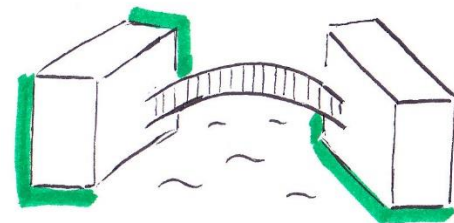# THE USE OF VISUALISATIONS AND VIDEO PRODUCTIONS IN ONLINE GAME-BASED LEARNING

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Nordic Visual Studies and Art Education (NoVA)
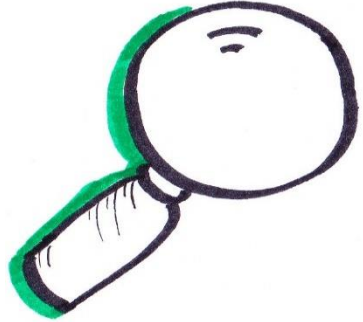
CASE

Aalto University, Helsinki

International students located at different campuses
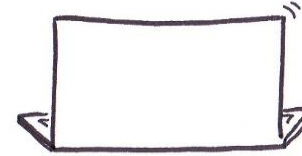
Konstfack, Stockholm

Aalborg University, Copenhagen

The aim of the master programme: to provide students with relevant competencies and **didactical interactions skills** for working in cross-cultural and international environments (NoVA Handbook, 2019)
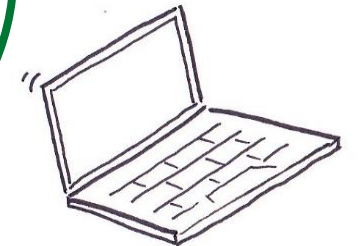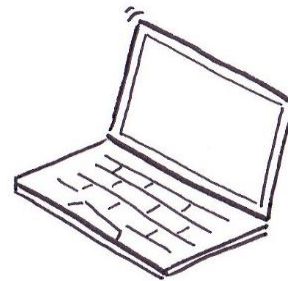
METHOD AND CASE DESCRIPTION

Exploratory case study

- **Empirical data** based on a 12 week online game-based learning course
- **Data:** teaching observations, videos of play sessions, students' reflection papers, written and oral evaluation
- **Initial question:** "*Games for change!? Let's explore the possibilities of using games for change*"
- Based om John Dewey's concept of **inquiry** the students was invited to take a pragmatic approach their in design processes (Ejsing-Duun & Skovbjerg, 20018)

Purpose:
To explore how to etasblish an online space for joint design inquiry in the context of *games for change*

ONLINE GAME-BASED LEARNING

COURSE DESCRIPTION

- Unlike our prior research project (Ejsing-Duun & Skovbjerg, 2018), the teaching setting for this case study was online, which **demanded new ways of creating shared spaces for lectures, peer-to-peer presentations and feedback sessions.**

- In his book "Teaching in a digital age" (2017), Tony Bates emphasizes the new digital opportunities which he refers to as "**rich medias**", media which: *"differ in terms of their formats, symbols systems, and cultural values."* (Bates, 2017, p.260).

- As a part of the NoVA master programme, **the use of multimodal approaches**; text, images, audio and videos are central elements in the teaching (NoVA handbook, 2019).

- Other studies show **how teachers' productions of videos and video tutorials in online settings affect students' engagement and enable a flexible teaching** suiting learners with different needs (e.g. Wells, Barry and Spence, 2012; Guo, Kim and Rubin, 2014).

THE USE OF VISUALISATIONS AND VIDEO PRODUCTIONS

Educational studies show **that applying visualisation tools and techniques support design students with an entrance to theoretical fields,** because it constitutes a familiar way for the students to explore and make sense of a situation (See e.g. Bang, Friis & Gelting, 2015).
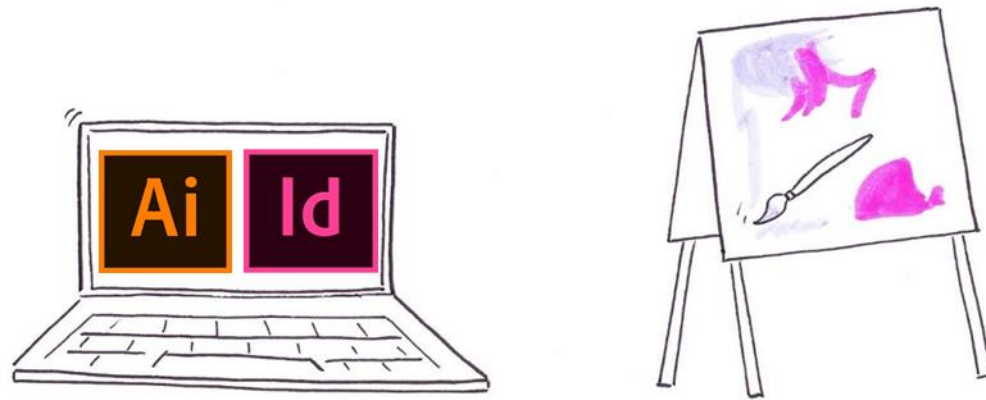
This exploratory case study will **explore both the teachers' and students' use of visualisations and video productions in an online game-based teaching** setting and their value in these iterative design processes.

"ONLINE GAME-BASED LEARNING

COURSE DESCRIPTION

- Throughout the game course the students had to **develop a game** with a focus on games for change

- The course was organised with one joint online meeting pr. week, each **revolving around a specific theme** such as; *1) Critical Play - Games and activism, 2) Understanding games, 3) Framing, Games in place and space, 4) Making an invitation - participation.*

- "*Critical play means to create or occupy play environments and activities that represent one or more questions about aspects of human life.*" (Flanagan, 2013, p.6).

- The NoVA master programme rely on **Problem-based learning (PBL)** approaches which has a purpose for students to develop the "criticality", that is, emotional, intellectual and practical independence (Savin-Baden, 2003).

"Online Game-based Learning

Course Description

Online meetings	Reflexive exercises	Group work
• Lectures/Video tutorials • Different themes • Presentation- and feedback sessions	• Debate in online forum • Screen recording of self-chosen digital game • Dot.walk in relation to the theme games in place and space	• Students self-directed design processes • Use of visualisations and video productions

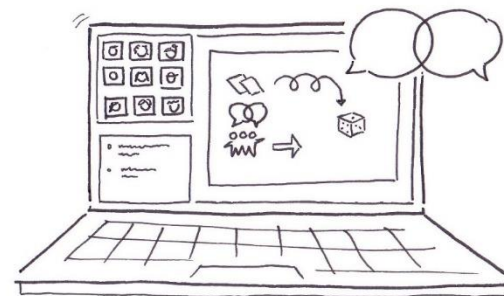*Different PBL activities during the online game-based learning course*

STUDENTS AS
PLAYERS AND DESIGNERS

Reflexive exercises
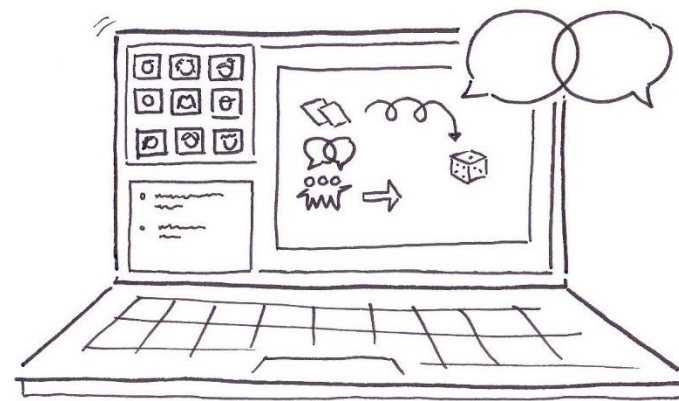*Autoethnographic approach*
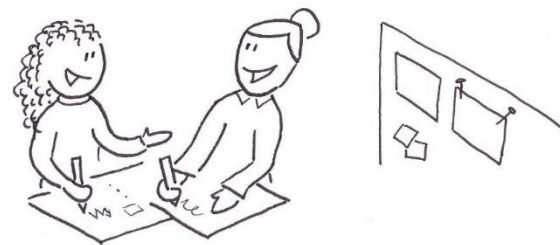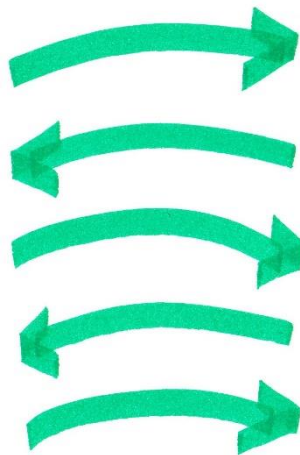
Group work and feedback sessions:
Design sketching approach

Through different activities we invited the students to take the role as both *players* and *learning designers*
(Sørensen & Levinsen, 2018)

STUDENTS AS
PLAYERS   AND   DESIGNERS

Final game presentation and feedback session
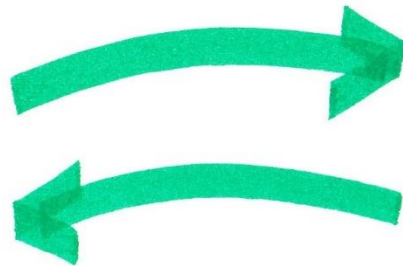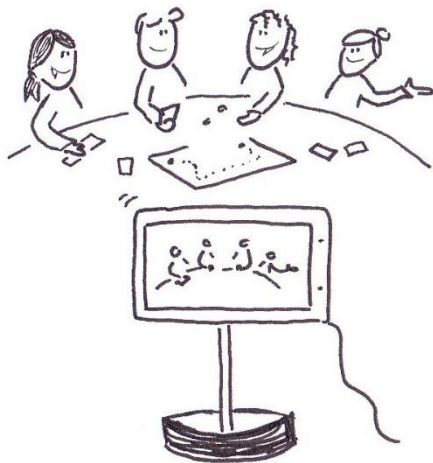
We will further explore how students' video productions **can expand the time frame of the students design ideas** in addition to their more static visualisations and photos. Specifically, in the students' final iteration of their game design **exemplifying the game experiences and narrative of the game**, still getting feedback on their design idea.

Video sketching technique: Where the learning *process* of making video productions are central to developing the game design with a less focus on making aesthetic video productions (Ørngreen, Henningsen, Gundersen and Hautopp, 2017)

EDUCATORS AS DESIGNERS OF TEACHING

GAME COURSE 2016

GAME COURSE 2018

Increasing focus on teachers using visuals and videos when designing online teaching (McKeachie & Svinicki, 2006; Bates, 2017). Summarizing and adapting material to the interests of a particularly group, **helping students discover key concepts**, principles and ideas within a specific topic (McKeachie & Svinicki, 2006)

In order to **'walk the talk', we also engaged in a iterative process exploring the use of visualisations and video productions** as a central part of the online teaching with an iterative focus on process over product (Guo, Kim and Rubin, 2014; Ørngreen et al, 2017).

Lectures and discussions about theoretical concepts → video tutorials and more space for feedback sessions

GAME EXAMPLE

The Period game

Figure 1: Sketch by Liv Strömquist, a student visualisation and a play session from video productions

- Inspired by the **dot.walk and photographing surroundings** → walk in the subway in Stockholm
- Inspired by graphic artist and activist, Liv Strömquist's enlarged sketches of women having their period, some of them entitled: "*I'm alright (I'm only bleeding)*
- **In feedback session:** the students used their photos to make a critical stand in line with the artist about taboos revolving women's periods
- During their game development the students **made their own visualisations inspired by the originals** which they incorporated as a part of their game design.

GAME EXAMPLE

The Period game

"*Your period had started this Tuesday morning. But your parents did'nt have enough money this month for period pads and are too tight in their budget to give you some for the upcoming days. School started in one hour. What do you do?*".

Figure 1: Sketch by Liv Strömquist, a student visualisation and a play session from video productions

- **Final presentation:** The "Period game" group produced a video showing a player engaging in their game which had been designed as **an app that provides scenarios exemplifying issues related to menstruations.**
- The app was made as a paper prototype and one **student acted as the player in the video, talking about her choices** when she was met with challenging question in the app (Costikyan, 2002).
- **The player took the role as a fictive character**, a British Female, 16 years old from a low socio-economic background. Dilemmas was related to facts, e.g. about how British teenagers cannot afford menstrual products due to high costs.
- The video productions **made the struggle in the game visible** (Costikyan, 2002) which was **used as a reference point for the students to discuss** different perspectives on women's period in the feedback session (Flanagan, 2013; observations).

GAME EXAMPLE

Cultural awareness game

Figure 2: Play situations starting with a zoom on specific game cards

- Inspired by **making a video screen recording of a self-chosen game**; a digital game about cultural differences → a student reflected upon how games can raise players' attention in relation to their own stereotyping of other groups.
- Together with three other students, she formed a group where they **started an inquiry process about how a game can foster inviting dialogues and interactions around cultural issues** (Flanagan, 2013; Costikyan, 2002).
- **After second round of feedback:** The students redesigned their initial idea about an app to a board game also embracing social aspects of the game to a greater extent.

GAME EXAMPLE

Cultural awareness game

"A cultural symbol - which meaning?"

"Western poet create his pen name using Chinese character"
Cultural appropriation or inspiration"?

Figure 2: Play situations starting with a zoom on specific game cards

- In the **final video presentation** of their game "Cultural awareness", the students showed the game play by exemplifying different game situations.
- The students showed the play situations by starting with a zoom on the specific game card, **which invited participants into a dialogue about cultural items and dilemmas** (Flanagan, 2013).
- Players write down their answers on a card and reveal their choice by turning the card, **which leads to a conversation about the background for their choices.**
- The game narrative and endogenous meaning (Costikyan, 2002) of the **cultural dilemmas as context dependent and negotiable became visible in the students' game structure focusing on dialogues and joint negotiation about scores.**

STUDENTS' EVALUATIONS

On video tutorials:

In their written evaluations, all students have expressed appreciation of the video tutorials.

*"The videos were so helpful! It was great to be able to go into the reading knowing a bit about what the context was, rather than grappling to understand it. **I appreciated the main points and concepts as well, as I was able to get more from the readings with the videos."***

*"I really appreciate that there were videos in advance to see and prepare for upcoming online lesson. It helped much to concentrate on specific topic (…) and **your feedback about our game design processes was also very helpful.** I think these preparation videos with examples (!!) are great."*

STUDENTS' EVALUATIONS
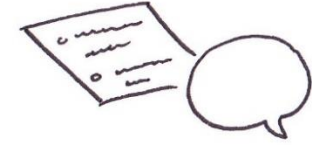
On Feedback sessions:

A student comments on the role as opponent: *"I value peer review. **It's good to learn how to communicate both compliments and critical points."***

Several students mentioned the benefits of feedback for their design processes: *"**Giving presentation was essential!** That way one had to formulate thoughts into a brief space of slides and then somehow share what one was passionate about."*

The student further elaborates*: "**Of course this was also not the first online course** so that made a big difference for me having learned and understood the platform and technologies."*

Other students also appreciated the feedback sessions as very relevant for the design processes, but **mentioned online experiences as a factor in the process**: *"Giving online presentations and being opponents all in all is good for the design processes and in this course it worked perfect. **Personally, it was a bit hard due to lack of experience in this kind of online learning environment."***

STUDENTS' EVALUATIONS

Some students expressed both before and after the game course that they are not particularly passionate about games. Despite the lack of interest in games, they found some **personal focus in the course, e.g. a politically interest in the game culture or an interest in the exploratory approaches and theory** presented at the course:

> *"The texts where many and very interesting and I was amazed by the text on autoethnography. There I saw that the theory was not only about games but about the research approach of ethnographers exploring a certain field and culture within academia approach"*.

The fact that we combined the academic inquiry approaches with visualisations and video productions as methods familiar to the students (Bang & Gelting, 2015) can be an explanation of the appreciation of the course despite the lack of interest in games.

STUDENTS' EVALUATIONS

A student expressed, her understanding of games was wider after the course which she related to her profession as an art teacher:

"In artistic creativity - when designing workshops or learning class, now I could include different approaches (...) Also when thinking about community based art projects, I will definitely remember about games as part of activism".

This quote exemplifies, how *games for changes* are not just about the specific games, but also about the **approaches embedded in the game design**, when inviting participants to play and take active part in critical issues.

CONCLUSION

- The combination of inquiry approaches, critical game theory and design processes combined with students' visualisations and video productions **indicates interesting connections for bridging gaps between professions, e.g. in art and games.**

- Students' different strategies of using visualisations and video productions in reflexive exercises and design processes **made the game experiences and narrative visible for students across campus**, which enabled further discussions in the feedback sessions and supported the joint inquiry processes.

- Analysis of PBL activities showed **how teachers' video tutorials relating theoretical game concepts to the students' group work supported their entrance in the game field as well as their design processes.**

- How to balance **feedback-related video tutorials and teachers' time for preparation is identified as a relevant issue** for further exploration in online game-based teaching.

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