

University of Turku

CASE STUDY

University of Turku Expands Access with Labster Virtual Labs



Five lecturers in the Turku Institute of Biomedicine in Finland adopted Labster's simulations as a resource for remote lab work. The staff and faculty found that they wanted to continue using virtual simulations because they helped students be more prepared for wet labs and offered an interactive learning alternative to reading and lectures.

Challenge

Adjunct Professor Leena Strauss and staff were desperate in the beginning of the pandemic to find ways of interacting with students that were not Zoom or Teams, but something where she could actually activate students to do lab work. After the pandemic began to recede, they found that they had limited resources to conduct wet labs, so they continued their use of Labster in-person.



Labster simulations used:

- Nuclear Chemistry: Understand the processes happening in the atomic nucleus
- Western Blot Transfer
- ELISA

Solution

Leena adopted Labster for her biomedical classroom where they've used the simulations to prep students for the wet labs. Since it was not possible to buy enough equipment to give every student access, they used Labster to supplement hands-on learning for the students.

Results

Students found that virtual labs have been very useful. When they enter the wet labs, they feel much more prepared than ever before. They don't fear making mistakes as much because they've already had exposure to the whole experiment through Labster.

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With really expensive experiments, usually the group can afford to do only one reaction. In this case, Labster is used so that everybody can try it.”

—Professor Leena Strauss, University of Turku

Teaching a new generation

We use Labster before the lab work to stimulate their thinking and to train them. Instructors saw a generation who played a lot with computers, and so they are learning in a different way than reading books.

Labster bridges the gap between lecture and practical lab

During the real labs, the teacher can't just say, 'Hey, what was the theory behind this thing?' But in Labster you can do that. Because the time frame is not critical. Nothing goes wrong. You don't explode the lab. In the Labster simulations, you are moving from both practice to theory. Combining these two things is very useful.

Varying student needs

It is important that we acknowledge different types of learners and give them the opportunity to learn in different ways. I don't believe in just reading manuals. How about if we didn't read the manuals and then we just went to the lab and made a little mess, but they can actually try them first?



Student feedback

Labster has been very useful and students like it. So with them, it's easier to go to the real lab when they have seen these simulations. Students say they find old ways very boring and not so useful. But Labster replacing the real demonstration has been very useful.

Helpful with active learning

Often there is one student who does it and everyone is watching. It's the basics of constructive learning to activate, though, not just follow what someone else is doing. Because of Labster, everybody can kind of try it.

