Pädagogische Hochschule HEIDELBERG
University of Education

MI-Ko Forschungskolloquium des Instituts für Mathematik und Informatik an der Pädagogischen Hochschule Heidelberg

Einladung

zum Forschungskolloquium im Wintersemester 2024/25

Asynchronous Teaching Simulations to Enhance Mathematically Responsive Teaching:

The Interplay of Experimentation, Indirect Feedback, and Authenticity

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While the importance of responsiveness in teaching is well known, implementing it presents challenges for many mathematics teachers due to the improvisational demands it entails. Traditional synchronous professional development (PD) has aimed to address this need, but its dependence on peers and facilitators can limit scalability. My talk introduces asynchronous digital simulations as an innovative PD context that allows teachers to develop and refine mathematically responsive teaching skills at their own pace. These simulations provide opportunities for teachers to experiment with instructional moves, receive reflective feedback without prescribing specific actions, and engage in repeated practice to strengthen their improvisational responsiveness. I will outline current trends in digital teaching simulations and illustrate how three key design principles—experimentation, indirect feedback, and authenticity—combine to create an immersive, educative experience for mathematics teachers. These principles are illustrated through findings from research I led at the University of Michigan, showing how mathematics teachers improve their noticing and decision-making in relation to students' productive mathematical thinking.

Donnerstag, 14. November 2024, 12:30 – 14:00 Uhr

Pädagogische Hochschule Heidelberg, INF 561, Raum A206