

Hybridity, Transparency, Structured Freedom and Flipped Engagement – an Example of Networked Learning Pedagogy

Thomas Ryberg, Lykke Brogaard Bertel, Mia Thyrrø Sørensen, Jacob Davidsen, Ulla Konnerup*

Department of communication and Psychology, Aalborg University, ryberg|mts07|jdavidsen|ullak@hum.aau.dk

**Department of planning, Aalborg University, lykke@plan.aau.dk*

Abstract

In this paper, we contribute to current discussions of what constitutes the field of networked learning as a research domain and what makes networked learning particularly relevant and distinct within the broader landscape of digital technology in higher education. We enter this dialogue through discussing and reflecting on a hybrid learning design for a 10-ECTS module that builds on a Networked Learning Pedagogy. The purpose of our discussions is to elicit tensions and contradictions that surface when students are confronted with a networked learning pedagogy. We discuss the module in relation to ideas of networked learning pedagogy, present four pedagogical principles underpinning the module, and we draw out interesting tensions and contradictions that have emerged. Following this, we use the discussions to feed into the ongoing dialogue of ‘what is networked learning’, and we discuss how networked learning can contribute to practice and policy in higher education through developing practice.

Keywords

Hybridity, transparency, structured freedom, flipped engagement, epistemic practice

Introduction

In this paper, we contribute to current discussions of the field of networked learning, and what makes networked learning relevant and distinct within the broader landscape of digital technology in higher education. We speak into discussions that have emerged in the books of selected papers from the Networked Learning Conferences (in the book series *Research in Networked Learning*) (Dohn et al., 2018, 2020), and we shall emphasise values and pedagogy as central characteristics of networked learning and the research field of networked learning.

We enter this dialogue through discussing and reflecting on a re-design of a 10-ECTS module towards a flipped semester/curriculum model building on networked learning pedagogy (Hodgson et al., 2012). The module is part of the Communication and Digital Media bachelor programme (CDM) in Aalborg University (AAU) and titled “Learning, networks and orchestration”. This is of interest to the field of networked learning as the re-design builds on a networked learning pedagogy, but equally because networked technologies play a central role in the module. While the field of networked learning has traditionally arced more towards online courses and programmes (Laat & Ryberg, 2018), ubiquitous mobile technologies and pervasive access to digital networks have been reshaping on-campus spaces and learning activities. Blended learning (Hrastinski, 2019) and flipped classroom approaches are prominent in the current discussions of digitising higher education and there is a strong need to enrich contemporary debates with theoretical, methodological and pedagogical insights from the area of networked learning. An area which emphasises its theoretical and critical approach to digital learning (Dohn et al., 2018; McConnell et al., 2012; Ryberg & Sinclair, 2016). In the paper, we discuss four pedagogical aspects or principles (hybridity, transparency, structured freedom, flipped engagement) that have shaped the re-design of the module, and which we argue are useful concepts in developing networked learning pedagogy.

The wish to re-design the module originated from a growing concern that the module was becoming too monological and lecture based (similar to other courses and modules within AAU). This sits uncomfortably with the fact that AAU heralds a problem and project based learning model, and various initiatives have therefore been launched internally to introduce more active learning methodologies into courses and modules. Secondly,

working with active learning methodologies is assumed to heighten study intensity e.g. the time and energy students invest in a course. This is of interest to lecturers, but is also becoming a hot topic at management and policy level with possibly troublesome implications.

In relation to these two concerns, the re-design and implementation of a flipped semester approach and working with the four principles of hybridity, transparency, structured freedom, and flipped engagement have raised interesting tensions and contradictions. As explored by Cutajar (2018, p. 79) this is not unusual as a shift to a networked learning pedagogy can be:

“[...] a significant shift from the prevalent classroom-based lecture which students are used to. Teachers are assumed to take a less prominent position permitting students to experience learning through active participation in cooperative and collaborative activities with others”

We therefore discuss the tensions arising between the design and students' experiences and expectation. One concern emerging was specifically related to the students' experience or reporting of study intensity of the module. Here a contradiction emerged between students' reports of being more engaged and motivated, while simultaneously claiming to have spent less time than in normal modules.

We use the discussions to feed into the ongoing dialogue of what is networked learning and how networked learning can contribute to practice and policy in higher education by developing practice as suggested by Hodgson & McConnell (2018, p. 462):

“This is a theme that epitomises the idea of epistemic practice where the theory of networked learning is captured in the practical accomplishment of not only one's learning designs but in our situated performative actions/work and social practices”.

In this way, the module reflects an example of networked learning as an epistemic practice or networked learning as a "developing practice". We further argue that such development processes need not be smooth and friction-free, but should perhaps be thought of as a fly in the ointment.

Case description – history and context

In AAU, a problem and project based learning model has been used as an institution-wide pedagogical approach since the university's establishment in 1974 (Kolmos et al., 2004). More recently, the model has been formally described in a number of principles (Problem Based Learning, 2015) underpinning how Problem Based Learning (PBL) is practiced at AAU. On a macro-curricular level, this means that semesters in different AAU programmes are often structured as 3*5 ECTS course modules that run alongside a 15 ECTS project module (in the European Credit Transfer System (ECTS) a semester is 30 ECTS).

As part of the 15 ECTS project module students work in groups. They identify their own real-world, societally relevant problems to address (often in collaboration with external stakeholders). They engage in long-term project work (3-4 months) where they choose relevant theories and methods in collaboration with a supervisor. They carry out empirical and theoretical studies; analyse and discuss empirical data and/or theories to address their problem. Finally, they present the solution to the problem in a final project report accounting for (typically) half of the students' credit for a semester (15 ECTS). The three 5 ECTS course modules have their own exams, but are also supposed to provide students with relevant disciplinary knowledge, theory and methods that can support their self-directed project work. However, reports and research suggest that course modules and the project module are drifting apart and courses are becoming increasingly discipline-oriented and self-contained (Kolmos et al., 2013). Furthermore, a growing concern internally in AAU is that courses have become too lecture-oriented and teacher-centred running somewhat counter to the original ideas of PBL.

Within the CDM bachelor programme, the fifth semester is organised differently from the other semesters and from the overarching Aalborg PBL model. The intention was to provide students with alternative experiences to the usual structure. The macro-curricular design for the fifth semester is three 10 ECTS modules running in succession, each of them finalised within six weeks with a brief group report (15 pages) and an oral group exam (1½ hours). Within this structure, the 10-ECTS module on "Learning, networks and orchestration" has run since 2012. It builds on the central idea that students are introduced to the theory and practice of teaching and (digital) learning through creating a learning design for others i.e. they have to teach others. In the course, fifth semester students are therefore tasked with introducing first semester students to digital academic PBL practices.

Structure and overall design of the module

The structure of the fifth semester aimed to provide students with different experiences, than the classic PBL structure. However, a growing concern amongst the group teaching the first module (and more widely across AAU) was that the teacher-led activities tended to become monologic lectures, where students are introduced to

concepts followed by self-directed work on developing their project (their teaching). One concern is that this stands in stark contrast to fundamental ideas of PBL, namely that students are active, engage, discuss and reflect together. Another concern relates to study intensity, and whether students invest sufficient time and energy in courses if lectures are primarily presentations more than working with tasks, exercises, preparation etc.

Discussing these tensions with other PBL researchers across AAU led to ideas of experimenting with what we named flipped curriculum or flipped semester (Bertel & Kristensen, 2018; Kofoed et al., 2018). In the past three to four years, we have therefore developed the course towards a flipped semester or flipped curriculum model.

The name flipped semester was a playful response to the growing interest in flipped classroom emerging globally and locally. While we agreed with the underlying idea of encouraging more student activity and interaction in the classroom, we also found that much of the practice emerging around flipped classroom locally and globally was too focused on lecture recording + class activity, rather than more fundamentally rethinking relations between students, teachers and curriculum. Hence, we developed the idea or ideal of a flipped semester, which we described loosely as:

"Semesters or modules with no courses, but where students and teachers can access relevant material online [...] semesters where students' self-identified problems/research questions become decisive for courses and choice of teaching material/literature and where time and activities between students and teachers are organised as workshops, discussion groups, peer-learning, critique, seminars"

This represented a return to original ideas of Problem Oriented Project work as it was conceived in Aalborg and Roskilde University in the 1970s where "the problem is the curriculum".

While not adopting fully the ideas of a flipped semester, the module did undergo major changes. The amount of disciplinary lectures (e.g. on design, pedagogy or learning) were reduced and replaced with weeks structured around topics and with a recurrent structure or rhythm. The module is now designed in the following way.

Within the first three weeks, the students have to identify an important digital academic practice they wish to introduce to the first semester students. They have to familiarise themselves with theories of teaching and learning, and design a 45 minutes workshop. They teach the workshop in week four. The overall progression of the module is loosely modelled over an adoption of Design Based Research called the ELYK-model (Christensen et al., 2012; Gleerup et al., 2014). More specifically the weeks are structured as:

- Week one and two focus on problem identification, domain knowledge and theory. What is relevant to teach to first semester students and why? This includes theory of learning and pedagogy.
- Week three on designing and prototyping (design workshops and introductions to learning design).
- Week four on intervention and reflection (actually teaching first semester students and reflecting).
- Week five for reporting (writing up and handing in a 15 pages report critically arguing for and reflecting on their teaching).
- Week six for group exams.

Each week has a relatively recurrent structure:

- Mondays and Tuesdays for brief lectures, group work, discussions, and seminars
- Wednesdays for reading groups where students present text to each other
- Thursdays for a weekly reflexive assignment that feed into the final report (e.g. write a page on learning theory)
- Fridays are for supervision/meetings with supervisor

The lecturers assign the students into groups of five and each group has a supervisor they can meet with and discuss their project.

Networked Learning Pedagogy – hybridity, transparency, structured freedom & flipped engagement

Pedagogically the module is rooted in networked learning ideas as they are summarised by Hodgson et al. (2012, p. 295) in their lengthier discussion of NL theory and pedagogy:

- Cooperation and collaboration in the learning process.
- Working in groups and in communities.

- Discussion and dialogue.
- Self-determination in the learning process.
- Difference and its place as a central learning process.
- Trust and relationships: weak and strong ties.
- Reflexivity and investment of self in the networked learning processes.
- The role technology plays in connecting and mediating.

These aspects were part of guiding the design of the module, and we have crystallised them into four principles that underpin the module: hybridity, transparency, structured freedom and flipped engagement.

Hybridity expresses that digital technologies play a central role in the course. Students reflexively explore how digital technologies are part of their own studies and how they mediate collaboration and learning. With the term "hybrid" we emphasise that the digital/non-digital or online/onsite are always co-present and tightly interwoven. In seminars and workshops during the module there are tasks where students need to collaborate online whilst being co-located in the same room, and they are encouraged to integrate online resources (such as online lectures) in their own learning (and their own teaching). They are designing digital resources for the students they teach, and asking them to work together online, whilst being co-located (e.g. exercises on the suggest function in online writing). Whereas some conceptualisations of flipped are about alternating between online and onsite (Hrastinski, 2019) we wish to highlight the simultaneity with the term hybrid. The hybridity, however, also refers to the notion of hybrid presence (Koutropoulos & Koseoglu, 2018) where both teachers and students adopt roles as co-explorers and co-dependent learners transgressing the traditional teacher/student roles.

Transparency, as explored by Dalsgaard & Paulsen (2009), refers to the idea that we ask students to share their group work with all the other groups and something which is enabled by networked technologies. For example, small assignments are handed in as links to online documents available to all students in the module. We do so to instil the idea that students can be resources to each other beyond the group and learn through more weakly tied networks such as a semester cohort (Ryberg & Davidsen, 2018). In this way students can alternate between strongly-tied collaboration in small groups, to being inspired by others via more loosely-tied cooperative forms of engagement (McConnell, 2002).

By structured freedom, we are referring to an inherent tension in the pedagogical design. On the one hand, the whole process is heavily structured with scheduled group readings, reflexive assignments and milestones (for example when to have their design and teaching resources ready). On the other hand, the students are largely free to choose when, how, and where to work (although we encourage them to work in a shared, open room), as activities Wednesday to Friday are teacher-initiated, but student-driven (meaning there is no teacher present). This relates pedagogically to the ideas of indirect design (Goodyear, 2015; Jones, 2015) where teachers can design worthwhile tasks, appropriate tools and places as well recommended division of labour that students then appropriate into their learning activity, which cannot be directly designed.

Finally, the concept of flipped engagement is a core principle in the module and reflects values such as self-determination in the learning process and reflexivity and investment of self in the networked learning processes. Fundamentally, the intention of flipped engagement is an intention of prompting, provoking or inviting students to take more ownership of the learning process and to address the concern we had with the increasing gap between monologic lectures and students' self-directed work. However, it is equally a means to heighten students' study intensity i.e. the number of hours students spend studying pr. semester by creating a more activity-based design (Goodyear, 2015). Study intensity has become a hot topic of public debate in Denmark as many politicians, opinion makers (and students) have criticised that students have too few classes and do not study the number of hours they are expected to (according to the ECTS scale)¹. This public/political critique has prompted universities to guarantee a minimum number of contact hours (i.e. hours where students meet or interact with a lecturer). Subsequently this has spurred a concern amongst staff of overly simplistic measures of hours and contact time being implemented (leading also to increased administration and documentation). This, because the term study intensity seems to reduce engagement to time spent studying, whereas other approaches to student engagement (Trowler, 2010) represents a more holistic approach involving both behavioural (attendance and involvement), emotional (interest, enjoyment and sense of belonging), and cognitive (investment in learning e.g. beyond requirements) forms of engagement. Thus, our idea of flipped engagement entailed a wish to heighten the students' engagement, curiosity and interest by granting more ownership and

¹ As a background to this discussion: University education in Denmark is a public good i.e. students do not pay fees. The universities are public funded and every student receives an amount around 825€ pr. month from the government. This being also the reason for a quid-pro-quo debate emerging.

responsibility over the learning process (as is the fundamental idea in the Aalborg PBL model and in networked learning). We conceived of this as a way of creating an alternative response to the study intensity problem, rather than a managerial or simplistic counting of hours.

Data collection and method

In autumn 2018, we collected two types of data in relation to the module. The authors who were part of teaching the course made an evaluation (open-answers survey) with the students. One of the authors, who was not part of teaching the module, collected data as part of a wider research project called "PBL Future". PBL Future is a large research project funded by AAU and with researchers from all faculties of the university. The aim of the project is to understand current state-of-the-art of the AAU PBL model and to develop scenarios and ideas for how to develop PBL in a digital world (PBL Future, 2019). The module was selected to be part of an ongoing study of various implementations of flipped curriculum/semester. The researcher therefore followed some module activities and conducted focus group interviews with students during and after the module.

The course evaluation was an open-answer survey with five questions on the students' experience of 1) the structure and working methods, 2) the course literature and resources, 3) information and communication (use of the technological platforms and sharing and reading of own and other groups assignments), 4) the role of the lecturers and supervisors, and 5) groups and group work. For each question, the student could write about their experiences (long answer). We asked the students to initially discuss their experiences in their group, then individually fill out the form, which left us with 36 answers out of 74 students.

Importantly, our aim in this paper is not to evaluate the course, rather we wish to draw out some tensions and contradictions we found, and we use these to discuss further networked learning pedagogy. The tensions are a first attempt to read into the interviews and evaluation and represent a first broad qualitative reading of the material that can later be expanded into a full thematic analysis (Braun & Clarke, 2006). It is a reading and analysis that takes its point of departure in systematic reflexive practice, evaluations, and experiences over a number of years designing and re-designing the module. Nevertheless, we wish to make it clear that treatment of data, the analysis and conclusions are preliminary and tentative.

Evaluation data – summarising

The different organisation of the module stands out in the students' evaluations. The module is recurrently contrasted to a usual semester with exposition of theories and literature through lectures, where there is a minimum of scaffolding on how to integrate course knowledge in their problem-oriented projects (according to the students). In general, the students were positive in relation to the shorter project period and the organisation of the module with more dialogue and workshops and less lecturing than usual. According to the students, these changes lead to increased motivation but also confusion in the beginning. However, while only few students explicitly expressed they would have preferred more lectures over workshops and dialogues, some students pointed to a wish for having more lectures as well.

While some students briefly described the structure as good, fine or worked well; others elaborated and pointed out positive aspects. For example, that they have been more active and felt more responsible for their own learning. A greater relevance and coherence between the teaching, the assignments, and the literature on one hand and then the project and their teaching of the first semester students on the other.

Many of the students are particularly positive about the peer-reading activities in groups. It gave a good overview of the literature and at the same time, they read texts more thoroughly than they would normally have done. However, they also report that too much time was devoted to reading and reviewing the texts. More students suggested that the peer reading of Wednesdays and the assignments of Thursdays should be reduced to a one-day program instead.

Evaluation data - discussion

In the evaluations, we find an ambivalence and uncertainty related to the organisation of the module residing on the one hand in students' positive experience of alternative activities over lectures with a simultaneous feeling among some students of being short of lectures.

"Structure has been a relief compared to other semesters and it has been a pleasure. Personally, not something I would prefer as permanent change (lectures are too valuable), but it was engaging and motivating to change pace" (student evaluation)

”First week was confusing because we were not used to the structure. But the structure has meant that I have been more motivated to immerse myself in the subject because we knew all the time what to use the knowledge for” (student evaluation)

Students substantiate the wish for lectures by describing lectures as a way of to check or confirm their understanding of literature. In contrast, others point out feedback on weekly assignments and supervisor meetings verified both their understanding of theories and of the project group being on track.

”Supervisor was good at confirming that we had understood and used the literature correct. This is something I have felt insecure about in this module, as we have just had information from other students and not had our own understanding "validated" in the lectures."

We find a similar tension in the students’ descriptions of peer reading. Some students describe the dependency on each other’s annotations and understanding of the literature as a drawback to peer reading. Some point out that the quality of the annotations varies, while a few describe peer-reading as a disadvantage regarding the exam because “you do not understand the literature, reviewed by the group member, as good as if you read it yourself” (paraphrased from evaluations).

Another tension related to peer-reading and Thursday assignments was that some students reported that too much time was allocated for these activities and they could be shortened and combined. A couple of students describe this as a question of priority and attitude; the assignment and peer reading became a question of efficiency, getting the work done and get home early; rather than, as intended from our side, a matter of discussion, reflection, exploration and absorption. One student writes:

“...what I hear from almost all groups, the fact that we had to work ourselves Wednesday to Friday meant that it was prioritised to get home early and therefore rush through the assignments. This was frustrating for those of us who wanted the important discussions about the texts – that never happened.” (Student evaluation)

Clearly, there were here some tensions between our (and some students’) intentions of deep engagement and reflection and then a more efficiency oriented perspective of getting things done. This could be read as discrepancies between what could be expressed as deep learning vs surface learning strategies (Biggs & Tang, 2007), but as we shall return to, we should like to locate these strategies at an institutional level rather than as properties of the individual students. They, however, concern questions of engagement and study intensity, which were issues also popping up in the (independent) interviews carried out with the students by an external researcher.

Flipped engagement and study intensity – insights from interviews

The term study intensity refers to the total time the student use in their studies and is increasingly considered an important indicator of student motivation and learning impact in a Danish context (and beyond). For example, it is assumed that high study intensity leads to high motivation and learning, whereas low study intensity leads to decreased motivation and learning, and perhaps even increased drop-out rates (Danmarks Evalueringsinstitut, 2016). Active, student-centred learning methods and feedback are positioned as one of the means to increase study intensity (more frequent exams are also considered an effective way of increasing study intensity (Danmarks Evalueringsinstitut, 2016)). As previously mentioned, the course was designed to increase study intensity through flipped engagement.

However, here we found an interesting tension or contradiction. In the interviews carried out by the external researcher, we found a contradiction between student motivation and study intensity, suggesting that students’ experience of study intensity and engagement might not necessarily correlate in modules adopting a flipped semester / networked learning pedagogy. In the interviews, we found that the students in general were positive about the design of the module (as also reflected in the evaluations). Further, the learning outcomes demonstrated in project reports and at exams lived up to expected academic standards. Students interviewed reported increased gains on learning outcomes, increased interest and experiences of being more motivated and self-directed in the networked learning designs. However, the same students simultaneously claimed to have spent less time on the module compared to traditional lectures, i.e. indicating a decrease in study intensity (this was also the case in a comparable courses carried out in AAU (Bertel & Kristensen, 2018)). While our perception, and that of other teachers in similar modules (Bertel & Kristensen, 2018), was that students did not invest less time in the module, we were (and are) a bit perplexed with this finding. While not having a clear answer to this, we are speculating that it could perhaps be an effect of increased motivation and that self-initiated and self-determined activities are not always consciously categorized as study activities. Some students even reported that they were significantly more aware of study intensity (i.e. time spent in-class) in a traditional

lecture-based course following the networked learning module, even though they felt less motivated to participate (Bertel & Kristensen, 2018).

This poses challenges, not only in relation to the increasing attention to study intensity in quality assessment of courses and curricula across educational institution, but particularly in PBL and networked learning environments that seek to support students in taking responsibility for their own learning through project work and networked learning pedagogy. If experiences of self-determination and engagement in such learning activities do not translate into an increase in reported study intensity, this could pose quite a challenge in an environment increasingly concerned with study intensity as a measurement of quality. Similarly, increasing the number of traditional lectures and tests might enhance students' awareness of how much time they spend studying and thus increase reported study intensity, however this would not necessarily be a valid indicator of neither engagement nor learning, and would run counter to many of the values and ideas in networked learning.

Concluding discussion

In this concluding discussion, we address two overarching questions: 1. What is the paper's contribution to networked learning research? 2. What is the contribution of networked learning research to higher education?

In relation to the first question, it is useful to return to Hodgson & McConnell's (2018, 2020) ideas of networked learning as an epistemic practice or as developing practice:

"[...] the idea of epistemic practice where the theory of networked learning is captured in the practical accomplishment of not only one's learning designs but in our situated performative actions/work and social practices." (Hodgson & McConnell, 2020 (in press), p. N/A)

The module we discuss is pedagogically heavily inspired by networked learning principles (Hodgson et al., 2012) and as such an example of developing networked learning practice. We have suggested four principles, as alternative ways of expressing and capturing some of the aspects laid out by Hodgson et al. (2012), namely: hybridity, transparency, structured freedom and flipped engagement. While each of these could be explored further in their own right, we believe they are concepts that may have wider currency than as only internal thinking tools for developing our own module.

They are concepts that have been born out of a developing networked practice and can perhaps now prove useful for other networked learning practitioners. Hybridity we see as an increasingly important way of thinking about new relations between spaces, places, activities and people, and new opportunities for designing learning experiences (Carvalho et al., 2017; Ryberg et al., 2018). Hybridity not only concerns the increasingly complex mixes between being online or onsite, but equally new relationships and roles between teachers and students (and potentially other stakeholders) (Koutropoulos & Koseoglu, 2018). Transparency is a principle tightly connected with ideas of alternating between and supporting both weak and strongly tied networks in learning activities (Jones et al., 2015). For example by asking students to share reflexive group assignments with the entire cohort or contribute to building a shared pool of resources. Structured freedom expresses the tension between on the one hand, a wish for students to take ownership of the learning process and practice investment of self in the learning process, and on the other hand, the need to design a structure within which this can occur. This is closely related to the idea of flipped engagement, which entails a wish to heighten the students' engagement, curiosity and interest by granting more ownership and responsibility over the learning process.

However, granting more ownership and responsibility also comes with costs. For one thing, we experienced the strange discrepancy between students' reports of increased motivation and self-investment vs reporting spending less time spent (though our perception as teachers was that they spent the same or more compared to other courses). This is an aspect we wish to look further into, as it poses challenges to PBL and networked learning pedagogies, where students are meant to take increased responsibility for their own learning. If self-determination and engagement do not translate into an increase in reported study intensity, this could pose quite a challenge in an environment increasingly concerned with study intensity.

Secondly, from the evaluations and interviews it was also clear that some students experienced insecurity and frustration with the module being differently designed than other modules within the programme; this particularly in the first week or two of the module. Experiencing different relations between lecturers and students and different expectations can lead to frustration and bewilderment (Cutajar, 2018), but this can also be seen as a positive trait, rather than a deficiency to be fixed. It is also clear students have embraced ownership and responsibility very differently and we alluded earlier to the notions of surface vs deep learning strategies. We should however like to adopt the concepts proposed by Katznelson & Louw (2018) who have studied pre-university students across different educations (15-19 years old). They adopt the terms "præstation"

(performance) vs "mestring" (mastery). Performance being a more strategic, instrumental approach aimed at getting things done most efficiently with the highest gain (grade) and thus prioritising one's resources. Mastery in contrast, is associated with curiosity, engagement and interest. In their analyses, they suggest that the performance orientation, due to various systemic reasons, is becoming increasingly widespread and dominant in the Danish educational system. Particularly in the educational tracks that typically serve as entrance to university.

This orientation is echoed in the comments made by one of the students (earlier cited). They point out that working on their own meant that many prioritised rushing through the assignments to get home early. It was reflected also in the wish of combining two days, as some students felt too much time was allocated for these activities. A strategy applied by many groups initially was to finish everything on Wednesday. There is clearly an uneasy tension between intentions of reflexive investment of self and then a performance orientation, which we have also experienced as a challenge in teaching and supervising the module. These tensions, in our experience, have been most pronounced in the beginning of the module, and seem to lessen as the module progresses and the students become more comfortable with the structure (a transformation also noted by many students in the evaluations). While we have strived to ameliorate some of these tensions, we are also wondering whether we - from a networked learning perspective - could view these as potentially productive, rather than as deficiencies. Ferreday & Hodgson (2010, p. 11) drawing on Foucault discuss the notion of heterotopian space:

"A heterotopian view acknowledges that it may well and often does test customary notions of ourselves and of participation but at the same time offer space to imagine and desire differently."

Perhaps, we should see networked learning principles, pedagogies and their embodiments (courses, modules etc.) as opportunities to disturb and provide students with different experiences. In this way, we can view networked learning as developing practice or an epistemic practice, which has a transformative view through which it continuously contribute to the development of higher education. The contribution of networked learning research to higher education is therefore not only theoretical and conceptual in the form of theory, papers and books, but also theoretical and conceptual as embodied in actual networked learning practices.

Networked learning practices are necessarily imbued with values, such as the pedagogical ideas or values of collaboration, dialogue, and investment of self, as adopted from (Hodgson et al., 2012). We should however like to add here, also ideas of imperfection, inquiry, curiosity, annoyance, heterotopian spaces - or echoing Ross & Collier's (2016) ideas of complexity, mess and not-yet-ness. Rather, than thinking about networked learning practices only in terms of what works or striving towards frictionless acceptance and satisfaction amongst students, we should perhaps occasionally strive towards designs that generate tensions, challenge and frustrate students and lecturers and prompt them to think differently about their own learning practices and education.

References

- Bertel, L. B., & Kristensen, N. S. (2018). Student Engagement and Study Intensity in Flipped PBL Curriculum and Blended Learning Activities. 7th International Research Symposium on PBL: Innovation, PBL and Competences in Engineering Education, 116–125. <https://vbn.aau.dk/da/publications/student-engagement-and-study-intensity-in-flipped-pbl-curriculum->
- Biggs, J., & Tang, C. S. (2007). *Teaching for Quality Learning at University: What the Student Does*. Open University Press/Mc Graw-Hill Education.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Carvalho, L., Goodyear, P., & Laat, M. de (Eds.). (2017). *Place-based spaces for networked learning*. Routledge.
- Christensen, O., Gynther, K., & Petersen, T. B. (2012). Tema 2: Design-Based Research – introduktion til en forskningsmetode i udvikling af nye E-læringskoncepter og didaktisk design medieret af digitale teknologier. *Tidsskriftet Læring og Medier (LOM)*, 5(9). <https://doi.org/10.7146/lom.v5i9.6140>
- Cutajar, M. (2018). Variation in Students' Perceptions of Others for Learning. In *Networked Learning* (pp. 79–94). Springer, Cham. https://doi.org/10.1007/978-3-319-74857-3_5
- Dalsgaard, C., & Paulsen, M. (2009). Transparency in Cooperative Online Education. *The International Review of Research in Open and Distance Learning*, 10(3), 1492.
- Danmarks Evalueringsinstitut. (2016). *Styrk de studerendes udbytte: Inspiration til at arbejde med de studerendes studieintensitet*. Danmarks Evalueringsinstitut.

- Dohn, N. B., Jandrić, P., Ryberg, T., & de Laat, M. (Eds.). (2020). *Mobility, Data and Learner Agency in Networked Learning*. Springer.
- Dohn, N. B., Sime, J.-A., Cranmer, S., Ryberg, T., & Laat, M. de. (2018). Reflections and Challenges in Networked Learning. In *Networked Learning* (pp. 187–212). Springer, Cham. https://doi.org/10.1007/978-3-319-74857-3_11
- Ferreday, D. J., & Hodgson, V. E. (2010). Heterotopia in Networked Learning: Beyond the Shadow Side of Participation in Learning Communities. <http://www.research.lancs.ac.uk/portal/services/downloadRegister/615478/Document.pdf>
- Gleerup, J., Heilesen, S., Helms, N. H., & Mogensen, K. (2014). Designing for Learning in Coupled Contexts. In V. Hodgson, M. de Laat, D. McConnell, & T. Ryberg (Eds.), *The Design, Experience and Practice of Networked Learning* (pp. 51–65). Springer International Publishing. http://link.springer.com/chapter/10.1007/978-3-319-01940-6_3
- Goodyear, P. (2015). Teaching as design. *HERDSA Review of Higher Education*, 2, 27–50.
- Hodgson, V., & McConnell, D. (2020). Becoming a Knowledge Community: The Epistemic Practice of Networked Learning. In N. B. Dohn, P. Jandrić, T. Ryberg, & M. De Laat (Eds.), *Mobility, Data, and Learner Agency in Networked Learning*. Springer.
- Hodgson, V., McConnell, D., & Dirckinck-Holmfeld, L. (2012). The Theory, Practice and Pedagogy of Networked Learning. In L. Dirckinck-Holmfeld, V. Hodgson, & D. McConnell (Eds.), *Exploring the Theory, Pedagogy and Practice of Networked Learning* (pp. 291–305). Springer New York. http://link.springer.com/chapter/10.1007/978-1-4614-0496-5_17
- Hrastinski, S. (2019). What Do We Mean by Blended Learning? *TechTrends*, 63(5), 564–569. <https://doi.org/10.1007/s11528-019-00375-5>
- Jones, C. (2015). *Networked Learning—An Educational Paradigm for the Age of Digital Networks*. Springer Verlag.
- Jones, C., Ryberg, T., & Laat, M. de. (2015). Networked Learning. In M. Peters (Ed.), *Encyclopedia of Educational Philosophy and Theory* (pp. 1–6). Springer Singapore. https://doi.org/10.1007/978-981-287-532-7_129-1
- Katznelson, N., & Louw, A. V. (2018). *Karakterbogen: Om karakterer, læring og elevstrategier i en præstationskultur* (1st ed., Vol. 6). Aalborg Universitetsforlag.
- Kofoed, L., Kristensen, N. S., Andreasen, L. B., Bruun-Pedersen, J. R., & Høeg, E. R. (2018). Integrating Courses and Project Work to support PBL: a conceptual design for changing curriculum structure. In W. Sunyu, A. Kolmos, A. Guerra, & Q. Weifeng (Eds.), *7th International Research Symposium on PBL* (pp. 260–268). Aalborg Universitetsforlag.
- Kolmos, A., Fink, F. K., & Krogh, L. (2004). *The Aalborg PBL Model—Progress Diversity and Challenges*. Aalborg University Press.
- Kolmos, A., Holgaard, J. E., & Dahl, B. (2013). Reconstructing the Aalborg Model for PBL: a case from the Faculty of Engineering and Science, Aalborg University. In K. Mohd-Yusof, M. Arsat, M. T. Borhan, E. de Graaff, A. Kolmos, & F. A. Phang (Eds.), *PBL Across Cultures* (pp. 289–296). Aalborg Universitetsforlag.
- Koutropoulos, A., & Koseoglu, S. (2018). Hybrid Presence in Networked Learning: A Shifting and Evolving Construct. In *Networked Learning* (pp. 109–124). Springer, Cham. https://doi.org/10.1007/978-3-319-74857-3_7
- Laat, M. de, & Ryberg, T. (2018). Celebrating the Tenth Networked Learning Conference: Looking Back and Moving Forward. In *Networked Learning* (pp. 1–20). Springer, Cham. https://doi.org/10.1007/978-3-319-74857-3_1
- McConnell, D. (2002). Action Research and Distributed Problem-Based Learning in Continuing Professional Education. *Distance Education*, 23(1), 59–83.
- McConnell, D., Hodgson, V., & Dirckinck-Holmfeld, L. (2012). Networked Learning: A Brief History and New Trends. In L. Dirckinck-Holmfeld, V. Hodgson, & D. McConnell (Eds.), *Exploring the Theory, Pedagogy and Practice of Networked Learning*. (pp. 3–24). Springer Verlag.
- PBL Future. (2019). PBL Future. <https://www.pblfuture.aau.dk/>
- Problem Based Learning. (2015). Aalborg University. http://www.aau.dk/digitalAssets/148/148025_pbl-aalborg-model_uk.pdf
- Ross, J., & Collier, A. (2016). Complexity, Mess, and Not-Yetness. In G. Veletsianos (Ed.), *Digital Learning: Foundations and Applications Emergence and Innovation in Digital Learning* (pp. 17–34). Athabasca University Press. http://www.aupress.ca/books/120258/ebook/02_Veletsianos_2016-Emergence_and_Innovation_in_Digital_Learning.pdf
- Ryberg, T., & Davidsen, J. (2018). Establishing a Sense of Community, Interaction, and Knowledge Exchange Among Students. *SpringerLink*, 143–160. https://doi.org/10.1007/978-3-658-19925-8_11
- Ryberg, T., Davidsen, J., & Hodgson, V. (2018). Understanding nomadic collaborative learning groups. *British Journal of Educational Technology*, 49(2), 235–247. <https://doi.org/10.1111/bjet.12584>

- Ryberg, T., & Sinclair, C. (2016). The Relationships Between Policy, Boundaries and Research in Networked Learning. In T. Ryberg, C. Sinclair, S. Bayne, & M. de Laat (Eds.), *Research, Boundaries, and Policy in Networked Learning* (pp. 1–20). Springer International Publishing. https://doi.org/10.1007/978-3-319-31130-2_1
- Trowler, V. (2010). Student engagement literature review. Higher Education Academy. <https://www.advance-he.ac.uk/knowledge-hub/student-engagement-literature-review>