

Title: Design thinking and innovation in iSchool educations.

Organizers: Camilla Moring, Trine Schreiber, Henrik Jochumsen. University of Copenhagen, Department of Communication, Njalsgade 76, 2300 Copenhagen S., Denmark.

Abstract

It is essential that the 21st century information specialist is creative and innovative in order to solve the complex problems of the future. Curriculums in iSchool educations need to evolve accordingly. In this SIE session we focus on the need to develop new curricula for students who have to learn how to function in the generative front end of product development processes. To meet the requirements of teaching students to be creative as well as innovative, design thinking has proven to be a powerful methodology represented in many curricula of university-based programs all around the world. This session has chosen the theoretical model of a design thinking process described by Stanford design school (2018), and is aimed at those who have an interest in exploring the relationship between theory and practice in design thinking, and to discuss how design thinking can be implemented in Information Studies curricula and teaching practice.

Overview

At the Department of Communication at University of Copenhagen¹ we have used Stanford's theoretical model depicting the five principles of design thinking to structure our curriculum for the course *Problem Solving and Design*. The course is offered to undergraduate students on the very first term of their education, and has been developed as part of a revision of the BA-program in Information Studies².

Besides adopting the design thinking approach the pedagogical idea of the course is informed by problem- and case-based teaching. A real-life case is provided by a local library or museum, and the students work in groups to design, develop and produce possible solutions to the case problems. These solutions are, at the final exam, pitched to the case provider. From day one, the students have to apply theories and methods to the case problem in search for both relevant and innovative solutions. Beside this, they develop skills in design, collaboration, critical thinking and communication.



Students' prototyping. Photo taken by Jakob Dall.

Planning and teaching this course required us to rethink our pedagogic approach to how we teach on an introductory level and reinventing what components an academic course contains. The result emphasis innovation, maker-mindset, teamwork, and connecting theory with practice as well as supporting the students' awareness of real-life problems relevant to Information Studies. The principles of design thinking steers the structure of the course where each lesson, activity, and the requirements and deliverables for the exam are organized around the five phases; *empathize, define, ideate, prototype and test* (see fig. 1).

¹ Department web page: <https://comm.ku.dk/>

² Link to the BA-program in Information Studies (only available in Danish): <https://studier.ku.dk/bachelor/informationsstudier/>

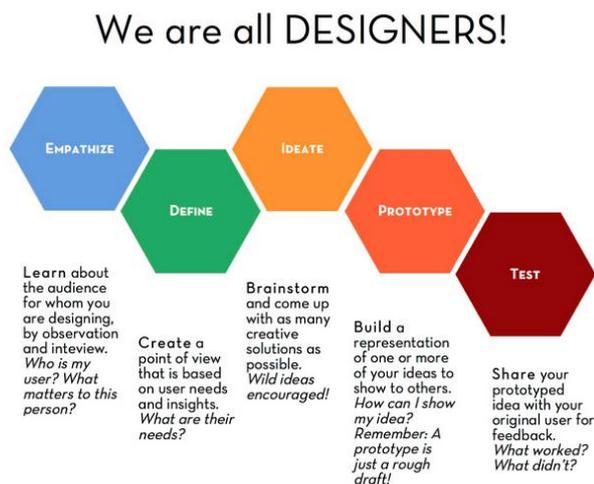


Fig. 1. The five principles of design thinking, from Stanford d.school (2018)

We propose a very hands-on SIE where the potentials for design thinking in curriculum development are explored, and in particular how design thinking can be or are implemented in various ways. Participants in the SIE will be engaged in discussions about the possibilities and challenges we face when using design thinking within Information Studies courses. Discussions will include design thinking as course framework or element, and how to stimulate students to develop innovative skills and maker-mindset. Also university teacher's transition from subject-experts to process-facilitators/supervisors is an issue, as well as how iSchool faculty can support each other in this venture.

Purpose and intended audience

The purpose of this SIE workshop is based on participants various experiences with design thinking to discuss how design thinking can be implemented in Information Studies curricula as well as in the everyday teaching practice.

The workshop is open to anyone with an interest in teaching, learning, and curricula development.

Aims and outcome

- Facilitate discussions on the use of design thinking in Information Studies curricula.

- Identify and discuss the competencies university teachers need to teach this type of course including, but not limited to, competencies and skills in facilitating creative learning processes, subject knowledge, technical and design skills and team teaching.
- Based on the discussions to initiate the development of a shared catalogue on the use of design thinking in Information Studies curricula and teaching practice.

Proposed activities incl. agenda, ramp-up, and follow-through (90 minutes in total)

Welcome and introduction

Allotted time: 10 min.

What is Design thinking? Introduction to the five principles of design thinking (Fig. 1) and the rationale driving these principles. Then a brief overview on how the organizers have applied this approach in the above mentioned BA-course.

Exercise 1

Allotted time: 20 min.

The participants are grouped in inter-/cross disciplinary teams to discuss their experiences with design thinking processes, and to share their opinions on the use of this approach in Information Studies curricula, as well as its possible implementation in their own teaching.

Exercise 2

Allotted time: 10+10 min.

The groups are then asked to discuss the strengths and weaknesses of applying a design thinking approach. After that the groups share a summary of their discussions in exercise 1 + 2.

Exercise 3

Allotted time: 15 min.

The participants are invited to formulate what knowledge and which competencies/skills university teacher's needs in order to incorporate design thinking successfully in Information Studies - and then write them down.

Wrapping up the SIE

Allotted time: 25 min.

Content chosen by the organizers from the former exercises will be used to enrich the final discussion and encourage participation from all groups. The potentials and challenges we will address to frame the wrap-up session are:

- Does design thinking change how we teach and how students learn?
- Does design thinking require a new approach to teaching and planning (e.g. less preparation, more post-paration)?
- Which infrastructure needs to be in place in order to teach courses based on a design thinking approach?
- How do we embrace the transition from subject-expert to process-facilitator /supervisor?

Based on the discussions the organizers creates an idea-catalogue on the use of design thinking in Information Studies curricula and teaching practice to be shared with participants after the conference.

Relevance to the Conference

The session relates to the theme of the iConference 2020; “Sustainable Digital Communities” in that it concerns the use of innovative teaching practices and activities to develop innovative mindsets. We invite participants to share their knowledge and ideas on what university teachers and staff can do to cultivate and develop the future generations of digital information specialists.

Preferred number of participants

15-30 participants.

Special requirements

We would prefer to have a room where participants are seated at smaller round tables in order to facilitate group discussions.

References

Sanders, B.-N.E. & Stappers, P.J. (2008). Co-creation and the new landscapes of design. *Co-Design*, 4(1), 5-18.

Stanford d.school (2018). *Design thinking bootleg*. Hasso Plattner Institute of Design at Stanford Education. [Available September 18, 2019, at

<https://dschool.stanford.edu/resources/design-thinking-bootleg>].