

## **For sustained commitment and enthusiasm to improving student engagement and achievement in marine biology through multi-dimensional teaching and response to feedback**

### **Context and contribution:**

*"It was always a pleasure attending class because you knew so much about each organism and you seemed so interested that it made me interested. You had the most helpful teaching style I have ever received. This was a hard subject that expected a lot out of me, but I learned more in marine invertebrates than I did in any other subject. The information I learned has opened my eyes to new world of creatures and I have a better understanding of what I am seeing because of you. Thank you for all your help and your enthusiasm for marine invertebrates." (Anonymous Thank you letter from Invertebrate Biology 2008).*

With a teaching program underpinned by student and peer comments collected over time, and incorporating lessons learned from them, as well as from models of exemplary teaching within the field, I have been able to create a teaching program with a continuous spiral of improvement. What began to stand out in observing exemplary mentor teachers as a higher education student and communicating with students while acting as a tutor in marine biology subjects, was that active learning supported by a multi-sensory, multi-styled program, presented with genuine enthusiasm for the field, inspired greater student understanding and encouraged their respect and commitment to the high standards of scientific thinking. It has been my experience that the principle teaching strategies that engage learners and insure greater competency as well as motivation include:

- x Demonstration of enthusiasm for subject content and for learning, itself.
- x Development of an active and accessible communication style with students.
- x Creation of a multi-sensory, multi-style approach to teaching to reach the diversity of the students.
- x Innovative assessment that allows students to apply knowledge to discipline-specific employability skills.
- x Consistently productive and supportive feedback.
- x Openness and receptivity to student and peer feedback.

Using the strategies above, my teaching has been highly successful as evidenced by both formal and informal peer and student feedback, since 2005. Through my teaching I have found that a program that incorporates these strategies is best created in response and receptivity to student feedback, insuring that my teaching strategies are relevant to their needs, supportive of their greater achievement and, deepening of their commitment to high standards.

Recognizing the importance of student feedback in this regard was a professional lesson I learned at JCU, while tutoring in marine biology subjects from 2001 to 2004, during which time I was able to establish close communications with students and I became acutely aware of their educational needs and concerns. They had questions of relevance regarding the curriculum, felt that the practicals were not linked to the lectures, that the assessment did little to prepare them for postgraduate programs and/or the workplace, that they did not get appropriate feedback so that they might make improvements and that there was little regard for these concerns. I inherited the class mid semester in 2005, with the vantage point of understanding and respecting the students' needs, and having an established rapport for communication to further that process. Having access to student feedback helped me shape strategic teaching that benefited the students tremendously. For example: a comparison of SFS (*Student Feedback on Subjects*) results between 2004 and 2006 on a scale from 1-5 show that overall satisfaction in the quality of student learning experience, interest level generated by the subject, quality of information provided about assessment requirements, quality of comments on assessed work and staff interest in assisting students to learn increased on average by 21.6% approaching scale level 5 (outstanding). I had such success accepting and building upon student feedback that I continued to do so and it has become one of my main tools for curriculum re-design, enhancing my teaching and achieving better outcomes in student learning.

### **Criterion I: Approaches to the support of learning and teaching that influence, motivate and inspire students to learn:**

The teaching strategies which I have developed reflect the principles for which I have received recognition from my peers and my students: enthusiasm, accessibility, attention to diversity and multi-approach activities, innovative assessment, conscientious feedback and the continued interaction and communication with my students. In so doing I have been able to meet students' needs, raise their enthusiasm and improve their achievement.

#### ***Enthusiasm for marine biology and for learning itself:***

*"Lindsay knows more than anyone how to motivate the students. She is so enthusiastic that you cannot remain*

Many students frequently comment on my

During my practicals, instead of having limited options and set outcomes, students are encouraged to learn on their own terms, and study specimens they want to examine, adding depth to the subject and facilitating application of knowledge. The model of active learning that I utilize requires students to take responsibility for their own learning. It is a model that fosters a cooperative rather than competitive learning environment. It also stimulates and nurtures intellectual curiosity in students. *"Lindsay changes the (normally quite clinical and formal) practical environment with the use of videos, extra reading and a huge array of posters, photos, printouts, slides and specimens, both live and preserved. The prac rooms are transformed into a colourful and stimulating environment where students are encouraged to interact with the materials, all of which piques students' interest and encourages curiosity." (Peer review: Tutor). "A very different practical style than I have ever seen before. It forced the student to take initiative about his/her own learning instead of being told what to learn. The subject forced me to mature as an academic student." (SFT Marine Invertebrate Biology 2006).*

***Innovative assessment that allows students' to apply knowledge to discipline-specific employability skills:***

*"I have always enjoyed planning assessment pieces with Lindsay, her approach to assessment is refreshingly*

