

ABSTRACT

The Effect of 7E Model Inquiry-Based Labs on Student Achievement in Advanced Placement Physics: An Action Researcher Study

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This dissertation involved an action research study of the effects of 7E Model inquiry labs in Advanced Placement (AP) Physics on students' performance on AP exam inquiry lab-based questions. The study, which is described in detail, employed a one-group, pretest-posttest design to answer the research question regarding the effects of the inquiry-based AP Physics labs on students' achievement on AP exam inquiry lab questions as measured by unit assessments. Data collection and analysis strategies are also discussed. Sources of data included a pretest, lab reports, and a posttest. The data was analyzed using descriptive statistics, specifically a t-test comparison of pretest and posttest results. Reflection upon the data and formation of an action plan after its analysis were the last steps in the action research process. Through this process, it was demonstrated that the 7E Model inquiry labs did have a positive effect on student achievement on AP inquiry lab questions.