

# PRIOR LEARNING FACTORS IMPACTING SUCCESS IN FIRST YEAR GENERAL CHEMISTRY

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Many students find the first semester of tertiary chemistry very challenging. This may be due to having weak backgrounds in chemistry and mathematics, lack of sufficient study time, poor prior teaching or lack of interest in chemistry. Academic staff have implemented various measures to support student engagement and achievement including small group tutorials, a variety of online resources, in-class polling, PASS sessions and weekly online quizzes. In this study we have used a diagnostic survey at the transition to university to investigate students' prior knowledge in mathematics and chemistry and to establish demographic factors. The results from this survey have been compared with student engagement in various resources and their final scores in the unit in an effort to determine factors that could be used to identify students at risk of failure, and to evaluate the utility of the additional resources offered to students. Gender effects have also been explored.

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