## Enhancing the first-year experiences of undergraduate students enrolled in large classes

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BIOL105 (Human Biology) is a 2-unit, integrated, interdisciplinary course offered by the School of Biomedical Sciences (The University of Queensland) to first-year students. Physiology forms a major component of the content. Student enrolments are high (n =315 in semester one, combined Pharmacy and Human Movement Studies cohort) to very high (n = 860 in the semester two, Science cohort). BIOL1015 provides a foundation of disciplinary knowledge, conceptual frameworks, practical skills and socio-affective orientations. As a keystone course, student experiences can strongly influence engagement in learning, consequent course selection and career paths linked to global knowledge economies. This paper describes the substantial re-culturing of BIOL1015 in 2005, framed around an explicit learning model and the building of a learning community. It presents findings from a comprehensive evaluation of the effectiveness of the course in enhancing their first-year experience.

The course has been renewed with substantive, benchmarked improvements to learning and assessment experiences for students. Two innovative assessment tasks were designed and implemented. The first task was to write a Personal Response (weighted as 10%) around contemporary biological issues. The aim was to develop students' abilities to communicate to various audiences. This task comprised a two-page written assignment of their response to recent audio interviews from Radio National's "Science Show" presented on a CD. As a complementary assessment task (weighted as 5%) students wrote a review of one other students' Personal response, guided by explicit criteria. The second task was an e-Conference which enabled students to actively and collaboratively contribute to learning about contemporary issues of biology. Students worked in collaborative pairs which formed larger clusters of 16 pairs. Each cluster addressed one broad interdisciplinary topic related to the course content. Students worked on-line within their cluster to develop: (a) a brief paper, weighted 9% (b) a related PowerPoint presentation, 4% and (c) presented one question and one answer to members of their cluster, 2%. Submissions were assessed by on-line tutors using pre-specified criteria. Students were supported in these tasks by explicit teaching and use of exemplars during lectorials (combined lecture-tutorial format).

Participants in the evaluation included 246 students (80% of the total combined cohort), four academic staff and one research assistant. The course was evaluated in terms of the: impact of teaching, effectiveness of course design, levels of students support, course delivery and student perceptions. Data were gathered from the following sources: print-based individual questionnaires; field notes; focus group interviews; analysis of student work using detailed criteria sheets, and analysis of assessment results. Interview and open-ended questionnaire items were analysed using qualitative methodologies (open, axial and selective coding). Survey data were analysed using non-parametric quantitative methodologies. Key themes emerging from the data were grouped into three categories. These were: teaching and management; learning pathways; and learning collaboratively. As expected, students expressed both positive and negative views about the e-Conference as a teaching and learning activity. Some students had difficulties articulating their learning pathways explicitly. An unexpected finding was the importance of social dynamics in affecting students' learning. Findings indicate that the adopted model of learning could be extended to include a social dimension. The findings also support the importance of collaboration, dialogue and reflection as key learning constructs from previous research.