

Join the weblab revolution

CHEMICAL engineers at British, German, and US universities have been united in their experimental efforts, without leaving their homeland comforts, thanks to the introduction of "weblabs" at three leading institutions.

The Universities of Cambridge and Leipzig, alongside the Massachusetts Institute of Technology, first worked together on remotely-operated experiments – or weblabs – in July 2005. The strengths, weaknesses and developments in weblab processes are the subject of a paper in the 2007 volume of *Education for Chemical Engineers*. Co-author Markus Kraft is in no doubt as to the value of the tool: "Hands-on laboratory experiments have enormous educational value, but traditional teaching laboratories are expensive and have complex logistics regarding space, staff, scheduling and safety. Experiments that are operated over the internet offer many advantages: the ability to share experiments between the different institutions drastically changes the economics of providing laboratory experiments and, potentially, a huge number of experiments could be available for use, including experiments on expensive equipment, rare materials and in remote locations."

Experimental equipment used in weblabs is designed to be intrinsically safe and to require little maintenance so that no-one is required to be in the laboratory at the time of the experiment. The future for weblabs looks bright – a platform to schedule and store experimental data has been built by MIT, whilst Cambridge has established a partnership with industry (Siemens Automation and Drives). Imperial College London and the University of Birmingham have also become involved with weblab projects.

Weblabs also offer opportunities to develop transferable skills – a hot topic on last month's journals page – such as teamwork, communication, and presentation.

Weblabs in chemical engineering education was published in Volume 2 of *Education for Chemical Engineers* (DOI: 10.1205/ece06018) and was written by A Selmer¹, M Kraft², R Moros² and K Colton³ (1. University of Cambridge, UK, 2. University of Leipzig, Germany, and 3. Massachusetts Institute of Technology, US.)

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