

Round table Submission Template:

Host names:

Thomas Ryberg, Lykke Brogaard Bertel, Antonia Scholkmann, Anette Kolmos, Mia Thyrrre Sørensen, Elisabeth Lauridsen Lolle

Round table title:

Networked Learning and PBL Future – an institutional development project

Elevator pitch:

In 2018, an ambitious cross-faculty research project titled “PBL future” was launched within Aalborg University (AAU). The aim of “PBL Future” is to develop research-based directions for problem- and project-based learning (PBL) and networked learning in AAU. In AAU PBL has been implemented as an institution-wide pedagogy since AAU’s inauguration in 1974 (Kolmos, Fink, & Krogh, 2004). The project aims to re-conceptualise how PBL and networked learning could operate in new formats, based on the core principles of PBL, while exploring and developing new digital approaches that operate in and open up for new hybrid PBL and networked learning models. In the project, there are five sub-projects addressing particular aspects in relation PBL and networked learning. In this round table we will discuss three of these in more depth:

- Scenarios and future development in organisational change processes – methodologies and theoretical reflection
- Emerging PBL Collaboration Skills for a Digital Age – students’ use of networked technologies in hybrid environments
- PBL competence development of individual students (working with portfolio methods and digital tools)

Within each of these three themes we shall discuss current findings, thinking, theories, questions, methodologies, but more importantly co-developing with the participant richer pictures of current knowledge and state-of-the-art in relation to the three themes. More concretely, this co-development will manifest itself as the production of rich-media posters to support and reify the discussion taking place in sub-groups.

Goal:

Within each of the proposed themes, we shall present findings, ideas and emerging questions emanating from the research project. Each theme will initially have five minutes for presentation. More importantly we are interested in the session as an opportunity for knowledge building and knowledge sharing amongst the participants who are interested in or working with one or more of the themes. In sub-discussions the aim is to co-develop posters and rich pictures (drawings, post-its, text) to map current knowledge, questions, references, journals, papers, ideas, curiosities etc. within the themes. These rich-media posters will subsequently be made available online. The themes are described below based on existing project descriptions (‘PBL Future’, 2019):

Scenario methodologies, practice and theory

Presenter and moderators: Lykke Brogaard Bertel, Anette Kolmos

As part of the PBL future project a large baseline study has been conducted and five subprojects are carried out during 2018-2020. All sub-projects will contribute to the final phase of the PBL-future project about on new PBL directions. In this final stage, the results from baseline-study and the subprojects will feed into creating a series of directions and scenarios. Scenario methodologies will be applied pointing at a diverse range of basic assumptions, criteria and processes (Kosow & Gaßner, 2008). In the round table, the current progress will be presented and discussions on methodologies, practice and theory will be opened for the participants to co-develop a shared mapping of the field and theme as a rich-media poster.

Students' use of networked technologies in hybrid environments

Presenter and moderators: Thomas Ryberg, Mia Thyrré Sørensen

The aim of this subproject is to identify and conceptualise new collaboration skills that emerge due to the changes in how students work and learn in PBL environments saturated by digital technologies. Recent studies show that students are already working and learning in 'hybrid' environments. Certain tools and services are omnipresent in students' work (e.g. Facebook and Google Drive/Docs), but gaps happen in the students' use of technologies, and more academically oriented services and practices are less commonly adopted (Ryberg, Davidsen, & Hodgson, 2018; Thomsen, Sørensen, & Ryberg, 2016)

Main questions are: 1) What experiences do students have with digital technologies and what is the impact of new technologies and hybrid spaces on students' collaboration in a PBL environment? 2) What are the PBL practices and collaboration skills that emerge out of this meeting and how do these translate into wider PBL competences that students develop or need to develop throughout their study?

In the round table, current ideas and findings will be shared and will form point of departure for conceptual, theoretical and methodological discussion in relation to understanding students' use of technology in higher education in relation to PBL and networked learning. In the sub-discussions participants will co-develop a shared mapping of the field and theme as a rich-media poster.

Portfolio methods and networked learning

Presenter and moderators: Antonia Scholkmann, Elisabeth Lauridsen Lolle

The aim of this subproject is to study individual students' reflections on their PBL competences, when they utilize digital tools in form of e-portfolios. Individual students struggle at times to identify the specific competences they acquire through their project work, their courses and the overall educational outcomes they strive towards.

PBL learning approaches present some unique challenges for an individual to evaluate the outcomes of their own learning, since much focus is on the benefits of working and thinking in teams in which the diversity of contributions helps to solve complex problems (Hmelo-Silver, 2004; Scholkmann et al., 2018). However, university education ought to lead to higher order learning competences that include the competences to think independently, including about one's

own learning. Self-reflection and formative assessment can assist such aims (Davies & LeMahieu, 2003). Tools that support self-evaluation include portfolios since they provide the structures needed for organized reflection and (self)-assessment of learning. In electronic form, they can include multimodal formats (text, images, video), that afford flexible and hybrid learning spaces.

In the round table, current ideas and findings will be shared and will form point of departure for conceptual, theoretical and methodological discussion in relation to portfolio methods and networked learning. In the sub-discussions participants will co-develop a shared mapping of the field and theme as a rich-media poster

How to engage the participants into the discussion:

The round table will begin with a very brief presentation of the overall theme and the PBL future project (5 minutes). Each theme or subproject will then be presented along with key questions and suggested topics for further debate (3*5 minutes).

We split into sub-themes or discussion groups. Initially, with equal numbers for each theme. After approximately 15-20 minutes there is an opening for changing to another sub-discussion and this pattern will be repeated two more times, so participants have an opportunity to move through all three subdiscussions (or stay in one debate if preferred). In the sub-discussions the moderators will facilitate the joint development of shared mappings of the field, the group discussions and the theme as a rich-media poster.

There will be a final wrap-up session presenting the rich-media posters i.e. the knowledge mappings, drawings and posters that emerged from the work. These will later be made available for all participants online.

References:

- Davies, A., & LeMahieu, P. (2003). Assessment for Learning: Reconsidering Portfolios and Research Evidence. In M. Segers, F. Dochy, & E. Cascallar (Eds.), *Optimising New Modes of Assessment: In Search of Qualities and Standards* (Vol. 1, pp. 141–169).
https://doi.org/10.1007/0-306-48125-1_7
- Hmelo-Silver, C. E. (2004). Problem-Based Learning: What and How Do Students Learn? *Educational Psychology Review*, 16(3), 235–266.
- Kolmos, A., Fink, F. K., & Krogh, L. (2004). *The Aalborg PBL Model—Progress Diversity and Challenges*. Aalborg: Aalborg University Press.

Kosow, H., & Gaßner, R. (2008). *Methods of future and scenario analysis: Overview, assessment, and selection criteria* (Vol. 39). Bonn: DEU - Deutsches Institut für Entwicklungspolitik.

PBL Future. (2019). Retrieved 25 October 2019, from PBL Future website:

<https://www.pblfuture.aau.dk/>

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>

Scholkmann, A., Loyens, S. M. M., Koch, F., Roters, B., Ricken, J., & Dahlgren, L.-O. (2018). To understand or not to understand? Evidence and challenges in assessing the potential of Problem-Based Learning (PBL). In N. Schaper & B. Szczyrba (Eds.), *Forschungsformate zur evidenzbasierten Fundierung hochschuldidaktischen Handelns* (pp. 157–173). Köln: Cologne Open Science.

Thomsen, D. L., Sørensen, M. T., & Ryberg, T. (2016). Where have all the students gone? They are all on Facebook Now. In S. Cranmer, M. de Laat, T. Ryberg, & J.-A. Sime (Eds.), *Proceedings of the 10th International Conference on Networked Learning 2016* (pp. 94–102). Retrieved from <http://www.lancaster.ac.uk/fss/organisations/netlc/abstracts/pdf/P01.pdf>