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Enhancing Learning Through Virtual Lab Experiences: A Research Facility Case Study

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Abstract

Research facilities are integral to universities' aims to advance knowledge, train research personnel and students, and attract business opportunities. However, when it comes to teaching and enhancing learning, research facilities are currently underutilised. This presentation will showcase the creation of a mass spectrometry research facility virtual tour with multiple embedded interactive elements using the digital platform ThingLink. The aim of this virtual resource is to enhance students' professional literacy, allowing students who would not have the opportunity to become familiar with expensive instrumentation in a live setting, to do so in a virtual environment. In this way, students' understanding of the underlying science is deepened and their employability prospects are enhanced, while at the same time, facilities are used for teaching purposes beyond traditional research projects, thus reaching a wider student audience (UG, PGT and PGR students). Critical insights/lessons learned from development of the resource will be shared and recommendations will be suggested for widespread use of this technology in other facilities.

Keywords: active learning; digital; professional literacy