The Evaluation of active-learning programs with “Interactive Lecture Demonstrations” in high school physics in Japan

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Interactive Lecture Demonstrations (ILDs) are programs developed by Sokoloff and Thornton[1]. They developed those programs to promote undergraduate students' understanding of physics concepts. We have developed active-learning programs with ILDs for high school students in Japan, and examined them to improve the curriculum of high school physics, where students are often taught subjects in traditional method. From 2010 to 2012, we introduced ILDs on dynamics in several high schools. The results showed that ILDs develop high school students' understandings to some extent, and that instructor’s inquiry has an important role for the participation of students [2]. In this talk, we will show our modified ILD programs and discuss the results of the examination of the students’ activities..