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REVIEW

An alphabetized conceptual compendium for science communicators

Reviewed Book

Fahy, D. and Newsman, T. P. (Eds.). (2026).
Essential Concepts of Science Communication: an A–Z Guide.
Routledge

Reviewed by

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Abstract

This review evaluates the *Essential Concepts of Science Communication: an A–Z Guide* edited by Declan Fahy and Todd Newsman. The alphabetised guidebook provides a comprehensive introduction to key concepts in science communication, encompassing the gamut of key concepts, including fundamental notions, prevalent influential ideas, as well as concepts of science governance and application. The compendium covers topics such as the medialisation of science, deficit model thinking, anticipatory governance, and branding. This review discusses the book's impact as a resource that supports science communication by providing a ready reference of terms and thoughts currently driving the field.

Keywords

Risk communication; Science communication teaching; Bridging research, practice and teaching

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Core concepts of science communication are increasingly being applied to agendas as diverse as academic commitments to engage the public in research initiatives, industrial attempts to attract investors, and political pursuits to elevate scientific literacy and trust in science-based policies. While such concepts are bandied about boisterously in scholarly and professional circles, they lack rigorous universal recognition, definition, historical background, and illustrative examples of uses and users.

Essential Concepts of Science Communication fills this gap by collating essays on fifty essential concepts in contemporary science communication, conveniently alphabetised for newcomers to the field and seasoned professionals alike. The selection is edited by Declan Fahy and Todd Newsman, who are both researchers and university teachers in science communication. The guidebook is written primarily for graduate-level students in science communication with a secondary focus on students enrolled in various science courses that include modules on science communication and a tertiary focus on practising professional science communicators, including scientists. The alphabetical organisation of the essays allows readers to dip in and out of the book with convenience, adding to its reference value, while a list of related concepts at the end of each essay allows the diligent reader, and particularly newcomers to the field, to interconnect seemingly disparate concepts and enrich the gestalt of ideas that currently govern and propel the field. Moreover, most contributors use sub-headers generously, breaking complex concepts into digestible chunks that systematically cover a concept's definition, origin, and diverse applications.

The collection is an eclectic mix of fundamental concepts, established notions, theories on science governance and tools for practical applications. The collection includes essays on narrative storytelling, audience, the medialisation of science, public opinion, social media, strategic communications, misinformation, and disinformation. Established concepts that have proven to be influential over time include deficit model thinking, dialogue, dissemination, public engagement, scientific literacy, public trust, visibility, controversies, evaluation, citizen science, lay expertise, science journalism, uncertainty and ethics. Governance concepts to be found in the book include anticipatory governance, responsible research, innovation, science policy and technocracy tolerance. In addition, ideas included that find ready application in the day-to-day practice of science communication include humour, art, branding, training, activism and co-creation.

While the editors recognise that science communication is a global and inclusive endeavor, subject to rapid internationalisation and diversification, most essays in the collection are written by European and American scholars and professionals in science communication who constitute the mainstream of the field. Access to contributors and the prominent rise of the core concepts in science communication in response to Western socio-political issues, are likely the reasons for this skewed selection. Notable exceptions to such mainstream points of view include an essay on decolonizing science communication by Siddharth Kankaria, an Indian independent science communication consultant who serves on the scientific committee of the Public Communication of Science and Technology (PCST) network, an essay on indigenous knowledge systems by Amanda Boyd, a member of the Metis Nation of Canada and director of Native American Programs and Cole Allick, a citizen of the Turtle Mountain Band of Chippewa Indians and a professor of public health, both at Washington State University, and an essay on the Chinese concept of interdependent fusion of science and technology (Keji) by Guoyan Wang, the secretary general of China's PCST society. The

collection also makes an effort to include entries on inclusivity in science communication, gender, empathy, and underserved audiences.

Most essays in the book are heavily research-centric, thoroughly indexed, and didactic. This is likely an intentional editorial decision to introduce students and early-career science communicators to the technical language and underlying theories of the field in a no-nonsense manner to impress upon them the seriousness and significance of science communication, instead of an adjunctive afterthought in altruism or philanthropy as is, unfortunately, the more common fate of the field. This is a commendable editorial feat, given the diversity of the essays' authors and foci, especially since science communication rarely rises to prominence in mainstream scientific courses and pedagogy.

However, the academic tone of the essays limits their accessibility, particularly for students who constitute a key target audience of the guide. Admittedly, it is hard to avoid jargon in a book whose premise is to document and explain a field's technical language. Essays in the collection that successfully manage to retain the overall research-informed approach of the book while maintaining an engaging narrative voice and vitality, often considered a signature of creative or literary non-fiction, include an essay on the advantages and pitfalls of being a visible scientist by Marina Joubert, associate professor of public engagement with science at the Stellenbosch University, South Africa, an essay on the roots and prospects of citizen science by Alan Irwin, professor of research policy at Aarhus University, Copenhagen, and an essay on the role and relevance of empathy in the exchange between science communicators and their audience by Stephen Hughes, lecturer in Science, Technology, and Society at University College London, United Kingdom.

The strict brevity of the essays in the collection prevents in-depth analyses of the concepts and the absence of some concepts from the compendium, including topics at the intersection of radical changes in the publishing industry and its effects on science communication, and the impact of artificial intelligence on the language, motivation and credibility of science communication, are jarring. However, as the editors admit, capturing concepts in a field as dynamic as science communication is like trying to hit the bull's-eye of a moving target. And, like all roadmaps crafted with rigour and intellectual humility, this too provides a worthy gateway for curious seekers to read their way into an ever-evolving field.

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