Identifying best practices for successful facilitation of science learning through general interest television programming

Results in Brief

Assessing scientists' communication skills

Scientists often struggle when explaining their work to the public. An EU-funded project developed an assessment tool to measure scientists' knowledge about science communication and their skill level.

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Although much effort has been invested in science communication training, little work has been done in developing a systematic evaluation of learning outcomes.
To fill this gap, EU-funded researchers on the SCIENCE ON TV project have developed and piloted learning goals and an instrument to measure whether they have been achieved. Guided by existing literature and interviews with active scientists to establish face validity and test/retest reliability, the instrument collected four types of data: background information, written communication skills, views about science communication, and knowledge about the context of science communication.
The tool was piloted in various contexts, in two languages, during semester-long courses, and one- and two-day interventions with undergraduate and graduate

science and engineering students, and with practicing scientists.The outcome of the project was an assessment tool that can be used as a baseline survey or as a pre-post evaluation of the learning outcomes of science communication and training programmes and courses.
The tool provided detailed analyses of scientists' written skills, as well as novel measurements such as a jargon index.
The analysis highlighted the importance of assessing actual performance, rather than declared knowledge.
Results have also led to areas for further research, such as better understanding the mismatch between what scientists say they know about science communication and what they actually know and the limited use of narrative and analogy.
The SCIENCE ON TV tool can be used to document changes in scientists' abilities to develop and convey their messages to the general public.
Other professionals such as journalists and media trainers in the science field will be able to communicate information more effectively with the general public.

Keywords

Science communication, training assessment, learning outcomes

Project Information

SCIENCE ON TV

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