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CONNECTING SCIENCE COMMUNICATION RESEARCH AND PRACTICE: CHALLENGES AND WAYS FORWARD

Teaching to bridge research and practice: perspectives from science communication educators across the world

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Abstract

Despite growing awareness of the need to bridge research and practice in science communication, methods of facilitating meaningful interactions between them remain elusive. This practice insight explores how teaching efforts can help to fill this gap. Drawing on case studies from the U.S., U.K., Canada, Germany, India, and Mexico, six instructors offer examples of pedagogical strategies that they have found effective in bridging the two domains — such as fostering partnerships with local science communication practitioners, using dialogic and participatory approaches to build communities of learning and practice, encouraging reflexivity and epistemic humility, and drawing connections with local contexts.

Keywords

Bridging research, practice and teaching; Dewesternising science communication; Science communication teaching

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Introduction

Interest in science communication is growing worldwide [Trench, 2012] but high-quality, formal educational opportunities remain limited in many countries [Gascoigne et al., 2020]. The field also struggles to integrate insights from research with the lived experiences of science communication practitioners [Gerber et al., 2020]. While there may be merits of delinking the teaching of science communication research and practice [Davis, 2010], there is growing consensus that education is most effective when it combines insights from both domains and serves as an active site for "social conversations around science" [Bucchi & Trench, 2021].

In this practice insight, we share six case studies that showcase how science communication teaching initiatives can help bridge these gaps. These cases took place in the U.S., U.K., Canada, Germany, India, and Mexico, and were developed within their own local and institutional contexts (see Table 1 for a summary). Each took a unique approach to integrating research and practice, shedding light on

different ways educators can bridge the two domains to address specific community needs.

Table 1. Overview of case studies.

	U.S.	U.K.	Canada	Germany	India	Mexico
Class size	5–10	20–25	12	3–17	22	15–25
Student type	Graduate	Graduate	Undergraduate and Graduate	Undergraduate, Graduate, and Postdoctoral Fellows	Graduate	Graduate, Postdoctoral Fellows, Scientists
Student background	STEM + SSH	STEM + SSH	STEM + SSH	STEM + SSH	STEM	STEM + SSH
Course duration	1 semester	2 semesters	1 semester	1 semester	1 semester	5 months
Organizational context	Mandatory course offered through SSH program [Museum Studies]	Mandatory course offered through SC program [Master of SC]	Elective course offered through SSH program [Publishing]	Elective course offered through SC program [Science Journalism]	Elective course offered through STEM program [Biological Sciences]	Elective course offered as continuing education [Biological and Agricultural Sciences]
Instructor background	STEM (Astronomy); SC [Research + Practice]	SSH (Sociology); Education; SC [Research]	SSH (Psychology, Publishing); SC (Journalism) [Research + Practice]	SC (Journalism) [Research + Practice]	STEM (Biology); SC [Research + Practice]	STEM (Physics, Biology; Education; SC (Journalism) [Research + Practice]
Course format	In-person	Hybrid	Hybrid	In-person	In-person	In-person
Pedagogical approaches and activities	Discussions; independent and group assignments; readings	Independent research; interactive classroom activities; lectures; one-on-one supervision	Discussions, guest lectures; independent and group assignments; individual feedback; interactive classroom activities; readings (with annotations)	Discussions; preliminary survey of prior knowledge and perceptions; self-reflection	Discussions; individual and group assignments; interactive classroom activities; lectures; participatory projects; self-reflection	Discussions; guest lectures; individual feedback; interactive classroom and field activities
Research topics and theoretical perspectives	Behaviour change; ethics; expertise and participation; philosophy of science; post-modernism; pseudoscience; risk communication; the scientific method	Project specific but include media representations of science; public engagement; SC models	Digital media landscape; ethics; inclusive SC; misinformation; narrative frameworks; persuasion; trust and credibility; SC models	Scientific quality standards in SC; social systems theory; SC history; sociology of science	Ethics; inclusive SC; narrative frameworks; SC history; SC models; social justice; theory of change	Audience studies; cultural studies; decolonization; ethics; SC history; SC models; social justice; sociology of science; strategic SC

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Table 1. *Continued from the previous page.*

	U.S.	U.K.	Canada	Germany	India	Mexico
Practical skills	Creating hands-on engagement activities; interacting with scientists; mediating between scientists and publics; identifying reputable information resources	Ethics; project management; quantitative and qualitative methods; research governance; research design	Data visualization; event planning; inclusive SC; infographics; multimedia production; news writing; science art; social media; writing for the public; audience analysis	Accessible language use; reflexivity; SC strategy	Evaluation/ impact measurement; narratives and storytelling; navigating careers in Indian SC; project management; reflexive practice; writing for the public; SC strategy	Audience analysis; multimedia production; news writing; science theatre; workshop facilitation; writing for the public; SC strategy (with a local focus)
Course materials	Book chapters; podcasts; research articles; science gadgets; videos; websites (blogs, science museum pages)	Data analysis software; empirical data collection; real community cases; reports and manuals, textbooks; research articles	Blog posts; infographics; news stories; podcasts; research articles; videos	Exemplary press releases; videos; research articles; social media posts	Blog posts; books; lived experiences; reports and manuals; videos; research articles	Blogs posts; books; magazines; podcasts; real community cases; reports and manuals; videos; websites; research articles

Note. SSH = social sciences and humanities; STEM = science, technology, engineering, and math; SC = science communication (including science journalism, science art, institutional science communication/public relations, etc.)

Below, each instructor presents a short case study of their course. While these cases are diverse, they also share common themes, including the value of fostering practitioner partnerships, using dialogic and participatory teaching approaches, encouraging reflexivity and epistemic humility, and tailoring instruction to local contexts. We highlight these commonalities to provide a foundation for future research and practice in advancing informed, reflexive science communication education.

Case study 1. "Learning by doing" through practitioner partnerships (U.S.)

Erik Stengler, Cooperstown Graduate Program, SUNY Oneonta

Over more than a decade of teaching science communication and science museum studies, I have observed the effects of the pervasive research-practice disconnect firsthand. Students from scientific backgrounds are seldom aware of science communication as an academic discipline when they first arrive in class. As I did during my early career, they often assume that science communication is a practical skill for "translating" scientific knowledge into more easily accessible forms. Students also tend to undervalue the need to *listen*. Dialogue and participation have long been buzzwords in science communication and are gaining importance in the museum sector [Leinhardt, Crowley & Knutson, 2003]. Yet I still encounter many students who struggle with listening, demonstrating the need to build this practice from the ground up.

As an instructor at the Cooperstown Graduate Program (Science Museum Studies Track) at SUNY Oneonta, I address these two challenges in multiple ways. I build

scholarship into my teaching to gradually expose students to issues and research methods that scholars often take for granted. For example, students are regularly asked to read academic articles and discuss how the findings connect with their own practice and experiences. This is a first step towards instilling a habit of informing practice with research. Once they graduate, I help students stay up to date in their competitive professional environments by informing them of new publications relevant to their work through e-mails and alumni newsletters.

To encourage listening and further demonstrate how research can inform practice, I provide students opportunities to learn by doing using real-world projects. The program partners with organizations that could benefit from collaboration, such as small museums for which students create exhibits, programming, activities, and more. Every year students partner with Little Falls Historical Society[1] to create resources that enhance their programming. They have also collaborated with Wings of Eagles Discovery Center[2] to create activities for their new Mars Base Eagle exhibit and take-home activities for school kids during the pandemic. To find such organizations, my colleagues and I visit many sites and knock on many doors. While working for these organizations, students are expected to justify every choice they make with references to academic work. The hope is that students will adopt this habit into their future professional practice.

In summary, it all comes down to practicing what we preach as educators and rolling back our sleeves to find opportunities to work with real partners for real audiences — all while putting ourselves in the shoes of our students, for whom things that are so familiar to us might be completely new.

Case study 2. Conducting socially relevant research through community collaborations (U.K.)

Clare Wilkinson, Science Communication Unit, UWE Bristol

I am a professor in the Science Communication Unit at UWE Bristol, one of the longest-running U.K.-based programs. Established in 2003, it delivers teaching in a hybrid format, with a third of the program delivered online and two-thirds provided on campus over short, intensive periods. The program embraces a synergy between theory and practice, with staff of both academic and practitioner backgrounds. It has an inclusive recruitment process seeking students from varied academic disciplines, and with an option to accredit previous learning (e.g., from employment). My colleagues and I take a reflexive approach in our teaching and supervision, prompting students to consider their own experiences as they learn about science communication and society [Llorente & Revuelta, 2023].

All students undertake a project/dissertation module, which I led between 2007 and 2023. To develop links between teaching, research, and practice, this module offers an "external project" opportunity where students can engage in applied research in partnership with an organization. This meets the needs of students seeking to develop practical skills, such as project management and qualitative and quantitative analysis, while also building professional networks. It also supports partner organizations, especially those who lack internal evaluation expertise or

[1] https://littlefallshistoricalsociety.org/suny-oneontas-cooperstown-graduate-program-of-museum-studies/.

[2] https://www.wingsofeagles.com/.

resources for small-scale research. Research in other sectors has suggested that working with external partners can improve students' awareness of the needs of organizations and increase self-confidence and team-working, enhancing their employability and, ultimately, university rankings [O'Leary, 2017].

Since the introduction of the external projects, my colleagues and I have supervised students working with a range of organizations, including Meningitis U.K. and Public Health England [Hale, Young, Grand & McNulty, 2017; Witt, Rowland & Wilkinson, 2012]. Projects have addressed diverse topics and aims, from communicating technical terminology at a wetlands visitor habitat to developing a virtual science festival. These projects provide real-world opportunities for students to access expertise and/or research participants they couldn't otherwise, while organizations benefit from students' time and understanding of contemporary science communication, with minimal provision of resources. Organizations can also informally access supervisors' expertise, leading to further opportunities such as partnership-based PhDs.

Models of this type raise practical and ethical questions. For instance, students need the capacity to undertake research with partners, meaning these projects particularly attract students without extensive employment responsibilities or caring commitments. As the U.K. cost-of-living crisis has exacerbated, especially during the COVID-19 pandemic, I have noted less uptake from students already undertaking paid work. To ensure such experiences are available to students with different levels of social and economic capital [Bathmaker, Ingram & Waller, 2013], my colleagues and I embed additional opportunities to collaborate and network throughout our program. The program also vets applications from organizations to ensure opportunities are not meant be undertaken by paid professionals and that projects remain mutually beneficial.

From the organizational perspective, some partners simply cannot provide the time to support a student or cover costs of research activities. As students can face personal and professional challenges, projects may not always be completed, posing risks to organizations. Finally, growing attention to data management and protection has increased the complexity of organizing projects between different organizations.

Nonetheless, I have witnessed firsthand how these external projects provide opportunities to broker students' research with practice. As with all "matchmaking", there can be successes as well as failures, but it is one model that can effectively lead to both short and long-term partnerships.

Case study 3. Facilitating dialogue and participation at multiple levels (Canada)

Alice Fleerackers, Scholarly Communications Lab, Simon Fraser University

Although interest in science communication is growing in Canada, few educational opportunities exist beyond a handful of bachelor's and certificate programs [Riedlinger, Schiele & Barata, 2020]. Perhaps as a result, many science communicators are self-taught, with a background in science but little communication experience [Riedlinger, Barata & Schiele, 2019]. Science communication in Canada is thus overwhelmingly practice-based rather than

theory-led, leaving researchers and practitioners with few opportunities to learn from one another.

It is in this context that I developed Telling Science Stories (TSS), an introductory science communication course bridging research and practice through a dialogic and participatory approach. The course took place in a hybrid format in the Publishing Program at Simon Fraser University in the second year of the COVID-19 pandemic. It involved both online, asynchronous learning and hands-on, synchronous discussions and activities. It was open to all, attracting graduate and undergraduate students of diverse backgrounds and levels of science communication experience.

TSS taught students to integrate research and practice at multiple levels. Before class, students watched or listened to a short podcast-style interview with a guest with expertise in that week's topic.[3] Experts included researchers and practitioners who shared insights based on their scholarly or professional experiences. For example, Jenni Metcalfe's interview described her research into practical applications of deficit, dialogue, and participation models [Metcalfe, 2019]. Angeline Sangalang's interview discussed her research on using emotional narratives to address health misinformation [Sangalang, Ophir & Cappella, 2019].

Students also read preparatory readings before class, including practitioner blog posts [e.g. Cheung, 2016] and academic articles [e.g. Medvecky & Leach, 2017]. To encourage students to build connections and reflect on course concepts, I asked them to annotate each week's readings using Hypothesis[4] — a free digital tool that enables collaborative discussion of readings via in-text comments (Figure 1). Hypothesis is known to support knowledge construction [Morales, Fleerackers & Alperin, 2022] and build classroom community [Kalir, Morales, Fleerackers & Alperin, 2020] within in-person settings, but I found these benefits also extended to a hybrid context. Students thus engaged with most of the core course content asynchronously, leaving synchronous time for dialogic and participatory learning (via discussions and small-group activities). Discussions allowed students to connect insights from the interviews with theoretical frameworks and empirical findings from the readings. Students also bridged research and practice by using evidence-based insights (from the readings and interviews) to create practice-based outputs (e.g., blog posts, videos) and by bringing their professional experiences and disciplinary knowledge into the classroom.

Ultimately, the course taught students that science communication is a vibrant and interdisciplinary field — one in which insights gained through school, work, and personal experiences are not only accepted but valued.

[3] A selection of these interviews is available at https://anchor.fm/tellingsciencestories/.
[4] https://web.hypothes.is.

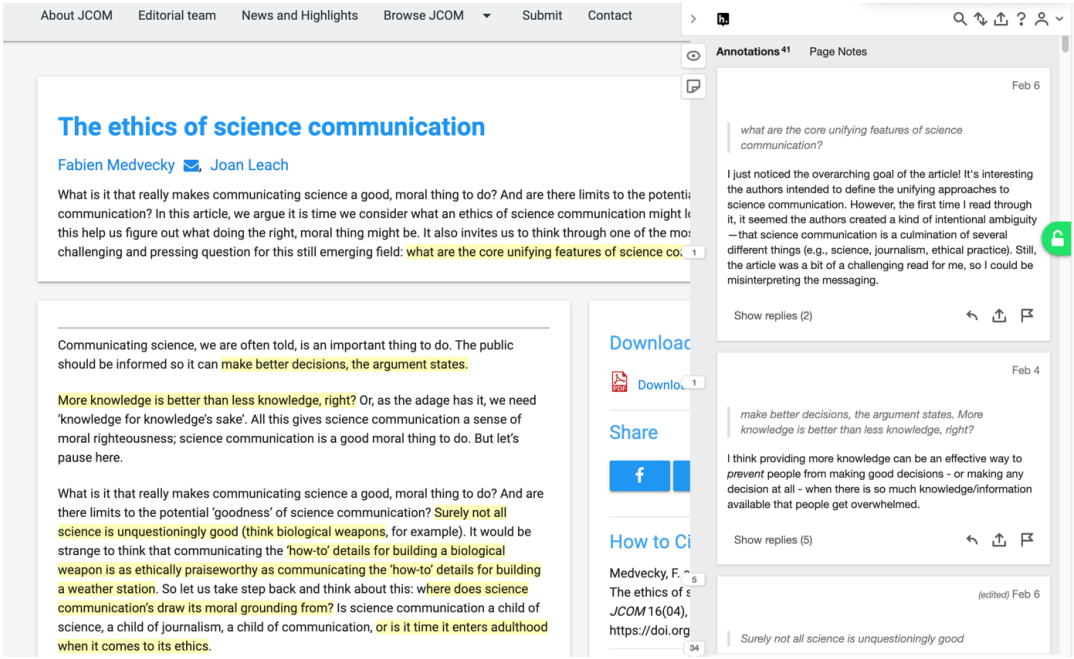

Figure 1. Example of student annotations on an article by Medvecky and Leach [2017]. Student names have been removed for privacy.

Case study 4. Reflecting on diverse scientific cultures and discipline-specific communication practices (Germany)

Tobias Kreutzer, Institute of Journalism, TU Dortmund University

Science communication has been on the public agenda in Germany for a while — with COVID-19 serving as the latest catalyst. However, in an increasingly competitive academic environment, the rise of science communication also risks promoting a form of science marketing that undermines reflexive ethics and critical public engagement with the sciences, social sciences, and humanities [see Weingart et al., 2022]. The latter poses "a specific challenge" to science communication research, which has tended to overlook communication of social sciences [Cassidy, 2021]. This lack of interest is also mirrored in public strategy papers on science communication in Germany [e.g. Wissenschaftsrat, 2021].

In this context, the TU Dortmund University in Germany established an interdisciplinary course in 2022 bringing together researchers from diverse disciplines, professional science communicators, and journalism students. The course built on the university's long tradition of linking (science) communication research and practice, as well as the introduction of the Chair of Science Journalism program in 2003. Advanced students and postdoctoral researchers from all disciplines were invited to attend a general introductory session that could be combined with one or more discipline-specific sessions throughout the semester. As the instructor who developed and taught the course, I provided a discipline-specific perspective on science communication and encouraged exchanges between research and practice by inviting professional communicators from the university press office and journalism students to join in-class discussions. By interacting with these practitioners, students learned about institutional communication services and reflected on their own communication activities by temporarily taking a newsroom perspective.

In a preliminary survey, I asked students what they expected to learn from the course and how their disciplines were publicly perceived. Students from the social sciences and humanities felt their research was important for society but was often perceived as less "legitimate" than research from the "hard" sciences. In contrast, students from the natural sciences were more concerned with communicating their work in simpler terms to inform the public. This formed a basis for the rest of the course, throughout which students learned that researchers from different disciplines operate in distinct contexts with unique communication needs.

I drew on news value theory and its implications for science communication in different disciplines [Badenschier & Wormer, 2012] as a conceptual grounding for my course. Further theoretical foundations included perspectives from social systems theory [Kohring, 2005] and communication model and actor theory [Trench, 2008]. I also bridged research and practice by facilitating regular group discussions about real-world examples of science communication. These examples covered a variety of formats, disciplines, and topics, ranging from a YouTube series on social scientific theory[5] to award-winning press releases aggregated on the German *Scientific Information Service*.

Through these interdisciplinary discussions and reflections on real-world case studies, as well as ongoing interactions with practitioners, students came to appreciate the diversity of research practices and contexts they operated within, as well as the benefits of cross-fertilizing insights from research and practice. They learnt to communicate "science" in the broadest sense of the word.

Case study 5. Connecting global theories to local contexts (India)

Siddharth Kankaria, Simons Centre for the Study of Living Machines, National Centre for Biological Sciences, Tata Institute of Fundamental Research

Despite a recent surge in science communication initiatives in India, formal avenues for researching and critically reflecting on its practice are rare [Duca, Cutajar, Kankaria, Rea & Wallace, 2021]. This is amplified by a lack of awareness of science communication as an academic field and the widely different sociocultural contexts and challenges facing practitioners in India [SciCommSci Club and Science Policy Forum, 2020]. There is thus an urgent need for capacity-building programs that enable crosstalk between science communication research and practice in culturally-sensitive and locally-relevant ways.

The current teaching landscape is also dominated by short-term, practice-oriented workshops that train participants in specific formats — predominantly science writing and journalism [Chakraborty, Raman & Thirumal, 2020] — but often overlook foundational concepts and theoretical frameworks. This creates blind spots around implementing evaluation and impact measurement, using reflexive feedback loops, adapting practices to local contexts, and understanding the broader role of science communication in society [Kankaria, 2023].

I developed *Fundamentals of Science Communication* at the National Centre for Biological Sciences in this context. To complement the practice-oriented training landscape in India, this graduate-level course provided a comprehensive,

[5] https://www.youtube.com/playlist?list=PL2Rn54bVHp6pRhgBxSbE0TMdGA6jyoiVS.

theoretically grounded foundation in science communication that was rooted in local Indian contexts.

The first half of every class introduced students to a new science communication concept or framework using evidence-based literature interspersed with hands-on participatory activities. For example, students learned about the importance of evaluation and impact measurement for iteratively improving practice by exploring a combination of frameworks such as theory of change [Weiss, 1998] and reflexive practice [Jensen, 2022]. The second half of every class was reserved for group projects where students designed communication campaigns around complex socio-scientific issues such as biodiversity and conservation, mental health, genetic engineering, gender and sexuality, and antimicrobial resistance. By working on these group projects throughout the course, students continuously incorporated fresh learnings from class and built skills in reflexive practice.

I chose not to limit the focus of the course to a particular communication format, and instead let students pick any format they wanted for their group projects. This facilitated introspection on choosing specific formats for specific audiences and contexts and encouraged appreciation of how theory can inform practice in ways that cut across formats. For example, after learning about audience typologies, many students chose to adapt their group projects to incorporate diverse communication approaches to cater to a broader cross-section of audiences.

I also situated my teaching within local, regional, and national contexts, instead of uncritically adopting Global North frameworks and theories. For instance, I supplemented Eurocentric readings with case studies from the Global South — including Aboriginal Australia, Western Africa, and India — to provide a more inclusive history of science communication [Finlay et al., 2021; Kankaria & Manna, 2022]. I facilitated discussions on the diversity of knowledge forms (beyond scientific knowledge) and encouraged students to overcome their epistemic biases to centre pluralistic ways of knowing in their practice. I used participatory approaches like facilitated discussions and role play to draw upon students' own lived experiences and cultural capital to co-create knowledge as a class and collate best practices in science communication.

To situate their training in sociocultural foundations, I introduced students to scholarship on community-centric approaches in public engagement, social justice principles, and ethics [e.g., Finlay et al., 2021; Medvecky & Leach, 2017]. For their final group presentations, students were asked to reflect on the research underpinning their projects, how they factored in the needs of the local communities they sought to engage, and how principles of social justice, diversity, equity, and ethics were centred in their project design.

Overall, the course served as a theoretically-grounded effort to complement the practice-dominated education landscape in India and build a more robust and reflexive science engagement ecosystem. It encouraged students to connect research and practice, reconcile global theories with local contexts, and reflect on the intersectional challenges of doing science engagement in the Global South.

Case study 6. Practicing reflexivity and epistemic humility (Mexico)

Edith Escalón, Academic Unit of Biological and Agricultural Sciences, Universidad Veracruzana

Over the last six decades, public communication of science in Mexico has undergone a gradual expansion. Today, it is a complex, diversified field with a growing need for training that integrates research and practice [Reynoso-Haynes, Herrera, Nepote & Patiño-Barba, 2020] and which is sensitive to national and local contexts. Currently, 43.9% of people living in Mexico experience deprivation or marginalization [Coneval, 2020]. Among them, indigenous and rural communities have been especially overlooked by science communication practitioners — as in many countries in the Global South [Barba, Castillo & Massarani, 2019].

To meet this need, the Universidad Veracruzana in Mexico established the Science Communication Diploma in 2013, a program that I helped found and where I have worked as an instructor ever since. Our program comprises a mix of short theoretical and practical components — including seminars, field placements, and skills workshops — and adopts an inclusive approach grounded in sociocultural perspectives [Lima, Martínez & Tenrreiro, 2015]. My colleagues and I approach communication as a social and cultural act, incorporating complex thought systems, cultural practices, perceptions, and knowledge. We provide students — mostly with scientific backgrounds — with theoretical, methodological, and epistemic training in social science research and practice to help them understand how audiences construct meaning and make decisions guided by knowledge, emotions, motivations, and trust.

The program equips students and bridges theory and practice in several ways. For example, in the four courses I teach, students read academic articles, especially those relevant to their local context (e.g., on science communication in marginalized communities [Escalón, 2015] and in Latin America [Barba et al., 2019]). They reflect, exchange experiences, and interact with authors, researchers, and experts to build a deeper understanding of the field in terms of knowledge and skills, but also its contributing actors. This socially-focused teaching model has encouraged many of my former students to join the field as practitioners or pursue additional training, thereby reaffirming their identities as science communicators [Baram-Tsabari & Lewenstein, 2017].

As an instructor, I also connect research with practice by introducing students to real science communication problems in places where science has not historically been seen as relevant, and where the gaps between academic and local cultures are widest. Fishermen, foresters, flower growers, and coffee producers are just a few examples of the communities that students learn to engage with. Our students observe their practices, talk with them, and actively listen to better understand the role science plays in their lives.

To help students communicate effectively with these target audiences, I promote "epistemic humility," emphasizing that communities possess valuable traditional knowledge that has often been devalued by Western science but needs to be acknowledged by science communicators. For example, I discuss the colonial heritage of Western science and how it has been legitimized as the only verifiable form of knowledge [Maldonado, 2014; Santos, 2006]. Drawing on Orozco and González [2015], I work with students to critically analyze the strengths,

limitations, and biases of different knowledge paradigms. Although it is often difficult for scientists to question their own epistemologies, I help them overcome this through activities designed to improve listening, dialogue, and negotiation skills, as well as through social science methods like focus groups, interviews, and participatory techniques. This allows students to recognize how other forms of (non-scientific) knowledge — along with values and emotions — are used to make valid and useful decisions.

Eventually, students learn to carry out two-way communication with diverse communities and evaluate their activities step by step. They also come to appreciate that science communication is more complex than they thought. Many leave the program acknowledging that there is not enough research on their specific contexts and thus publish about their own lived experiences [e.g. Farias-Escalera & Escalón, 2022]. Ultimately, linking research and practice through this reflexive, sociocultural perspective helps students appreciate the need for ongoing training and evaluation and really ask, "Is it working?" rather than assuming that "evidence-based" practices are universally applicable to all contexts.

Discussion

The above case studies provide six examples of how instructors have approached teaching as a way to build bridges between science communication research and practice. Within this diversity of approaches, four common themes emerge: *building interdisciplinary partnerships, using dialogue and participation, encouraging reflexivity and epistemic humility,* and *adapting to local and cultural contexts.*

First, as can be seen from Stengler, Wilkinson, and Escalón's contributions, collaborations with practitioners and community stakeholders can support mutual learning and situate theoretical or empirical concepts within local contexts. Yet, while building such communities of practice enables exchanges of expertise and experience between practitioners, researchers, and students, educators must also ensure that these exchanges are mutually beneficial — requiring care in "matchmaking", as Wilkinson puts it.

Second, dialogic and participatory teaching approaches, such as those used by Fleerackers and Kreutzer, offer opportunities to create communities of learning that enable students to integrate insights from research and practice, but also view science communication from diverse disciplinary perspectives. Creative approaches such as student-led annotations or podcast-style interviews offer new ways to support learning and enhance interactivity within and beyond the classroom. Further, incorporating real-world examples into classroom discussions can help students appreciate how science communication approaches differ across disciplines and formats.

Third, case studies such as Kankaria and Escalón's underscore that science communication cannot deliver on its potential to make research accessible unless it is paired with self-awareness and deep consideration of the needs of the communities it seeks to support. These case studies show how teaching critical skills such as reflexivity and epistemic humility can encourage students to appreciate different ways of understanding the world — not just through theory or practice, but also through local, community, and indigenous contexts and knowledge systems.

This last point highlights a broader theme across the six case studies: the importance of teaching students to integrate science communication research and practice in ways that are culturally and locally relevant. As Kankaria highlights, this is particularly important in the Global South, where local conditions often differ from those of the countries in which many core science communication theories were developed, and where there might already be other locally embedded knowledge-sharing practices and frameworks that merit further investigation. More broadly, the six case studies make it clear that what effective "science communication training" looks like can vary widely, depending on the context in which it takes place.

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