Currently, there is little consensus on how science education researchers conceptualize representational competence. Even though understanding what it means to be representationally competent is fundamental for supporting learners in developing this critical set of skills, there is little agreement about capturing and characterizing these skills. This lack of agreement might be partly due to the lack of specificity and explanatory power of the current models that conceptualize representational competence. Within this talk, I will describe our refined model of representational competence – the Interconnected Model of Representational Competence Skills. This model has been elucidated as part of our efforts to characterize chemistry students’ representational competence in the context of representations of molecular structure. This presentation will share our efforts, including findings related to student competence across skills and the interconnected nature of some of the representational competence skills.

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