

Chapter 9

The Challenge of Building Communities About PBL Supervision: From Networks of Practice to Communities of Practice

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ABSTRACT

Problem-based learning (PBL) is central to the degree programmes at Aalborg University (AAU), but if one is a member of the teaching faculty with a degree from another institution, it is unlikely that one is familiar with PBL. In this chapter, the authors describe the development of an ongoing experiences with PBL Exchange, a web-based platform whose goal is to facilitate the transfer and development of knowledge and skills within PBL project supervision by means of a web-based crowdsourcing approach that makes it easy to exchange and discuss one's specific problems and experience with project supervision. The goal was to build a new community of practice from a network of practice, but this has turned out to be difficult. The authors discuss and analyze their experiences and suggest technical and social developments that may be able to facilitate the creation of community of practice.

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1. INTRODUCTION

A major challenge in providing high-quality learning at universities is that of developing professional competence for the teaching staff involved. It is essential to be able to capture and maintain the expertise that evolves through teaching practice.

At Aalborg University, problem-based learning (PBL) is central to all degree programmes offered. However, the teaching competences needed in the PBL model differ from those used at many other institutions of higher education and are not widely known. This means that members of the teaching staff that have their background from other academic institutions are likely not to have any experience with supervising PBL projects, that each comprise 15 ECTS or more. While there are now formal programmes at Aalborg University that are intended to provide qualifications in supervising PBL projects, there appears to be a chasm between the formal competence development carried out and the informal communities of practice that also exist. Moreover, these informal communities can be highly divergent in their interpretations of PBL and the informal, collective understanding of what constitutes good PBL practice does not get written down.

Crowdsourcing is now advocated as a powerful strategy for mobilizing creative knowledge development and problem solving (Howe, 2006), and as an approach to peer learning (Stonebraker and Zhang, 2015). So far there has been little research on how to apply this approach in the area of competence development. Albors et al. (2008) have built a taxonomy of networking platforms that considers the interplay of social and informational connectivity based on work by Bernard (2006). In this taxonomy, crowdsourced platforms appear at the high end of social connectivity and at a medium-high level with regard to the potential for creating knowledge as compared to merely sharing information. On one hand, crowdsourcing has a stronger emphasis on knowledge creation than that of other social networking platforms. On the other hand, crowdsourcing has a stronger emphasis on the social negotiation aspect as compared to other social platforms for creating knowledge. Moreover, knowledge occurs most effectively among people with a common frame of reference and a common field of practices (Contu, A. and Willmott, H., 2003). This combination makes crowdsourcing interesting in the context of informal competence development within a knowledge-oriented social community set-up in an academic professional context.

In this paper we describe the development of, and ongoing experiences with PBL Exchange, a web-based platform whose goal is to facilitate the transfer and development of knowledge and skills within the field of PBL project supervision by means of a web-based crowdsourcing approach that makes it easy to exchange and discuss one's specific problems and experience with project supervision.

Following the social knowledge creation argument, PBL Exchange has been conceived as a *closed expert crowdsourcing* forum in the sense of (Stonebraker and Zhang, 2016), where practitioners guide colleagues within the same field of reference towards solving problems that arise in their daily practice: the users of the system are project supervisors at Aalborg University.

The development of PBL Exchange is an example of *design-based research (DBR)*; this is an approach that has attracted both researchers and various layman groups, mostly within the area of technological interventions to improve learning outcomes (Anderson and Shattuck 2012). DBR is driven by a double aim, which is that of conducting an intervention addressing a problem in practice together with an empirical examination that can further theoretical conceptualization in the domain and inform future actions. DBR commits to mixed methods that are used widely in educational research (McKenney and Reeves 2012) and leans onto learning design principles (Gravemeijer and Cobb, 2006) with the purpose of furthering both research and practice. The framework adopted is often one of practitioner-researcher

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