



An integrated approach to scientific writing in first year biology

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Abstract: *In response to concerns about poor student performance in a large first year biology student cohort at La Trobe University, a small group of academic staff consisting of five first year biology lecturers, a first year practical coordinator, a faculty librarian and a faculty Academic Language and Learning lecturer voluntarily formed a 'community of practice' in order to implement curriculum reform across the four first year biology subjects. Traditionally, the skill of scientific writing was taught multiple times, using different methods, to the same cohort of students. The First Year Biology Learning and Teaching Group developed and implemented an integrated program of training, practice and assessment of writing skills. The program was supported by a new resource, which described a single set of instructions and expectations, consistent style and formatting requirements for reports. The skill of scientific writing was built throughout the year by repeating exercises and increasing complexity over time. This integrated program was introduced in 2008. The aim of this project was to determine the effect of the new program on the student perception of the teaching and learning of scientific writing, as well as on the performance of students on the scientific writing summative assessment tasks. The student perception was surveyed using both closed and open questions in a questionnaire. The average scientific report mark was compared between 2007 and 2008 for the student cohort as a whole and for subsets of the student body grouped by their university entrance scores. Even though the change of curriculum had little effect on the performance of students (no significant improvement in average mark was found), the student perception of the scientific writing curriculum improved markedly. An additional 27% of the class in 2008 (increasing the total to 73%) agreed with the statement 'I have learned to write scientifically' all or most of the time. Students commented that the new Scientific Writing Workshop was helpful; 'It gave me an insight as to how to write scientifically. What to do as well as what not to do', and the student response to the new First Year Biology Communication Skills Manual was extremely positive; 'It's awesome ... Wouldn't have made it through without it'. This paper will reflect on the effects of the curriculum reform including the surprising lack of improvement in student performance.*