Science for Environment Policy

Internet tools for research dissemination: a climate-change case study

Modern technologies have provided new ways for communities to engage with climate change. This study investigated the role of Internet-based tools in disseminating the findings of a climate change research project in Canada and provides insights on how best to use the Internet to communicate the outcomes of scientific research.

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Climate change will affect communities and societies across the globe. Responding to this challenge requires coordination between nations, governments and sectors. On a smaller scale, it requires collaboration between researchers, local governments and communities — to share knowledge about climate change and the actions that can help mitigate it.

Online technologies offer new ways for this knowledge to be shared, and for the public to engage with climate-change discourse. This study explored how new communication tools can be used to share knowledge on climate change and to encourage mitigation action, using the Canadian research project Climate Change Challenge (MC³). This two-year research project studied community-level climate-change innovations in British Columbia. The project completed in June 2013 with the publication of an agenda for decision makers.

The project aimed to identify innovative municipal approaches to climate action and record best practices, but also to trial new methods for knowledge mobilisation and the dissemination of research outcomes. There was a heavy emphasis on electronic communication, which was used to circulate information to geographically dispersed communities in Canada and to build partnerships between scientists and practitioners. This information was also available on public websites.

Five key communication channels were used in the project: an online case-study library; e-Dialogues (real-time, text-based communication between researchers and practitioners, in which the public could provide comments and questions) and LiveChats (online instant-messaging forums); social media; peer-to-peer learning exchanges; and traditional dissemination (e.g. peer-reviewed journal articles). Aside from the last, each of the channels had a specific internet-based delivery method, all of which could be linked to optimise engagement. For example, social-media platforms such as Twitter were used to draw attention to e-Dialogues and LiveChats. The authors investigated how effectively these different communication tools were used to disseminate the project's outcomes by measuring engagement, using metrics such as website traffic and views of case studies, videos and Facebook posts.

Their evaluation revealed several important insights. In particular, they found that building online presence and awareness of a research project is key to engagement, in a similar way to 'brand building' for businesses.

The researchers also found differences between active and passive online audience engagement. Public audiences were more inclined to 'spectate' than actively engage in dialogue. This was evidenced by the fact that e-Dialogues, which consist of expert panel discussions, attracted more participants than LiveChats, which are driven by audience participation. The authors suggest the lack of public dialogue may be due to a preference to 'learn from the experts' rather than engage actively in discourse, but say this needs further research.

The type of media used was also found to influence engagement. For example, Facebook data showed that the format of the content presented influenced the number of people who viewed the post. While the mention of climate change did not impact on viewership, the insertion of an image did, which suggests that appealing visuals can attract audiences on the Facebook platform.

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Overall, the authors say researchers wishing to effectively communicate their findings should:

- establish a web presence;
- think about how the public likes to engage with their field of science;
- consider how practitioners (e.g. policymakers) use media;
- be aware that different media types attract different audiences.

The key message is that a project should not cease all activity when the research is completed. It is important to account for the continued and sustainable building of audiences for the outcomes of the research and explore creative methods of disseminating findings. The authors suggest this could also help to reduce the time lag between the publication of results and their use by decision makers.

While this study focused on climate change, its findings have implications beyond this particular issue and for communication of research outcomes generally.