

Using explicit teaching of the opinion editorial to improve communication skills of science students through writing

D.H. Hryciw, P. Poronnik and R.W. Moni, School of Biomedical Sciences, The University of Queensland, St Lucia, QLD 4072, Australia.

A key graduate attribute expected of science undergraduates is effective communication of science to the public. We recently developed a “media role” model to demonstrate how scientists, media, students and the public communicate science, resulting in the use of an Opinion Editorial (Op-Ed) as a novel assessment task in a third-year Physiology course. Here, we present evidence from the second-phase study (one group, pretest-posttest) that shows that explicit teaching of the Op-Ed improved the ability of science students to write for the public. The baseline writing ability of the students was assessed from a Communication Assignment (weighted 8%) in which they presented key data from a scientific paper to the public. The assignment was marked according to a criteria sheet and students provided with comprehensive feedback. Students were then explicitly instructed in the writing of an Op-Ed by a professional journalist and provided with exemplars. The students then presented data from another unrelated scientific paper in the Op-Ed format (weighted 12%). For the Communication Assignment, the average percentage was $74.7\% \pm 11.9$ ($n = 204$). Using the same criteria, the students achieved a significantly higher grade for their Op-Ed ($84.8\% \pm 9.1\%$; $p < 0.05$, $n = 218$). The two assignments from a student whose marks had improved in the Op-Ed were then distributed to 82 members of the public who were surveyed on their responses to both texts. The surveys showed that the respondents found the Op-Ed easier to understand. This study highlights that explicit teaching of an Op-Ed embedded in the context of learning science is a useful pedagogical strategy to improve communication skills of the students.