

UBC Teaching and Learning Enhancement Fund

Final Report – maximum 2 pages

Project Name: ChemTube: Instructional Videos to improve student learning in the CHEM3XX analytical laboratory (13-095)

Date: April 13 2015

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Year of Funding: 2013-2014

Summary of Work Accomplished

With financial support from TLEF, a chemistry co-op student was hired to assist in writing storyboards and scripts for the series of videos. After this, a local videographer with scientific wherewithal was hired to shoot and produce the videos. One video was produced for each experiment in the 3rd year analytical chemistry laboratories. Draft versions of the videos were released to students in January 2015, and the final versions have been received. The videos demonstrate instrument *principles* rather than procedures for use and approach the topic on a component by component basis. Some project aspects (continuing assessment of success, embedding video into existing course resources) are still on-going. While the project extended significantly beyond its expected timeline, it also came in significantly under budget (details below).

Evaluation of Project's Success (Include evidence of rigorous evaluation.)

Evaluation of this project's success is being undertaken in a multi-pronged approach. Data on student understanding of instrument concepts before exposure to these videos was collected September to November 2014. Equivalent data, but for the case after student exposure to the videos, was collected this term and will be collected again next year. While data reduction is on-going, certainly the student feedback thus far has been extremely positive. Indeed, students now say the laboratory experience helps them understand the lecture content rather than vice-versa as was previously the case! Course TAs have also noted improvement in student understanding. We await the results of this term's course teaching evaluations as students were asked to directly comment on the videos. Planning continues for how best to evaluate the effect of these new resources on the performance of students in the follow-along 4th year laboratory course. Lastly, the videos have not yet been shared with other institutions (this will happen in May 2015), but already many UBC colleagues have asked for copies.
