

Video recording of a multipurpose demonstration experiment

Thursday, September 7, 2023 4:00 PM (20 minutes)

I will present and comment on a short video recording of a didactic experiment (a magnetic swing) produced at the height of the pandemic crisis in the spring of 2020 [1]. I will explain the circumstances that led to the decision to record the experiment and the many uses of the video produced. We were all faced with unforeseen circumstances and had to suddenly adapt our teaching methods and procedures to a completely new reality. This is an example of a small creative solution to improve distance learning when it is not possible to conduct experiments in the real physical world with students present in the school.

Fig. 1. A screenshot from the recorded video of the experiment with magnetic swing.

It is not possible to develop experimental skills or get a feel for possible experimental accuracy without performing physical experiments yourself, e.g., by just watching video clips of recorded experiments. On the other hand, it is possible to recreate a demonstration experiment without actually performing it by using a video clip instead of the real equipment. Sometimes it may even be better to use a recording projected on a large screen than to improvise with equipment that is not suitable for a demonstration in front of a large group of students, even if the demonstration takes place in a normal classroom.

The idea of making short video recordings of physics experiments was further developed. In the following years, the recording of a didactic video of a physics experiment became one of the obligations of the fourth-year students of educational physics at our faculty in the course Didactics of Physics. I will show an example of the students' recordings [2].

Contribution categories - primary focus

Contribution categories - type

Application (shared experience, activity suggestions)

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