SP - (16015) - FUTURE, TECHNOLOGY AND AGENCY: STUDENTS' EXPERIENCES FROM A MODULE ON FUTURES THINKING AND QUANTUM COMPUTING

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Short Abstract

While sustainability, responsible scientific practice and value-based agency hinge on a connection with a personal and collective future, the concept of 'future' is prone to remaining implicit and vague. Connecting agency to futures thinking (based on the field of *futures studies*), we report on a study that attempts to elaborate the concept of future in school science. Phenomenographic analysis was used on interview data to see what changes upper-secondary school students (n=21) saw in their futures perceptions and agentic orientations after attending a course module which adapted futures thinking skills in the context of quantum computing and technological approaches to global problems. The results show students perceiving the future and technological changes as more positive but also more unpredictable, seeing their agentic possibilities as clearer and more promising (especially by identifying with their peers and generation), questioning deterministic views, and thinking more creatively about technological and non-technological solutions to global problems. Our results provide further validation for a future-oriented approach to science education, highlighting essential synergies between futures thinking skills, agency, and authentic sociotechnical issues in developing science education for the current age.