Facilitating teachers' professional learning with and about digital technologies by fostering professional learning communities

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Teachers' professional development and learning have long been receptive to the advances in information and communications technologies (ICT) and digital technologies. Digital resources, digital learning platforms, games, or artificial intelligence, are just a few of the recent transformations that influence teacher practice and learning. Teachers interact with digital technologies in the classroom, in their work with students, and in their ongoing professional learning.

New designs for professional development and learning with and about digital technologies could build on effective theories and practices of teacher professional learning. Teacher collaboration in professional learning communities is one such practice that could support and empower teachers in their professional learning with and about ICT.

This presentation will focus on a professional development and learning program we designed (https://mathematic.lu/plc) and implemented with more than 150 teachers. The primary goal of the program was to support and guide teachers in using a digital learning platform for mathematics in their classroom practice. The secondary goal was to facilitate the emergence of professional learning communities within the schools, so that teachers could support each other in the long term while using the digital learning platform in their classroom practice. The format of the program was hybrid, in that it was delivered online, but each session required teachers to meet and work together at their school.

In discussing the findings of this study, I will touch on the benefits and barriers that teachers perceived as part of this professional development and learning program and the perceived processes of developing professional learning communities. Building on known theories and practices of teacher learning can facilitate the emergence of new professional learning models that could support teachers in exploring and using digital technologies in practice.

At the end of the talk, I will briefly discuss how new technologies, such as eye tracking and overlaid, multiple-point-of-view videos of participants performing collaborative tasks, provide new methods for studying collaboration.

References:

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Bio:

Catalina Lomos is a researcher at the Luxembourg Institute of Socio-Economic Research (LISER). She holds a Ph.D. in Education from the University of Groningen in the Netherlands.

Her research has focused on school-based PLCs that impact student achievement and those that support teachers' use of ICT in their practice or the implementation of digital learning platforms in mathematics education. She now asks: Will PLCs help teachers discover new ways to support student learning in a digital future? Will emerging technologies challenge or empower teacher collaboration and lifelong learning?

Her professional goal is to collaborate with teachers, teacher educators, and curriculum developers to understand how teachers adapt their personal epistemologies to embrace new paradigms. This knowledge will enable the design of effective professional development programs for teachers and the in-depth study of shifts in practice and knowledge.

She has collaborated with the Luxembourg Ministry of Education on numerous educational projects. For the 2023-2024 academic year, she was a Fulbright Visiting Scholar at the Embodied Design Research Laboratory (EDRL) at UC Berkeley, USA.

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