

Thyme room
2.00-2.05pm

One size might not fit all:
Lessons from the validation of a science communication module

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Though it is generally agreed that there is a need for varied communication training for science undergraduate students, it is not clear how teachers should go about developing materials to develop such skills. Drawing on literature in popular discourse (Calsamiglia & van Dijk, 2004; Myers, 1991) and media discourse (Bednarek, 2006), the authors developed materials for a new science communication module titled *Exploring Science Communication through Popular Science*, a compulsory module for all Science undergraduate students at NUS.

This module focuses on the shift in language between scientific reports and their corresponding popular news articles with an emphasis on disseminating scientific developments to non-specialist readers. Studies in the popular discourse identified the changes in vocabulary, syntax and texts in the popularisation process and established a range of explanatory strategies such as description, exemplification and metaphor that can be used to simplify scientific concepts and enhance the comprehensibility of scientific texts. Literature on media discourse (Bednarek, 2006) also shows that the use of evaluative language can intensify the value of the news and attract readers' attention to the news articles.

Though it has been shown that the use of these strategies and evaluative language makes science more interesting and accessible to non-specialists, it has never been explicitly taught or included as part of the science communication pedagogy. This new syllabus introduces a pedagogical intervention which has never been implemented in other science communication modules. Thus, the evaluation of the effectiveness of the syllabus is essential in the revision and fine-tuning of the syllabus. To evaluate the new syllabus, two research questions were used to guide the study.

1. To what extent does the use of explanatory strategies help make scientific concepts comprehensible by non-specialist readers?
2. To what extent does the use of evaluative language help make science news articles appealing/newsworthy to readers?

Selected articles written by students were evaluated by 60 non-specialist readers regarding the comprehensibility and the appeal of the articles. The results demonstrate that from the four explanatory strategies used, 'exemplification' was found to best contribute to the comprehensibility of the article.

Regarding the appeal of the article, the results showed that evaluative language in the area of 'possibility' best contributes to making science news articles more captivating to readers. The presentation will focus on the results and the discussion of what makes these strategies and areas of evaluation more successful than others. The results of the study can also be applied to other courses which aim to develop teaching materials for communicating technical content to a wider audience. Lastly, the pedagogical implications for validation of syllabuses in higher education are discussed.

Note

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Keywords

Syllabus validation, science communication, materials development and design

References

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