagogikumkurser præsenteres der

structure the preconditions, opportunities, consequences, and limits of learning and teaching within a professional field in or outside school-related contexts.³⁵

If we briefly return to the legal framework to which teaching is subject, then you might see the qualifications framework described by the Danish Ministry of Higher Education and Science³⁶ as belonging to general didactics: as the kind of description to which teaching across disciplines is subject, and which is interpreted and translated into and as a part of discipline-specific didactics. Expressed in somewhat popular terms

Let us also briefly return to the quote at the beginning of the article: “No teaching is in itself good.” Following on from this, Jank and Meyer believe that the development of didactic skills is necessary to be able to teach well.³⁸ If you accept this, it is not possible to teach well without developing didactic skills. It might be possible on a purely practical level, but not at a professional didactic level. Professional didactic reflection requires didactic knowledge and skills. Could they be right? In any case, this is what is being claimed in both national and international contexts, when participating in a teacher training course is made a requirement for gaining permanent employment as a teacher at institutions of higher education - including higher education institutions with a professional orientation: for instance, schools of architecture. Teacher training courses present various theoretical concepts, methods and

således forskellige teoretiske begreber, metoder og positioner inden for didaktik, som kursisterne bliver opfordret til at benytte som tænkeredskaber i forhold til egen undervisningspraksis.

positions within didactics, and the course participants are encouraged to use these concepts as tools for thinking about their own teaching practice.

Hvorfor et laboratorium?

Why a laboratory?

Hvorfor kalder vi det et *laboratorium*? Hvad er et laboratorium egentlig? Hvis vi begynder med ordbogen, så vil vi som en af mulighederne kunne læse følgende:

“Et (tænkt) sted hvor der udføres forsøg og undersøgelser af forskellig art.”³⁹

Det passer meget godt på Arkitektskolen Aarhus som uddannelsesinstitution. Arkitektskolen Aarhus er et sted, hvor vi eksperimenterer, undersøger og udfører (praksis)forsøg i både undervisning og forskning. Sommetider arbejder vi bevidst og systematisk og andre gange mere intuitivt og erfaringsbaseret.

Man kan argumentere for, at vi udfører handlingstestende forsøg, udforskende forsøg og hypoteseafprøvninger.⁴⁰

Handlingstestende forsøg kan beskrives som dem, hvori vi handler for at se, hvad der sker i forhold til nogle forventninger. Det udforskende forsøg kan beskrives som en handling, der udføres uden forventninger til udfaldet. Hypoteseafprøvning handler om at afprøve flere hypoteser og på den baggrund kunne slutte, at en af hypoteserne er bekræftet ud fra forventningerne og de øvrige afkræftet.⁴¹ Vi gør lidt af hvert, når

Why do we call it a *laboratory*? What exactly is a laboratory? If we consult the (Danish) dictionary, it offers the following definition: “

An (imaginary) place where experiments and studies of various kinds are carried out.”³⁹

This matches quite well with the Aarhus School of Architecture as an educational institution. Aarhus School of Architecture is a place where we experiment, investigate, and carry out (practical) experiments as part of both teaching and research. Sometimes we work deliberately and systematically - at other times with a more intuitive and experience-based approach. You might say we conduct action-testing experiments, exploratory experiments, and test hypotheses.⁴⁰ Action-testing experiments can be described as experiments where we act to see what happens in relation to some expectations we have. The exploratory experiment can be described as an action performed without any expectations of the outcome. Testing hypotheses is about testing several hypotheses and, based on this, concluding that one of the hypotheses has been confirmed based on our expectations and that the others have been refuted.⁴¹ We do a little of

39 – <https://ordnet.dk/ddo/ordbog?query=laboratorie>

40 – Volf p. 75

41 – Schön p. 130, Volf p. 74

42 – Høyrup and Pedersen p. 130

vores undervisning tager form af eksperimenteren og udforskning, der skaber ændringer i omgivelserne.⁴²

Det er derfor, vi kalder det et laboratorium. Og vores undervisningsmæssige forsøg og undersøgelser skal gøres til genstand for refleksion i det Didaktiske Laboratorium. Vi skal vidensdele, sparre med hinanden og diskutere vores undervisning. Vi skal sammen identificere, dokumentere og herigennem udvikle de bedste rammer for de studerendes læring inden for feltet arkitektur.

Jeg tror egentlig, at vi – stort set – skal gøre, som vi plejer. Vi er gode til at undervise her på stedet! Vi skal så samtidig gøre en indsats for at dokumentere, reflektere og gøre det klart for os selv, hinanden, de studerende og andre, ikke bare *hvad* vi ønsker, at lære de studerende, men også *hvordan* og *hvorfor*! Derfor glæder jeg mig også til at se, at det Didaktiske Laboratorium og dets *portfolio* stille og roligt tager form og synliggør, hvordan vi underviser her på skolen. Synliggør og formidler, hvorfor det er vigtigt at gøre, som vi gør!

Vi kan noget særligt her på Arkitektskolen Aarhus, når det kommer til undervisning – og vi er stolte af det!

Lad os sammen løfte udviklingen af undervisningen - reflektere over og formidle den gennem det Didaktiske Laboratorium.

everything when our teaching takes the form of experimentation and exploration which create changes in the environment.⁴²

This is the reason we call it a laboratory, and in the Didactic Laboratory, our teaching-related experiments and explorations will be subjected to reflection. We will share knowledge, we will give each other's ideas feedback, and we will discuss our teaching. Together, we must identify, document and thus develop the best framework for students' learning in the field of architecture.

I really think we - pretty much - have to do what we usually do. We are good at teaching at the school! But we also need to make an effort to document, reflect on, and make it clear to ourselves, each other, the students, and other people not just what we want to teach the students but also *how* and *why*! I therefore also look forward to seeing the development of the Didactic Laboratory and its *portfolio*, making visible the way we teach here at the school and showing why doing what we do is important!

When it comes to teaching, we have special skills here at Aarhus School of Architecture and this is something we are proud of!

Let us go on developing our teaching together, reflecting on it and communicating it through the Didactic Laboratory.

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LITTERATUR

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“Good teaching not only involves reflection on what needs to be taught, but also on who should learn - from and with whom, where, when, how, why, and how we assess learning. And if you think about it; this is a rather precise definition of the task and subject area of didactics.”

DE FØRSTE INITIATIVER

THE FIRST INITIATIVES

De første initiativer og projekter i Didaktiske Laboratorium blev iværksat og gennemført i E2019/F2020:

— Etablering af et fysisk sted. Midlertidig lokalitet: Nørreport 15 st. På lokaliteten er der to kontorer, to møderum og et tekøkken med spise/mødefaciliteter. Lokalerne er indrettet, men der mangler miljø og identitet. Der skal laves et bookingssystem, så lokalerne ikke kommer til at indgå som almindelige mødelokaler. Lige nu udstiller Unit 1C i forlængelse af Port Folio Day januar 2020. Pædagogikumdeltagere 20/21 benytter lokalerne. Tanken er også, at de, der arbejder med udviklingsarbejde, har mulighed for at benytte lokalerne. Grundet Covid19 er yderligere indretning sat på standby.

— Alle fastansatte i ikke-forskningsbærende stillinger (med kontrakter af længere end ét års varighed) kan årligt søge om tid til udviklingsprojekter inden for det undervisningsfaglige og didaktiske område. Udviklingsprojekterne er knyttet til Didaktisk Laboratorium. Didaktisk Laboratorium tilbyder sparring og stiller lokaler m.m. til rådighed. I efterårssemestret 2019 og forårssemestret 2020 blev der tildelt udviklingstid til Troels Rugbjerg og Kari Moseng, Ann Aloy Kilpatrick, Lars Holt samt Nuria Casais. *

— Didaktiske Laboratorium har i samarbejde med Forskningsudvalget tilrettelagt og gennemført et inspirationsseminar om vidensbaseret undervisning og undervisningsbaseret vidensudvikling. Seminaret fandt sted onsdag den 12. februar 2020 kl. 14.00-17.00. *

The first initiatives and projects of the Didactic Laboratory were launched and implemented during the 2019 autumn semester and the 2020 spring semester:

— Establishing a physical space. Temporary location: Nørreport 15, the ground floor. Here there are two offices, two meeting rooms and a kitchenette with dining/meeting facilities. The premises have been furnished, but the sense of environment and identity are still missing. We need to establish a booking system to avoid lumping our rooms together with the school's other meeting rooms. Right now, there is an exhibition Unit 1C, a continuation of Portfolio Day January 2020. Participants in the teacher training course 20/21 use the premises. The idea is also that people who are engaged in development work should be given an opportunity to use the rooms. All further furnishing of the premises has been put on hold due to COVID-19.

— All permanent employees in non-research positions (with contracts longer than one year) can yearly apply for time for development projects in the field of teaching and didactics. The development projects are affiliated with the Didactic Laboratory. During the 2019 autumn semester and the 2020 spring semester, development time was allocated to Troels Rugbjerg and Kari Moseng, Ann Aloy Kilpatrick, Lars Holt and Nuria Casais. *

— In collaboration with the Research Committee, the Didactic Laboratory organised and conducted an inspiration seminar on knowledge-based teaching and teaching-based

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— Pædagogikum sammen med Det Kongelige Akademi og Arkitektur- og designhøgskolen i Oslo. Tanken er, at pædagogikum fremadrettet vil blive videreudviklet i Det Didaktiske Laboratorium i samarbejde med Tina B. Keiding, funktionschef, Forskningsbaseret Center for Universitetspædagogik – Uddannelsesudvikling, Aarhus Universitet og Annika Bürhert Lindberg, undervisningsudvikler, Forskningsbaseret Center for Universitetspædagogik – Undervisningsudvikling, Aarhus Universitet.

— Pædagogikum light, to dages undervisning på Ph.d.-skolen. Projektet blev gennemført som onlinekursus den 21. og 22. april 2020 med deltagelse af ni kursister. *

— Didaktiske Laboratorium (Mette Volf) har bistået med sparring ang. et nyt vejledningsforløb i forbindelse med et EU-projekt ved Ph.d.-skoleleder Claus Peder Pedersen og Ph.d. koordinator Mia Foldager.

— Det Didaktiske Laboratorium (Mette Volf) har bistået til didaktisk sparring i forbindelse med kollegaers undervisning F2020.

— Undervisningens Dag kom i 2020 til at omhandle videns- og erfaringsdeling om udfordringer og fordele ved *Det store Online-eksperiment i foråret 2020*. *

— Det Didaktiske Laboratorium påbegyndte arbejdet med at udvikle en DIGITAL PORTFOLIO som skal synliggøre og tilgængeliggøre undervisningsproduktionen herunder undervisningsstemaer og -forløb, -metoder og redskaber, -litteratur og begreber samt refleksioner, gode råd og tips og således understøtte udviklingen og synliggørelsen af de pædagogisk-didaktiske kompetencer Arkitektskolen Aarhus.

— Det Didaktiske Laboratorium har på forskellig vis bidraget til/deltaget i flere ansøgninger om fondsmidler og støtte til forskellige formål.

* se yderligere præsentation i denne publikation

knowledge development. The seminar was held on Wednesday 12 February 2020, from 14.00 to 17.00.*

— A teacher training course together with the Royal Danish Academy of Fine Arts, School of Architecture and The Oslo School of Architecture and Design. The intention is for future teacher training courses to be further developed in the Didactic Laboratory in collaboration with Tina B. Keiding, Division Manager, Centre for Higher Education Research and Development - Educational Development, AU, and Annika Büchert Lindberg, Educational developer, Centre for Higher Education Research and Development - Teaching Development, AU

— The PhD School's Professional Teacher Training Course Light. Two days' teaching at the PhD School. The project was completed as an online course on 21 and 22 April 2020 and had nine participants. *

— The Didactic Laboratory (Mette Volf) assisted with discussions and feedback regarding a new supervision course in connection with an EU project run by Head of Ph.D. School Claus Peder Pedersen and Ph.D. Coordinator Mia Foldager.

— The Didactic Laboratory (Mette Volf) assisted with discussions and feedback in connection with the teaching in the 2020 spring semester.

— Consequently, in 2020, The Day of Teaching focused on sharing knowledge and experience regarding the challenges and benefits of *The Great Online Experiment of Spring 2020*

— The Didactic Laboratory began the work of developing a DIGITAL PORTFOLIO aimed at making visible and accessible the production of teaching, including teaching themes and courses, methods and tools, literature and concepts, together with reflections and useful advice that might support the development and visibility of pedagogical-didactic competencies at Aarhus School of Architecture.

— The Didactic Laboratory has in various ways contributed to, and participated in applications for funding and support for various purposes.

* You will find a more detailed presentation in this publication

* Planlægningsgruppen bestod af forskningschef Thomas Bo Jensen, leder af ph.d.-skolen Claus Peder Pedersen, repræsentant for Forskningsudvalget Anne Elisabeth Toft og forskningskoordinator Hanne Foged Gjelstrup, undervisningschef Rasmus G. Hansen og koordinator for Didaktisk Laboratorium Mette Volf

*The planning group comprised Head of Research Thomas Bo Jensen, Head of The PhD School Claus Peder Pedersen, Representative of The Research Committee Anne Elisabeth Toft, Research Coordinator Hanne Foged Gjelstrup, Head of Education Rasmus G. Hansen and Coordinator of The Didactic Laboratory Mette Volf

Didaktisk Laboratorium har i samarbejde med Forskningsudvalget tilrettelagt og gennemført et inspirationsseminar om vidensbaseret undervisning og undervisningsbaseret vidensudvikling. Seminaret fandt sted onsdag den 12. februar 2020 kl. 14.00-17.00.

Formålet med inspirationsseminaret var at udveksle erfaringer med og idéer til, hvordan undervisning og forskning/udvikling kan foregå i praksis og gensidigt kan inspirere og befordre hinanden. 41 kollegaer havde meldt sig til inspirationsseminaret, og de blev inddelt i grupper.

Som forberedelse til seminaret blev alle tilmeldte bedt om at overveje følgende spørgsmål formuleret af planlægningsgruppen*:

In collaboration with the Research Committee, the Didactic Laboratory organised and held an inspiration seminar on knowledge-based teaching and teaching-based knowledge development. The seminar was held on Wednesday 12 February 2020, from 14.00 to 17.00.

The aim of the inspiration seminar was to exchange experiences and ideas on how teaching and research/development might be carried out in practice, and how they might inspire and promote each other. 41 colleagues had signed up for the inspirational seminar. They were divided into groups.

As a way of preparing for the seminar, all participants were asked to consider the following questions formulated by a planning group*:

Hvordan bruger du din forsknings-/udviklingsviden i din daglige undervisning?

Hvad er de studerendes rolle, når de indgår i din forskning/udvikling?

Hvordan bruger du input fra dine studerende i din forskning/udvikling?

Hvordan introducerer du opgaver til studerende, der har et forsknings-/udviklingsformål?

Hvad ser du som forskellen på forskningsbaseret undervisning og undervisningsbaseret forskning?

Hvordan skal forholdet være mellem underviserens vidensindsamling og potentialet for læringsindhold for de studerende?

How do you make use of your research/development knowledge in your daily teaching?

What is the role of the students when they contribute to your research/development?

How do you use input from your students in your research/development work?

How do you introduce assignments to students

which have a research or development purpose?

In your opinion, what is the difference between research-based teaching and teaching-based research?

How should the relation be between the teachers' knowledge gathering and the learning potential for the students?

Som optakt til seminaret præsenterede Mette Volf ideerne bag og de foreløbige aktiviteter i Didaktisk Laboratorium og pointerede, at laboratoriet består af alle undervisere, som kan bidrage med idéer, erfaringer, værktøjer, eksempler m.m.

Derefter blev hhv. to eksempler på udviklingsprojekter, der foregår i regi af Didaktisk Laboratorium, og to eksempler på undervisningsforløb, der har været tæt forbundet med igangværende forskning, præsenteret.

De to undervisere, der præsenterede deres udviklingsprojekter, arbejdede begge med interviews og indsamling af materiale og erfaringer. Det ene omhandlede arkitektoniske referencer og det andet digitale potentialer.

De forskningsbaserede undervisningsforløb viste, at udformningen af studenteropgaver er det sted, hvor udvekslingen mellem forskning og undervisning tydeligst viser sig. Fx kan forskningens resultater danne udgangspunkt for en åben opgave, eller opgaver skal løses ved hjælp af de metoder, forskerne selv benytter.

Følgende kollegaer præsenterede deres arbejde, som på forskellig vis indgik i emnet for seminaret:

Nuria Casais – *References in Architecture*

Ann Aloy Kilpatrick – *Digital dannelse*

Rune Christian Bach – *DØM-projektet (Den Østjyske Millionby)*

Anders Kruse/Niels Martin Larsen – *Material Imagination; Wood*

As a prelude to the seminar, Mette Volf presented the ideas behind, and the preliminary activities of the Didactic Laboratory, pointing out that the laboratory is for. All teachers who can contribute ideas, experiences, tools, examples etc.

There were then presentations of two examples of development projects under the auspices of the Didactic Laboratory and two examples of teaching courses that have been closely connected with ongoing research. The two teachers who presented their development projects both worked with interviews and gathering material and experiences. One project dealt with architectural references and the other with digital potentials. The research-based teaching courses showed that exchanges between research and teaching are most evident in the way student assignments are designed. For instance, results from research may provide the basis for an open-ended assignment or assignments have to be solved by applying the methods the researchers themselves use.

The following colleagues presented their work, which was in various ways included in the topic of the seminar:

Nuria Casais – *References in Architecture*

Ann Aloy Kilpatrick – *Digital culture*

Rune Christian Bach – *DØM-projektet (a project about the East Jutland Metropolitan Area)*

Anders Kruse/Niels Martin Larsen – *Material Imagination; Wood*

Flyer, med invitation og program for inspirationseminaret udfærdiget af Hanne Foged Gjelstrup, Forskningskoordinator

Flyer, with the invitation and programme for the inspiration seminar made by Hanne Foged Gjelstrup, Research Coordinator

FYSIKLOKALET, PARADISGADE
FEBRUARY 12, 2020

INSPIRATION SEMINAR

*KNOWLEDGE-BASED TEACHING /
TEACHING-BASED KNOWLEDGE*

Program

- 14.00 The thoughts behind the Didactic Laboratory
- 14.20 Presentations of two development projects
- 14.50 Break
- 15.05 Premiere on the M2M film about our research
- 15.10 Presentations of research-based teaching courses
- 15.40 Discussion and knowledge sharing in groups
- 16.20 Drinks and recap of the discussions in plenary

The *Didactic Laboratory* and the *Research Committee* invites all teachers to exchange ideas for and experience with ways to incorporate our artistic-, practice- and research-based knowledge foundation into teaching AND how teaching can contribute to research and development projects.



ARKITEKTSKOLEN AARHUS

Med udgangspunkt i de seks udsendte spørgsmål blev dagens emne diskuteret i grupper. Nedenstående pointer er fra den efterfølgende diskussion.

Based on the six questions sent beforehand, the topics of the day were discussed in groups. The below points are from the following discussion.

To overordnede tilgange:

Two main approaches:

En indirekte, hvor underviserens viden danner baggrund for undervisningen. (Forskningsbaseret undervisning)

An indirect approach, where the knowledge of the teachers provides the backdrop for teaching. (Research-based teaching).

En mere direkte, hvor et forskningsprojekt bliver en del af undervisningen og inddrager de studerende. (Kan både være forskningsbaseret undervisning og undervisningsbaseret forskning)

A more direct approach, where a research project is included in teaching and the students are involved in this. (Can be both research-based teaching and teaching-based research).

Overvejelser fra en undervisningsvinkel

Reflections from a teaching perspective

Inddragelsen af forskningen skal planlægges, så det giver mening for de studerende, deres læringsmål og deres uddannelse.

Incorporating research must be planned in a way that makes sense to the students, their learning objectives and their studies.

De studerende bliver engagerede, når underviseren inddrager sin egen forskning, og får forståelse for, at underviseren ikke kun er en instruktør med alle de rigtige svar, men også selv udvikler sin viden.

The students engage when the teacher incorporates his own research in teaching. They also gain an understanding of the teacher not only as an instructor who knows all the correct answers, but also as someone who develops his/her own knowledge.

Forskningen kan vise de studerende, at det er i orden at eksperimentere uden at nå frem til et fastlagt resultat.

The research can show the students that experimenting without achieving a determined result is acceptable.

Underviserens forskningsviden bruges både i formulering af opgaver, formidling af stoffet og tilrettelæggelse af workshops m.m.

The teacher's research knowledge is used in problem statements for assignments, for disseminating the subject matter, and for organising workshops etc.

Forskningen skærper spørgsmålene i opgaverne.

Metoder kan gå igen i forskning og undervisning – og på tværs af niveauer.

The research helps fine tune questions in assignments.

Ved at deltage i et forskningsprojekt opbygger de studerende et netværk, som de kan bruge senere.

Methods may recur in research and teaching - and across levels.

By participating in a research project, students build a network they can use later.

Overvejelser fra en udviklings- og forskningsvinkel

Reflections from a development and research perspective:

– Studerende kan flytte forskningen i nye retninger og skubbe den fremad, fordi de har et frisk blik på tingene.

– Students can turn research in new directions and push forward because they see things with fresh eyes.

– Som forsker skal man reflektere over den viden, de studerende bringer ind i et projekt.

– As a researcher, you need to reflect on the knowledge the students bring to a project.

– Der kan ikke være en 1:1 sammenhæng mellem forskning og undervisning, fordi undervisningen skal være bred. Projekter reflekterer ofte fragmenter.

– There can be no 1:1 correlation between research and teaching, as teaching needs a broad aim. Projects often reflect fragments.

– I undervisningsbaseret forskning udvikler man viden sammen med de studerende, og man er afhængig af idéer fra de studerende.

– Teaching-based research develops knowledge together with the students, and teachers are dependent on ideas from the students.

– Man kan opnå gode refleksioner fra de studerende, hvis resultatet eller målet i en opgave er fastlagt på forhånd, men processen er åben.

– The students may offer useful reflections if the desired result or goal of an assignment is determined in advance, but the process is open-ended.

Både undervisere, ledelse, Didaktisk Laboratorium og Forskningsudvalget har givet udtryk for, at seminaret var udbytterigt, og samarbejdet vil således blive udviklet med henblik på at iværksætte lignende tiltag.

Teachers, the management, the Didactic Laboratory, and the Research Committee say they felt the seminar was fruitful. Accordingly, we will develop the collaboration further with a view to launching similar initiatives.

DEVELOPMENT WORK

UDVIKLINGSARBEJDER

Alle fastansatte i ikke-forskningsbærende stillinger (med kontrakter længere end ét års varighed) kan årligt søge om tid til udviklingsprojekter inden for det undervisningsfaglige og didaktiske område. Den samlede mængde udviklingstid er afhængig af antallet af fastansatte undervisere i ikke-forskningsbærende stillinger, der hver lægger tid svarende til 0,1 årsværk per fuldtidsansættelse i den fælles pulje. Projekterne er knyttet til skolens Didaktiske Laboratorium. Det Didaktiske Laboratorium tilbyder sparring og stiller lokaler mm til rådighed.

I efterårssemestret 2019 og forårssemestret 2020 blev der tildelt udviklingstid til Troels Rugbjerg og Kari Moseng, Ann Aloy Kilpatrick, Lars Holt samt Nuria Casais.*

Tanken var, at de fire projekter – som en del af videndeling/ formidlingsforpligtelse - skulle præsenteres ved Undervisningens Dag i juni 2020, men eftersom dagen var nødsaget til at foregå online, blev dagen gjort kortere og præsentationerne blev udsat på ubestemt tid.

Nuria Casais og Ann Aloy Kilpatrick præsenterede halvvejs i forløbet deres undersøgelser, erfaringer og foreløbige resultater. Og Troels Rugbjerg og Kari Moseng har samlet deres viden og udvikling i en artikel, som er blevet optaget på TEACHING-LEARNING-RESEARCH: DESIGN AND ENVIRONMENT Conferences i Manchester i december 2020.

Troels Rugbjerg og Kari Moseng har i deres udviklingsprojekt forsøgt at afdække og identificere elementer i skrivebordsvejledninger, hvor de har fokuseret på et traditionelt undervisningsformat, hvor en studerende undervises af en underviser

All permanent employees in non-research positions at Aarhus School of Architecture (with contracts longer than one year) can annually apply for time for development projects in the field of teaching and didactics. The total amount of development time depends on the number of permanently employed teachers in non-research positions, each of which contributes to the shared pool that corresponds to 0.1 full-time equivalent per full-time position. The projects are affiliated with the school's Didactic Laboratory.

During the autumn semester of 2019 and the spring semester of 2020, development time was allocated to Troels Rugbjerg and Kari Moseng, Ann Aloy Kilpatrick, Lars Holt samt Nuria Casais.*

The idea was that the four projects - as part of the duty to share/disseminate knowledge - should be presented at The Day of Teaching in June 2020. However, as the event had to take place online, the day was shortened and the presentations were postponed indefinitely.

Halfway through the process, Nuria Casais and Ann Aloy Kilpatrick presented their research, experiences and preliminary results at the Inspiration Seminar in February 2020. Troels Rugbjerg and Kari Moseng have collated their knowledge and development in an article that was accepted by the TEACHING-LEARNING-RESEARCH: DESIGN AND ENVIRONMENT conference in Manchester in December 2020. In their development project, Troels Rugbjerg and Kari Moseng have tried to identify the different components of desk crits, focusing on a traditional teaching format, in which a student is taught by a teacher at the student's desk located in a studio. Troels Rug-

ved den studerendes skrivebord på tegnesalen. Troels Rugbjerg og Kari Moseng har skrevet nedenstående resumé som en del af deres formidlingsforpligtelse.

Rugbjerg and Kari Moseng wrote the below summary as part of their duty to disseminate.

TALKING, DRAWING AND REALISING TOGETHER

Identifying elements of desk tutorials in architectural design studio Development project in the Aarhus School of Architecture by Kari Moseng, Teaching Associate Professor and Troels Rugbjerg, Teaching Associate Professor

In August 2019, we started a development project with the aim of studying desk tutorials, and an ambition to identify elements of these and to discuss the impact and potential of this specific format of teaching. Desk tutorials are key to the development of projects in the education of architects. However, there is a lack of description of desk tutorials in research. Our study is the result of monitoring different tutoring sessions conducted by our colleagues and discussions related to different strategies and approaches

Background and history

1— Schön, Donald (1987): *Educating the Reflective practitioner*. San Francisco, Jossey-Bass. P. 18.

2— Ibid. P. 93.

3— Ibid. Pp. 44-45. Often projects in the education of architects simulate the development of a design according to professional architectural practice. However, some projects may also focus on more academic questions, but still be structured as a project.

The American philosopher Donald Schön describes how "Reflection in action" happens in design studios in schools of architecture: "...its characteristic pattern of learning by doing and coaching, exemplifies the predicaments inherent in any reflective practicum and the conditions and processes essential to its success."¹ So, according to Schön, becoming an architect involves an aspect of practising that you cannot *learn about*, but need to *do* and to *practise* in order to master it.² By developing projects, aspiring architects become acquainted with challenges and the problem-solving aspects of such a practice.³

Developing projects in a studio-based environment is also a primary element in the education at Aarhus School of Architecture, and although these are complemented with secondary elements such as lecture series and courses, the project-based education that takes place in the studios still accounts for a larger



percentage of the 30 ECTS required each semester. Given that project development is pivotal in the education of architects, tutoring is an essential part of educating students in architecture.⁴ From studying a limited range of sources describing historic practices of teaching architecture in Denmark and abroad, it is evident that tutoring has been an integral part of the education for many years.

However, since we as tutors often conduct our desk tutorials individually in one-to-one situations with students, we rarely question and discuss *what* a tutoring session actually consists of and *why* it works – or doesn't – and *how* it takes place. Because there is often a tacit knowledge that has evolved from years of experience in practice, there is still a lack of description of essential parts of this unique situation. The aim of our development project was to identify elements of desk tutorials, focusing on a traditional format of tutoring in which one student is tutored by one teacher at the student's desk in a design studio.⁵

By way of method, we decided to observe three of our colleagues at Aarhus School of Architecture in their tutoring, thus seeking to study their tutoring practice. The teachers we selected all have numerous years of experience as tutors, also in schools of architecture other than Aarhus School of Architecture. We also selected teachers who tutor at all levels in the programme: first year, second year, third year and master's level, as we expected to see differences between tutoring a first-year student doing a shorter exercise and tutoring a thesis student doing his or her final project.

From our experience, a tutoring session often lasts approximately 30 minutes. This period can roughly be structured into an introduction, a discussion and a conclusion. Also, from the beginning, from our experience of the practice of tutoring, we identified that:

– *It involves a reflective practice.*⁶

– *Communication happens on several levels, not only orally, but also through drawing.*⁷

– *Drawings and models shift back and forth from being results to also being the means of developing and exploring architectural possibilities.*⁸

– *Tutoring has a two-level aim: to help students develop a specific project; and to help students develop a fruitful method for developing projects in general.*

4— Teaching in relation to project development also happens at the end through crits where the students get a response to the result of their project and also at the beginning when introducing the field and context of the project to be developed.

Method

5— Traditional tutoring happens in a studio, where a teacher comes and sits next to the desk of the student. There are of course other possibilities, where instead the student comes to the teacher's desk or to a more neutral setting elsewhere. Tutoring can also include more than one student and/or more than one teacher. Although this does not involve other students, it is possible for students around the desk of the student being tutored to listen to the discussions and possibly learn from this, as the issues and the questions being discussed for this one particular student would also be relevant to the neighbouring student working on a similar project based on the same assignment.

6— As presented in: Pelsmakers, Sofie, Donovan, Elizabeth, Moseng, Kari and Eybye, Birgitte Tanderup (2019): 'Developing Architecture Studio Culture: Peer-Peer Learning' and in: Schön, Donald (1987): Educating the Reflective practitioner. San Francisco, Jossey-Bass.

7— As studied by Troels Rugbjerg in Course for Teachers of Architecture and Design (Pædagogikum): http://www.troelsrugbjerg.dk/120501portfolio_troelsrugbjerg.pdf

8— Schön, Donald (1987): Educating the Reflective practitioner. San Francisco, Jossey-Bass. P. 58. Petherbridge, Deanna (2008): 'Nailing the Liminal: The Difficulties of Defining Drawing' in: Garner Steve (ed.) (2008): Writing on Drawing, Essays on Drawing Practice and Research. Bristol, UK; Chicago, USA: Intellect Books, pp. 27-42.

Such varied requirements mean that tutors need abilities to adapt and to sense empathically what is needed and to be able to respond to this by alternating between *drawing and talking, instructing and improvising, demonstrating from a master-learning relationship to a reciprocal relationship that includes mutual development and creation*. We had to be aware of how these three tutors were handling and dealing with these different relations during the tutoring we monitored.

We both observed the tutoring sessions, which meant we had a common experience that we were able to talk about afterwards. We stayed as quiet and invisible as possible. However, our presence did of course have an influence, which should be taken into consideration here. We recorded the tutoring after receiving a clear acceptance of this from both the student and tutor, promising that this recording was only to be used for our own internal use in the context of this development project. During observation, we took pictures of important instances of the tutoring: e.g. how tutoring took place with the use of drawings. After the observations, we interviewed the tutored students (without the teachers being present) about the tutoring session: format, content and outcome of the tutoring session.

We monitored several tutoring sessions for each of the three teachers, and we then selected one representative tutoring session for each of the teachers, ending up by analysing three tutoring sessions. In a combination of our hypotheses on the structures of tutoring sessions and reoccurring themes, and from what we then actually observed at the tutoring sessions, we developed a 'script-model' with four different parts/layers as a method for our investigations. Analysing the tutoring sessions according to the same model also amplified possibilities for comparing the three different tutoring sessions in relation to each other and for identifying differences and similarities.

The cases and the conclusions on the projects was presented at the TEACHING-LEARNING-RESEARCH: DESIGN AND ENVIRONMENTS conference (organised by Routledge, AMPS, PARADE and the University of Manchester) in December 2020, and will also be presented in a paper in the context of the conference.

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THE PHD SCHOOL'S
PROFESSIONAL
TEACHER TRAINING
COURSE LIGHT

PH.D. SKOLENS
PÆDAGOGIKUM LIGHT

THE PHD SCHOOL'S PROFESSIONAL
TEACHER TRAINING COURSE LIGHT

Den 21. og 22. april 2020 Afviklede Didaktisk Laboratorium i samarbejde med Ph.d.-skolen på Arkitektskolen Aarhus et ph.d.-kursus i didaktik. Der var ni ph.d.-studerende, som tilmeldte sig kurset, og otte, som gennemførte. På grund af Covid19-pandemien blev kurset omdannet til et onlinekursus og foregik på Microsoft Teams. Kurset var tænkt som et led i Ph.d.-skolens forpligtelse til at udbyde en uddannelse i vidensformidling. Inden kurset skulle de studerende have læst udvalgt litteratur og en anden studerendes beskrivelse af eget Ph.d. projekt samt løst to små opgaver.

Med udgangspunkt i en mere generel introduktion til didaktik, herunder inddragelse af Donald Schöns *Den Reflekterende Praktiker* som en del af det teoretiske udgangspunkt, var erfaring med og udvikling af kompetencer inden for undervisning omdrejningspunktet for kurset. Tanken var, at de studerende med udgangspunkt heri og i deres egne ph.d.-projekter skulle gøre sig tanker om, hvordan deres egen forskning ville kunne vinkles og indgå i en (kommende) undervisningssituation, samt hvordan undervisningen evt. ville kunne bidrage til deres egen forskning.

Formålet med kurset var, at de studerende allerede under deres ph.d.-uddannelse skulle stifte bekendtskab med didaktik og gøre sig didaktiske overvejelser om undervisning i arkitektur, herunder hvordan man kan tilrettelægge undervisning med udgangspunkt i egen forskning. Undervisningen bestod af forelæsninger, øvelser og peer-to-peer-feedback og tog udgangspunkt i John Biggs begreb om *alignment* samt Donald Schöns begreb om *refleksion-i-handling*.

On 21 and 22 April 2020 The Didactic Laboratory held a PhD course in didactics together with the PhD School of Aarhus School of Architecture. Nine PhD students signed up for the course and eight students completed the course. Due to the COVID-19 pandemic, the course was transformed into an online course on Microsoft Teams.

The course was conceived as part of the PhD School's obligation to offer an educational programme in knowledge dissemination. The students were asked to read selected literature and another course participant's description of his or her project, and to complete two short assignments before the course.

Based on a more general introduction to didactics, which included Donald Schön's *The Reflective Practitioner* as part of the theoretical basis, was experience with and development of competencies within teaching the focal point of the course. Based on this and on their own PhD projects, the intention was for the students to reflect on how their own research might be angled and incorporated into a (future) teaching situation, and on how teaching might possibly contribute to their own research.

The aim of the course was to acquaint students with didactics during their PhD course and make them reflect didactically on the teaching of architecture, including how teaching could be organised on the basis of their own research.

The teaching consisted of lectures, exercises, peer-to-peer feedback, and was based both on John Bigg's concept of *alignment* and on Donald Schön's concept of *reflection-in-action*.

After the course, the students should be able to explain what didactics and learning can be,

Efter kurset skulle de studerende kunne redegøre for, hvad didaktik og læring kan være, herunder desigtænking, samt kunne redegøre for begreberne refleksion i/over handling. De skulle kunne beskrive og udvikle et undervisningsforløb med udgangspunkt i Biggs *alignment*-begreb, og endelig skulle de kunne reflektere over egen forskning i forhold til et undervisningsforløb.

Efter endt kursus skulle de studerende skrive et refleksionsark. Refleksionsarket skulle dels indeholde refleksioner over den studerendes egen læring med udgangspunkt i kurset og dels indeholde refleksioner over den særlige undervisningssituation, der kendetegner det at undervise i arkitektur. Materialet skulle sendes til Mette Volf, som tilbød at give feedback på materialet. Se nedenstående eksempel på et refleksionsark udfærdiget af ph.d.-studerende Charlotte Lintrup.

Kurset tænkes gentaget og videreudviklet med jævne mellemrum, når der er nye ph.d.-studerende på Arkitektskolen Aarhus og/eller Designskolen Kolding.

including design thinking, and also explain the concepts of reflecting in/on action. They should be able to describe and develop a teaching course based on Bigg's concept of *alignment* and, also, finally, to reflect on their own research in relation to a teaching course.

After completing the course, the students were asked to draw up a document containing their reflections: partly featuring reflections on the PhD student's own learning based on the course, and partly featuring reflections on the special teaching situation that is a characteristic of the teaching of architecture. They were asked to submit the material to Mette Volf, who had offered to provide feedback on the material. See the below example of a document drawn up by PhD student Charlotte Lintrup.

The intention is to develop the course further and repeat it regularly when there are new PhD students at Aarhus School of Architecture and/or Design School Kolding.

Forud for kurset havde jeg, på baggrund af mine erfaringer med undervisning i forbindelse med mit ph.d.-projekt, anført en mængde punkter, jeg havde oplevet tvivl omkring. Ud af disse punkter berørte kurset en del, men ikke alle. Vi arbejdede med elementer som konkrete læringsmål for undervisningen, formålet med undervisningen, struktur mv., men berørte ikke i så høj grad den konkrete formidling i undervisningssituationen. Desuden vil jeg kunne bruge fif fra kurset i sig selv, som bestod af mange diskussioner og opgaver, til at sætte fokus på vigtigheden af, at de studerende selv er aktive i undervisningen. Kursets fokus på didaktik og læring har givet anledning til yderligere refleksioner vedrørende kurser, jeg selv har deltaget i. På hvilken måde går det ud over læringen, hvis man fx ikke har tid nok til at udføre en opgave? Hvorfor er det helt nødvendigt at introducere begreber, værktøjer mv. meget grundigt, så man har alle de studerende med, og alle er klar over, hvad opgaven består i? Ligeledes nødvendigheden af en klar struktur i undervisningen, pausernes betydning mv., som muligvis ved første øjekast kan virke sekundært, men som for den der modtager undervisningen, understøtter formålet og hensigten med kurset.

Before the course, based on experience from teaching acquired during my PhD project, I had stated a number of points I had some doubts about. The course touched on some but not all of these points. We worked on topics such as specific learning objectives for teaching, the purpose of teaching, the structure etc., but did not deal so much with specific dissemination in teaching situations.

Apart from this, I can use some advice from the course itself, which involved many discussions and assignments, to focus on the importance of the students being active during teaching.

The course's focus on didactics and learning has given rise to further reflections about courses I myself have participated in. In what way is learning affected when, for instance, you do not have enough time to perform a task? Why is it absolutely necessary to introduce concepts, tools etc. very thoroughly, in such a way that all the students can follow you and everyone is aware of the nature of the assignment? Similarly, the need for teaching to have a clear structure, the importance of breaks, etc. Aspects which may, at first glance, seem secondary but which, for the recipient of the teaching, support the purpose and intent of the course.

På kurset arbejdede vi meget med Pentagon-modellen. Netop dette, tænker jeg, er et meget brugbart og klart værktøj, som både kan bruges til at strukturere min egen undervisning, til at sørge for at alle områder er blevet tænkt igennem, og at der netop er en sammenhæng hele vejen rundt. Værktøjet kan også bidrage til at skabe klarhed for mig selv over, hvad det er, jeg gør som underviser, og hvorfor; hvad er målet med undervisningen (læringsmål).

During the course, we worked quite a lot with the Pentagon model. I believe this is a highly useful and easy-to-understand tool that I can use to structure my own teaching, and to ensure that I have contemplated all areas and that my teaching has all-round cohesion. The tool may also help make it clear to me what it is I do as a teacher and why; what the goal of teaching is (learning objectives).

Pentagonens punkt om 'vurderingskriterier' kan bruges til at sætte fokus på, hvad der er det væsentligste i opgaven (hvilke kriterier jeg har tænkt at vurdere de studerende i forhold til) og lade dette afspejles i læringsmålene, der formidles til de studerende fra starten. På den måde skabes der klarhed for de studerende og sammenhæng hele vejen gennem forløbet.

Eftersom jeg primært vil skulle undervise i forundersøgelser, hvor den kreative proces ikke er i forgrunden, vil begreber som 'design thinking', 'reflecting in action' m.fl., være interessante at kende, men nok ikke direkte brugbare i samme grad som pentagonmodellen.

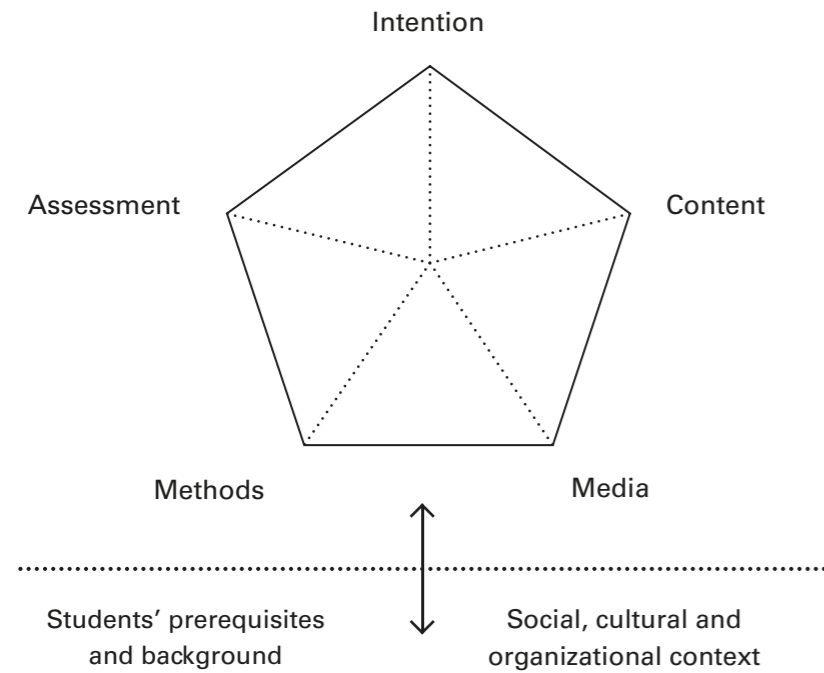
Det var interessant at se nærmere på, hvordan mit eget ph.d. projekt kan bruges i undervisningen og vice versa. Den brainstorm, som lå i en af opgaverne, på en nærmere sammenhæng mellem mit eget projekt og undervisningen, tænker jeg vil være brugbar i fremtiden i forhold til fx intentionen for mit eget projekt/intentionen for de studerendes forløb, den anvendte metode og forventninger til udkomme, og ikke mindst sammenhængen mellem disse dele.

For eksempel kunne jeg, i forhold til mit eget arbejde med forundersøgelser, udvælge tre forskellige metoder til registrering (eller til opmåling, afhængig af forløbet) og lade de studerende afprøve disse i mindre grupper. Min egen rolle ville i så fald være mere 'objektivt' observerende, end hvis jeg selv udførte de forskellige undersøgelser. På den måde ville jeg kunne indsamle større mængder

The Pentagon's point regarding 'assessment criteria' can be used to focus on what is most important in the assignment (in relation to which criteria I intend to assess the students on) and ensure that the learning objectives communicated to the students from the beginning reflect this. This creates clarity for the students and coherence throughout the course.

As I will primarily be teaching preliminary (research) studies, in which the creative process does not take centre stage, concepts such as 'design thinking', 'reflecting in action' etc. would be interesting to know, but would probably not be immediately useful to the same extent as the Pentagon model would.

Taking a closer look at how my own Ph.D. project might be used in teaching, and vice versa, was interesting. The brainstorming on a closer connection between my own project and teaching, which was part of one of the assignments, will probably be useful in the future: e.g. in connection with the intention for my own project/the intention for the students' course, the method used, expectations for the outcome, and, not least, the connection between these elements. In relation to my own work with preliminary studies, I might, for instance, select three different methods for preparatory investigation (or measured surveying, depending on the course) and let the students test methods in small groups. In that case, my own role would be more to observe 'objectively' than if I had carried out the various studies myself. In this way, I would be able to collect large amounts of data and test



data og prøve flere forskellige metoder af, samtidig med at de studerende ville lære om forskellige forundersøgelser på en forskningsbaseret måde.

I forhold til den Pentagonmodel, vi arbejdede med, ville det komme til at se sådan ud:

Opøve færdigheder og hands-on erfaringer med opmåling hhv. registrering. (Intention i forhold til mit ph.d.-projekt ville være at indsamle data + observationer i forhold til tre forskellige metoder til forundersøgelser (opmåling eller registrering))

Dele de studerende i fx tre grupper, der arbejder med hver sin metode til opmåling (eller registrering), Introduktion til hver af de pågældende metoder. Arbejde med de studerende på et sted/en bygning (samme sted for alle), hvor hver gruppe arbejder med sin måde at enten opmåle eller re-

several different methods, while, at the same time, the students would learn about different preliminary studies in a research-based way.

In relation to the Pentagon Model we were working with, this might look something like this:

Acquiring skills and hands-on experience with respectively measured surveying and preparatory investigation. (For PhD projects the intention would be to collect data + observations relating to three different methods for conducting preliminary studies (measured surveying or preparatory investigation))

For example, dividing the students into three groups, each group working with their own methods of measured surveying (or preparatory investigation). Providing an introduction to each of the methods. Working with the students on a site/in a building (the same location for everyone), where

Intention – i forhold til de studerende

Intention - in relation to the students

Content - i forhold til de studerende

Content - in relation to the students

gistrere på. (I relation til mit ph.d.-projekt ville opgaven gå ud på at opstille tre forskellige metoder til registrering eller opmåling, på baggrund af state-of-the-art, litteratur mv., og afprøve disse.)

Media

Media

Som introduktion til de forskellige metoder ville jeg benytte mig af et power point/slide show (tekst, visualiseringer) til at gøre rede for formål, læringsmål og fremgangsmåde. Dette ville efterfølges af øvelser på stedet, hvor min rolle ville være som vejleder i de konkrete praktiske opgaver.

Methods - i forhold til de studerende

Methods - in relation to the students

Undervise i metoder til enten opmåling eller registrering, som udføres på stedet. Ved registrering vil man muligvis kunne være mere åben og inddragende i forhold til de studerendes idéer og undersøge metoderne sammen. Opmåling vil være mere stringent, eftersom man har behov for et klart udkomme, nemlig tegningerne til at arbejde videre på. (I forhold til mit ph.d.-projekt: Kvalitative studier af tre forskellige metoder til forundersøgelser.

Min rolle: Observerende rolle, interviewe de studerende under og efter; hvad fik de ud af det fx i forhold til oplevelse af bygningen, inspiration til senere projektarbejde mv.)

Assessment - i forhold til de studerende

Assessment - in relation to the students

Resultatet af enten opmåling eller registrering. Kvaliteten af arbejdet, graden af opnået forståelse af bygningen, brugbarheden i forhold til værdisætning, restaureringsholdning og projektarbejde. (Efterfølgende vurdering i forhold til brug i mit ph.d.-projekt: Evaluere på de tre metoder: fordele, ulemper, kvaliteter, huller i vidensindsamling mv. Inspiration til videre undersøgelser på baggrund af egne observationer, interviews med de studerende osv.)

each group works with its specific way of either measured surveying or preparatory investigation. (In relation to my PhD project, the aim of the assignment would be to set up three different methods of measured surveying or preparatory investigation, based on state-of-the-art, literature etc., and test these methods.)

To introduce the different methods, I would use a PowerPoint/slide show (text, visualisations) to explain the purpose, learning objectives, and procedure. This would be followed by exercises on location, where my role would be to supervise the specific practical tasks.

Teaching methods for either measured surveying or preparatory investigations carried out on site. When preparatory investigations, you can be more open and inclusive in relation to the students' ideas and investigate the methods together. Measured surveying is more stringent, as you need a clear result: i.e. drawings you can process further. (In relation to my PhD project: 'Qualitative studies of three different methods for doing preliminary studies.'

My role: To observe the process, interview students during and after: what did they get out of it, for instance in terms of experiencing the building, finding inspiration for later projects etc.?)

The result of the measured surveys or preparatory investigations. The quality of the work, the degree of understanding of the building achieved, the usability in relation to valuation, attitudes to restoration and project work. (Subsequent assessment in relation to using it in my PhD project: Evaluating the three methods: advantages, disadvantages, qualities, gaps in knowledge acquisition etc. Inspiration for further studies based on my own observations, interviews with the students etc.)

TIME SCHEDULE:

Dette program viser en tidsmæssig tilrettelæggelse som fortæller om underviserens didaktiske overvejelser i forhold til sammenføring af opgaver, emner, interaktionsformer samt handlinger hos deltagerne.

This program shows a time plan which tells about the teacher's didactic considerations and relation to the merging of tasks, topics, forms of interaction and actions of the participants.

Wednesday, 22 April 2020 9.00-17.00

Tuesday, 21 April 2020 9.00-17.00

9.00 Presentation and introduction to the course content/purpose/
learning outcome/timetable by Mette Volf

9.30 Lecture by Mette Volf
*'Didactics in an artistic educational programme,
learning outcome and alignment'*
Introduction to Exercise 1

10.15 Break

10.30 Exercise 1: Discussion in groups based on own experience
(or lack of same)

11.15 Recap of the group discussions
- all participants together

11.45 Introduction to Exercise 2

12.00 Lunch

13.00 Exercise 2: Reformulating descriptions of teaching courses
- individually

13.45 Discussion in groups

14.15 Recap of the group discussions
- all participants together
Introduction to Exercise 3

14.45 Break

15.00 Exercise 3 - Assessment

15.30 Discussion in groups

16.00 Recap of the group discussions
- all participants together
Short break

16.30 Lecture by Mette Volf: *'Reflections on/in action
and Design Thinking'*

17.00 See you tomorrow

9.00 Introduction to the day's programme
by Mette Volf

Lecture by Mette Volf
*'Design Thinking in relation to
teaching and research'*

Short break

9.45 Presentation by Rune Bach a former PhD student at
Aarhus School of Architecture
Introduction to Exercise 4

10.45 Break

11.00 Exercise 4: Discussion in groups based on own experience
(similarities/differences)

11.45 Recap of the group discussions
- all participants together

12.15 Lunch

Introduction to Exercise 5 & 6

13.00 Exercise 5: Discussion about, and feedback on the students'
own projects with the aim of reflecting on/developing the
projects into a teaching course

13.45 Exercise 6: Rephrase a description of teaching courses
with a focus on introducing

PhD projects - individual work

14.15 Reading each other's rephrased descriptions

14.45 Break

15.00 Recap and Q&A - all participants together

Introduction – Exercise 7

Peer-to-peer feedback on the rephrased descriptions

16.15 Recap in the form of a joint discussion

Introduction to the framework for the final assignment
(Evaluation)

17.00 Thank you and goodbye for now

THE DAY OF TEACHING

UNDERVISNINGENS DAG

Det var på ingen måde ønskværdigt, at Danmark blev lukket ned den 11. marts 2020, men det var en handling for at undgå smittespredning af Covid19. Det bevirkede, at hele Danmark – og herunder undervisningssektoren – gik online. Brugen af digitale kommunikationsplatforme eksploderede på Arkitektskolen Aarhus, og det lykkedes for undervisere og andre ansatte på meget kort tid at fortsætte undervisningen af arkitektstuderende online.

Det var hårdt arbejde at skulle omlægge undervisningen, tage hånd om bekymrede og sårbare studerende og samtidig lære at beherske nye digitale programmer at kommunikere igennem. Set ud fra et didaktisk synspunkt var – og er – det ét stort eksperiment, hvor arkitektfaglige kompetencer som det *at handle hurtigt, lære i nuet og det at være i stand til at omstille sig* for alvor blev synlige. Nedlukningen af Danmark blev på den måde en uventet kickstart for hele den digitale bølge, som ruller ind over undervisningssektoren i disse år, hvor fokus er på digitalt understøttet læring, og hvor hele undervisningssektoren – herunder Arkitektskolen Aarhus – er forpligtet til at beskæftige sig med og udvikle læringsforløb, som er digitalt understøttet.

Det er således helt oplagt, at dette – ufrivillige – eksperiment må gøres til genstand for opmærksomhed både i didaktisk og forskningsmæssig sammenhæng. I første omgang handler det om at indsamle og kortlægge viden og erfaringer med situationen, som opstod så uventet og pludseligt.

The fact that Denmark was locked down on 11 March 2020 was by no means desirable. It was, however, necessary to avoid the spread of COVID-19 infection. As a result, the whole of Denmark - including the educational sector - went online. At Aarhus School of Architecture the use of communication platforms snowballed, and teachers and other staff members managed to go on teaching architecture students online in a very short time. Restructuring teaching was hard work, alongside the task of taking care of anxious and vulnerable students, and also mastering new digital programmes for communicating. From a didactic point of view, this was - and is - a huge experiment, in which architectural skills, such as *the ability to act quickly, learn from the present and being able to adapt*, really came to the fore.

Thus, the lockdown of Denmark became an unexpected kick-start for the entire digital wave that is rolling in over the educational sector these years - a wave in which the focus is on digitally-supported learning, with the entire educational sector - including Aarhus School of Architecture - committed to working with, and developing learning courses that are digitally supported.

It is obvious to draw attention to this - involuntary - experiment - in both a didactic and a research context. To begin with, this is about gathering and mapping knowledge about, and experiences with a situation that arose very unexpectedly and suddenly. Consequently, this year, The Day

THE PROGRAMME
FOR THE DAY
29.06.2020:

9.00	Welcome by Rasmus G. Hansen Brief framework of the day by Mette Volf Brief presentation: Experience using Miro by Thomas Hilberth Intro to Miro by Thomas Hilberth and Mette Volf
	Collecting knowledge - individually + DIALOG I short presentations
10:15	Break
10.30	DIALOG II + DIALOG III short presentations
11.30	BRAINSTORMING and DIALOG IV short presentations
12.15	Lunch
12.45	Presentation: The first thoughts on D-Lab portfolio by Christian K. Ramsing Presentation: The first thoughts on D-Lab portfolio by Mette Volf
13.30	Break
13.45	DIALOGUE V Short presentations
14.15	Summing up - sharing a drink and saying: HAPPY SUMMER

Derfor kom Undervisningens Dag 2020 til at omhandle videns- og erfaringsdeling om udfordringer og fordele ved *Det store Online-eksperiment i foråret 2020*.

Undervisningens Dag foregik online via Microsoft Teams (som vi alle kendte og var blevet fortrolige med) og Miro.com, som nogle af os havde erfaringer med. Begge dele kørte samtidig. Vi benyttede Teams til tale (med og uden video), og vi benyttede Miro, som gjorde det muligt for at samarbejde visuelt.

Dagen var tilrettelagt til at foregå (primært) som gruppearbejde og i udgangspunktet sammen med den unit/det studio, som vi undervisere havde arbejdet og opbygget erfaringer sammen med i F2020. Den blev faciliteret som en designproces af Mette Volf med brug af metoderne *problemtræet* og *tilfældig brainstorm*. Fordelen ved metoderne er, at deltagerne arbejder og producerer materiale hurtigt og i mange tilfælde intuitivt. Udbyttet af materiale er ofte stort, ustruktureret og ufærdigt, men rummer til gengæld ofte meget potentiale og ofte overraskende materiale, der kan arbejdes videre med.

Formålet med Undervisningens Dag var at vidensdele og samle op på de erfaringer, vi hver især og sammen havde gjort med online-undervisning og brugen af digitale platforme. Tanken

of Teaching focused on sharing knowledge of, and experience with the challenges and benefits of *The Great Online Experiment of Spring 2020*

The Day of Teaching was held online using Microsoft Teams (which we all knew and had become familiar with) and Miro.com, of which some of us had experience. Both programmes were running at the same time. We used Teams for speech (with and without video), and Miro to allow us to cooperate visually. The day was organised (primarily) to involve group work, mainly working together with the units/studios we, the teachers, had worked with and built up experiences with during the 2020 spring semester. Mette Volf facilitated this as a design process, using *the problem tree and random brainstorming* methods. The advantage of these methods is that the participants work and produce material quickly and often intuitively. The resulting material is often huge, unstructured and unfinished. But, on the other hand, it often holds much potential and often contains surprising material that you can go on working with.

The purpose of The Day of Teaching was to share knowledge and sum up the experiences each of us had had with online teaching and the use of digital platforms. The intention was to be specific and formulate the experiences as preliminary

var, at vi skulle blive konkrete og få formuleret erfaringerne som begyndende problemstillinger, der fremadrettet ville kunne handles på. Det fælles arbejde er konkretiseret i en rapport. Rapporten består af et repræsentativt udsnit af de indkomne svar/refleksioner over oplevede fordele og udfordringer ved online-undervisning, som underviserne havde noteret sig. Overordnet er materialet kategoriseret i udsagn, 1) som synes mere generelle for arbejdspladser, der benytter digitale redskaber/platforme, og 2) som omhandler undervisning. De overordnede kategorier er endvidere inddelt i forskellige overskrifter. Materialet kunne naturligvis have været inddelt i andre kategorier. Kategoriseringen er gjort for at skabe overblik og se mønstre på tværs af materialet, som kan pege i retning af problemstillinger, som kan være interessante at undersøge nærmere.

Nedenstående opsamling bygger på det fremkomne materiale (skriftligt og visuelt), der blev genereret på dagen på den digitale platform Miro. Jeg (Mette Volf) har læst kommentarer og set materialet igennem og vil her videregive et samlet overblik over, hvad materialet synes at give udtryk for. Hvad der synes at optage underviserne på Arkitektskolen Aarhus mest ang. deres erfaringer med online-undervisning.

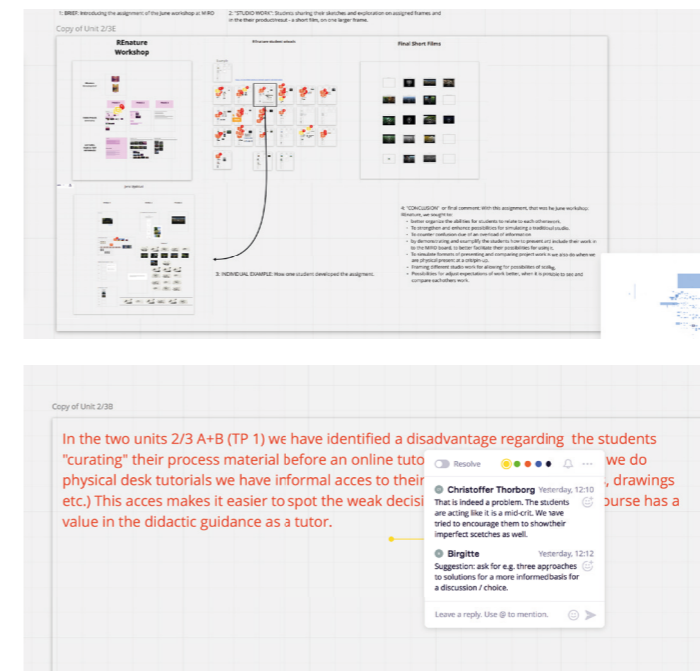
Materialet kan betragtes som et øjebliksbillede. Det kan endvidere være svært at sige noget om, hvorvidt erfaringerne fra Undervisningsdag alene er forårsaget af online-undervisningen, og/eller hvordan selve situationen vedr. Covid19-nedlukningen i sig selv har haft betydning

issues that could be acted on in the future.

Our collective work is specified in a report.

The report consists of a representative sample of the received answers/reflections regarding the perceived benefits and challenges of online teaching, which the teachers had noted. In overall terms, the material has been categorised as statements (1) that seem to pertain more generally to workplaces that use digital tools/platforms and (2) that deal with teaching. The overall categories have, furthermore, been placed under different headings. The material could, of course, have been divided into other categories. The categories were applied to provide clarity and look into patterns across the material that might point to issues that it would be interesting to investigate further.

The below summary is based on the material we obtained (in writing and visually), generated that day on the digital platform Miro. I (Mette Volf) have read the comments and looked through the material and will give a comprehensive overview of what the material appears to express: what most seems to concern teachers at Aarhus School of Architecture in terms of their experiences with online teaching. You could see the material as a snapshot that captures a moment in time. Furthermore, it can be difficult to say anything about whether the experiences from The Day of Teaching were the result of online teaching only or whether, or how, the COVID-19 lockdown itself had an impact on the spring semester. Or whether completely different aspects, of which we are not immediately aware, had an impact. Over time, attention to, and various studies of the main points of



på forårssemesteret, og om helt andre aspekter, som vi ikke umiddelbart er vidende om, har haft indflydelse. En opmærksomhed samt diverse undersøgelser på opsamlingens hovedpunkter over tid vil kunne kvalificere materialet.

Materialet indgår i arbejdet i den *kortlægning af erfaringerne om online-undervisning under nedlukningen pga. Covid19*, som Arkitektskolen Aarhus' nedsatte Task Force-gruppe har udfærdiget. Den samlede rapport fra Undervisningsdag vil ligge online, og det vil være muligt at rekvirere rapporten og råmaterialet fra Undervisningsdag.

UNDERVISNINGENS DAG startede med, at underviserne individuelt skulle lave en øvelse: De skulle skrive minimum tre fordele ved online-undervisning og tre ulemper, de hver især havde oplevet. Tanken var at få startet brugen af Miro, påbegynde en fokusering af dagens tema samt lade den enkelte få konkretiseret/nedfældet nogle mere eller mindre ubevidste tanker.

I de efterfølgende opgaver (dialoger) skulle underviserne arbejde sammen i de units/studios, de arbejder i til daglig. I *dialog 1* skulle de vælge en af udfordringerne fra den individuelle øvelse, som gruppen i fællesskab oplevede som en af den mest udfordrende, og sammen omformulere udfordringen til et problem.

Tanken med *dialog 1* var at få startet gruppearbejdet med en fælles dialog om mulige udfordringer og således en fokusering af dagens tema samt at gøre et materiale klart til metoden *problemtræet*.

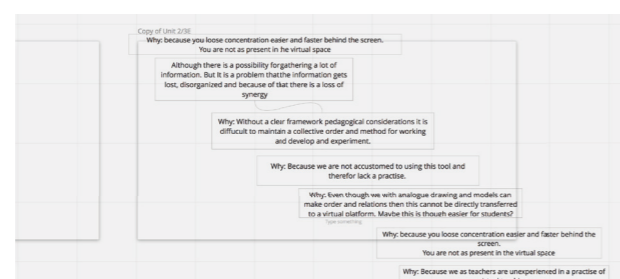
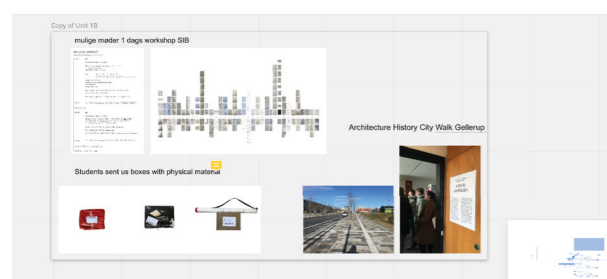
the summary will be able to inform the material. The material is partly a *mapping of the experiences with online teaching during the lockdown due to COVID-19*: a mapping prepared by a task force set up by Aarhus School of Architecture.

The complete report from The Day of Teaching will be made available online. And you can request the report and the raw material gathered during The Day of Teaching.

THE DAY OF TEACHING kicked off with the teachers being asked to do an individual exercise: They were asked to write down at least three advantages of online teaching and three disadvantages each of them had experienced. The idea was to get started using Miro, and start focusing on the theme of the day, and to allow people individually to specify/record some of their more or less unconscious thoughts.

In the subsequent assignments (dialogues), the teachers were required to work together in the units/studios they work in on a daily basis. In *dialogue 1*, they were asked to choose one of the challenges from the individual exercise, which the group jointly perceived as one of the most challenging and, together, rephrase the challenge into a problem.

The intention of *dialogue 1* was to get the group started on working on a collective dialogue about possible challenges and thus focus on the topic of the day and prepare some material for the problem tree method.



Herefter skulle underviserne i *dialog 2* analysere det valgte problem vha. *problemtræet* (undersøge mulige konsekvenser ved det formulerede problem – og i enkelte tilfælde identificere årsager til problemets opståen). På baggrund heraf skulle underviserne i *dialog 3* formulere en begyndende problemformulering omhandlende brug af online-undervisning med henblik på efterfølgende i *dialog 4* at kunne stille forslag til løsninger på problemet og argumentere for handling og ressourcer til løsninger.

Eksempler på begyndende problemformuleringer:

- Det er et problem, at den fysiske tegnesal som læringsrum går tabt for de studerende, bl.a. fordi det betyder manglende tilhørsforhold og dermed også ansvarsfølelse for samarbejder med medstuderende.

- Det er et problem, at undervisningen udelukkende er i det talte og formelle rum, og at vi dermed mister mellemrum/pauser, fordi refleksionen bundfælder sig i pausen.

- Det er et problem, at bygningsregistrering ikke kan gennemføres digitalt. Det er både et praktisk og et kreativt problem. Praktisk er man nødt til at undersøge bygningen fysisk. Kreativt mæssigt får man ikke den kropslige erfaring af den fysiske tilstedeværelse. Det resulterer i, at undervisningen bliver fragmenteret, og i manglende viden om studieobjektet. Vi har brug for et fysisk rum som udgangspunkt for vores semesterprojekt.

- Det er et problem, at online vejledningssituationer ofte går ud over de studerendes skalaforømmelse og materialeforståelse.

Next, during *dialogue 2*, the teachers were asked to analyse the problem they had chosen using the *problem tree* (investigating possible consequences of the formulated problem - and, in some cases, identifying the causes of the problem).

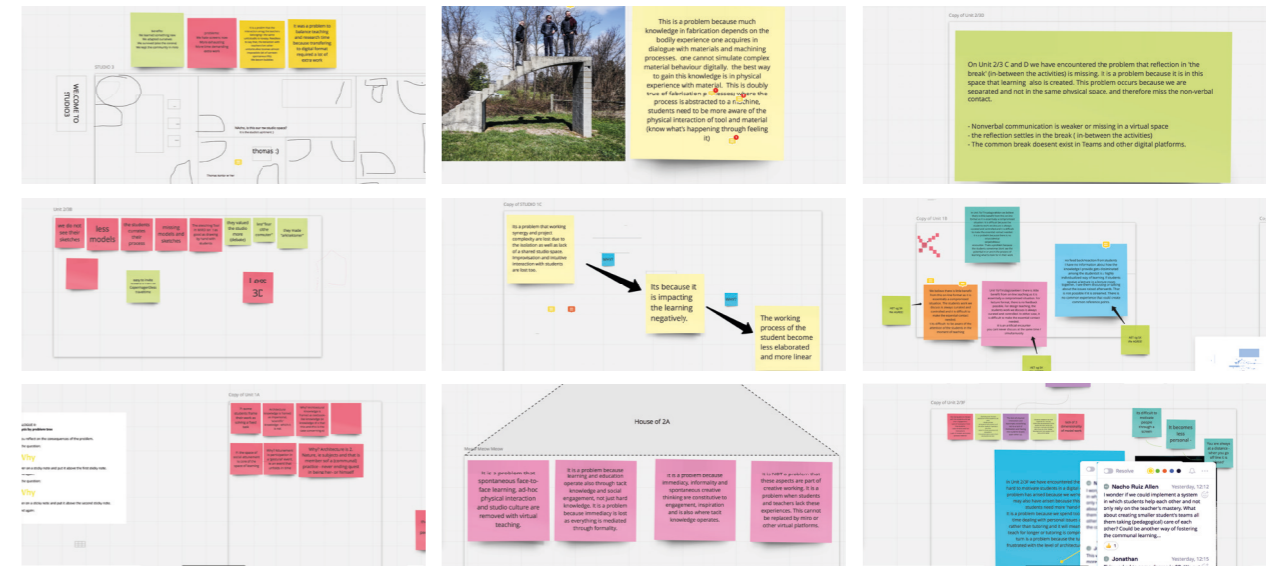
Based on this, during the *dialogue 3*, the teachers were asked to formulate an initial problem formulation concerning the use of online teaching in order subsequently, during *dialogue 4*, to propose solutions to the problem and argue for actions and resources that might lead to solutions.

Examples of preliminary problem formulations:

- It is a problem that that the physical studio is lost to the students as a learning environment, as this means they will lack a sense of belonging and thus also a sense of responsibility for working together with their fellow students.

- It is problematic that teaching is exclusively carried out in the spoken and formal space, and that we thus lose the in-between spaces/breaks, as reflections sink in during breaks.

- It is a problem that building survey cannot be conducted digitally. It is both the practical and the creative problem. Practically one needs to be able to investigate a building physically. Creatively, one does not get the embodied experience from physical present. It leaves the teaching fragmented due to lack of knowledge of the study object! Due to the method used in conservation we need a physical space as a point of departure for our semester project.



Fleere af grupperne fik ikke fat i det systematiske i det at analysere vha. *problemtræet* (givetvis pga. tidsrammen og sikkert også pga. pres over det nye online-format), hvilket bevirkede, at der ikke opstod så mange begyndende problemformuleringer. Men materialet gav trods alt samlet set et godt indblik i, hvad der rører sig af bekymringer vedr. *online-undervisning og brug af digitale platforme* blandt underviserne på Arkitektskolen Aarhus.

Efter frokostpausen præsenterede Christian Koch Ramsing og Mette Volf deres første tanker for Didaktiske Laboratoriums digitale *portfolio*. Præsentationerne havde to formål: dels at præsentere Didaktiske Laboratoriums digitale portfolio for hele undervisergruppen for at sætte gang i tankeprocessen om, hvad den kan indeholde, hvorfor og hvordan, og dels at sætte formiddagens program om online-undervisning ind i en konkret ramme.

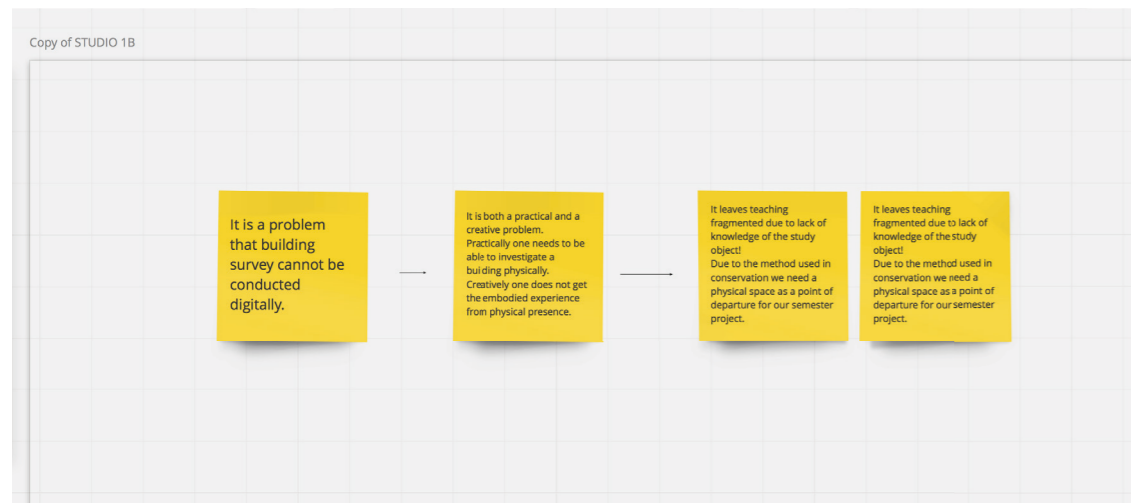
Dagens sidste gruppearbejde og *dialog 5* koblede sig til oplæggene om Didaktiske Laboratoriums digitale *portfolio* og havde således også et dobbelt formål: dels, at underviserne skulle vidensdele mere generelle undervisningserfaringer – online og ikke online – og dels, at underviserne skulle gøre sig mere konkrete tanker om, hvad Det Didaktiske Laboratoriums *portfolios* kan indeholde, hvorfor og hvordan.

- It is a problem that online supervision is often detrimental to the students' understanding of scale and materials.

Several of the groups did not grasp the systematic aspects of analysing with the aid of *the problem tree* (probably due to the time frame and probably also due to pressure in terms of the new online format). This meant that fewer initial problem formulations were drawn up. But, all told, the material provided a good insight into the different concerns regarding *online teaching and the use of digital platforms* among teachers at Aarhus School of Architecture.

After the lunch break, Christian Koch Ramsing and Mette Volf presented their first thoughts on the digital portfolio of The Didactic Laboratory. The presentations had a dual purpose: to present the Didactic Laboratory's digital portfolio to the entire teaching group to initiate thought process about what it might contain, why and how, and to put the morning's program on online teaching into a concrete framework.

The day's last group work session and *dialogue 5* were devoted to the presentations about the Didactic Laboratory's digital portfolio and therefore also had a dual purpose: for the teachers to share more general teaching experiences - online and not online - and to make the teachers think, in more specific terms, about what the Didactic Laboratory's portfolios might contain, why, and how.



Grundet dagens overordnede formål har jeg i denne opsamling alene beskæftiget mig med materiale, der omhandler erfaringer med online-undervisning. Materialet, der omhandler Didaktiske Laboratoriums *portfolio*, er gemt og vil indgå i udviklingen af Det Didaktiske Laboratoriums *portfolio*.

Due to the days overall purpose, in this summary I have only dealt with material concerned with online experiences of teaching. The material dealing with the Didactic Laboratory's portfolio has been saved and will be included in the development of the Didactic Laboratory's portfolio.

Opsummering – UNDERVISNINGENS DAG THE DAY OF TEACHING Summary

Af erfaringer, som opleves som positive, kan der fx peges på en forbedret møde- og samarbejdskultur og arbejdstilrettelæggelse, herunder egen disponering af arbejdsopgaver samt forholdet mellem arbejde og hjem. Der gives udtryk for, at brug af digitale platforme i den forbindelse opleves som mere effektivt og som tidsbesparende. Samtidig har flere på den rent undervisningsmæssige side givet udtryk for, at det tager længe tid at vejlede online, og at det tager tid at lære nye digitale redskaber/platforme.

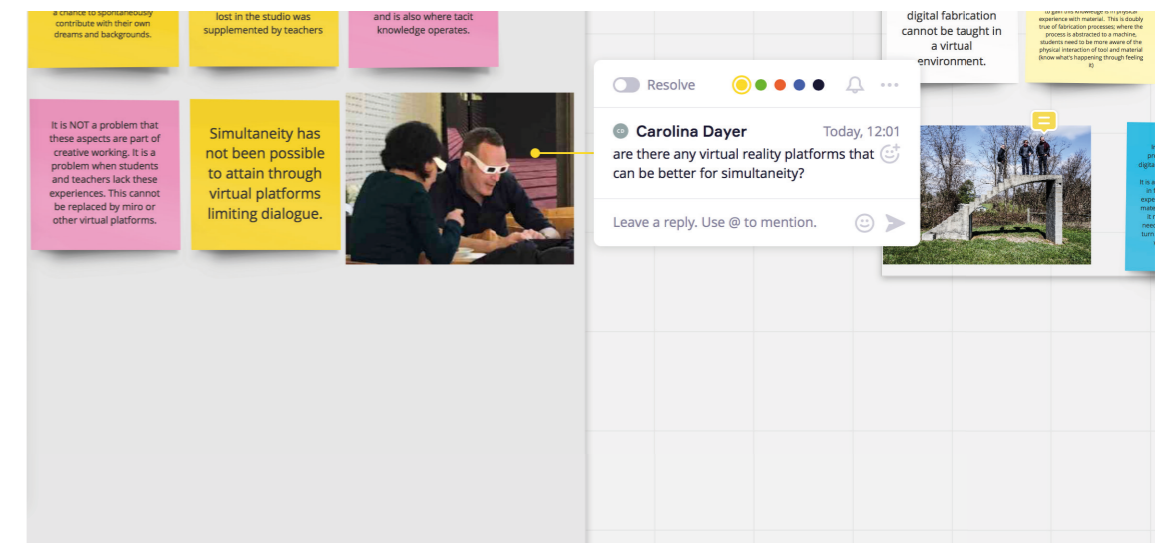
Det opleves også som mere udmattende at benytte digitale redskaber/platforme – til både møder og undervisning – og det er derfor svært for mange at fastholde fokus og koncentration. Det kobles til det manglende fysiske, sociale rum. En begrundelse i den forbindelse kan være, at man på online-platforme har svært ved aflæsning af kropssprog og mimik i de sociale forhandlinger.

Vejledninger/kritikker, som foregår ved hjælp af digitale platforme, opleves af mange som mere fokuserede og koncentrerede. Der gives udtryk for, at de studerende virker mere og bedre forberedte. De studerendes fremlæggelser/præ-

In terms of experiences perceived as positive, one may, for example, point to an improved meeting culture, culture of cooperation and a better organisation of work, including how you prioritise work tasks and the relationship between work and home. In this connection, the use of digital platforms is perceived as being more efficient and time-saving.

From the purely teaching side of things, several teachers have expressed that it takes longer time to supervise online, and that it takes time to learn new digital tools/platforms. Many also find using digital tools/platforms more exhausting - for both meetings and teaching. Also, for many it makes it difficult to stay focused and maintain concentration. This is connected with the lack of a physical and social space. One reason may be that on an online platform it is difficult to interpret body language and facial expressions that are part of social negotiations.

Many teachers find supervision/critiques carried out on digital platforms more focused and concentrated. Many find that the students seem more, and better prepared. The students'



sentationer fremstår klarere og mere præcise, og kommunikationen mellem de studerende og underviserne generelt bidrager til præcision. Omvendt er der også undervisere, der peger på udfordringer i den forbindelse. De oplever, at de studerende, når de skal fremlægge vha. digitale platforme, kurterer deres materiale for komprimeret, hvilket gør det svært for underviseren at følge de studerendes proces. Der er også undervisere, der mener, at de studerende generelt mangler overblik over deres egen proces og deres eget arbejde, og at det særligt ses i forhold til *arkitektfaglig* undervisning pga. den store produktion af analogt og digitalt materiale (i både konkret og overført betydning), som de studerende sædvanligvis opbygger i deres projektarbejde.

Endelig er der flere, der giver udtryk for problemer med, at svagere studerende får det sværere og falder fra. Det handler tilsyneladende både om motivation og ensomhed og – ikke mindst – den manglende sparring med andre studerende.

Flere peger på en direkte forringelse af de studerendes læring. Det, der forekommer oftest i materialet og derfor måske kan betragtes som det vigtigste, omhandler følgende:

Underviserne giver udtryk for bekymring om, hvorvidt de studerende lærer den nødvendige

- skalaforståelse (som skønnes svært at opnå, hvis der alene arbejdes digitalt)
- rumlige forståelse
- materialeforståelse, herunder stoflighed og det taktile

presentations appear clearer and more precise, and communication between students and teachers generally contributes to raising the level of precision. Conversely, some teachers point to challenges in this regard. They feel that, when the students have to make presentations on digital platforms, they curate their material and make it too compressed, making it difficult for the teacher to follow the students' processes. Some teachers believe that the students generally lack an overview of their own processes and work. And that this is especially reflected in *architectural* teaching due to the large production of physical and digital material (literally as well as figuratively), which students usually generate as part of their project work.

Finally, several teachers express that it is problematic that the weaker students are having a harder time and drop out. This is apparently an issue of motivation as well as loneliness and is - not least - about the lack of professional discussions with other students. Several teachers point to a direct deterioration of students' learning. The most frequent statements, and perhaps therefore the most important, have to do with the following issues:

Teachers express concern about whether students are acquiring the necessary

- understanding of scale (which is seen as difficult to achieve if you only are working digitally)
- understanding of space
- understanding of materials, including materiality and tactile aspects



I forlængelse af bekymringerne om manglende materialeforståelse peges der også på repræsentationers betydning for erkendelse og refleksion. Modsat oplever andre det dog som en fordel, at det er nødvendigt, at undervisere italesætter undervisningen mere – når man benytter online-platforme til undervisning som fx Teams – og at det gør, at de studerende angiveligt får en større opmærksomhed på repræsentationernes betydning for de studerendes egen proces.

Flere undervisere giver udtryk for bekymring over de studerendes manglende spontanitet, undersøgelse og afprøvning, dels i de studerendes arbejdsproces og -situation og dels i selve vejledningssituationen. Det er givetvis særligt udtalt i en arkitektfaglig undervisningssituation, hvor kreativitet og det at eksperimentere i sig selv er en del af kernefagligheden.

Der peges endvidere på tabet af viden skabt gennem fysisk håndværk, og der gives udtryk for bekymring for, at den viden, der opstår gennem (fysisk) skabelse, forringes. Bekymringen omhandler både det at bygge 1:1 og det at bygge analoge skalamodeller. Det skal dog tilføjes, at det lykkedes for flere undervisningsenheder under Covid19-nedlukningen at fortsætte undervisningen i analog modelbygning på trods af, at undervisningen foregik online via digitale platforme. Underviserne tilkendegiver, at de savner tegningsalen (og kantinen) som socialt og uformelt læringsrum, og de fremhæver manglen på den viden, der sker gennem socialisering – både den, der foregår de studerende imellem, og den, der foregår mellem underviser og studerende.

In continuation of these concerns about students' lack of an understanding of materials, teachers also point out the significance of representations to understanding and reflecting. On the other hand, others see it as an advantage that, when using online platforms such as Teams for teaching, teachers need to address teaching more, and that it results in the students supposedly paying more attention to the significance of representations to the students' own process.

Several teachers express concern about the students' lack of spontaneity, exploration and testing: partly in the students' work process and work situation, and partly in the supervision situation itself. This is, of course, particularly pronounced in an architectural teaching situation, where creativity and experimentation are part of the core discipline.

Another thing that is pointed out is the loss of knowledge created through physical craftsmanship. Also, concerns about the reduction of knowledge that arises through (physical) creation. This concern is about both building in full scale (1:1) and building physical scale models. It should be added, however, that, during the COVID-19 lockdown, several teaching units managed to continue teaching students in the construction of physical models despite the fact that teaching was carried out online on digital platforms. The teachers state that they miss the studios (and the canteen) as a social and informal learning environment. They also stress the lack of specific knowledge created through social interaction - both between students and between teachers and students.

Det skal tilføjes, at de undervisningsenheder, som benyttede digitale platforme, som gav de studerende mulighed for at uploade materiale (som fx Miro), melder om gode erfaringer. Her er oplevelsen, at online-platformen har været en gevinst i forhold til, at alle studerende har kunnet få direkte adgang til alles materiale, og at materialet har været tilgængeligt hele tiden.

It needs to be added that teaching units which used digital platforms that enabled students to upload material (Miro, for example), report good experiences. In these cases, the teachers feel that the online platform has been a gain in terms of giving all students direct access to everyone's material, and in terms of making the material available at all times.

Det kunne der tages hånd om og udvikles ...

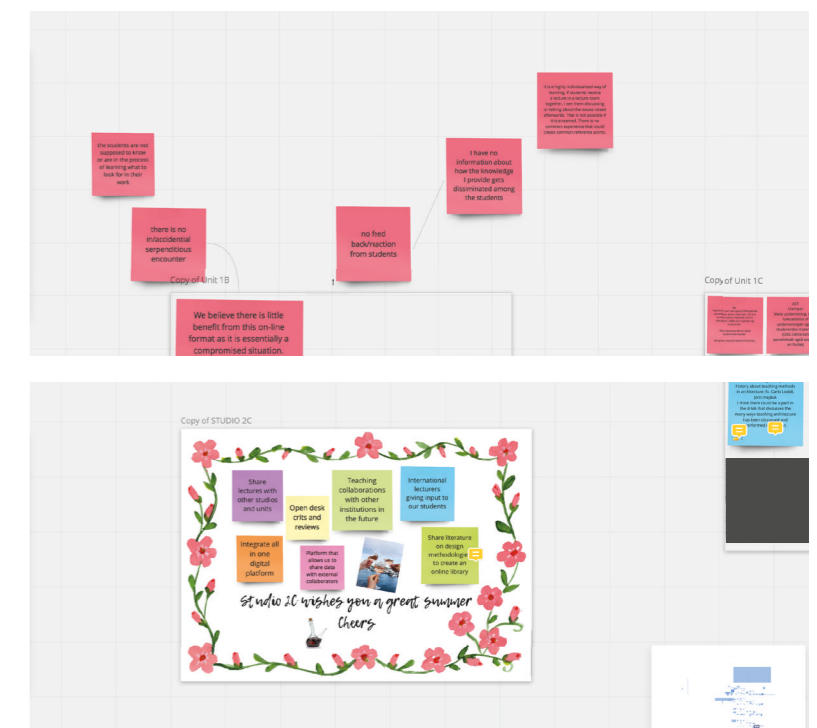
Aspects that might require care and development...

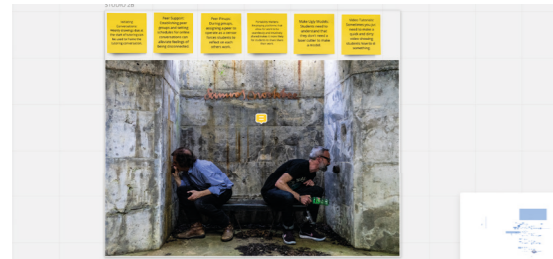
Det er tilsyneladende de erfaringer, som omhandler møder, samarbejds- og arbejdskultur samt arbejdstilrettelæggelse, der opleves som noget, vi i et større omfang bør fortsætte med. Der er dog også problemstillinger i den forbindelse fx med træthed, mangel på social kontakt herunder smalltalk m.m., som der bør findes løsninger på.

Apparently, it is the experiences that deal with meetings, co-operation and work culture as well as work organization that are perceived as something we should continue doing online. However, we also need to come up with solutions to issues related, for instance, to fatigue, lack of social contacts, including small talk etc.

De oplevede erfaringer, som knytter sig til undervisning mere generelt, og som vi deler med andre undervisningsinstitutioner, og som således ikke synes at være særegne for undervisningen på Arkitektskolen Aarhus, kunne med fordel undersøges. Der kunne med fordel igangsættes undersøgelser her på stedet, men det vil være en oplagt mulighed også at drage nytte af undersøgelser fra andre (lignende) institutioner, der beskriver, hvordan de håndterer, udvikler og implementerer online-undervisning og brug af digitale redskaber og platforme i den forbindelse.

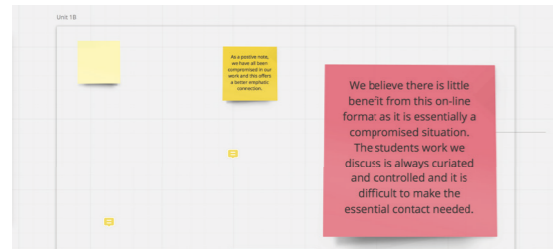
It might also be advantageous to examine experiences which relate to teaching in more general terms, and which we share with other educational institutions, and which thus do not appear to be specific to teaching at Aarhus School of Architecture. It might also be useful to initiate research here at the school. However, benefitting from research from other (similar) institutions that describes how they handle, develop and implement online teaching and the use of digital tools and platforms in this context would also be an obvious option.





Dagen forløb i et højt tempo, med glad energi og humor

The day was characterised by a fast pace, positive energy and good humour



Endelig er der også en del oplevede erfaringer med online-undervisning og brug af digitale platforme, som er nært knyttet til den *arkitektfaglige* kernefaglighed og undervisning både indholdsmæssigt (at bygge og bo fysisk) og metodisk (at erkende som kropslig oplevelse og gennem fysisk handling/skabelse), som givetvis kalder på andre og interne undersøgelser og handlinger.

En del af de problemer, som rejses i materialet, kan måske løses ved at gentænke undervisningen og derudfra udvikle undervisningsforløb med indhold og metoder, som gør de studerende i stand til at lære de ønskede kompetencer og færdigheder – blot på en anden måde end den først tiltænkte.

Det synes umiddelbart også som en god idé at undersøge, hvordan man evt. ville kunne videreudvikle muligheder for at arbejde med en digital tegnesal som et supplement til den fysiske tegnesal, herunder undersøge, hvilke fordele og ulemper det evt. ville afstedkomme.

Når det handler om erkendelse gennem kropslig før-bevidsthed, vil en digitalt simuleret virkelighed sandsynligvis endnu ikke kunne det samme som en fysisk virkelighed, og her vil fysisk undervisning tilsyneladende være at foretrække. Materialet peger i retning af bekymringer både for de studerendes manglende skalaforståelse, rumlige forståelse og materialeforståelse, for tabet af viden skabt gennem fysisk håndværk og til dels for savnet af tegnesalen som fysisk og socialt læringsrum. Eftersom der synes at være en samstemmende opmærksomhed på, at den

Finally, there are experiences on online teaching and the use of digital platforms, which are closely linked to the architectural core professionalism and teaching - both in terms of content (to build and physically live) and methodically (to perceive as bodily experience and through physical action / creation), which most likely calls for other studies and for internal studies and actions.

Some of the challenges addressed in the material can be solved by reconsidering the teaching and developing the teaching with content and methods that enable the students to learn the desired competencies and skills - however in a different way than originally intended.

At first glance, it also seems like a good idea to explore how we might further develop opportunities for working with a digital studio (examining the advantages and disadvantages) as a supplement to the physical studio.

When it comes to creating knowledge through bodily pre-consciousness, a digitally-simulated reality would probably not yet be able to do the same things a physical reality can. This is one aspect where physical teaching is apparently preferable. The material points to concerns both about the students' lack of understanding of scale, of space, and of materials – and about the loss of knowledge created through physical craftsmanship and, in part, about the lack of a studio as a space for physical and social learning. As there appears to be some agreement on awareness of bodily pre-consciousness as an important part of teaching carried out at Aarhus School of

kropslige før-bevidsthed er en vigtig del af den undervisning, der foregår på Arkitektskolen Aarhus, ville det være relevant at undersøge, *hvorfor* det er vigtig læring. Spørgsmål blandt flere kunne være:

Hvorfor er den kropslige før-bevidsthed tilsyneladende en uforventet del af arkitektfaglig undervisning?

Hvorfor er den sociale forhandling en nødvendighed i (arkitektfaglig) undervisning?

Hvorfor er tegnesalen så betydningsfuld i arkitektfaglig undervisning?

Hvorfor synes den dialogbaserede vejledning umiddelbart mest udbytterig, når den foregår fysisk i samme rum?

Hvad er det, der går tabt (konkret og læringsmæssigt), når materialiteten er digital og ikke fysisk?

Hvad er det, de studerende lærer ved at bygge analoge modeller, og hvad lærer de ved at bygge digitale modeller?

I arbejdet med at finde svar vil vi forhåbentlig kunne præcisere en fælles opfattelse af vores kernefaglighed og – måske vigtigst i denne sammenhæng – kunne kvalificere argumenter til bevarelse af didaktiske formater, som vi tilsyneladende ser som helt afgørende for vores undervisning (herunder bl.a. den dialogbaserede, fysiske vejledning og tegnesalens betydning som fysisk og socialt læringsrum).

Materialet viser også en "enlig svale", som dog er tankevækkende og interessant: *Vi er alle blevet bedre til at gå på kompromis i vores arbejde.* Det synes uklart, om udsagnet har direkte sammenhæng med online-undervisning og brug af digitale platforme, og i så fald hvordan og hvorfor, men måske bør udsagnet alligevel give anledning til refleksion.

På UNDERVISNINGENS DAG

At THE DAY OF TEACHING

den 29.06.2020 fik vi alle kendskab til og erfaringer med en ny online-plattform: Miro. Og ikke mindst: Det lykkedes os som samlet underviserkollegium at udvikle et fælles materiale om vores erfaringer med online-undervisning og brugen af digitale platforme.

Architecture, it would be relevant to investigate *why* this constitutes important learning. Some relevant questions might be:

Why is bodily pre-consciousness apparently an integral part of architectural teaching?

Why are social negotiations a necessity in (architectural) teaching?

Why are the studios so important to architectural teaching?

Why is it that dialogue-based supervision seems to be most rewarding when it takes place physically within the same space?

What is it that is lost (concretely and in terms of learning) when materiality is digital and not physical?

What do students learn from building physical models, and what do they learn from building digital models?

When we work on finding the answers to these questions, we will, hopefully, be able to clarify a common perception of our core professionalism and - perhaps most importantly in this context - be able to inform arguments in favour of preserving didactic formats that we seem to see as absolutely crucial for our teaching (including the dialogue-based physical supervision, and the importance of the studios as a physical and social learning environment).

The material also indicated an isolated one-off which is, however, both thought-provoking and interesting: *We have all become better at making compromises in our work.* It seems unclear whether this statement is directly related to online teaching and the use of digital platforms and, if so, how and why. But perhaps the statement should nevertheless give rise to reflection.

on 29 June 2020 we all got to know and had some experience using a new online platform: Miro. And, not least, as a unified collective of teachers we succeeded in developing collective material related to our shared experiences with online teaching and using digital platforms.

Copy of Unit 2/3F

- Benefit: 1. Better prepared students
- Benefit: 2. Remote learning
- Benefit: 3. Tasty coffee

(Anders) Benefits:
1. Students were better prepared

Copy of STUDIO 1A

- It is difficult for the 'weak' students to learn as much in the online studio environment
- It is more difficult to create a good online tutoring environment
- It is easier to hide
- It is harder to motivate people through a screen

It becomes less personal -
You are always at a distance - when you go off line it's 'closed'

4: "CONCLUSION" or final comment: With this assignment, that was the June workshop:
Renature, we sought to:
- better organize the abilities for students to relate to each other work
- To strengthen and enhance possibilities for simulating a traditional studio.
- To counter confusion due of an overload of information
- by demonstrating and exemplify the students how to present and include their work in to the MIRD board, to better facilitate their possibilities for using it.
- To simulate formats of presenting and comparing project work as we also do when we are physical present at a crippin-up
- Framing different studio work for allowing for possibilities of scaling.
- Possibilities for adjust expectations of work better, when it is possible to see and compare eachothers work.

UNIT 1C

- AET: Mere understøttelse af undersøgelsen af de studerendes materiale (OBS: Dette kan paradoksalt også ses som en fordele)
- Ulemper: Mere understøttelse af undersøgelsen af de studerendes materiale (OBS: Dette kan paradoksalt også ses som en fordele)
- AET: Mere understøttelse af undersøgelsen af de studerendes materiale (OBS: Dette kan paradoksalt også ses som en fordele)
- Ulemper: Mere understøttelse af undersøgelsen af de studerendes materiale (OBS: Dette kan paradoksalt også ses som en fordele)

super analogue / super digital

super analogue / super digital

It's a problem because these aspects are part of creative working. It is a problem when students and teachers lack these experiences. This cannot be replaced by miro or other virtual platforms.

UNIT 1B

- It is a problem that working synergy and project complexity are lost due to the isolation as well as lack of a shared studio space.
- It is a problem because these interactions are incredibly important teaching tools as 2B focuses on pipeline processes and the influence of each tool on design thinking and production.

On Unit 2/3 C and D we have encountered the problem that reflection in 'the break' (in-between the activities) is missing. It is a problem because it is in this space that learning is also created. This problem occurs because we are separated and not in the same physical space, and therefore miss the non-verbal contact.

- Nonverbal communication is weaker or missing in a virtual space
- the reflection settles in the break (in-between the activities)
- The common break doesn't exist in Teams and other digital platforms.

It's because it is impacting the learning negatively.

The working process of the student become less elaborated and more linear

Copy of Unit 1A

- It is a problem that spontaneous face-to-face learning, ad-hoc physical interaction and studio culture are removed with virtual teaching.
- It is a problem because learning and education operate also through tacit knowledge and social engagement, not just hard knowledge. It is a problem because immediacy is lost as everything is mediated through formality.
- It is a problem because immediacy, informality and spontaneous creative thinking are constitutive to engagement and is also where tacit knowledge operates.
- It is NOT a problem that these aspects are part of creative working. It is a problem when students and teachers lack these experiences. This cannot be replaced by miro or other virtual platforms.

House of 2A

Meow Meow Meow

UNIT 2/3E

- Benefit: More accurate and precise information
- Benefit: Possibility for sharing and collecting in a more formal way
- Its a good media to see collective work of the Unit
- It is a great media for sharing files and inspiration

Copy of Unit 2/3F

- Not being able to interact with the screens and see their engagement
- Lack of social and fun interactions
- Lack of models and some process material

lack of 3 dimensionality of model work

They lack inspiration from other students - lack of competitive spirit as part of the inner dynamic in the studio

Its difficult to motivate people through a screen

It becomes less personal -

You are always at a distance - when you go off line it is 'closed'

UNIT 1A

- Very focused and concentrated discussion
- Very focused discussions during crisis
- Very focused discussions during crisis
- Very focused discussions during crisis

UNIT 1B

- It is a problem that working synergy and project complexity are lost due to the isolation as well as lack of a shared studio space.
- Improvisation and intuitive interaction with students are lost too.

UNIT 1C

- It is a problem that working synergy and project complexity are lost due to the isolation as well as lack of a shared studio space.

UNIT 1D

- It is a problem that working synergy and project complexity are lost due to the isolation as well as lack of a shared studio space.

UNIT 1E

- It is a problem that working synergy and project complexity are lost due to the isolation as well as lack of a shared studio space.

UNIT 1F

- It is a problem that working synergy and project complexity are lost due to the isolation as well as lack of a shared studio space.

UNIT 1C

- It is because the 'weak' students do not learn as much from the 'strong' students
- It is more difficult to create a good online tutoring environment
- Student motivation
- Lack of physical group dynamics, lack of inertia
- It's easier to hide
- Weaker students are more prone to hide
- lack of study activity is not as 'blatant'

PROBLEM:
It is difficult for the 'weak' students to learn as much in the online studio environment

Understanding

Demontstrating

Hi Heidi, Troes, Studio 2B and anonymous
Thanks for your comments and good suggestions

UNIT 1A

- It is a problem that working synergy and project complexity are lost due to the isolation as well as lack of a shared studio space.
- It is a problem because these interactions are incredibly important teaching tools as 2B focuses on pipeline processes and the influence of each tool on design thinking and production.

UNIT 1B

- It is a problem that working synergy and project complexity are lost due to the isolation as well as lack of a shared studio space.

UNIT 1C

- It is a problem that working synergy and project complexity are lost due to the isolation as well as lack of a shared studio space.

UNIT 1D

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UNIT 1F

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UPCOMING
INITIATIVES

DE KOMMENDE
INITIATIVER

De kommende initiativer og projekter i Didaktisk Laboratorium som er eller forventes iværksat E2020/F2021

– Arkitektskolen Aarhus' DIGITALE PORTFOLIO er under udvikling og skal være et digitalt sted til indsamling, præsentation, dokumentation og evaluering af de undervisningsaktiviteter, der foregår på Arkitektskolen Aarhus – og dermed også i det Didaktiske Laboratorium. Det overordnede formål er at støtte vidensdeling, inspiration og synlighed af undervisningspraksis på skolen samt øge muligheden for at forstå og værdsætte udvikling, undervisningsindsatser og -aktiviteter – og i forlængelse heraf udvikle de bedste rammer for de studerendes læring. De første tanker til Arkitektskolen Aarhus DIGITALE PORTFOLIO blev, som anført kort i denne publikation, præsenteret på Undervisningens Dag 2020.

En vigtig indholdspost vil være et digitalt, struktureret og søgbart arkiv med tidligere og nuværende studieplaner til inspiration og videreudvikling (eller genbrug) af opgaveforløb, øvelser, metoder, emner osv.

Tanken er, at alle undervisere på skolen kan bidrage til den DIGITALE PORTFOLIO, og der er allerede igangsat og udviklet forskelligt indhold til portfolioen, fx video tutorials med tegneundervisning ved Jan Fugl.

Med links fra portfolioen til undervisernes PURE-profiler kan materialet også bidrage til at øge synligheden af nye undervisningsmetoder og -forløb og undervisernes aktiviteter mere generelt.

Upcoming initiatives and projects in The Didactic Laboratory which have been or are expected to be launched in the autumn semester of 2020 / the spring semester of 2021

– Aarhus School of Architecture's DIGITAL PORTFOLIO is under development. It will be a digital space for collecting, presenting, documenting and evaluating teaching activities carried out at Aarhus School of Architecture - and therefore also in the Didactic Laboratory. The overall aim is to support knowledge sharing, inspiration, the visibility of teaching practices at the school, and to increase the potential for understanding and appreciating development, teaching efforts and activities – in order to develop the best possible frameworks for student learning. The first ideas for Aarhus School of Architecture's DIGITAL PORTFOLIO were, as briefly stated in this publication, presented at The Day of Teaching 2020.

An important content item will be a digital, structured and searchable archive with previous and current study plans for inspiration and further development (or reuse) of assignments, exercises, methods, topics, etc.

The intention is for all teachers to be able to contribute to the DIGITAL PORTFOLIO. Different types of content have already been initiated and developed for the portfolio: e.g. video tutorials of drawing lessons given by Jan Fugl.

As the portfolio also links to the teachers' PURE profiles, the material may also help increase the visibility of new teaching methods and courses, and the activities of teachers in general.

– Udvikling af en digital læringsplatform med henblik på at arbejde med undervisningstiltag, der er digitalt understøttet, samt udvikling af tutorials og mindre undervisningsforløb, som underbygger digitalt understøttet læring. Arbejdet tænkes påbegyndt F2021.

– Didaktisk Laboratorium og Laboratorie for entreprenørskab har etableret et samarbejde, som forventes udviklet i F2021.

– Didaktisk Laboratorium vil udvikle kursusudbud i didaktisk videreuddannelse – herunder pædagogikum. Arbejdet tænkes påbegyndt F2021.

– Gertie Kolding, arkitekt, startede på ph.d.-projektet *Læringsrum til uddannelser i stadig forandring* i december 2020. Projektet er samfinansieret af Roskilde Universitet, Arkitektskolen Aarhus og Arkitektfirmaet Kjaer og Richter. Vejledning i regi af Arkitektskolen Aarhus er knyttet til Didaktisk Laboratorium og Ph.d.-skolen.

De kommende initiativer vil blive beskrevet (i udvalgt) i Didaktisk Laboratoriums publikation 02, som forventes at udkomme efterår 2021

– A digital learning platform is being developed with a view to working with teaching initiatives that are digitally supported, and developing tutorials and short teaching courses that support digitally supported learning. This work is scheduled to begin in the spring semester of 2021.

– The Didactic Laboratory and the Laboratory for Entrepreneurship have established a collaboration, which we expect will be developed further in the spring semester of 2021.

– The Didactic Laboratory will develop a range of courses in didactic education - including Professional Teacher Training Course. This work is scheduled to begin in the spring semester of 2021.

– The architect Gertie Kolding commenced her PhD project *Læringsrum til uddannelser i stadig forandring* (A learning environment for educational programmes in continual change) in December 2020. The project is co-financed by Roskilde University, Aarhus School of Architecture, and Arkitektfirmaet Kjaer og Richter. Supervision under the auspices of Aarhus School of Architecture is affiliated with the Didactic Laboratory and the PhD School.

The upcoming initiatives will be described (selected) in Didactic Laboratory's publication 02, which is expected to be published in autumn 2021.

HVAD er Didaktisk Laboratorium?**WHAT is the Didactic Laboratory?**

I august 2019 blev Didaktiske Laboratorium på Arkitektskolen Aarhus etableret. Didaktiske Laboratorium er et fysisk, mentalt og digitalt sted, hvor undervisere og forskere sammen identificerer, dokumenterer og udvikler de bedste rammer for studerendes læring inden for feltet arkitektur.

The Didactic Laboratory was established at Aarhus School of Architecture in August 2019. The Didactic Laboratory is a physical, mental and digital space where teachers and researchers can together identify, document and develop the best frameworks for students' learning within the field of architecture.

HVOR ligger Didaktisk Laboratorium?**WHERE is The Didactic Laboratory located?**

Laboratoriets lokaler ligger på Nørreport 15, 8000 Aarhus C. Der vil endvidere blive etableret et digitalt sted på skolens nye Intranet.

The laboratory's premises are located at Nørreport 15, 8000, Aarhus C. A digital space on the Internet will also be set up.

HVEM er Didaktisk Laboratorium?**WHO are The Didactic Laboratory?**

Didaktisk Laboratorium er ansatte (ledelse, underviserne, forskere og administrativt personale) på Arkitektskolen Aarhus.

The Didactic Laboratory comprises employees (management, teachers, researchers and administrative staff) at Aarhus School of Architecture.

Mette Volf, Cand. Arch., Ph.d. er ansat som koordinator til at iværksætte og udvikle tiltag samt rådgive, bakke op om og undervise i didaktiske initiativer og projekter. Mette Volf skal endvidere sikre et tæt samarbejde mellem Didaktisk Laboratorium, ledelse, undervisningsprogrammer og faglige miljøer.

Didaktisk Laboratorium samarbejder med forskellige institutioner, som bidrager til en høj grad af pædagogisk-didaktisk kernefaglighed.

Mette Volf, Cand. Arch., PhD, has been appointed lab coordinator. She is responsible for starting up and developing initiatives as well as advise, support and teach didactic initiatives and projects. Mette Volf is also responsible for ensuring close collaboration between The Didactic Laboratory and the school's management, teaching programmes and academic environments. The Didactic Laboratory collaborates with various institutions. This contributes to a high level of pedagogical-didactic core professionalism.

HVAD skal Didaktisk Laboratorium?**WHAT is the purpose of The Didactic Laboratory?**

Didaktisk Laboratorium skal etablere et miljø for undervisningsudvikling på Arkitektskolen Aarhus. Didaktisk Laboratorium skal bidrage til, at undervisningsindsatser og undervisningskompetencer er synlige og værdsatte.

Didaktisk Laboratorium skal virke som en ressource for didaktisk uddannelse, synliggørelse, refleksion og konkret hjælp.

The Didactic Laboratory has been tasked with establishing an environment that facilitates the development of teaching at Aarhus School of Architecture. The Didactic Laboratory aims to help raise the profile of teaching efforts and teaching skills and ensure that they are appreciated.

The Didactic Laboratory should be a resource for didactic teaching, visibility, reflections and specific assistance.

HVORFOR er Didaktisk Laboratorium blevet etableret?**WHY was the Didactic Laboratory established?**

Didaktisk Laboratorium er tænkt som et led i arkitektskolens strategiske rammekontrakt med Uddannelses- og Forskningsministeriet, som led i en undervisningsfaglig indsats på både forsknings-, undervisnings- og kompetenceudviklingsniveau. Didaktisk Laboratorium blev etableret, fordi det skal være en hjælp til at:

- Opfylde arkitektskolens strategiske rammekontrakts mål 1: De studerende skal opnå et højt læringsudbytte
- Synliggøre og værdsætte undervisningsindsatser og kompetencer

The Didactic Laboratory is intended to be part of Aarhus School of Architecture's strategic framework agreement with the Danish Ministry of Higher Education and Science. It is intended to be part of teaching professional efforts at the levels of research, teaching and competence development. The Didactic Laboratory is established as an aid to:

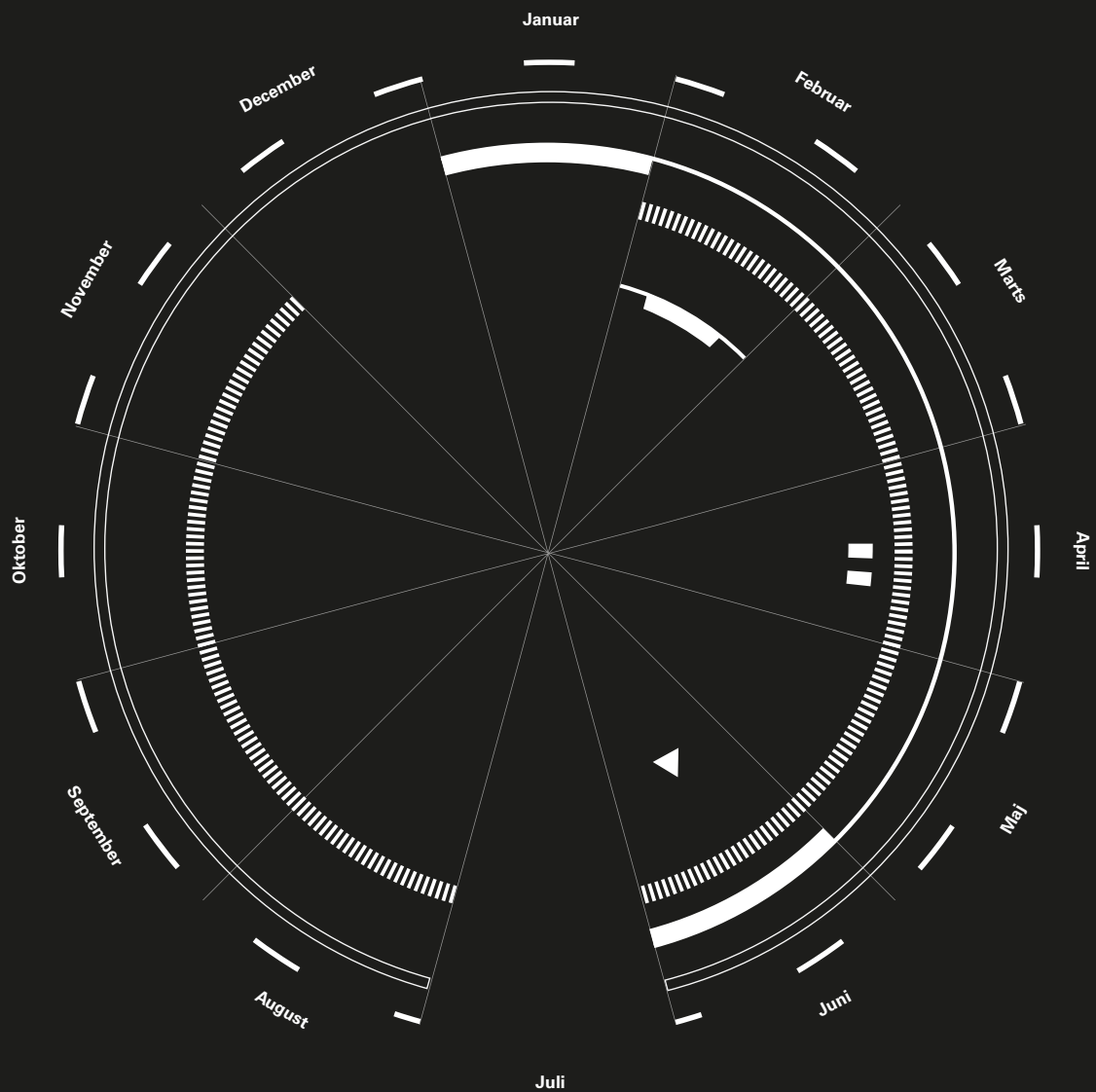
- Meet Objective One of Aarhus School of Architecture's strategic framework agreement: Students should achieve a high learning outcome
- Make teaching efforts and competences visible and appreciated

HVORDAN arbejder Didaktisk Laboratorium?**HOW does the Didactic Laboratory work?**

Denne publikation giver eksempler på, hvordan Didaktisk Laboratorium arbejder, fx i beskrivelsen af *Undervisningens Dag 2020 og Ph.d. skolens Pædagogikum Light*. Fremtidige publikationer og tiltag vil beskrive og videreudvikle flere eksempler, metoder og strategier.

This publication provides examples of how the Didactic Laboratory works: e.g. in the descriptions of *The Day of Teaching 2020 and The Ph.D. School's Professional Teacher Training Course Light*. Future publications and initiatives will present and develop further other examples, methods and strategies.

A



ÅRSHJUL THE ANNUAL CYCLE OF WORK

- Pædagogikum Light på Ph.d.-skolen:
2 dage medio i april
- Undervisningens Dag:
hvert år i juni
- Pædagogikum:
løbende årligt fra februar – november
- Opgaver som forløber hele året
samt Ad Hoc-opgaver:

Iværksætte, rådgive om samt
bakke op om didaktiske Initiativer og projekter

Sparring vedr. undervisning og
undervisningsforløb

Sparring vedr. pædagogikum

Sparring vedr. udviklingsprojekter

Deltagelse i ansøgninger til støtte
for didaktiske udviklingsprojekter
- Port Folio Reviews:
to gange årligt i januar og juni
- Seminar – forskning og undervisning:
en gang årligt - februar
- Udviklingsprojekter:
løbende årligt fra august – juni

