Live Video Streamed Teaching

Students’ Experiences

Vibe Jelsbak

Bachelor's Degree Programme of Biomedical Laboratory Science and VIA Center for Learning and ICT

vj@via.dk

In collaboration with:
Rikke Ørngreen
Lillian Buus & Jonas Thorsen

VIA University College
LVST Classes

- 18-22 lessons per week on average
- LVST classes
  - Days for studying at home
  - Days attending school in campus (e.g. in laboratories)
  - "Net days" - Classes with 33 students attending classes in physical rooms designed for 12 students

How is the development of technological transparency perceived by students in live video-streamed teaching based on an investigation into the students’ experience of participation and student’s interaction?
Models of educational designs in LVST classes
Reduced drop out rate
Regional coverage
Financially sound
Students’ experiences

- Focusing on
  - Active student participation
  - Students’ collaboration
  - Educational possibilities

Theoretical background

Networked learning (Jones, Ferreday, & Hodgson, 2008)
Socially constructed third learning room (Levinsen et al., 2013)
Tele-presence (Levinsen, Ørngreen and Buhl 2013)
Experiencing and participating through technology (Ihde, 2002)
Mediation theory and technological transparency (Verbeek 2012)
Data
- 11 open questions to the students about their experiences
- posed by mail every second day in a period of two weeks
- data gathered from four groups of students over five years, in:
  - 2012 (49 students)
  - 2015 (73 students)
  - 2016 (23 students)
  - 2017 (29 students)

“What do I choose to stay at home/to come to campus on netdays?”

“What do I remember most clearly from the latest netday?”

“Mention something regarding organization of the netdays, that does or does not work for you”
Data analysis

Analysis was carried out following the six phases of thematic analysis (Braun & Clarke, 2006).

1) Students’ statements were read through - overview
2) Subtopics were identified through describing initial codes
3) Sorting subtopics into themes in focus for this inquiry:

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub-themes</th>
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<tbody>
<tr>
<td>1</td>
<td>Participation</td>
</tr>
<tr>
<td></td>
<td>Time and flexibility</td>
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<td></td>
<td>Concentration and the feeling of surplus in the everyday life</td>
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<td>The surroundings regarding table space (both in class and at home)</td>
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<td>Number of lectionings and difficulty of subjects</td>
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<td>2</td>
<td>Interaction</td>
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<td></td>
<td>The social element and the class sense of unity</td>
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<td></td>
<td>The student-teacher interaction</td>
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<tr>
<td></td>
<td>The student-student interaction including students who choose to shut off</td>
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<tr>
<td></td>
<td>sound to be able to work at home in peace and quiet</td>
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<tr>
<td></td>
<td>The hurdle affecting whether students interact or choose to be by</td>
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<td></td>
<td>themselves in class</td>
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<tr>
<td>3</td>
<td>Transparency</td>
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<td>Sound issues affecting interaction</td>
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<td>Video issues affecting interaction</td>
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<td></td>
<td>Software issues</td>
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<td>Problems arising from the classroom technology</td>
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</tbody>
</table>
3 – Transparency (video)

Kondensering

The students' focus was to be able to see teachers' shared desktop and where the teacher points by using electronic pen/mouse. They can see. In 2015 an extra video stream showing whiteboard was introduced to be shown together with teacher's shared desktop. The doubling decreased in 2015, but it also challenged the students in both 2015, 2016 and 2017. They now had at least three different elements showing on their computer: students note-taking software. Some students report about using their television screen or an extra PC-screen and maybe even an iPad to see

In 2017 a student indicates that there is not that much difference between non-netdays and netdays regarding the learning activities, the students see each other via webcam instead of face to face.

4 Students' statements. Marking show central statements.

5 Condensation of statements, sorted by data set

6 Comparison of the four datasets including description of differences, if present.
Findings

- Participation
  - Settings
  - Premises
- Interaction
  - Students feeling part of a team
  - Confidence
- Technological transparency
  - Technical issues demanding attention
Findings - Participation

- Net days give a surplus and less stress in general
- Mixture of net days and days on campus provides a sense of community amongst students
- In 2017 students report a cosier atmosphere, focusing on homey conditions and access to food and beverages
Findings - Interaction

Students interact via online group room or chat

Interaction with teacher reduced

- All four data sets indicate that online students feel there is a hurdle for them to overcome to be able to take part in class discussion.
- Unlike findings from the previous years, there are no statements in 2017 about whether students show less activity in class on net days
Findings - Transparency

Many points of reference

Sound is a deliberate choice

Technology - a time consumer

- Students at home perceive technology as enabling them to participate and act in ways they see as establishing a space for learning – e.g. extra screens
- Students’ perceived technology transparency has increased
- Some teachers need more strategies on how to navigate in LVST classes, both in relational and technological
Take home messages

LVST classes provides flexibility for students as they can stay at home and attend class including actively interaction with peers and in generally earning a surplus in a stressed students’ daily life.

Students need to distribute their attention between different screens and they are dependent on technology to function in order to participate.

Students in 2017 seems to have a better experience over all in comparison to students in 2012-2016. They are actively participating in LVST-classes and large percentage of them choose to stay home.