

AN INVESTIGATION OF THE PLACE OF INQUIRY-BASED LEARNING IN CHEMISTRY LABORATORIES IN SENIOR SECONDARY SCHOOL AND FIRST-YEAR UNIVERSITY

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ABSTRACT

One of the most important aspects of science education is understanding how evidence, data, and models explain the natural world. Laboratory work strengthens this understanding by linking content knowledge to science practices and promoting student inquiry. Inquiry within chemistry education is generally taught through laboratory experiments, ranging from traditional, guided inquiry and open inquiry experiments (Furtak et al., 2012). This poster will look at the preliminary results from 152 undergraduate Curtin University students who completed year 11 chemistry. A questionnaire derived from five Likert scales (Chatterjee et al., 2009; Cheung, 2011; Fraser et al., 1993) was used to understand students' past experiences with inquiry types and if changes should be made to the level taught at year 11. The results showed strong support for guided inquiry laboratories compared to open and procedural laboratories. While guided inquiry was favoured, students acknowledged that conducting procedural experiments better develops practical skills. Additionally, participants had to match the most frequent type of inquiry to a scenario with students struggling to decide between open and guided inquiry; students more uniformly identified procedural laboratories.

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