

Abstract Submitted  
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**Using the iCARE for monitoring cognitive conflicts and anxiety in PBI classes**<sup>1</sup> YEOUNSOO KIM, LEI BAO, The Department of Physics, The Ohio State University — Cognitive conflicts can cause some students to have high levels of anxiety during their learning, which, when not properly addressed, can have negative effects to students' motivations and performance. Based on the large amount of literatures on studies of cognitive conflicts and student anxiety, we developed an easy-to-use instrument, the In-class Conflict and Anxiety Recognition Evaluation (iCARE), for monitoring the status of students' cognitive conflicts and anxiety in the context of Physics by Inquiry (PbI) classes. In this poster, we present examples to show the types of information that can be obtained with iCARE in a PBI class and discuss how instructors can use such an instrument in instruction.

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