

Smartphone-based undergraduate research projects in an introductory mechanics course

Content

At the University of Göttingen we implemented undergraduate research projects into a first-year mechanics course for physics majors and student teachers that aimed to foster self-directed, crosslinking, inquiry-based learning. Small groups of students each conducted one of six open experimental tasks using smartphone sensors to allow for flexible, first-hand data collection outside university laboratories. The program was evaluated based on questionnaires and students' learning products (posters and responses to reflection questions). Initial analysis shows that students enjoyed the open, creative group work and the use of smartphones, but also found the project challenging due to the high degree of openness.

Contribution categories - primary focus

University

Contribution categories - type

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