EMENTORING TO SUPPORT AND ENABLE RESEARCH INTEGRATED LEARNING USING AUTHENTIC ASSESSMENT IN A THIRD YEAR UNDERGRADUATE SCIENCE COURSE IN PATHOLOGY AT A RESEARCH INTENSIVE UNIVERSITY

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Abstract

Development of research thinking skills and capabilities is challenging for undergraduate science students. Research scientists often learn in a laboratory-based community of practice and from peer mentoring. The Research Impact Symposium assessment task was developed in parallel with an eMentoring system in the School of Medical Sciences to address the issue of developing research practice for undergraduate science students within community. Students were required to work in research teams of 4-5 members to address a topical research challenge in the same manner as we professional research scientists would in real world research laboratory environments. Mentors were Early Career Research (ECR) scientists within the School of Medical Sciences with 1 to 5 years postdoctoral research laboratory based work experience. Recruitment was voluntary, with mentors demonstrating an interest in developing their roles and skills in supporting undergraduate science students in developing their research practice. Mentor experience varied from significant to minimal involvement in university teaching. Mentors were introduced to students via short videos with a brief biographical sketch posted to Moodle the UNSW learning management system. Our role as mentor leads in this process was to not only support students in clarifying the assessment task expectations but to also develop and support the mentors. Our own collaboration also developed, with Polly an established academic / course convenor and Cochran the lead mentor working together with Jones a student advisor from The Learning Centre UNSW. As mentors were not co-located in the same laboratory work environments, we decided to use Slack https://slack.com/. Slack, a cloud based team collaboration tool worked especially well with student research teams. Each student research team had access to a private channel to organise meetings, share research and assignment materials and liaise with the team mentor. Mentors also had access to a dedicated private channel to allow guidance from mentor leads. This research community of practice which integrates eMentoring not only supports research integrated learning of research practice for undergraduate science students but also allows students to work together to develop their professional skills in teamwork, communication and critical thinking.

Keywords: e-Mentoring, Research Integrated Learning, Teamwork, Community of Practice, Communication, Science, Pathology.