



## **The science of science outreach: methods to maximise audience engagement**

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Effective public engagement relies on a clear understanding of public audiences; their existing knowledge base and their learning preferences. Scientific content that is effective in academic spheres is not necessarily popular in the public domain. This may be due to content (e.g. beginner level to advanced terminology); presentation style (graphical, text, multimedia); audience demographic (children to adults); and entertainment value. Over the last few years, there has been a major expansion in the quantity and quality of science outreach material. For scientists, the production of outreach material, in any form, is the first giant leap to disseminating their knowledge to broader audiences. However, there is also a need to evaluate the performance of outreach material, so that its content and delivery style can be tailored and maximised for the target audience. We examine the Google Analytics data for climate science outreach website Climatica over a 12 month period in 2015. The site publishes regular posts, which take the form of short written articles, graphics, videos, or teaching resources, on all aspects of climate science. The site is publicised via social media including Twitter and Facebook. In particular, we assess website performance, in terms of website visits and post engagement. These are examined in the context of: post topic, post style, social media engagement, and the timing of post publication/advertisement. The findings of this investigation are used to explore audience preferences and mechanisms for future post development to maximise the use of this web resource.