Making Our Purposes Clear: Practical Epistemologies in Science Education

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242 Education Building

Light Lunch Provided

Epistemology concerns what knowledge is and how we get it (learn). In this talk, I introduce an action-oriented understanding of epistemology, learning, and learning progression. It is argued that learning progressions can be understood and studied as the transformation of one activity into another, each with its own purpose. To support progression, teachers need to make those purposes clear through joint action with students. However, since learning outcomes cannot be predicted unequivocally from teaching theory or teaching principles, formative assessment is needed to examine how planned classroom activities actually devolve into changed action of students in ways that are conducive to the purposes. In the talk, I will discuss my work with the development of an action-oriented methodology of practical epistemology analysis as an approach to undertake such formative assessment.

Per-Olof Wickman is professor and director of science education at the Department of Mathematics and Science Education, Stockholm University, Sweden. His research interests focus on understanding teaching and learning processes in science education in ways that can inform teachers in transaction with students. His interest encompasses both the cognitive and value dimensions of the content taught and learnt as scientific literacy in its broadest sense. He has more than one hundred publications of which more than fifty are in peer-refereed journals. He has published books internationally and nationally, and has written chapters for handbooks within the field of science education. He sits on the editorial boards of the journals Science Education and Cultural Studies of Science Education.