



Challenges, Opportunities, and Directions of Science Teacher Education in the 21st Century Digital World

Professor Soonhye Park

Department of STEM Education

North Carolina State University, North Carolina (NC State)

Date: March 7, 2023 (Tuesday)
Time: 17:00 - 18:15
Venue: Room 305, Runme Shaw Building, HKU
/ Online via Zoom (Hybrid Mode)



Registration:

https://hkuems1.hku.hk/hkuems/ec_regform.aspx?guest=Y&ueid=86484

(Meeting ID and password will be sent to registrants by email)



Chair: Dr Kennedy Chan

Abstract:

Since the onset of the 21st Century, enormous scientific challenges such as a global pandemic, climate change, world hunger, fast changing science and technology, and pervasive mistrust in science have greatly influenced science education both explicitly and implicitly. In particular, those critical challenges require science educators to redefine knowledge, skills, competency, and abilities our students need to develop in schools in order to become scientifically literate citizens who can confront a myriad of socioscientific issues that are often complex and unpredictable. This need for rethinking students' science learning necessitates revamping science teacher education to better prepare science teachers to produce scientifically literate citizens. Considering it, in the talk, Dr. Park will discuss challenges and opportunities of science education in the 21st century digital age, and provide new directions for science teacher education. Finally, she will introduce her current research and engagement projects (e.g., modeling-based instruction, computational thinking, epistemic orientation) that utilize innovative approaches to science teacher education and professional development.

About the speaker:



Soonhye Park is Professor in the STEM Education Department at NC State University. Park's research interests focus on teacher Pedagogical Content Knowledge (PCK), teacher change, and teacher professional development. She has led various federal, state, and internally-funded grant projects on teacher professional development that explicitly seek effective ways to advance teachers' knowledge, skills, and practices that promote students' engagement in core science practices, critical thinking skills, and science achievement. Her currently active grant projects include: (1) Using Real-Time Multichannel Self-Regulated Learning Data to Enhance Student Learning and Teachers' Decision-Making with MetaDash that aims to improve science teachers' decision-making based on their analyses of students' real-time, multi-channel, self-regulated learning data with MetaDash and (2) SIMIRS: Supporting the

Implementation of Scientific Modeling Instruction in High School Chemistry and Biology in Rural that aims to support rural science teachers' implementation of reform-oriented modeling instruction and examine their developmental trajectories in PCK and teaching practices. She has a number of impactful publications in top-tier journals in the field of science education and teacher education. Her research has been recognized by several awards including PCK Summit invitee (2012, 2016), NARST Outstanding Paper Award (2014), David P. Butts Award for Contributions to Science Education (2014), and University Faculty Scholar (2017-2018).

~ All are welcome ~

For enquiries, please contact the Office of Research, Faculty of Education at hkchow@hku.hk