

## **Fifth Issue of the Journal of Problem Based Learning in Higher Education**

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### **INTRODUCTION TO THE FIFTH ISSUE**

We are pleased to introduce the fifth issue of the Journal of Problem Based Learning in Higher Education. The current issue is composed of four research papers and four PBL cases. These address different aspects of PBL and feature contributors from The Netherlands, Croatia, Denmark, Ireland, Ukraine, the UK, and Brazil. Three of the papers analyse and reflect on concrete implementations of PBL and particular methods and tools that have been used to support students' work with PBL. The fourth paper reflects on the conditions of knowledge production in Higher Education with point of departure in a particular PBL model. The four cases report and reflect PBL implementations within Engineering, Medical Education and a MBA programme. This brief recap helps to illustrate that PBL is both of international, global interest, but also is becoming adopted within a range of different disciplines.

From a PBL research perspective this is of course exciting and invigorating, but moreso we should say that from a citizen and societal perspective we also find this development important, as PBL - and education more generally - is increasingly important. No doubt that in the years to come 2016 will stand out in many ways as a particularly disturbing year. Europe has been marked by Brexit, but also a humanitarian crisis. The latter has unfortunately shown both cracks and conflicts in the European collaboration and an appalling lack of will to tackle the challenge of refugees seeking shelter in Europe. This year, more than 4000 people, men, women and children have died in their attempt to cross the mediterranean, and within the EU we have not been able to agree on how to distribute the refugees who managed to survive the dangers - or rather, there seems to be an agreement, but not the willingness among member states to put words behind their actions and accept the allotted number of refugees. No more decisive do we seem as a global community to address the atrocities happening in Syria, and Yemen, and so many other places where people are displaced or killed. Many of

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the conflicts we are witnessing are difficult to understand and disentangle, who are the parties fighting, what are the vested interest of the superpowers in terms of trades and alliances, who should we support? These are questions that are difficult to resolve for the individual citizen - educated or not - but more concerning they are also conflicts it seems both politicians and media struggle to fathom.

The year of 2016 also became the year where notions of post-truth and post-factual gained widespread attention. Post-truth became Oxford Dictionaries 'word of the year' in both US and UK. In for instance both the leave and remain campaigns, as part of the Brexit elections, outrageously false and deceptive claims were. It has been a year where the internet has revelled in Fake News, and it has become clear that entire businesses are built around promoting claims that are farfetched lies.

While one could hope for a less turbulent 2017 it also seems clear we are facing a number of global challenges. With increasing popularity of nationalist-populist parties across Europe we could be facing a surge in post-factual, populist claims and news as elections in a number of European countries are nearing. And as sociologist Matthijs Rooduijn writes in a recent column in nature it is questionable whether simply studying populism is enough, and he urges academics to 'step up and choose sides' (Rooduijn, 2016).

So, what are the relations between these disturbing trends, PBL and calls to 'step up' the reader might ask. For us it underlines the importance of understanding PBL, not only as a technique for teaching more effectively, but as an educational philosophy that should underpin Higher Education practice. In our view, PBL is equally about enabling students to engage in critical enquiry at societal level, and thus more than developing skills we see PBL (and Higher Education more generally) as a means to develop critical, enlightened citizens. Acc In Aalborg University (and Roskilde) where students work with real-life problems in projects for extended periods of time, we should perhaps also be more insistent in our encouragements for students to critically engage with societal issues. How can areas such as social science, education and computer science help us understand how we can resist and battle fake news, post-truths, misinformation and outright lies. In many understandings of PBL it is a pedagogy that goes further than the classroom - it is a pedagogy and philosophy that brings the world and academia in closer alignment. It is, in our view, a pedagogy that should encourage teachers and students to stretch out and attempt to become change agents. While PBL is often about empowering the students in terms of autonomy, self-direction and choice in relation to education, we need perhaps to strengthen our focus on the world outside the educational institutions.

The papers in different ways help us in this regard. For example, the paper by Ravn and Jensen explicitly discuss 'PBL and the postmodern condition - Knowledge Production in University Education'. Based in Lyotard they discuss how University Education is

increasingly marked by marketization and preoccupied with efficiency and performativity over ‘truth’ and human emancipation. In some ways, the authors argue, PBL is part of this trend, where there is an increased interest in ‘usable and applied mode 2 knowledge’ and industry-university partnerships. PBL can clearly be understood as part of this line of thinking, however, the authors equally argue that the original thoughts on PBL, as reiterated by Bøgelund & Kolmos (2013), were oriented towards emancipation and social change, and PBL could or should focus on the ideal of students as change agents in a globalised world. The paper by Aničić & Mekovec (2016) show the positive aspects of bringing practice and theory closer together. For example, in their paper “Introducing Problem-Based Learning to Undergraduate IT Service Management Course: Student Satisfaction and Work Performance” Aničić & Mekovec (2016) write: *“The presented results can be considered a new aspect of the development and amendment of the information and communication technology (ICT) skills requested by future employers. In this regard, the demand for innovation in the education of future ICT professionals arises from the need for experts equipped with both IT and business skills.”* In the citation we see the positive aspects of bringing closer together real-world practice and skills with higher education with PBL as the pedagogical means to facilitate this meeting.

The paper by Lund & Jensen (2016) also touches upon the intersections between education and industry. In their paper “Dealing with Insecurity in Problem Oriented Learning Approaches” they report from an experiment where students use the it-tool KUBUS to scaffold their formulation of a research problem. The KUBUS tool is an industry tool developed to manage innovation processes in companies, and the authors analyse both the challenges and potentials of adopting the tool as part of students’ inquiry processes. In a similar vein Swaal & Otting (2016) analyse students understanding of and how they apply the well-known Seven Step Procedure. While the method is well-known the authors argue that: *“So far, little is known about how students rate the performance and importance of the different steps, the amount of time they spend on each step and the perceived quality of execution of the procedure.”*

This issue further contains four cases. PBL cases are not research papers but a shorter communication whose purpose is to disseminate experiences with PBL to inspire others who are already doing PBL or someone considering to do so but in need for ideas on how to do it in practice. The four cases are from all over the world and in different types of disciplines: One of the cases by McLoone, Lawlor & Meehan (2016) focuses on developing a PBL model in the first year of a Bachelor of Electronic Engineering in Ireland. Demikhova (2016) presents and analyses a case of implementing innovative information and communication technologies and PBL in medical education in Ukraine. The third case by Wood (2016) focuses on how PBL is used in educating archaeology students to enhance their employability skills in the UK. Finally a fourth case, by Arantes do Amaral, Petroni & Hess (2016) is from Brazil and focuses on fundraising strategies developed by MBA students in a PBL course.

The four cases are from different parts of the world and stem from different disciplines and faculties. However, the ideas and experiences presented in these four cases are also inspirational to people from other faculties and disciplines. The cases show that PBL is a set of pedagogical ideas and principles that can be applied within a range of different context. While the concrete implementations may vary, and there might be disciplinary differences in terms of how the PBL principles are adopted, we do believe that the PBL cases offer opportunities for inspiration across disciplinary boundaries. We would encourage readers to submit cases about PBL to share experiences and learn from each other about how to work with PBL in practice.

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