

Reality Physics Teaching (RPT) for Enhancing Student Favorable Expectations

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Abstract

Previous studies showed that student expectations about physics—about the structure of physics knowledge, the connection between physics and the real world, how to approach problem solving, and how to learn physics—play a critical role in a student's ability to learn physics. Students who come into a course with more favorable expectations are more likely to achieve high learning gains. Therefore in this study, we attempted to develop a learning unit called Reality Physics Teaching (RPT) for enhancing student favorable expectations in physics and learning physics. We found that after conducting the classes using the RPT, the students have more favorable expectations in physics and learning physics as identified by using *Maryland Physics Expectations (MPEX)* survey. The results are different in both conceptual understanding and expectation changes compared with those of traditional classes where notable decreases were found.

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