

Peer Assessment of Laboratory Skills

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#RSCEdu

Assessment of what?!

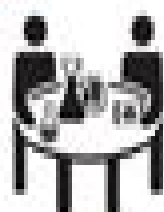
Laboratory skills! Students do lots of lab work at university but most of it is assessed afterwards, and by lab reports. We **rarely directly assess** laboratory skills.¹ We implemented our peer-assessment protocol with >150 1st years.

Ok, but there's no time! Never. Any. Time.

The model we use is **E-A-S-Y**:



Students watch **EXEMPLAR** materials such as video in advance of their lab class.



ASSESSMENT begins in the lab. Students video each other as they demonstrate the technique. Then they peer review.



Students **SUBMIT** their video for review by instructor to confirm competency is demonstrated.



YES! Students obtain their digital badge if their video demonstrates competency. A badge is a micro-certificate.²

Did someone say epistemology?

They didn't. But let's talk. **EXEMPLARS** have a really great basis in the education literature. They provide students with quality standards on which we can build self- and peer-assessment protocols.³

Giving students preparation materials in advance of the laboratory class has a good grounding in **COGNITIVE LOAD THEORY**. If there is one topic you should know about as a chemistry educator, this is it.⁴

And how often do we get our students to talk instead of write? This is an easy way to get some **GRACY** going on.⁵

What happens when you do this?

We examined students' perceptions of their knowledge, skills, and experience of practical techniques before and after, as well as testing some aspect of each technique, before and after. We saw **significant improvement**. We've also trialled it in school classrooms.



Knowledge, experience, & skills-o-meter

Tell me everything you know!

E-A-S-Y! See our 2017 CER⁶ paper:

DOI: [10.1039/C7RP00003K](https://doi.org/10.1039/C7RP00003K) or at www.rsc.org/cerp.

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Pbds Competency Assessment Study Guide

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