Western
Interdisciplinary Centre for Research in Curriculum as a Social Practice

Monday, June 6th 2022 4:00pm – 5:00pm EST

Computational Thinking in primary mathematics classrooms – from a teacher's perspective

Presenter: Siri Krogh Nordby, PhD Candidate
(Oslo Metropolitan University, Norway)

In recent years, there has been rising interest in bringing Computational Thinking (CT) into school curricula, with the intention of fostering student's 21st century skills. Norway has followed suit, introducing CT in the curriculum from autumn 2020, with teaching goals pinpointed to subjects such as mathematics. This presentation is about my PhD project including four Norwegian primary mathematics teachers (1-26 years of teaching experience) from three different schools (grade 1 – 5) in Eastern Norway, and how they understand and implement CT in their teaching practices. Keeping in mind that CT is new to teachers in Norway, with limited systematic upskilling initiatives, I first used a case study with an ethnographic approach to investigate teachers' initial understandings and implementation. After two semesters, I realized that they struggle with the implementation, and continued my project including an educational design with two of the teachers, from two different schools, over eight more months. During these months we (me and the teacher) collaborated in designing teaching lessons in iterative cycles (teacher one: 7 cycles, teacher two: 4 cycles). The aim of the presentation is to discuss issues found as far as I have come in my PhD project and highlight the implementation of CT from primary mathematics teacher's perspective.

About the Presenter:

Siri is a former secondary teacher (9 years) and is currently on leave from her position as a teacher educator at Oslo Metropolitan University. She is a second year PhD student in the Faculty of Education and International Studies at Oslo Metropolitan University. The aim of Siri's thesis is to investigate CT in primary mathematics from a teacher perspective. Siri's research, which takes shape as a longitudinal study, considers the perspectives of four teachers that she followed over various periods of time. Siri uses case studies and educational design research, together with interviews, audio recordings of planning sessions, and video recordings of observations in classrooms to support her data collection process. The ICRC looks forward to considering Siri's research findings and their wider implications for students and educators.