

Writing as an integral part of experimental physics

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The paper reports results from a project designed to investigate the difficulties that sixty-four undergraduate students experienced while learning to write lab reports after having performed lab experiments. The participants had the opportunity to design and perform experiments in their own design (without being given guidelines). At the same time, they were giving feedback in the form of written comments to peers. Peer review is seen as one of the processes of science. Sources of data included lab reports, weekly reflective journals, interviews with the participants and peer-to-peer feedback. Results suggest that physics students experienced a variety of difficulties related to writing and that feedback enhanced the quality of lab reports throughout one semester. Yet, the use of exemplars helped the participants to internalize the expected quality and provide feedback focused on the assessment criteria. Recommendations are made about instruction and assessment criteria through which lab reports are assessed.

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