LEARNING ORGANIC CHEMISTRY REMOTELY: METHODS TO REDUCE THE DISTANCE BETWEEN EXPERTS AND STUDENTS

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Australia has a high distance chemistry education enrolment due to its disparate population (Dalgarno, Bishop, & Bedgood, 2012). While distance education provides extensive opportunities for students to develop theoretical knowledge, there are challenges in teaching organic chemistry remotely due to its emphasis on laboratory-based skills and assessments (Neeland 2007; Rhodes 2010).

Here we report on a two-stage research project to explore how distance chemistry education is conducted and perceived: 1) a review of learning theory and methods used for contemporary distance chemistry education; 2) a survey of high school science teachers across school archetypes regarding available resources, and teacher perspectives of successful approaches in science education. Informed by the results of our research, we will develop instructional resources to improve distance teaching of practical chemistry skills. Our initial findings suggest that distance teaching methods employed, are highly dependent on the classroom or home environment and resources available. In this talk, we will share results from both stages of our research project. We will then map out our plans for resource development to enhance distance learning in practical chemistry for school students, undergraduates and citizens. This research is being completed in partnership with the Breaking Good citizen science project (Motion, 2020).

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