

TEKNOLOGIEN ER EN LØFTESTANG TIL AT ÆNDRE UNDERVISNING / TECHNOLOGY IS A LEVER THAT HELPS CHANGE TEACHING METHODS

Wallenberg Hall er et eksperimentarium for undervisning, rum og teknologi. Her tilbyder Stanford University optimale fysiske rammer, den nyeste teknologi og eksperter til at inspirere underviserne / Wallenberg Hall is a teaching, classroom and technology exploratorium. Here, Stanford University offers optimum physical surroundings, the latest technology and experts to inspire the teachers

INTERVIEW

Daniel Gilbert, IKT-vejleder, Stanford University

I Wallenberg Hall kan undervisere afprøve og få erfaringer med IKT og nye læringsformer. Wallenberg Hall har 5 undervisningslokaler. Alle har udstyr til videokonferencer, møbler, der kan flyttes efter behov og digitale skærme, der kan kobles til de bærbare computere. Også dialogen med underviseren tager udgangspunkt i det optimale, for man skal se ud over det mulige for at finde de praktiske løsninger.

På Stanford University er udviklingen af IKT støttet læring og læringsmiljøer integreret i teknologispecialisternes vejledning af underviserne, men hvordan foregår dialogen?

Et spørgsmål, der kan åbne dialogen er: Hvad ville du ønske, at dine studerende kunne gøre, hvis vi ser bort fra økonomi og den teknologi, der er i dag? Det kan være, at underviserne ønsker, at deres studerende kan researche i de bedste databaser, at de kan samarbejde med andre studerende verden over, eller at de blot vil tie stille og lytte. Derfra kan vi se på, hvilke IKT løsninger, der kan bruges, og hvordan undervisningen kan koordineres”

Hvordan gør man så det?

Grundlæggende handler det om at imødekomme en ny underviserrolle. Underviseren er ikke bare en afsender af viden, men den der leder samtalen og hiver de interessante sammenligninger eller modeller frem. Han eller hun vejleder både i, hvordan den studerende selv kan finde information og selv skabe viden ud af informationerne, for underviseren skal sætte informationerne ind i en forståelsesmæssig

INTERVIEW

Daniel Gilbert, Academic Technology Specialist, Stanford University

At Wallenberg Hall, teachers can try out and gain experience with ICT and new forms of learning. Wallenberg Hall has five classrooms. All have video conference equipment, furniture that can be moved around as required and digital screens that can be connected to laptop computers. This also creates optimum conditions for dialogues with the teacher, as the best solutions are often found when you stop thinking in terms of what you believe is possible.

At Stanford University, technology specialists cover the topic of ICT-supported learning and learning environments in their instructions to the teachers, but how does this dialogue take place?

One question that can open the dialogue is: What would you like your students to be able to do if we forget about finances and current technology? Perhaps the teachers would like their students to be able to search for information in the best possible databases, be able to work with other students around the world or that they would just keep quiet and listen. Once we know that, we can look at suitable ICT solutions and at how we can best coordinate the teaching.

How do you do that then?

Fundamentally, it is a question of being open to a new teacher role. The teacher is not just a knowledge transmitter but the person who directs the conversation and draws attention to the most interesting comparisons or models. He or she guides the students on how to find information and how to derive knowledge from the infor-



↑ Wallenberg Hall samler tre researchere, der forsker i IKT og udviklingen af læring. De vejleder samtidig universitetets undervisere i at bruge IKT og udvikle undervisningen.

/ Wallenberg Hall. Three researchers who study ICT and the development of learning offer guidance to teachers at the university in the use of ICT and the development of teaching methods.

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Skyledøre giver mulighed for samarbejde og fordybelse i Wallbergs "box-cars". De fysiske rammer og teknologien tilpasser sig på denne måde husets aktiviteter. / Sliding doors create an opportunity for collaboration and in-depth study in Wallenberg's 'box cars'. The physical surroundings and the technology are thus adapted to the activities in the building.

mation, because the teacher's role is to place the information in a context. The ICT facilities open the eyes of the teachers to new ways of getting the students more involved and increasing the collaboration, both between students and between the students and the teacher.

What characterises a good learning environment?

If the dialogue plays the main role, it is essential that you can make your ideas visible. A visual display of the ideas is the quickest way to exchange knowledge. Electronic boards create new ways in which to instantly display, store and distribute ideas. Light and flexible furniture is another fundamental component for a good learning environment. Both the classroom and the furniture should be suitable for the teaching method. The light furniture makes it easier to alternate between different forms of teaching, as you can shift the furniture around as required.

Does this flexibility not have the drawback that you waste a lot of energy on rearranging the room and defining a new situation?

It does. It takes some time to prepare mentally and physically for new situations. What our teachers do is to start the lesson by creating a place that supports the type of teaching that is going to take place that day. The students quickly take responsibility for shifting things around like each taking a chair if suggested by the teacher. However, it is not only the furniture that has to be flexible. The flexibility also has to be incorporated in the design of the rooms.

ramme. IKT-faciliteterne åbner underviserens øjne for at aktivere de studerende mere og øge samarbejdet både mellem studerende og indbyrdes mellem studerende og underviser.

Hvad karakteriserer et godt læringsmiljø?

Når dialogen er i centrum, er det et grundlæggende krav, at man kan synliggøre sine idéer. At vise ideerne visuelt er den hurtigste måde at udveksle viden. Her skaber elektroniske tavler nye muligheder for at vise, gemme og distribuere idéer hurtigt. Et andet grundlæggende element i et godt læringsmiljø er lette og fleksible møbler. Rum og indretning skal nemlig passe til undervisningsformen. De lette møbler gør det nemmere at skifte mellem undervisningsformer, da man altid kan møblere om, så det passer til situationen.

Kan omkostningen ved fleksibiliteten ikke være, at man skal bruge en masse energi på at omarrangere rummet og definere situationen på ny?

Jo. Det tager noget tid at omstille sig fysisk og mentalt til nye situationer. Det vores undervisere gør, er at starte lektionen med at skabe et sted, der understøtter den type undervisning, de skal have den dag. De studerende tager hurtigt ansvar for at flytte rundt ved fx hver at tage en stol, hvis underviseren lægger op til det. Men det er ikke blot møblerne, der skal være fleksible. Flexibiliteten skal også tænkes ind i rummene.

Hvilke råd giver I til underviserne, der vil ændre deres undervisning?

Vi opfordrer underviseren til at fokusere på en problemstilling fx et emne, hvor de studerende har svært ved at gribe stoffet. De skal finde ét punkt, hvor de vil ændre deres undervisning. Det giver et godt udgangspunkt for udvikling, og ud fra dette ene fokus dukker der dog altid en masse andre nye idéer op.

Hvad må man aldrig gøre, når det handler om teknologi?

Helt grundlæggende er det vigtigt ikke at tage udgangspunkt i IKT-udbuddet. Der er mange eksempler på, at universiteter har købt teknologi uden at gennemtænke, om det faktisk kan muliggøre nogle aktiviteter, der er brug for. I USA har regeringen haft meget fokus på muligheden for automatisk at videooptage undervisningen. Men ingen har tænkt over, hvor lang tid det tager at gennemse optagelsen eller redigere i den. Derfor bruges det næsten ikke. De færreste af vores undervisere gør det. Udstyret har dog fået en anden anvendelse for de studerende, som kan bruge det til at vise deres universitetsoplæg til fremtidige arbejdsgivere.

Det er slet ikke meningen, at alle klasselokaler skal have de faciliteter, man finder i Wallenberg Hall. Rådgivningen handler derfor også om, hvordan man bibeholder undervisningsaktiviteterne udenfor Wallenberg. At anskaffe IT udstyret er en tung investering for nogle universiteter, men man kan sagtens implementere undervisningsmetoderne uden Wallenberg Halls tekniske faciliteter.

Cathrine Schmidt

What advice do you give to the teachers who wish to change their teaching?

We encourage the teacher to focus on one issue, e.g. a topic the students find difficult to grasp. The teachers should identify one specific topic for which they want to change their teaching. That creates a good starting point for development and one focus always leads to a lot of other new ideas.

What are the things you should never do when technology is involved?

First of all, it is important not to use the ICT equipment as a starting point. There are many examples of universities that have purchased technology without thinking through whether it will actually allow them to carry out some of the activities they need. In the USA, the government has placed great emphasis on the possibility of automatically recording a lesson on video. However, nobody has thought about how much time it takes to view or edit the recording. Therefore, this method is hardly being used. Only a few of our teachers use it. Instead, the equipment has been used by the students to show their university presentations to future employers.

It is not at all the intention that all classrooms should have the facilities you see at Wallenberg Hall. The advice is therefore also about how to practise the teaching methods outside Wallenberg. The purchase of IT equipment is a heavy investment for some universities, but you can easily implement the teaching methods without Wallenberg Hall's technical facilities.

Cathrine Schmidt