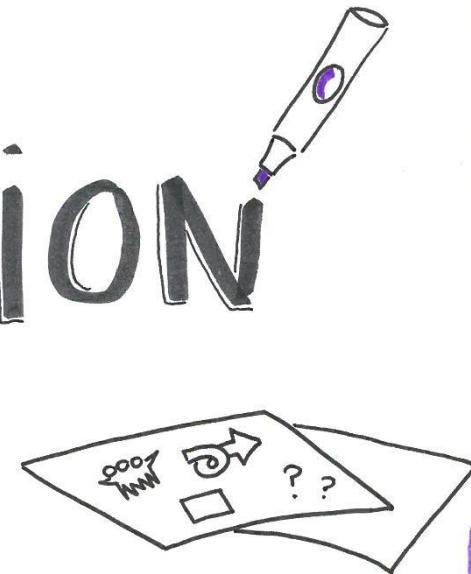


TEACHING VISUAL FACILITATION AND SKETCHING FOR DIGITAL LEARNING DESIGN IN HIGHER EDUCATION



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Heidi Hautopp and Mie Buhl
**Research Lab: IT, Learning and Design, Aalborg University,
Copenhagen, Denmark**

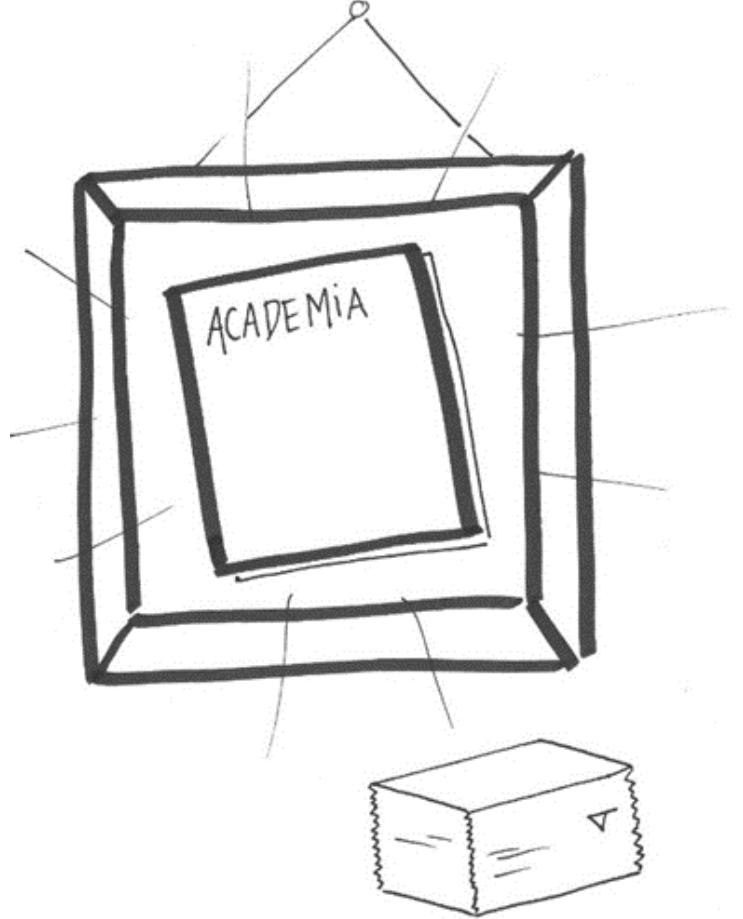
INTRODUCTION

What are the potentials of using visual facilitation in learning practices in Danish Higher Education?

How can teaching visual facilitation empower students as digital learning designers by adapting visual methods for group work?

Visual facilitation involves the structured use of pen and paper methods to
'facilitate interaction in a group of people, using structured visual content. It is a systematic way of drawing together with others'
(Qvist-Sørensen & Bastrup, 2020, p. 20)

BACKGROUND



Western culture:

- The spoken and written word is the highest form of intellectual practice – higher education in the humanities in particular
- Visual representations are second-rate illustrations of ideas

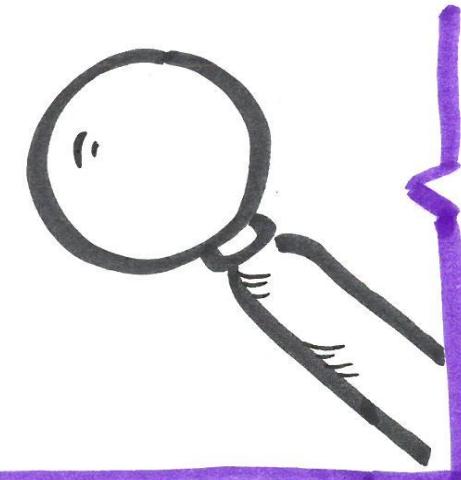
(e.g. Mirzoeff, 2000; Bowen and Evans, 2015)

PREVIOUS STUDY

...exposed the limitations of students' ability to articulate and reflect on their own visualisation practices, which were nevertheless identified as learning resources at all phases of the design projects (Buhl 2018).

When not instructed in using visualization, students:

- Still used visualisations developing ideas, design drafts and mockups
- But, did not recall using it, only when interviewer persisted in requesting examples
- Had difficulty explaining their actions between the emergence and selection of design ideas



— THEORETICAL PERSPECTIVES —

Social materiality (Fenwick et al 2011, Fenwick and Landri 2012):

- Learning emerges from a continuous social practice of materialities of doing to which meaning is attributed.
- Materialities such as textbooks, tablets, discourses and learning models offer different forms for participation in hybrid assemblages in learning

Analysis: Tracing the visualisations as participants in hybrid assemblages – rather than any thorough analysis of the visual artefacts themselves

Social learning (Wenger 2000):

- Learning happens socially and is negotiated through collaborative processes.

Analysis: Revealing how students attributed meaning to drawings and the act of drawing when we interviewed them after completing the course

MASTER PROGRAMME

- Master programme ‘IT, Learning and Organisational Change’ (ILOO) in the Faculty of Humanities at Aalborg University, Denmark
- Redesign of an 8-week course ‘IT and Learning Design’ – 70 students located at two campuses
- Aim of the course: Masters students developed digital learning designs to solve a problem framed by an external stakeholder
- Students’ background: In humanities and are not specifically trained in using drawing as an academic tool

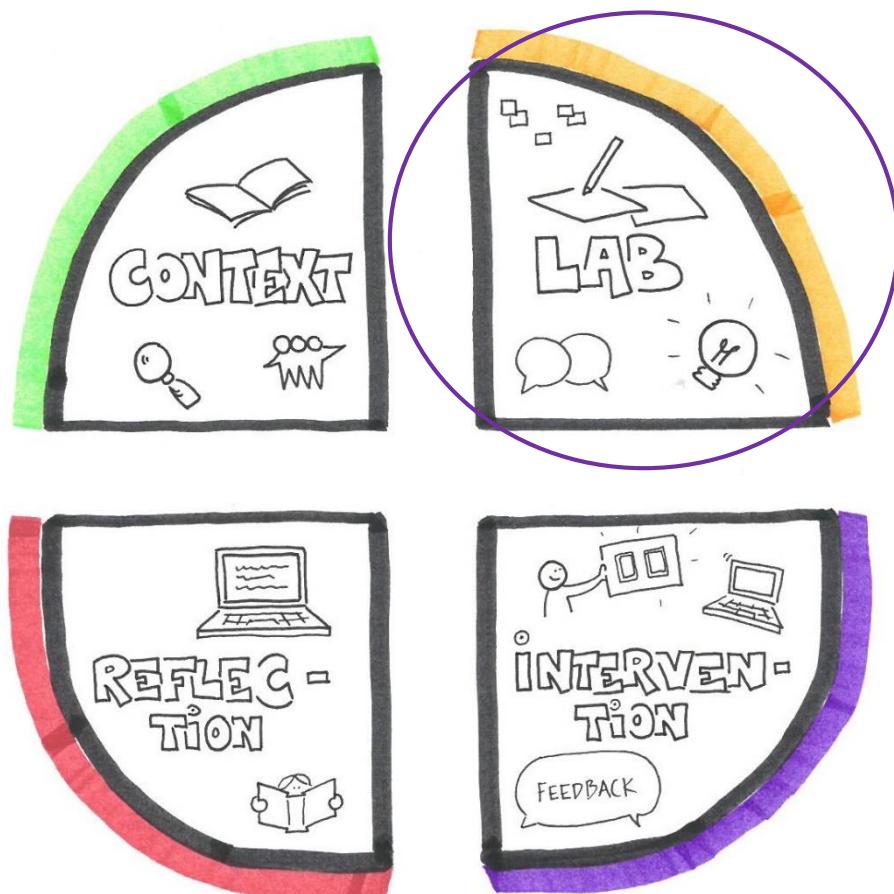


Empirical data:

- Teaching observations, students’ visual productions and interviews with 27 students from nine groups after completing the course

RESEARCH DESIGN

EDUCATIONAL DESIGN

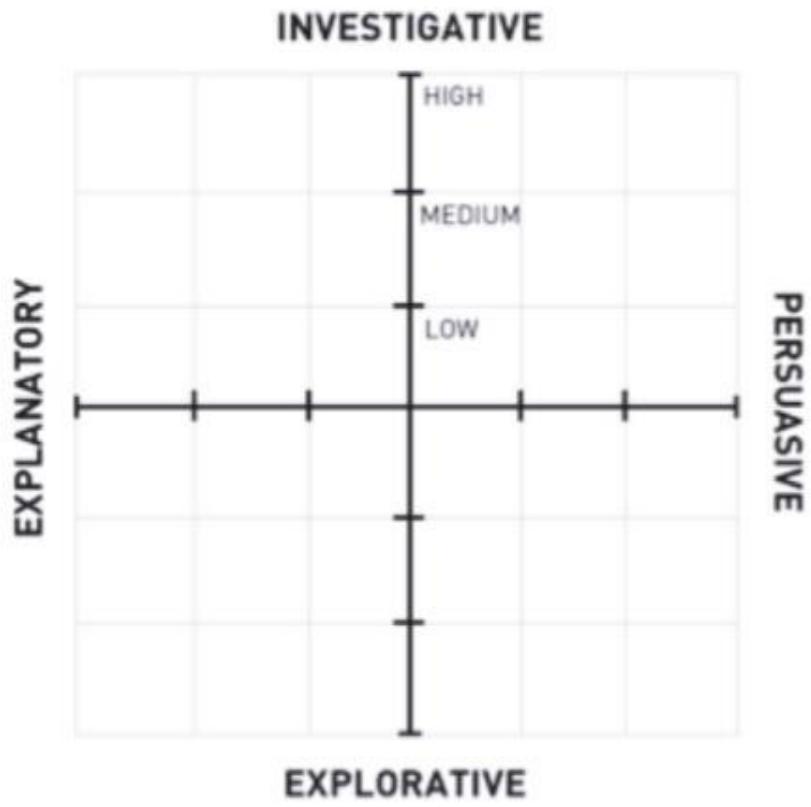


- **Educational design – Design Based Research:** Students working through 4 phases: *Context, Lab, Intervention, Reflection*
- **Research approach** in the case study
- **2. iteration:** focus on *teaching* visual facilitation and sketching (Lab-phase)

(Barab & Squire, 2004; Christensen et. al. 2012)

RESEARCH DESIGN

EDUCATIONAL DESIGN



Sketching genres/modes:

- The **investigative and explorative**: Used to examine the design problem and to share design solutions within the design team.
- The **explanatory** genre is used to present and communicate a design concept to stakeholders outside the design team, and the **persuasive** genre relates to selling the concept in a marketing context

(Olofsson and Sjölen, 2007; Vistisen, 2016)

WORKSHOP 1

- Initial drawing exercises – *from head to paper*
- Focus on idea generation, sketching
- Investigative and exploratory modes
- Theories: e.g. Goldschmidt, 2003; Twersky & Suwa, 2009; Hansen & Dalsgaard, 2012



WORKSHOP 2

- From initial sketching phase to prototypes + use in data collection
- Focus on presentation, visual facilitation - feedback session
- Explanatory and (persuasive) modes
- Theories: e.g. Qvist-Sørensen and Bastrup, 2020; Causey, 2017; Bang, Friis and Gelting, 2015



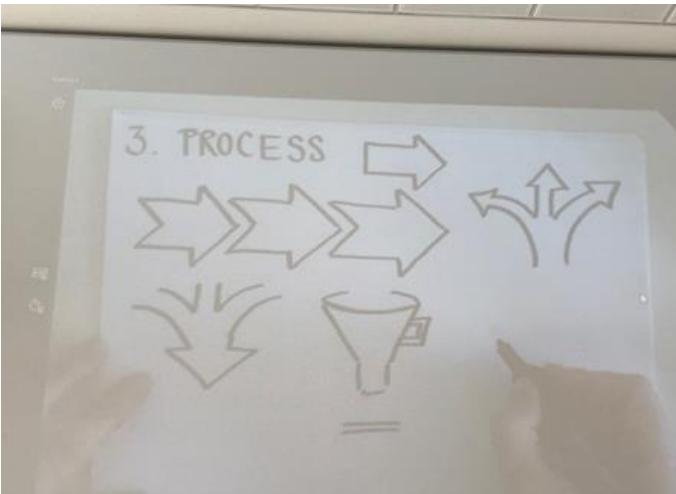
TEACHING SETTING



Teacher's use of document kamera to share drawing exercises



Students situated at two different campuses



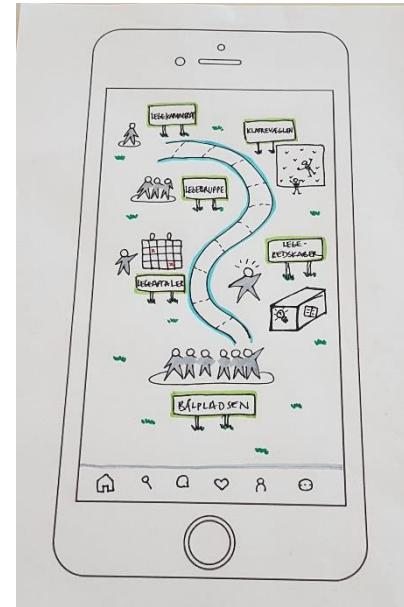
Through the document camera the drawing exercises was live-projected to a wide screen as well as through video-conferencing systems at both campuses

TEACHING SETTING

Examples of student work



Initial drawing exercises



Prototype on paper



Feedback session

ANALYSIS

Analytical approach: From a social material perspective, we focused on the ***production context*** and ***utilization context*** of the students' work with the visual methods and not on a thorough analysis of the ***visual artefacts*** themselves (Pauwels and Mannay, 2020).

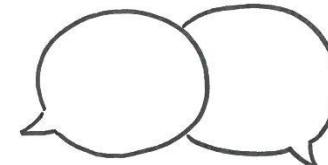
Three main analytical themes

1. Students' reflections on the drawing exercises and group design processes
2. **Using one's own experience of visual facilitation in developing learning designs**
3. **Using one's own experience of visual facilitation in data collection**

Selected examples →

— STUDENTS' EVALUATIONS —

2. Using one's own experience of visual facilitation in developing learning designs



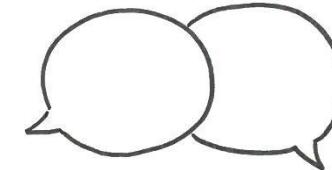
Student group working with external case: *How can student teachers be supported when developing teaching materials for innovation?*

'You can talk about innovation, but how might you make a design about it? How can we make a product that supports [the process of innovation]? In other words, we can talk about it, but how should it look visually?'

'We went through an innovative process ourselves'

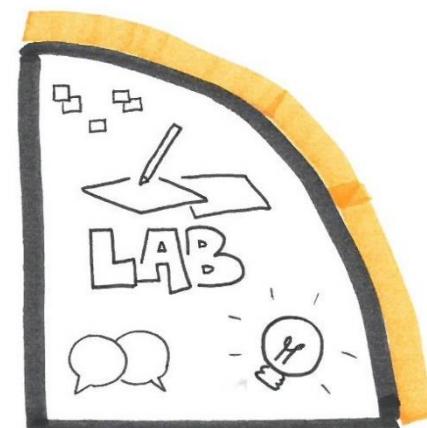
— STUDENTS' EVALUATIONS —

2. Using one's own experience of visual facilitation in developing learning designs



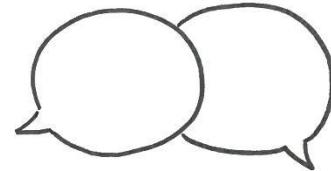
Analysis:

- The students reflected on and applied their own experiences of drawing (from the Lab phase) in developing a learning design
- Students own drawing experiences → **integrating drawings as a modality** in their learning designs.
- The student group used their own *production* of visuals to reflect on their target group's *utilization* phase (Pauwels and Mannay, 2020).
- It can be argued that the drawings also prompted pedagogical considerations (Beetham, 2013) when *the students took on the role of learning designers*.



— STUDENTS' EVALUATIONS —

3. Using one's own experience of visual facilitation in data collection



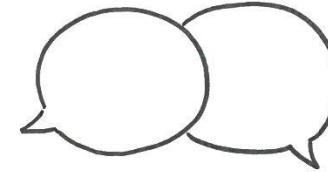
Student group included drawing as a social activity in their interventions

'We had a user participant workshop in which participants made some sketches that we worked on in the Sketch programme later the same day. We included their sketches so that participants could see the process as well'.

'From the physical sketches they [workshop participants] made, we talked a lot about how we could include their ideas. (...) The logo we made—actually, one of the young ones from the club made the logo that we chose to take further'



— STUDENTS' EVALUATIONS —



Analysis:

- Students moving between: 1) Materialities – hand drawings and Sketch programme 2) Switching between the four design modes (Olofsson and Sjölen, 2007)
- Beginning with their own **exploratory mode** when preparing the workshop. Next, they invited participants to draw their ideas, leading later in the day to a more **explanatory mode**, where different ideas were presented and discussed using the Sketch programme.
- From a sociomaterial perspective (Fenwick and Landri, 2012) the **drawings could be traced** from the students' design processes to the participatory workshop, where the design ideas were developed and **redesigned on the basis of participants' drawings and joint discussions** (Wenger, 2000)



— DISCUSSION & CONCLUSION —

- Our findings confirm that teaching visual facilitation **helps students to realise the potentials of visualisations for learning as well as to explaining their actions and selection of design ideas**
- **Findings** show that drawing activities became a significant pedagogical consideration, as students seemed more likely to use drawing as a tool for digital learning design and for involving their target group in the participatory workshops
- **The students' flexible use of different design genres** (Olofsson and Sjöfén, 2007) indicates an interesting direction for further studies of what emerges when design practices enter new interdisciplinary domains (Hansen and Dalsgaard, 2012)
- **Academic language of the use visual methods:** In the interviews, the students recall of their design processes drew on the richness and diversity of visual materiality in driving social learning processes forward. However, the students lacked terminology to specify what their experience achieved, and they used common language to narrate their actions.
- **We advocate for more acknowledgement of visual methods in academia and further research** is needed to assess the long-term implications of teaching visual facilitation in Humanities in Higher Education

THANK YOU! ☺

ANY QUESTIONS?

Heidi Hautopp: hhau@hum.aau.dk

Mie Buhl: mib@hum.aau.dk