

# **Applying six principles of effective curriculum design in a first year essay feedback / assessment cycle**

Dr Gerry Rayner, School of Biological Sciences, Monash University  
Ms Colleen Cridland, Learning Skills Unit, Library, Monash University

*Concerns about the standards of student writing in first year Biology and the quality of assessment and feedback led to a review of practice and the implementation of a draft and final essay sequence. Criteria for assessment were redeveloped and workshops reflecting stages in the essay writing process were designed and conducted. This new framework included marker training and alignment, and one-on-one marker/student consultations. Collectively, these components contributed to improvements in student writing as measured by student feedback, marker observations and an analysis of student results for specific writing criteria. An important outcome was the development of an assessment/feedback cycle that incorporates in its design six principles of effective first year experience. The cycle is achieved through a continuing dialogue between the Unit Co-ordinator, Learning Skills and Library staff, markers and teachers and most importantly, the students.*

## **Introduction**

A comprehensive body of research into academic success has consistently reiterated the range of complex and dynamic issues faced by students in transition to higher education (Upcraft, Gardner & Barefoot, 2005; Nelson, Humphreys, & Harper, 2006). Kift (2009) grouped these issues into six generic pedagogies, defined as first year curriculum principles that support student engagement, success and retention. These principles address issues associated with: student transition to university and engagement with learning; the design of learning tasks and the nature and timing of their assessment; the diversity of the student body; and evaluation and monitoring of both student progress and the learning programs.

This paper reports on the implementation and outcomes of a project aimed at enhancing student writing skills and the quality of the feedback students received on their written work in a large enrolment first year biology unit at Monash University. A course design structure that contributes to successful transition provides scaffolded learning tasks that enhance student engagement and development of learning (Nelson et al., 2006) including proficiency in written communication. An innovative student essay writing and assessment process was implemented in first year Biology in Semester 1, 2008 following a diagnostic assessment of student written communication skills in Semester 2, 2007. The diagnostic assessment measured students' writing performance in the introduction of a laboratory report against a set of criteria that measured the coherency, style, sentence and paragraph structure, and task completion against four levels of achievement. Overall, one in six students was identified as requiring explicit instruction to improve their writing communication skills to a suitable level for tertiary study.

Writing in general, and perhaps essay writing in particular, is an intellectually challenging process, and the vast majority of 1st year students experience considerable difficulty with structuring, researching, and writing essays. Nevertheless, writing is an essential element of the methodology of scholarship and research in higher education and the development or refinement of student writing skills is an often-stated learning objective of a vast number of undergraduate subjects. Furthermore, employers consistently rank written communication skills as highly as, or more highly than, quantitative or technical skills (Gray, Emerson, & MacKay, 2005).

In spite of the value placed on the development of written communication skills in courses, many academics consider the general level of undergraduate writing to be inadequate. This is not a new perception, given that more than two decades ago, Nightingale (1986), was equivocal about whether the standard of students' writing was declining or improving. The standard of student writing has received considerable press recently, focusing on a perceived lack of what are considered to be fundamental, but essential, skills in sentence structure and punctuation. As a constructivist skill, writing is related to many other facets of cognitive development, including reading and critical thinking. The finger has been pointed at middle to upper secondary school education, with researchers citing factors ranging from the setting of mechanistic and trivial writing tasks (Moore 1994) to a lack of teacher skills development (Cranney, Jones, Starfield, Morris, Martire, Newell, & Wong, 2008) to explain why many first year students struggle with writing. Such a simplistic view, fails to consider a diverse student population entering university from a range of educational pathways.

An increasing diversity of pathways for students entering undergraduate programs creates first year cohorts that challenge past held notions of academic readiness. International students and Australian students with English as a second language as well as those with English as a first language access undergraduate science courses through foundation and bridging courses and via the Victorian Certificate of Education (VCE), with ESL and mainstream English. Additionally, many undergraduates begin first year science subjects without pre-requisites (Koenders, 2005). Finally, students enrolled in science courses often have a very broad range of tertiary entrance scores. Thus, the heterogeneity of first year students does not provide a standard platform of academic literacy on which to construct discipline knowledge. The redeveloped introductory writing assessment task for first year Biology scaffolded student learning of expected academic writing skills, and developed student understanding of the assessment criteria through a series of workshops.

In addition to the intrinsic problems students have with writing, assessment of writing often fails to provide feedback to enable students to develop writing skills. Effective feedback and assessment can be defined as:

- reliable and valid: feedback should reflect the assessment objectives and provide a reliable measure of student performance;
- effective: markers should have the skills, knowledge and experience to provide feedback that will engage with the skills, knowledge and experience of the student; and,
- accessible: the timing and delivery of feedback should provide an opportunity for students to use it in the process of learning.

High quality, consistent feedback on written work is essential to enhance student writing skills. Past assessment processes at university have not always given the practice of assessment the scrutiny it deserves (Barrett 1999). In spite of the large amounts of money spent on assessment, Hounsell, Hounsell, Litjens and McCune (2005) expressed serious concerns about perceived declines in effective guidance and feedback on assessed work. The assessment process should provide a valuable opportunity for students to acquire discipline-specific modes of communication and develop the academic literacies required for their course of study.

## Methods

The 2007 diagnostic of student writing and review of assessment practice in first year biology highlighted a number of shortcomings in the assessment design and process, including:

- students received varying amounts of feedback – even from the same marker;
- ESL students were assessed in a different way - typically more harshly - and penalised more often and to a greater degree regarding writing syntax and punctuation; and
- assessment was based largely upon content rather than expression of understanding.

Traditionally, students submitted their biology essay just after mid-semester without an opportunity to utilize feedback, or refine skills in referencing. Such a process was based on the notion that student writing formed part of an overall process of *assessment* rather than one of *learning*. This practice is counterintuitive to the practice of referral and revision that is the norm in academic publishing (Nightingale, 1986).

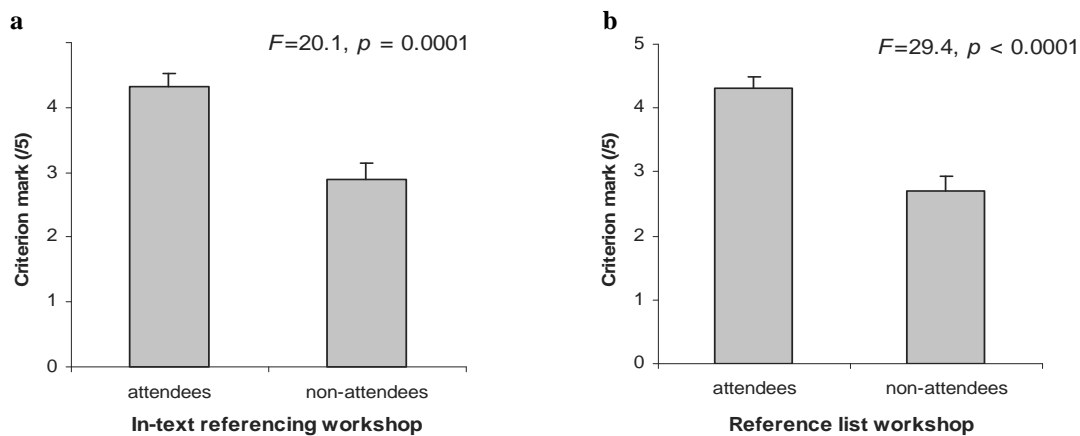
Based on a review of the writing and assessment practices arising from the diagnostic, the essay was restructured to a draft-final process. Students signed up for an essay topic of their choice. The opportunity to choose a topic is important, as students are likely to have greater interest and thus motivation to do well (Rust, 2002). At the end of week four, students submitted (electronically) a full-length draft essay, which was annotated, corrected and returned within two weeks, after which students revised and redeveloped their essay in response to feedback. Students also had the opportunity to meet individually with their marker for topic- and draft-specific feedback. The essay writing process was supported by academic skills workshops developed and presented by the Learning Skills Unit. Students resubmitted the essay for final assessment at the start of week eight. This process required the redevelopment of a draft essay rubric which, together with clearly written essay writing guidelines, was made available to students prior to submission of their draft essay.

The redeveloped approach was based on a social constructivist theory of learning (Rust, O'Donovan, & Price, 2005), where learning outcomes are achieved via active construction of shared knowledge and learning experiences within the discipline context. Marker moderation workshops were also conducted. These provided a forum for discussion of marking criteria and benchmarks of written performance, and improved marker alignment and the consistency, validity and accuracy of feedback to students.

## Results

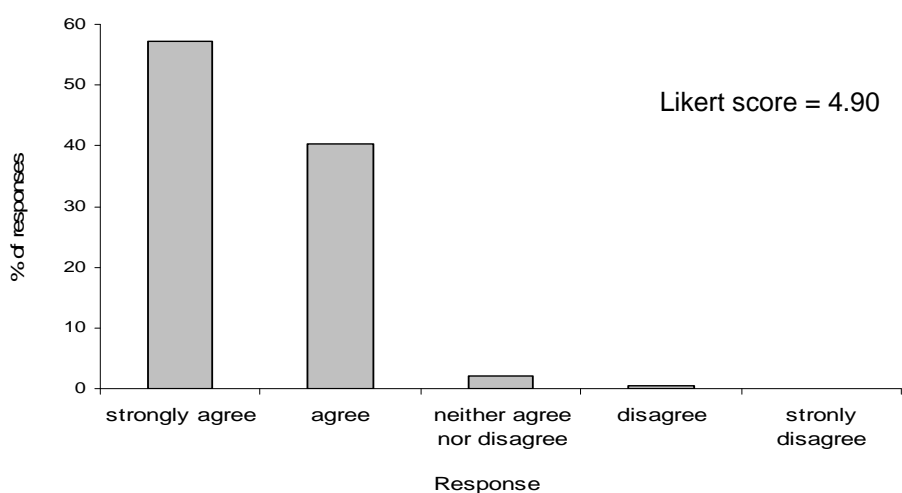
Anecdotally, markers considered that there was, on average, a 20% improvement in the quality of the essay from the draft to the final essay. Although relatively poorly attended, individual feedback sessions were valued by markers and students as a means to align expectations of content and standards, and explain specific comments and annotations.

Attendance at Learning Skills workshops had a positive effect on student marks for specific essay criteria. For example, students who attended the workshop on in-text referencing and reference list construction obtained significantly higher marks than non-attendees for the assessment criteria relating to these components (Figure 1).



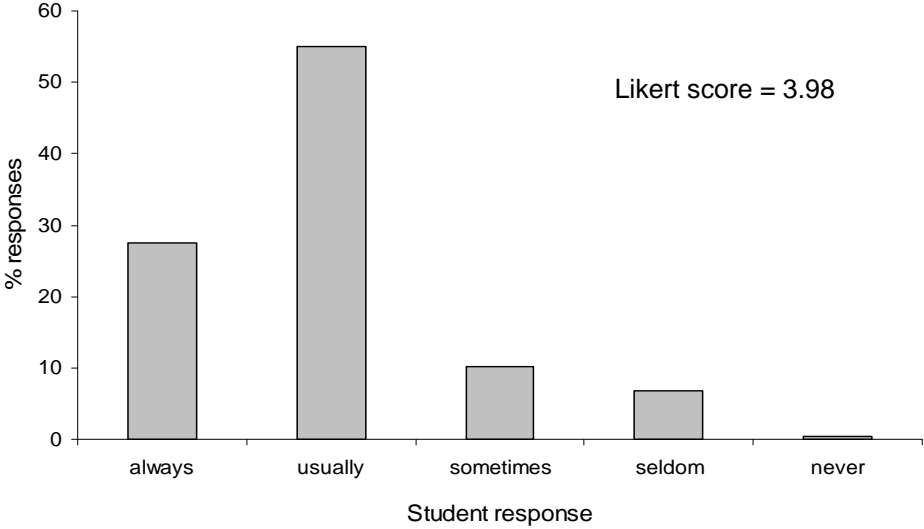
**Figure 1. Criterion marks (mean  $\pm$  standard error) for (a) in-text referencing and (b) reference list structure, of 15 randomly-selected workshop attendees and non-attendees.**

Students responded very favourably to the restructured essay writing procedure. For example, over 97% of students agreed or strongly agreed with the statement 'I think the essay submission process (draft essay followed by feedback and annotations followed by final essay submission) should help me to improve my writing skills' (Figure 2).



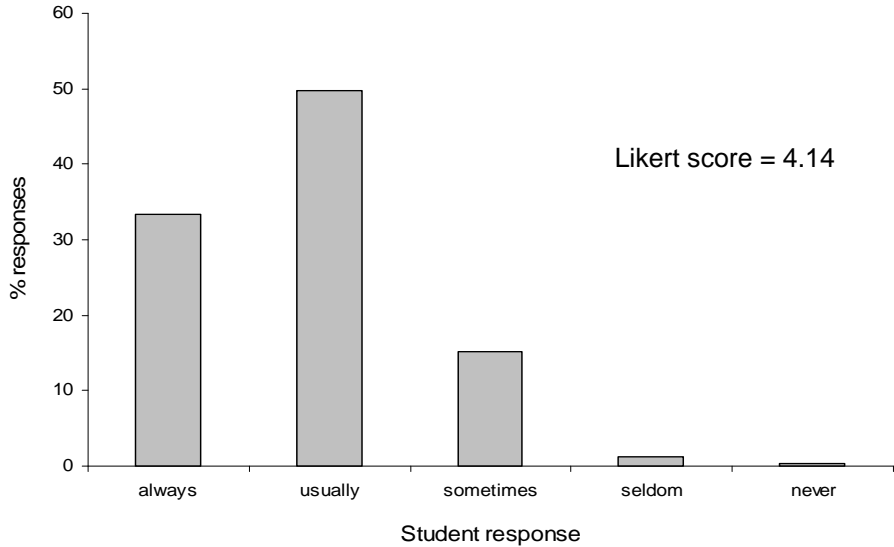
**Figure 2. Student responses to the statement 'I think the submission process (draft essay followed by feedback and annotations followed by final essay submission) should help me to improve my writing skills' (n= 189).**

Almost 83% of students considered that the character of feedback, in terms of quality and quantity, on their draft essay would help to enhance their writing skills (Figure 3).



**Figure 3. Student responses to the statement ‘The feedback on my draft essay will help me to improve my writing skills’ (n= 189).**

More than 83% of students who responded to the survey considered that the feedback they received was written clearly and was easy to understand (Figure 4).



**Figure 4. Student responses to the statement ‘The feedback I received was clearly written and easy to understand’ (n= 189).**

### Specific student comments included:

“It’s a good idea to have a draft because some of the questions were quite tricky and it was easy to go down the wrong track answering the question, so this gives us a chance to make sure we are doing what is required.”

“Submitting the draft essay is very helpful. It provided me with guidance as well as motivating me to start the essay weeks before the final due date.”

“It was good to receive the draft essay back early (before the suggested date). The feedback helped me understand where improvements were required.”

“I think that it is very important to have the opportunity to submit a draft essay and to receive feedback before producing a final copy as it is not always easy to know exactly what to focus on in some of the broader topics. The feedback given usually gives some direction as to whether the topic has been covered sufficiently or not. It is good to be some added guidance because as a first year student you don’t really know how things should be done and to what standard.”

“The feedback that I got on my essay was very helpful since I knew clearly what areas in my essay that I can work on before I submit my final essay.”

### Discussion

On a number of levels, the redevelopment of the first year writing task adheres to and applies the six principles identified by Kift (2009). Submission of the draft essay early in semester, supported by specific workshops, engages students in their learning and smooths their transition to University. The early provision of valid and reliable feedback on their written work scaffolds this learning by providing benchmarks for writing standards and conventions of structure, and integration of source materials. The improvement in the overall writing quality from draft to final essay is consistent with the outcomes of Covic and Jones (2008), who applied a similar approach to an upper year level psychology essay.

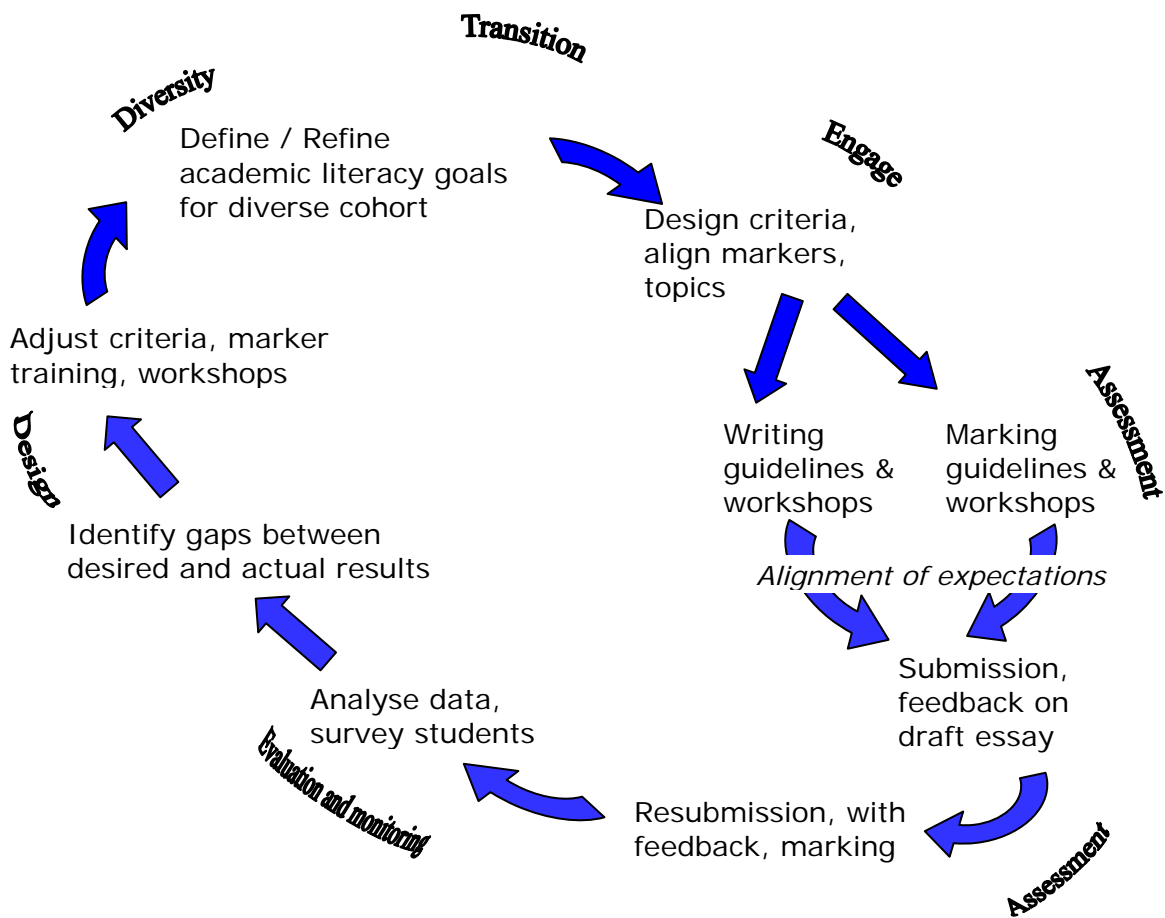
Given the diversity of the first year student cohort, it is not surprising that students valued the structured approach to their writing, not only in terms of demonstrating discipline knowledge, but also in developing an understanding of the conventions and expectations of writing within the discipline. Current approaches and principles of teaching first-year student cohorts with diverse backgrounds and educational experiences identify the need for a scaffolded approach to skill development in student transition to university study (Kift, 2002).

While the costs and logistics of assessing draft and final essays are substantial for large enrolment subjects such as first year biology, the benefits of enhanced student engagement and learning justify the expense. Furthermore, the value ascribed by markers and students to the one-on-one feedback sessions, in spite of the relatively low number of attendees, affirms the benefits of individual assistance. Learning support practitioners consider individual assistance to be most effective mode of instruction (Chanock, 1996), as the feedback provided in these sessions allows for recognition and resolution of student-specific problems and builds student confidence (Muldoon, 2005).

The demonstrable positive effect of learning skills workshops on student writing, for example in understanding and applying referencing conventions, shows the value of scaffolding writing tasks such as the first year essay. In addition, in the discipline of biology, these workshops provide a learning experience akin to the tutorial of other disciplines. In a survey

of first year students, a majority considered the tutorial to be the primary setting for their support and learning (Cameron, 2008).

A major outcome of this initiative was the development of a cycle of continuous evaluation and improvement of student writing assessment practices within first-year Biology. Initial questions regarding standards of student writing, and the ensuing review of assessment and feedback practices, generated an assessment/feedback cycle that incorporates in its design the six principles of effective first year experience. The cycle is achieved through a continuing dialogue between the Unit Co-ordinator, Learning Skills and Library staff, markers and teachers and most importantly, the students themselves (Figure 5).



**Figure 5. Development and deployment of an assessment and feedback cycle for first year student essay writing.**

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