

Abstract Title: Narrating Science in Public: The approach of an interdisciplinary project to create new reflective spaces

Authors: Natasha Constant, Antonia Liguori, Liz Roberts, Margarida Sardo
Presenters: Natasha Constant, Liz Roberts

Scientists and researchers are beginning to explore different ways of communicating their research to reach different audiences. Some of these innovative methods include narrative, citizen science, storying and visualisation of data (e.g. Dahlstrom 2014; Kwan-Liu 2013; Avraamidou & Osborne 2009). The Drought Risk and You (DRY) Project interweaves narrative and drought science to explore the impacts of drought in the UK. The project will collect people's experiences of participating in citizen science activities and drought-science-narrative workshops through narrative approaches: videos telling the story of a day at a workshop, water and citizen science diaries, participant observation, digital storytelling, visual narratives and post-card evaluation. With the added layer of narrative acting both as a science communication act and as a form of evaluation for the project, we will create an iterative science communication methodology over the course of the four-year project. Science communication has been evaluated using traditional social science methods (Friedman, 2008) however narrative is only recently being used in this way (Negrete & Lartigue, 2010; Klæbe 2013). Through the narrative approach we aim to provide a greater understanding of the extent to which storying experience of science participation contributes to knowledge gain and learning processes, and perceptions, behaviours and values related to water use and drought impacts. For example, does participation in citizen science foster a stewardship ethic for local environments? Overall the project will contribute to debates about the role of narrative for learning and evaluation in different science communication contexts and how different audiences respond to creative evaluative methodologies. We posit that the process of narrating 'Science in Public' creates a reflective space for critical thinking and self-evaluation where embedded behaviours may be challenged. This approach chimes with current research which questions science communication as a one-way or top-down process.

References

AVRAANIDOU, L. and OSBORNE, J. 2009. The Role of Narrative in Communicating Science. *International Journal of Science Education*, 31(12), 1683 — 1707

DAHLSTROM, M.F., 2014. Using narratives and storytelling to communicate science with nonexpert audiences. *Proceedings of the National Academy of Sciences*, 111(Supplement 4), pp. 13614-13620

FRIEDMAN, A. (Ed.), 2008. *Framework for Evaluating Impacts of Informal Science Education Projects* [On-line]. (Available at: http://inisci.org/resources/Eval_Framework.pdf)

KLAEBE, H.G., 2012. Disaster strikes, then what? Using evaluation in narrative driven (oral history & digital storytelling) community-based projects, *Proceedings of the 17th International Conference of Oral History The challenges of oral history in the 21st century: Diversity, Inequality and Identity Construction 2012*, International Oral History Association (IOHA), pp. 1-8.

KWAN-LIU MA, LIAO, I., FRAZIER, J., HAUSER, H. and KOSTIS, H.-., 2012. Scientific Storytelling Using Visualization. *Computer Graphics and Applications*, IEEE, 32(1), pp. 12-19

NEGRETE, A. AND LARTIGUE, C. 2010. The science of telling stories: Evaluating science communication via narratives (RIRC method). *Journal of Media and Communication Studies*, 2(4) pp. 98-100