

Student Voice & STEM Learning

In the context of a federally funded [research and development project](#), the UW Institute for Science and Math Education is collaborating with Sammamish High School, a comprehensive high school serving a socially and economically diverse community in suburban Seattle, to transform that school's curriculum into a problem-based, STEM-rich experience for all students. STEM opens up opportunities to explore the relevance of subject matter to students, contemporary disciplines, and the workplace. To privilege what is, in fact, relevant to students, we must first unveil it. In this session, we are sharing work related to our efforts to collaborate with teachers and students to elicit student voice to inform curriculum design.

Research on the importance of learners' relationships to subject matter is unambiguous: it can have a profound influence on learner outcomes. Whether we call it learner disposition, background knowledge, prior experience, or identity, how learners relate to subjects they wish to learn is paramount in shaping successful outcomes. Our conceptualization of student voice and design of practices to elicit voice build on these findings. We are designing processes within the school intended to put student voice at the heart of instruction.

We have designed a process through which we (a) collaborate with practitioners to discuss upcoming units of instruction, their impressions of student successes and struggles related to the unit, and to generate topics to explore with focus-group students; (b) recruit a group of students to discuss these questions, following which we (c) debrief with teachers focusing on specific students tasks, instructional practices, and assessments that can be infused with findings.

Initial indications are that students are generous and sincere about their education, they seek learning opportunities that are relevant to the subject matter, and they are eager to share their views. We have also found the teachers to be well intentioned and, while uncertain how to do this work, eager to identify and build on what students care about. In this session, we will share specifics of the process we have designed, focusing on illustrative cases. We will briefly share strategies we've developed and engage participants in a discussion of their approaches, questions, and concerns related to student voice and STEM.

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