

228 Learning by design in Living Labs: understanding the complexities

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Research Domains

Learning, teaching and assessment (LTA)

Abstract

Living Labs in higher education have the intention to synergize learning and innovation through integration of education, research and innovation. However, the literature does not seem to provide an evidence-base for student learning in these complex settings, balancing professional, pedagogical and accountability discourses. An educational-design study aims to help develop this knowledge-base: three social learning settings in Labs in the Social Professions Faculty of a single university are analyzed and redesigned in collaborations with teachers, students, and professional partners. Afterward, their experiences are collected through semi-structured interviews. A grounded approach of the analysis of the interviews and fieldnotes will contribute to the understanding of the complexities of balancing professional, pedagogical and accountability discourses in learning and its scaffolding in Labs. The conceptual framework and initial methodological findings will be presented and discussed. It is expected that preliminary findings in the first co-design project and interviews will also be shared.

Full paper

Introduction

Living Labs in higher education aim to offer integration of education, research and professional practice and intend to synergize learning and innovation (Schipper, Vos & Wallner, 2022). Yet, the literature shows a divide between innovation focused labs and student focused labs (Griffioen & van Heijningen, accepted). Labs with innovation focus do hardly include students (Kalinauskaite, Brankaert, Lu, Bekker, Brombacher & Vos, 2021; Westerlund, Leminen & Habib, 2018). Similarly, student Labs are framed as *sec* pedagogical devices, with transferable innovation positioned as a mere by-product of education (Admiraal et al., 2019; McLaughlan & Lodge, 2019). Hence, international literature does not seem to provide an evidence-base for student learning in complex, innovative Lab settings.

Labs aim to offer students a learning environment characterized by realistic, complex task situations, multidisciplinary and social interaction (Admiraal, 2019). Thus, students' interactions in Labs are less strongly framed than they are for example in the traditional lecture; in a Lab the pedagogical relationships are more open to initiative and require more autonomy (Barnett & Coate, p. 34). This requires adequate scaffolding of students' intended learning processes (de Kleijn, 2021; Griffioen & van Heijningen, accepted). Following Markauskaite and Goodyear's (2017, p. 210) triple perspective to professional education, student learning in Labs is underpinned by three discourses: a professional discourse in the interaction with practice, a pedagogical discourse for learning structures and an accountability discourse for testing. These discourses interact, but so far it remains unclear how to position the professional discourse to ensure transferable innovation and learning of students (Griffioen & van Heijningen, accepted). Within this overarching frame basic human needs (Dweck, 2017; Ryan & Deci, 2017) and Labs as social learning spaces (Wenger-Trayner and Wenger-Trayner, 2020) are chosen as framework from which to design and develop the scaffolding practices.

An understanding of the complexities of balancing professional, pedagogical and accountability discourses in learning and its scaffolding in Labs is needed to (possibly) allow Labs to fulfill their promises as rich learning environments.

Research design

This issue is addressed in a two-year educational-design study in which three social learning settings in living labs in the Social Professions Faculty of a single university are analyzed and iteratively redesigned. Undergraduate students follow part of their formal education in these Labs.

The three co-design projects each follow an iterative redesign process, where needed adapted to their particular context and setup (McKenney, Nieveen, & Van den Akker, 2006). Labs will be chosen to cover the scope of Labs at the Social Professions Faculty in terms of complexity, multidisciplinary and social interaction. Semi-structured interviews with students, teachers and professionals results in a needs-analysis for the learning goals of the Labs, as well in a first insight in the experienced working mechanisms of scaffolding practices in labs. Next, the professional, pedagogical and assessment practices, and scaffolding practices are co-designed and co-developed by teachers, students, professional partners and the researcher. After implementation, an evaluation session will take place per Lab, and experiences will be shared in a cross-Lab evaluation session.

Measurement instruments

The experiences of students, teachers and professionals partaking in each of three Labs are collected after implementation through semi-structured interviews on the professional, pedagogical and assessment practices and the students' learning and their needs in learning. Depending on the size of the teacher teams and their classes, in Lab 3 to 6 teachers, 6 to 12 students and 3 to 6 six professional partners will be interviewed.

Fieldnotes of and memo's on the co-design and co-development sessions will complement the interview data.

Analysis

A grounded approach is used in coding the interviews (Charmaz, 2014). For data reduction, all quotes on professional practices, pedagogical practices, assessment practices, learning, and needs are selected in all interviews and mapped onto these categories. Secondly, focused coding is used to analyze emergent relations between professional, pedagogical, and assessment practices, student learning and needs. Design principles for balanced professional, pedagogical and assessment practices in Labs and effective scaffolding practices will be inferred from comparisons of the data of the three labs.

Findings

At SRHE 2023 the conceptual framework and methodological findings will be presented and discussed. Both the interviews and the first co-design project indicate that the students' experiences do not match the conceptual ideal of balanced professional, pedagogical, and assessment discourses, see Figure 1. It is expected that preliminary content findings in the first of three co-design projects and the first interviews can also be shared and discussed.

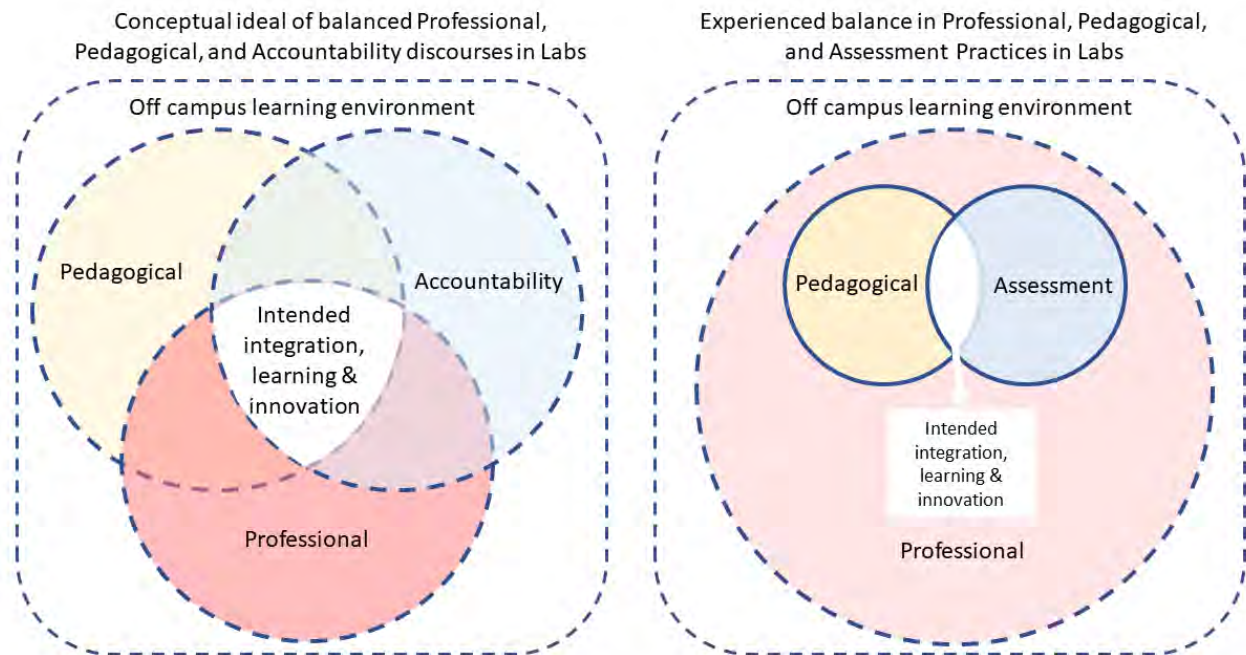


Figure 1. Visualization of the conceptual ideal of the intended balance of Professional, Pedagogical and Accountability discourses and learning in Labs and preliminary students' experienced balance of Professional, Pedagogical, and Assessment Practices in Labs

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