out independent fieldwork on an animal species of their choice documenting the subject's behavioural repertoire and subsequently creating and testing hypotheses about the behaviours observed. The activity has been designed based on Ramsden's (1992) principles of a student-centred approach to learning which aims to create a learning context which fosters a 'deep-approach' to learning. A deep approach is characterised by an intention to understand, focussing on the concepts applicable to solving problems (hypothesis testing), relating previous knowledge to new knowledge and has an internal or intrinsic motivational emphasis. Deep approaches empower students to take an active and independent role in their own learning experiences. Preliminary results of student feedback via a questionnaire and a series of open ended written responses will be assessed examining the success of the activity in terms engendering independence and internal motivation, encouraging problem solving skills and thus fostering a deep approach to student learning.

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Teaching biochemistry differently: collaborative peer group activities in large classes

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Abstract: Traditional university teaching of undergraduate biochemistry is generally delivered in lectures and laboratory classes. Online teaching environments have recently enabled different approaches to content delivery and assessment. By developing an online repository of content (lecture notes, exercises, formative and summative assessment), the academic can now construct new teaching and learning methodologies and experiences for the student, since formal lecture time can be reduced and replaced by other learning activities that promote active student involvement. We have designed and implemented a new teaching and learning initiative for second year Biochemistry involving collaborative learning in Peer Groups (Dobos, Grinpukel, Rumble and McNaught 1999; Dobos 2001). In this program, students are engaged in structured discussions, problem solving and concept mapping exercises, and seminar preparation, in a collaborative group setting. Additional sharing of ideas occurs through student-generated materials, Web Board online asynchronous discussions and group seminars. The Peer Groups are facilitated and managed by the students. The Peer Group program enables the students to actively engage in a discourse on biochemical concepts and adopt different approaches to learning. Furthermore, through participation and practice, the students are improving their communication and teamwork skills necessary in the workforce. In this paper we report on further developments of the program in response to student feedback, and its implementation in large classes. Our findings indicate that the group activities need to be carefully designed and structured, and closely aligned to the other learning activities of the curriculum, in order to provide maximum benefit to the students. The timetabling of classes, institutional infrastructure and student resources are critical to the efficacy of the program and the learning experience of the student.

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Integrating activities, e-environment and objective driven curriculum design in the learning environment

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Abstract: An objective driven curriculum design with experiential learning activities, and e-learning are integrated into the learning environment, resulting in increased student satisfaction, enjoyment, and assessment results. Curriculum objectives, used as the basis for the curriculum design, are assigned to module topics and assessment items, becoming the drivers for key concepts highlighted in lecture and tutorial activities. Sparse lecture notes are supplemented by summarized outcomes at the end of the week. As content is replaced with experiential activities, students develop an application of knowledge in the learning experience, with direction to additional resources for details. The knowledge gained from the directed readings and experiential activities form student knowledge for implementing their practical assignments. The use of an e-learning environment complements the process with online discussions, student portfolio management, and assignment submission and assessment. Some students feel they haven't learnt much with real life examples, activities and experiences as the tools for the learning approach. Others see the big picture and find the experience highly rewarding. Additional key elements for the curriculum design include a team-based teaching approach with tutor input to teaching activities, and tutor and student reflection used to improve the curriculum design and delivery, on a weekly and semester basis.