



Justice, Equity, Diversity and Inclusion in **Science Communication**

FACILITATOR GUIDE





This facilitator guide provides the information required to deliver the GlobalSCAPE Science Communication training workshops. These workshops are available as an open access resource that can be used and adapted by anyone. The intention is that a diverse range of practitioners and trainers from across the globe can take the workshop and adapt it to suit their particular contexts. These contexts could be oriented towards particular disciplines, stakeholder groups, cultures or language but the main feature is that it can and should be made relevant to the diverse groups that may benefit from it.



This guide outlines the main format and flow of the workshop, whilst the associated workbook provides materials for participants to follow along with the workshop. It should be noted that this workshop is a non-formal training resource, i.e. it isn't directly intended for inclusion in an academic Science Communication training setting. Nevertheless, as crossover is common between the needs of formal and non-formal training, it is conceivable that some of the content here may also be useful in that way. (Anyone interested in more formal, academic content can refer to GlobalSCAPE Deliverable 5.2 – Science Communication Module).

In total there are two GlobalSCAPE Science Communication training workshops that have been specifically designed to be applicable to multiple stakeholders. The first workshop is "Global Relevance in Science Communication", which focuses on the global field of Science Communication and how we can expand our networks of who we learn from and collaborate with. The other workshop is "Justice, Equity, Diversity and Inclusion in Science Communication", which was chosen in response to a highlighted need for more EDI (Equity, Diversity and Inclusion) in Science Communication and training (Judd and McKinnon, 2021; Heslop, 2021). We also thought it necessary to align with recent efforts to include Justice, as GlobalSCAPE has at its core the ambition to focus on the lesser heard voices in Science Communication. This is a matter of achieving a fairer global representation of who takes part and is featured within Science Communication discourse.

Who is this workshop for?

Science Communication practitioners, including journalists, scientists, educators, presenters, performers and other interested Science Communication professionals.

Why do we need this as Science Communication practitioners?

There are large differences in societies' access and contribution to science across the world, for many complex reasons. To avoid continuing these imbalances, we need to prioritise practices that acknowledge and support our diverse global communities.

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1. Introduction



The experiences of Science Communication professionals in regions other than Europe and the Western world have traditionally been under-represented (Finlay et al, 2021). As such, the GlobalSCAPE project aims to redress this imbalance by expanding outwards to bring focus to the lesser-heard voices. In particular, the science communicators working in non-Western countries and in regions where taking stock of Science Communication is particularly difficult. In this way GlobalSCAPE aims to generate a full and accurate picture of Science Communication professionals across the globe. So in essence, at the very heart of the GlobalSCAPE project is the will to provide a more globally inclusive view of Science Communication.

Inclusion is central to Science Communication, in that one of the major focuses is to find ways of increasing the audiences that effectively engage with science (in it's broadest sense). Whether that's other scientists, members of 'the public', politicians or funding organisations, to name a few. So we put a focus on particular (and often typical) audiences but in doing so often exclude other, non-typical audiences, with a result of perpetuating practices that are not really 'inclusive' of the diverse societies that we live and operate within.

The recognition of a need to be more inclusive is more evident in some areas of society, such as in business or academia. For example in Western education its origins could be traced back to the early 1900's (Hodkinson, 2011). However, current ideas started to gain prevalence in the 1960's as a result of the civil rights movement, which also instigated conversations about diversity. More recently, in particular regard to contemporary Science Communication, issues of diversity and inclusion have become an increasingly hot topic, with the amount of articles published in the English language roughly doubling every 5 years during the last two decades (Judd & McKinnon, 2021).

Commonly, diversity and inclusion are also grouped together with conversations about equity, under the banners of the widely used acronyms, EDI or DEI. More recently, justice has also been regarded as an important component, leading to the growing adoption of the acronym JEDI (justice, equity, diversity, inclusion), although it should be noted that at least one source has raised concerns about using JEDI as an acronym (Hammond et al, 2021). In any case, the role of justice, or more specifically social justice, within Science Communication has been considered from at least as early as 2013 (Pierce, 2013).

Despite the historical presence of EDI initiatives in businesses and academia and recent calls for more EDI in science (Mehta et al, 2020; Ruzycki & Ahmed, 2022) and Science Communication (Canfield et al, 2020), some evidence points to the fact that many science communicators and trainers in the US and UK do not directly account for issues of EDI (Dudo et al, 2020, Heslop et al, 2021). Although (Heslop et al, 2021) did find that some trainers employed EDI practices within the design and delivery of their training sessions, EDI tended not to be covered as a specific topic of the training itself. When it was included, it was mostly centred on "reaching underserved audiences", unconscious bias, stereotypes and accessibility of events. They also found that data was generally not collected regarding demographics of trainees and that trainers themselves did not feel too confident in broaching EDI topics.

Taking this into account, this workshop will be a dedicated session specifically on JEDI, to increase equitable and inclusive practices within Science Communication and promote the design, delivery and recognition of more socially just practices (Dawson et al, 2022), through more inclusive (Canfield & Menezes, 2020) and responsible (Achiam et al, 2022) Science Communication.



2. Workshop Overview

This justice, equity, diversity and inclusion (JEDI) in Science Communication workshop is intended to be an opportunity for science communicators from different regions of the world to see how issues of justice, equity, diversity and inclusion can factor into their practices. It relies on providing links to some of the recent research and resources in the field, as well as on participants sharing their experiences with each other.



After introducing the presenter and background to the workshop, there is an opportunity for participants to get to know each other. They will share their thoughts on the importance of JEDI within Science Communication and whether they intentionally target issues of JEDI in their practices, as a basic introduction to how JEDI issues are considered by their fellow communicators in different national and global contexts.

The basic introduction to JEDI in global practices is followed up by a look at why JEDI has become an increasingly important area of attention within Science Communication research and practice. The difference between equality and equity is also briefly considered before taking a deep dive into the meaning and relevance of diversity. Participants get an opportunity to produce an audience profile and are introduced to some practical recommendations for reaching underserved audiences.

In Part two of the workshop, participants learn about inclusion and how to incorporate diverse practices to increase inclusion in science and Science Communication. The relatively new Inclusive Science Communication movement is also introduced as a way to prioritise inclusion, equity, and intersectionality within Science Communication practices.

The workshop then takes a look at what justice is and how it fits into Science Communication. Participants learn about some ways in which people may seek justice before considering how Science Communication could be used as a means of promoting and addressing justice related issues.

For a more fine grained overview of this workshop, there is a Slide Guide in the appendices (Appendix A and Appendix B), which provides a slide by slide outline of the presentation content. It also lists approximate timings as an indication of the general pace of the presentation. In practice these timings should be somewhat flexible in response to the needs and level of engagement from participants. Nonetheless, it is useful to print this out to keep track of your progress throughout the session. You should adapt the timings and content based on your own requirements.

3. Basic Information



Location

These workshops are primarily for online presentation, although they have been designed in a way that allows adaptation for in-person presentation if necessary. On activities where this might be necessary, we will include a note suggesting an alternative in-person approach. Please adapt as you see fit though.

Session length

4 hours – Split across 2 sessions of 2 hours each.

The session lengths can be altered depending on how much time you'd like to give for each activity. Generally, in-person sessions can be longer than online sessions.

If online, we recommend sticking to between 2 and 3 hours per session, with roughly one break every 60 – 80 minutes. Generally it's better to "take short breaks often, rather than longer ones less often. For example 5 to 10 minutes every hour is better than 20 minutes every 2 hours." (HSE, 2021).

Materials (Online)

Computer, reliable internet access, quiet space with minimal distractions, a video conferencing platform (e.g. Zoom) with breakout room capability, presentation software (e.g. PowerPoint), workshop slide deck, PDF of workbooks, this facilitator guide at hand, spare pens/pencils and paper, liquid refreshment.

Materials (In-Person)

Your facilitator guide, enough printed workbooks and pens/pencils for participants, extra blank paper, laptop, a way to display the presentation (e.g. projector with screen or blank wall, OR even a Large TV screen if in a smaller room), a room that's big enough to fit all attendees when split into several small groups, suitable seating, suitable places to fill in workbooks (e.g. desks, clipboards), name tags, drinking water, coffee/tea and snacks for breaks.

Prior to the workshop

Check that ALL internet links in the presentation slides still work. Familiarise yourself with the slide deck and workbook. Watch through the video associated with the workshop to get an idea of what should be covered at each slide. Send out a workshop pack before the session.

Workshop pack

This should contain the **workbook**, a **pre-workshop survey**, information about any **pre-workshop activities** you want participants to carry out, and links to any relevant reading or **additional resources**. Please adapt these to suit your needs as appropriate e.g. accessibility or in-person vs online etc.



4. General Tips and Recommendations

Presentation

Throughout the presentation, the facilitator will generally explain the content of the slides in each section. If a slide has a key research paper associated with it, it's recommended that facilitators have a quick look at the related paper. This should include the abstract and conclusions/discussion at the very least. A recording of the session is available and can be viewed for insight into how to present the slides. Although, it's recommended that you present the parts of the presentation that you feel are most relevant to your contexts. Please add or delete content where necessary.

Facilitators

Try to have more than one facilitator if possible and if the participants are from a particular region it's a good idea to have at least one facilitator from that region. The next desirable option would be to partner with someone who is at least familiar with the region. If none of these options are possible, then strive to learn as much as you can about the local needs and culture of people you are presenting to. If you are presenting to a group from very different regions, as is often the case, then provide enough time in the break out sessions for them to get to know each other and negotiate each other's similarities and differences. This is already designed into the workshop, but please do adjust as appropriate.

Evaluative surveys

Send out a **pre-evaluation survey** before the event to learn a little about the participant's personal situations. The survey is important to establish what the participants are hoping to gain from the session and what their baseline knowledge/experience is or is perceived to be. Try to send it out two weeks or more beforehand to give time to get responses and tailor your workshop to the participants. Although if you feel comfortable with responding to a shorter schedule, that's entirely up to you. You should also include information about when you'll expect responses until. Again, it depends on how much time you feel you will need to prepare.

After the session, you should also send out a **post-evaluation survey** to find out how your workshops went. This includes whether the participants gained what they wanted from the sessions and whether you managed to achieve the goals you set out to. You should aim to get this evaluation filled out straight after the session, while the information is fresh in the participant's minds. For in-person this could be handed out as a sheet at the end. For online sessions a QR code, or clickable link can make this more straightforward and immediate for participants to respond.

Note: If evaluations are sent out after the session (rather than included at the end of the session), it often takes longer for people to respond. If the evaluations are filled out longer than a week or two after the session, then the data gathered may not be as robust, although it may indicate what the participants have retained beyond the immediacy of the session.

A pre-evaluation and post-evaluation survey can be found in Appendix C and Appendix D of this guide. Some of the questions may need to be adapted to suit your specific requirements. There is also a link to an online version of the survey that you can copy and edit to suit your own purposes.

Workshop materials

Download and adapt the slides to suit your context e.g country, culture, language, length, and even particular content covered, depending on indications from the pre-survey. Participants should be at the focus of the workshop and so each session should be tailored with their indicated needs in mind, where possible.

Introductions

All modules begin with an introduction to the presenter, an overview of the module, including the main goal and objectives, followed by an optional icebreaker. There is an example given in the slide deck for each module, however you can also source your own that you feel is more relevant or better suited to your participants. There are many to be found online. E.g. <https://www.signupgenius.com/groups/group-icebreaker-activities-adults.cfm>

Ground rules

Establish any rules of conduct for the workshop. This can also be developed with participants who can suggest how they would like to approach etiquette's within the session. This could include the length and frequency of breaks, how they should treat each others views and opinions, whether they would like to record the session for their own subsequent viewing, whether their contact details can be passed around to each other, can they take pictures and/or refer to each other or the session on social media. Chatham house rules could be evoked here if wanted. (<https://www.chathamhouse.org/about-us/chatham-house-rule>)

Participants

It's generally a good idea to limit the number of participants to enable you to more effectively respond to particular needs they may have. However, this workshop has been designed to provide opportunities for participants to share and learn from each other's experiences. So for online sessions, limit attendance to however much you personally feel comfortable with joining. For in-person sessions, limit the number based on the space you have available.

Registration

Ensure that participants are sent an email to confirm the details of the session they have registered for. If using an online form (e.g. Google Forms) there is an option in the settings to email respondents their choices. Also be clear about how many spaces are available on the course, as well as the closing date for registration.

In person workshops

Ensure that you have booked and confirmed the location of your workshop. Ensure it has enough space for attendees to comfortably work whilst divided into separate groups. Ensure that you (or the venue) can offer refreshments at break times. Visit and familiarise yourself with the venue beforehand to ensure it has everything you need and so you can better direct participants to different rooms or facilities on the day.

Online platforms

Find and become familiar with any online programmes you will use to facilitate the sessions. In particular these will include video conferencing software such as *Zoom*, *Microsoft teams*, and *Google Meet*, and online collaboration programmes such as *Slido*, *Mentimetre*, *Padlet*, *Miro*, *Mural* and *Klaxoon*. Please be aware that you may need to sign

up in advance for some of these programmes and free versions often have limitations. So provide good time to test out your software before running a session with it.

Other things to consider are: Is it available to use in the relevant country of ALL participants, does it only function well on certain computer systems, does it have a different layout on different computer systems, is there a limit to the number of people that can use it or the length of time a meeting can run for.

Breaks

Necessary time for participants to refresh the body and mind. You can include a visible countdown timer here, which can be easily found on YouTube. Remind participants to move away from the screen and consider stretching or moving around.

If in-person, then providing a refreshments trolley is a good idea, if the venue doesn't have a cafe. In particular it may just contain water, coffee and a tea and biscuit selection or whatever snacks are appropriate or usual for the participants. If relying on vending machines, it's a good idea to have a quick look beforehand to see what there is on offer, and whether it is stocked well and works reliably (ask the venue staff).

Timezones

As there may be timezone differences, please double check that all published dates and times are correct for the participants. Be wary of Daylight saving adjustments that only occur in some countries and not always at the exact same time and date. You can check on this website: <https://www.worlddata.info/timezones/daylightsavingtimes.php>.

Networking

Suggest Social media Networking for workshop group (or perhaps become part of wider "GlobalSCAPE Network" Social media groups). There is a GlobalSCAPE Twitter, Mastodon[?], Facebook, LinkedIn and Slack group that participants and facilitators are encouraged to join to be linked up with a global network of science communicators and trainers. Participants can also be encouraged to set up a WhatsApp group if they will be attending multiple modules as part of a GlobalSCAPE course.

Resources

Double check that the participants have ALL the resources they need to partake in the session. Consider asking them to confirm that they have received everything, and whether they have any particular questions or concerns for the upcoming workshop. This information is separate from the surveys, which should be anonymous.

Participants should be advised to print out some of the materials before the session OR have a separate device where they can work on them digitally. The workbook will include guidance as to whether a particular page should be printed out, or is more relevant as a digital resource. The materials will be available in PDF form for printing and document form for editing. There are also spare pages at the end of the workbook to note down any details or comments they find interesting.

Tailored materials

As the resources are fully open resource, they could appear in multiple locations on the internet depending on how they are used or distributed. If you download and adapt the materials please consider acknowledging the version you originally adapted from. You could add some indication that your copy is an adapted version of the original GlobalSCAPE resources, to avoid any potential confusion later.



5. Workshop Activities

Following you will find guidance on how to run the particular workshop activities that participants will do. To see how to deliver the other parts of the workshop, it is recommended that you watch the recorded videos of the session.



5.1 Justice, Equity, Diversity and Inclusion in Science Communication

PART 1

5.1.1 Workshop Agenda (Part 1)

Guide times	Section	Section lengths
09:00 – 09:10	Introduction	10m
09:10 – 09:25	Getting to know	15m
09:25 – 09:40	JEDI in Science Communication	15m
09:40 – 09:50	Science Communication and equity	10m

09:50 – 10:00	BREAK	10m
10:00 – 10:20	Considering diversity	20m
10:20 – 10:45	Audience profiles	25m
10:45 – 11:00	Reducing the gaps	15m
11:00	End Part 1	

5.1.2 Introduction: 10 minutes

This covers who you are and what the module is about.

Begin by welcoming the room, and **introducing yourself**.

At this point you may want to briefly cover any venue/location related issues. This can include etiquette for online interaction and any general ground rules you may want to consider for the session. For in-person this may also include brief health and safety related issues (such as what to do in case of an emergency), where the toilets are, or arrangements for refreshments for example.

A **warm up exercise** can also help to get participants ready to start communicating with you and each other. In this module we have suggested that participants use the chat function to describe themselves in three words. This can provide a rough indication of how participants perceive themselves. It is about them self identifying through whatever words work best for them. It can be a good idea to ask participants to only press enter on their answers when you say (so they don't get influenced by other responses).

Feel free to spend a minute or two highlighting a few of the participants responses and if appropriate you could even ask for elaboration on any particularly unusual, humorous or interesting responses.

Follow this up by indicating the **relevance of the module** along with the **goals and objectives**.

5.1.3 Icebreaker: Getting to know: 15 minutes

Mode of engagement

Share, discuss

Purpose

An opportunity for participants to get to know some of their colleagues and consider how JEDI is important to themselves and other science communicators.

Resources

- Markers/pens, Workbook guide (one page)
- Access to relevant online workspace

Participants are divided into groups of around four or five people. They should take turns introducing themselves to the rest of their group, i.e. who they are, what they do, and why the three words they used in the warm up exercise relates to them. Once they have all introduced themselves, they should now spend the rest of the time briefly discussing **how relevant or important they think JEDI is** within their Science Communication contexts and/or within Science Communication generally. Do they intentionally target issues of JEDI within their Science Communication practices?

5.1.4 JEDI in Science Communication: 15 minutes

Mode of engagement

Share, conduct a Poll, discuss

Purpose

To outline the value of focussing on JEDI within Science Communication, and also the attention it has received within (anglophone) Science Communication research

Resources

- Workbook. Access to relevant online polling platform
- Suggested online platform: <https://www.mentimeter.com>

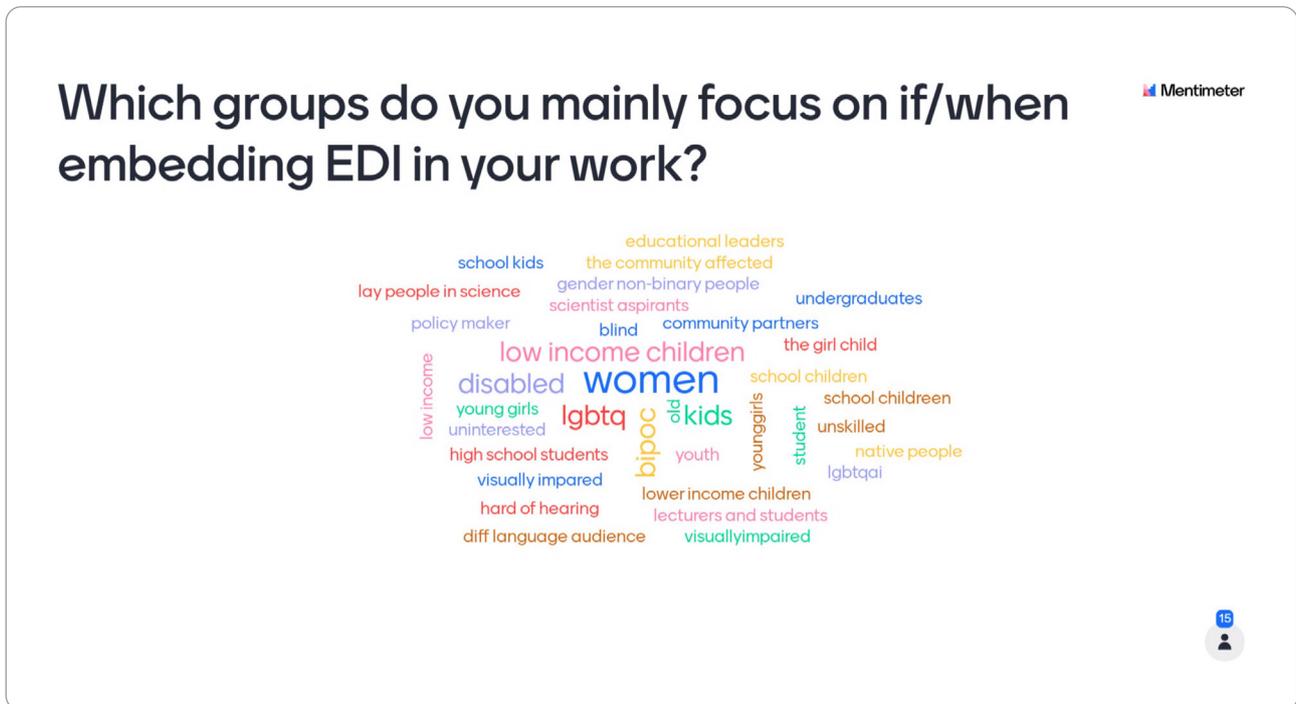
Start this section by acknowledging that the groups have met some of their colleagues and that they likely have different but overlapping reasons for being interested in JEDI in Science Communication. Then reveal that a major aspect is that “everyone has **the right** freely... to share in scientific advancement and its benefits”, as revealed on the slide.

The facilitator can then introduce some reasons why focusing on JEDI can be beneficial within science communication, stressing that many of the points can be looked into further by following the links associated with them. They can do this in their own time by downloading the presentation and clicking on the links to the underlying recent research papers. The reference for the points is also included in the ‘Presenter notes’ for the slide.

Depending on when this module is delivered, it is advised that facilitators look for recent literature to update and adjust these points as necessary to their own particular context i.e. region, language, area of Science Communication (such as science centres, journalists, policy makers etc).

There may also be reservations about the JEDI acronyms point out that there are other possible acronyms. Please consider checking with participants at this stage. There is a disclaimer included to finish up this slide.

At this point **Conduct a Quick Poll**, asking the question, “Which groups do you mainly focus on if/when embedding EDI in your work?”. This can be done directly within Zoom, using the poll function, or even just by fielding answers in the chat. However we recommend using a platform like Mentimeter as it allows the production of a Wordcloud, which can be instantly shared with the participants to provide a useful visual overview of the main groups they focus on. Here is an example of what it looks like.



This is useful as a reflection point when moving onto the next slides, which provide a brief review of a paper that explored forty years of EDI in Science Communication research. Participants can follow the link on the slide if they’d like to read it in more detail in their own time, however some key points have been included for brief discussion. Facilitators are welcome to highlight alternative points of discussion as they see fit.

The key points here are that:

- EDI has been an increasingly **popular topic within recent years** and so as a field we may see more research appearing that can inform evidence based approaches for reaching particular groups or communities.
- Much of the research has focussed on **girls and women**. Is this also apparent in participants’ practices or of practitioners they are aware of?
- Do practitioners in their region or area of Science Communication also largely overlook local **‘minoritised groups’** ?

Note: The term minoritised “describes groups or identities that are viewed as “other.” This term emphasizes the reality that “othered” groups are not necessarily the numerical minority, but minoritized by the dominant group to maintain their social power.” This description was taken from igi-global.com (2022), which includes six descriptions of what “minoritized” is.

The following slide highlights some recommendations by the authors, which are included here for practitioners to consider adapting or incorporating into their own contexts. Intersectionality is briefly introduced after the break.

5.1.5 Break: 10 minutes

Mode of engagement

Relax!

Purpose

Refresh body and mind

Resources

Liquid and snack refreshments

Time to refresh the body and mind. You can include a visible countdown timer here. These can be easily found on YouTube.

Remind participants to **move away from the screen** and consider stretching or moving around.

If in person, then providing a refreshments trolley is a good idea, if the venue doesn't have a cafe. Particularly water, coffee, and a tea and biscuit selection or whatever snacks are appropriate or usual for your participants.

If relying on vending machines, it's a good idea to have a quick look to see what it has on offer, and whether it is reliable (ask the staff).

5.1.6 Considering Diversity: 20 minutes

Mode of engagement

Inform, discuss

Purpose

An introduction to diversity and some of the social consequences of it

Resources

The following background reading is advised

- Intersectionality: <https://www.intersectionaljustice.org/what-is-intersectionality>
- Prejudice, discrimination, and stereotyping: <http://noba.to/jfkx7nrd>

Asking how diverse participants consider the group in the right picture to be, is intended to get them thinking about how we can even define or recognise diversity. It's likely that they will say that, to explain the diversity depends on what characteristics we are comparing, which is the main point here. The second point is that some may also refer to the characters as particular genders, ethnicities or even ages. This provides an opportunity to get participants to reflect on whether they can indeed tell that just by looking at them. Often we can't, with more characteristics being invisible to us, so we shouldn't assume but rather be prepared to ask.

The concept of intersectionality is introduced here too. To learn more about intersectionality there is a link to a webpage in the 'Additional resources' section of this guide.

Generally, working with diverse groups can lead to different biases and it's a two way process! Our thoughts affect how we may regard and treat participants, but their thoughts of us also effect how they interact with our communication efforts. Fiske, 2022, provides a good read on this subject. A link can be found in the 'Additional resources' under 'Prejudice, discrimination, and stereotyping'.

One example of bias is similarity bias, where people deemed more similar are seen more favourably. A potential response to similarity bias is to identify (and demonstrate) ways in which you are similar to your audience, where authentically possible, to increase positive perceptions between you and the audience.

Note: People don't just have biases towards people. They can also avoid particular settings or topics based on preconceptions and biases about what those things represent or involve.

5.1.7 Audience Profiles: 25 minutes

Mode of engagement

Inform, create, discuss

Purpose

To explore how diversity can be considered within society and produce audience profiles based on that knowledge

Resources

Workbook

The main activity in this section is to produce audience profiles, based on some of the characteristics highlighted above but also including any other identifiable characteristics that participants feel are relevant to their context.

To get used to the activity, they should begin by writing down their own profile but only spend a few minutes on it. Then they should make a profile of the characteristics of their most common audiences, to ascertain the diversity of the publics that usually attend their activities. They can just use estimates for this exercise but in their future Science Communication events they could consider trying to collect some of this information for real, or perhaps look for existing research about their region, establishment or audience, if that information exists. National science surveys are a good place to start in some countries. Some links to global surveys are included in the resources of this guide.

For the demographic characteristics, participants can look up the typical demographics of their country or region, to see what publics they could reasonably attract in their locality. They should then compare this to their profile of who typically attends their activities. Are the typical attendees a good representation of the general diversity in that region or are certain groups missing?

The next step is to document the groups or characteristics that are missing or not considered at their events, to identify any potentially marginalised, minoritized or underserved groups. The idea is to find ways to focus on these groups for greater inclusion and involvement in future activities. There is an additional column in the workbook where participants can add their thoughts on HOW they could target these groups. They might source ideas based on their own inspiration, suggestions from other participants, observations of other events, or from related studies in academic literature. We provide an example in the slide following this activity.

5.1.8 Reducing the Gaps: 15 minutes

Mode of engagement

Inform, discuss, reflect

Purpose

To consider guidelines on how to reach underserved audiences and to raise awareness of how our own personal situation in the world effects how we view others

Resources

Facilitator guide

Participants will see seven guidelines on how to reach underserved audiences, taken from *Humm and Schrögel (2020)*. Just read through the guidelines, expanding a little on what they mean for Science Communication. For each guideline the participants should just reflect on whether it is something they already do or whether they see any difficulty in applying it to their own context. The guidelines are summarised below, with a few examples for each. Facilitators should also add their own preferred examples if need be. It is acknowledged that all situations are different and so each participant should focus on their own activities.

This exercise could be extended for longer conversations to be had, and participants could even enter breakout rooms to reflect on their own situations in comparison to others. The timetable should be adjusted accordingly if this is a desired activity.

The guidelines (with examples):

1. Start With Listening, be responsive and meet people on their terms

Example: You have an event with a mixed group of children from a local school who are averse to science.

- You could either ask their teacher in advance about their reservations or preferences for engagement activities.

- You could directly ask the group if you have time and access to them.
- You could offer alternative activities and let them choose their preferred democratically.
- You could ask them questions at the start of the session and let them lead the general discussions within the session. This requires adaptability on the presenters part.

2. Reduce the Distance and Be Accessible, use language common to audience

Example: You will be seeing a group whose characteristics are mostly opposite of yours, whether by gender, age, beliefs about science or religion, language etc.

- You could find out what terms, belief systems they commonly use and incorporate them into your activity.
- You could seek out someone that is familiar with that group, or close to that group and either collaborate with them or get them to present to the group instead.

3. Be Relevant for Everyday Life; bring theory to practice

Example: You would like to target a group that are generally not interested in science.

- You could link science topics to popular topics (sport, celebrity, fashion, entertainment) or anything that the group may already be into.
- You could make it more about enriching other aspects of their life, such as providing an entertaining way to pass the time while interacting with science, showing clear links to employment opportunities, or providing science based methods for achieving things they do on an everyday basis (e.g. life hacks).

4. Go Where People Are; to where they prefer

Example: You discover that some communities never come to your events.

- You could liaise with the community to plan an event within their community, at a place they would usually meet and based on their preferences.
- You could arrange transportation to collect and return people to a place where they would usually meet.

5. Cooperation Is Key, with local stakeholders or target group members

Example: You are tasked to engage a public but you have very little experience communicating with them.

- You could first seek to build a genuine relationship by attending events that they hold or attend, to understand a little about who they are and how you culturally relate.
- Develop activities with somebody from that group.

6. Mind the “Openness Paradox”, a basic agenda can provide direction for participants to engage

Example: You want to work with a group on an activity you are planning, but they have no experience in doing similar types of projects.

- You could make the project as easy to follow as possible, and provide a clear outline of what the project involves.
- Let people join in to the extent that they feel comfortable, and let them take on more or less responsibility for planning depending on their desires and ability.

7. Implement Long-Term Activities. Local groups could start projects to favour longevity

Example: You have funding for one year, to run an activity with a group, but when the funding is over, you will have to move on to another project.

- Be transparent about the temporary nature of the project and assess participants desire to continue it.
- Plan the activity in a way that allows participants to gain the necessary skills to continue it beyond the funding timescale.
- Have the group appoint their own manager on the project and work together with them. Find and provide links to further sources of funding they could explore, and ensure that helping to apply for that funding is something that is integral to the end or hand over of the project.

5.2 Justice, Equity, Diversity and Inclusion in Science Communication

PART 2

5.2.1 Workshop Agenda (Part 2)

Guide times	Section	Section lengths
13:00 – 13:10	Introduction to Part 2	10m
13:10 – 13:20	Seeking inclusion	10m

13:20 – 13:45	Inclusion through diversity	25m
13:45 – 13:55	Inclusive Science Communication	10m
13:55 – 14:05	BREAK	10m
14:05 – 14:20	A focus on Justice	15m
14:20 – 14:50	Science Communication for Justice	30m
14:50 – 15:00	Summary and Reflection (Wrap up)	10m
15:00	End Part 2	

5.2.2 Introduction: 10 minutes

Mode of engagement

Inform

Purpose

To quickly recap part 1 and outline part 2

Resources

Access to relevant online workspace.

This is a straightforward introduction to this part of the workshop, where the last session is recapped and the goals of this session are shown. **Participants** could be asked if they have any questions or concerns before starting.

There are no real activities for this and the next section, so it's just a case of running the content of the slides and expanding on them as and when it becomes necessary. The same applies to the 'Seeking Inclusion' section, so the next active part is 'Inclusion through diversity'.

5.2.3 Inclusion through Diversity: 25 minutes

Mode of engagement

Inform, explore, create

Purpose

Exploring ways to diversify elements of the communication process to boost inclusion

Resources

- Access to relevant online workspace, facilitator guide, workbook

The images represent ways we can have more diversity in Science Communication by looking at elements of a simplified communication process. Namely, this communication process involves a source (producer) of information, that is communicated with some audience (publics), via some actor (practitioner) who does the actual communicating in some setting (place). By targeting diversity within these different areas, we can provide an array of instances for 'science' and publics to interact. This diversity and flexibility within Science Communication can mean that our practices can be made more inclusive of different stakeholders by better catering for their diverse needs and characteristics.

In this activity, participants should think about how they could diversify in one or more of these areas to better cater for groups that don't usually attend their activities. (As highlighted in the audience profile from the first part of the session).

The activity explores the question, how can we make Science Communication more accessible and hence inclusive? It aims to demonstrate how thinking inclusively can cause us to make different choices about where and how we communicate and represent science, as well as expanding what we include as content in our communications. Broadly speaking it explores examples of inclusion through consideration of diverse producers, practitioners and places, to suit diverse publics.

Participants should be divided into breakout groups, with each group discussing and filling in their thoughts on a shared online workspace, such as Padlet or Miro. Here is a link to a Padlet template that you can copy to use for delivering your own workshops (in Padlet you choose the option to "remake", in the settings panel on the right).

<https://padlet.com/globalscicomm/template-inclusion-through-diversity-yi5nh5zev1971s9c>

An example is included so they know how they could fill it in. Alternatively they can note down ideas in their workbooks; there is also space for notes at the back of it. They should keep an eye out for anything that would be particularly relevant to their own practices, especially after the groups rejoin the main room and share what they have come up with.

It also helps if participants are informed that it would be nice if someone in each group could volunteer to share their group's thoughts with the rest of the room afterwards. Mentioning this beforehand means they are mentally prepared for someone in their group to share.

Beyond the session participants should also take time to revisit and consider all of the areas as is relevant to their own contexts.

Below are some questions that each group can consider for each area. Similar questions are also included in the workbook but facilitators are welcome to add or consider alternative questions that they feel are relevant. The participants are welcome to do the same.

Publics

- How varied are your publics' characteristics? Mostly the same age (e.g. school group), gender, race, educational level or well mixed.

- Which publics are typically in your audience? Consider the presence of the different forms of diversity mentioned earlier
- What groups are missing from your audience? In comparison to the potential groups that could be in attendance based on regional population data.
- What languages are common in the region? National and local languages, colloquial or formal language, indigenous languages and dialects, languages of expatriates, immigrants and tourists, literacy levels

Producers

- Which/whose knowledge systems do we include? i.e. Indigenous and local knowledge or just scientific publications. Long established “textbook” knowledge or cutting edge “frontier” knowledge.
- How diverse are the scientists we feature?
- What scientific fields do we shed light on? Formal sciences (e.g. Maths, computer science), natural sciences (e.g. physics, chemistry, biology, astronomy), Applied sciences (e.g. engineering, medicine), social sciences (e.g. psychology, sociology, anthropology, history)
- What themes/topics do we cover? These can typically involve the combination of many different scientific (and non-scientific) fields. Examples include space, food, health, life, the environment, Arabic science etc...

Practitioners

- Who mediates the messages to publics? (how diverse are the characteristics they have?)
- What approaches/styles do they use? (One or two way communication, telling/showing/asking/involving, serious or humour, narratives or just the facts, demonstrations/performance/story telling/graphical, visual, multi-sensory, rhetoric i.e. persuasive technique such as ethos/pathos/logos (speaker credibility/audience’s emotion/logic or reasoning of the argument), frames...)
- What are their goals for communicating? (to inform, educate, convince/persuade, learn about

Places

- Where does communication take place? (in-person or through a medium, Formal/informal settings, public/private, Audience goes to presenter OR presenter goes to audience, community centre or science centre/establishment),
- Which communication mediums are used? Television, Radio, print (newspaper/magazine/comic/poster), Internet (social media and blogs, news websites, journals, science related businesses, etc)

5.2.4 Inclusive Science Communication (ISC): 10 minutes

Mode of engagement

Inform, elaborate

Purpose

To increase awareness of the existence of Inclusive Science Communication (ISC)

Resources

- Facilitator guide
- Link to download the ISC Starter Kit: https://inclusivesciomm.org/wp-content/uploads/sites/1568/ISC-Starter-Kit_FINAL.pdf

Participants are introduced to the practice of Inclusive Science Communication and consider the seven techniques and strategies that have been summarised from the ISC Starter Kit.

The **facilitator** should read out each recommendation and provide an example that relates with the participants, where possible. An example of each is given below, but facilitators should add their own as they see fit.

Watch your language

Be wary of language that might “exclude or oppress” particular groups. This can include offensive terms, scientific jargon, or any vocabulary that is not in common use with much of the audience. Consider checking online if you are in doubt about terms used for audiences or by audiences. Abbreviations are not always universal either.

Engage with different ways of knowing and learning

The “Western or European-centric lens” is not the only way to know, however it is often prioritised. Different cultures have varied means of understanding and describing the world, which we should attempt to recognize, understand and integrate into our communications with those cultures, at the very least. Furthermore, including these diverse perspectives and approaches can enrich how science is communicated, and ensure we don’t potentially neglect valuable cultural expertise, developed over many centuries.

E.g. Some cultures share knowledge through stories, performance (e.g. song, dance and theatre) and art. Many members of society prefer to engage with social media to gain information and discuss science related issues.

Understand you and your organization’s historical, cultural, and political contexts, and your audience’s contexts

We’re all different and the nature of these differences can’t be considered by just looking at the surface. Considering our differences on a wider, more contextual level may help us to avoid assumptions about audiences and also find ways of communicating with them more effectively.

Decenter yourself

We shouldn’t assume we have the answers to other people’s problems. People are mostly “best positioned to know their own priorities, interests and challenges.” So we should show humility, ask before telling, listen (actively) with an open mind, and aim to be responsive to them.

Reflect on power dynamics

Consider your perceived social position compared to your audience. Is your identity perceived as one of someone with power in your society e.g. male, white, older, ableist? This can effect how audiences respond to you, depending on their own perceived power. Reflect on how you can make people feel safe and welcome.

Don't perpetuate exclusive or inequitable practices

Look out for Science Communication practices highlighted as less favourable (e.g. stereotypes and misconceptions) to avoid repeating them.

View this work as a marathon, not a sprint

Take time to build relationships and to develop your ability to be more inclusive in your own practices. Don't expect to immediately do it all, it's a "lifelong process".

5.2.5 Seeking Justice: 10 minutes

Mode of engagement

Inform

Purpose

To introduce concepts of justice and relate them to Science Communication

Resources

- Facilitator guide
- Workbook

Facilitator introduces the four major types of justice and then reveals what they mean one at a time. When each is described a brief example should be provided of what it means or looks like in practice. Other examples could be:

Distributive

E.g. We should all have access to a fair share of energy to power our homes, tools or devices **however** we should also have a fair share of the burden of dealing with the waste products of energy production i.e. pollution. Some regions receive an unfair share of those burdens. Communicating the evidence can bring attention to this and lead to change.

Procedural

Concerns whether judgements and decision making processes are fair. There are four pillars.

- **Voice:** listen to everyone's side of the story.
- **Respect:** treat people with dignity and respect
- **Neutrality:** decisions are unbiased and guided by consistent and transparent reasoning.
- **Trustworthiness:** decision maker conveyed trustworthy motives

Good Science Communication can help scientists to portray these 'actions' or attributes within society, to increase legitimacy and respect; potentially increasing engagement and acceptance of the science. More information can be found here: <https://www.justiceinspectors.gov.uk/hmiprobation/research/the-evidence-base-probation/models-and-principles/procedural-justice/>

Retributive

Basically, an eye for an eye. This is not really a relevant goal for Science Communication.

Restorative

This helps to bring accountability to those perceived to have done 'wrong', whilst helping them to see things from the point of view of those that felt wrong was done to them.

Here is a video explaining the concept in more detail: <https://www.youtube.com/watch?v=KLPZy2wW-x8>

You will have to imagine how to apply this to situations in science and Science Communication where a perceived injustice has or is taking place e.g the disregarding of certain perspectives, how certain groups are presented or under represented, how people are researched upon, how land is used in the pursuit of discovery of progress.

If there is time, after describing all meanings (or after each form of justice is described), the **facilitator** could ask participants if they would like to unmute audio and contribute an example of a situation where Science Communication could be used to achieve that form of justice. It's okay if they have no examples, it may be a very new concept to many. Reveal the simple examples of each, provided on the slide.

The participants may want to go into more detail on each. A few questions are fine but there's no need to spend too long with it at this stage as the concept will be explored further through the following exercise. Reassure the participants that this is the case if needed. Also, feel free to add different examples of how each might apply to and/or be resolved through Science Communication.

5.2.6 Science Communication for Social Justice: 30 minutes

Mode of engagement

Explore, discuss, reflect

Purpose

To provide a way for participants to start thinking about how their Science Communication practices can contribute to a fairer, and hence more just society

Resources

- Access to relevant online workspace, workbook
- Video links:
 - Global justice short video: <https://www.youtube.com/watch?v=rt9D7wH1vRc>
 - Epistemic injustice short video: <https://www.youtube.com/watch?v=xB2QuLx9pMQ>
 - Environmental justice short video: https://www.youtube.com/watch?v=dREtXUij6_c
 - Climate justice short video: <https://www.youtube.com/watch?v=Y3s58Ang5ql>
 - Template link for group work: <https://padlet.com/globalscicomm/template-science-communication-for-justice-ifa03mfxz2i92fzb>

The slides show different domains or contexts for justice, that can be relevant to Science Communication. Five are shown, but they could really just be seen as specific applications of Social Justice in different domains of human life. Nonetheless, the presentation slides have a few examples where Science Communication could be used to seek some form of justice.

It's recommended that two of the examples should be used as an exercise to help participants become more familiar with thinking about issues in terms of a particular context of justice. Start with the 'Social justice' example and then choose any ONE other. (Although if your schedule allows, feel free to go through as many of them as you please). It should be noted that there are many overlaps between the categories and that the given examples don't always fit neatly into just one of the contexts.

When looking at the examples, participants should be asked whether they think it relates to seeking distributional, procedural or restorative justice (or indeed more than one of them). Ask them to also say why they thought that. This is a reflective exercise and there might not always be one simple answer. Remember that "Justice is not absolute, fixed and unyielding" (slide 44).

For the next 15-20 minutes, participants are divided into groups to explore one of the areas of justice. They will view a video (links are clickable on the slides, and are repeated above and in the additional resources) about the particular area of justice and make notes on how they feel it could be addressed by Science Communication practices. Then they should discuss their thoughts with each other in their group. They should note down whether the type of injustice might be a matter of distributive, procedural or restorative justice, AND make suggestions as to how science communicators could adapt or implement practices that help to bring more fairness to the situation.

They can input their thoughts on a shared workspace (online), so all participants can access each other's responses at their own leisure to see how Science Communication could be used to achieve justice in a variety of contexts. A link to a template is provided above. At around 20 minutes, bring the groups back from the breakout rooms to briefly discuss what they came up with. If the conversation is interesting feel free to extend the time here and just do a shorter summary of the session.

One last thing to mention is that information on specific applications of Science Communication to issues of justice is not that widespread. However, there are some notable examples discussing Social justice (Pierce, 2013; Dawson et al, 2022), epistemic justice (Medvecky, 2018), and environmental justice (Polk & Diver, 2020). Also,

publications often do not appear as discussions about Science Communication specifically, but instead might be labelled as “justice in climate communication” or “healthcare communication and justice” for example. As such, participants should be encouraged to share any examples that they might come across that are published in more particular contexts.

5.2.7 Summary and Reflection (Wrap up): 10 minutes

Summarise the key points of the session and check to see if anyone has any further questions or comments.

Participants should be asked to fill out a post training evaluation also. This can also be sent later in an email. A printable version is available in the appendix.

Some people may require a letter of attendance to justify time spent on a training course. There is no formal certificate with this course but facilitators can decide on whether they would like to provide a letter and on what form that should take.

It's also nice to not finish the journey when the workshop ends. The conversations, relationships and potential networking opportunities should continue. This workshop is just the start. As such, if participants haven't already, consider initiating somewhere that participants can network after the event to share ideas and questions after the workshop is complete. If there are no solutions in place, they are welcome to join any of the groups that were set up on the initial delivery of these workshops. There is a LinkedIn group under the name GlobalSciComm, available here: <https://www.linkedin.com/groups/12791037/>

As well as a WhatsApp group, that can be accessed via the following link: <https://chat.whatsapp.com/JgzMQc3gZvC2bs7F6KoRQY>

6. Additional Resources



01. **Concept of a minority – mandate definition**
<https://www.ohchr.org/en/special-procedures/sr-minority-issues/concept-minority-mandate-definition>
02. **Demographic examples**
(and links to other forms of segmentation)
<https://www.questionpro.com/blog/demographic-examples/>
03. **Inclusive Science Communication Starter Kit**
https://inclusivescicomm.org/wp-content/uploads/sites/1568/ISC-Starter-Kit_FINAL.pdf
04. **An Inclusive History of Science Communication**
<https://app.us.lifeology.io/viewer/lifeology/scicomm/a-brief-history-of-science-communication>
05. **YESTEM – Free tools and resources for equitable informal STEM learning**
<https://yestem.org>
06. **Diversci – Practical tools that support your journey to a more diverse, inclusive and equitable organisation**
<https://www.diversci.eu>
07. **Prejudice, discrimination, and stereotyping**
<http://noba.to/jfkx7nrd>



08. **Intersectionality**
<https://www.intersectionaljustice.org/what-is-intersectionality>

09. **Global justice short video**
<https://www.youtube.com/watch?v=rt9D7wH1vRc>

10. **Epistemic injustice short video**
<https://www.youtube.com/watch?v=xB2QuLx9pMQ>

11. **Environmental justice short video**
https://www.youtube.com/watch?v=dREtXUij6_c

12. **Learn about environmental justice**
<https://www.epa.gov/environmentaljustice/learn-about-environmental-justice>

13. **Climate justice short video**
<https://www.youtube.com/watch?v=Y3s58Ang5ql>

14. **Learn about climate justice**
https://www.mrfcj.org/pdf/Geography_of_Climate_Justice_Introductory_Resource.pdf

7. References



- Achiam et al, 2022 (Achiam, M., Kupper, F. and Roche, J. (2022). 'Inclusion, reflection and co-creation: responsible Science Communication across the globe'. JCOM 21 (04), E. <https://doi.org/10.22323/2.21040501>)
- Canfield KN, Menezes S, Matsuda SB, Moore A, Mosley Austin AN, Dewsbury BM, Feliú-Mójer MI, McDuffie KWB, Moore K, Reich CA, Smith HM and Taylor C. (2020). Science Communication Demands a Critical Approach That Centers Inclusion, Equity, and Intersectionality. *Front. Commun.* 5:2. doi: 10.3389/fcomm.2020.00002
- Canfield, K. & Menezes, S. (2020). *The State of Inclusive Science Communication: A Landscape Study*. Metcalf Institute, University of Rhode Island. Kingston, RI. 77 pp.)
- Dawson, E., Hughes, S. Lock, S. J. and Wahome, M. (2022). 'Exploring the politics of Science Communication research: looking at Science Communication from a social justice perspective'. JCOM 21 (07), C05. <https://doi.org/10.22323/2.21070305>
- Dudo, A., Besley, J.C., and Yuan, S., (2020), Science Communication Training in North America: Preparing Whom to Do What With What Effect?, *Science Communication*, 43:1, 33-63
- Finlay, S. M., Raman, S., Rasekoala, E., Mignan, V., Dawson, E., Neeley, L. and Orthia, L. A. (2021). 'From the margins to the mainstream: deconstructing Science Communication as a white, Western paradigm'. JCOM 20 (01), C02. <https://doi.org/10.22323/2.20010302>
- Heslop, C., Dudo, A., and Besley, J. (September, 2021). *Landscape of the UK science engagement training community*. Center for Media Engagement. <https://mediaengagement.org/wp-content/uploads/2021/09/Landscape-of-the-UK-Science-Engagement-Training-Community.pdf>
- Hodkinson, A. (2011). Inclusion: A Defining Definition?. *Power and Education*. 3. 179. 10.2304/power.2011.3.2.179
- HSE, (12th Nov 2021), Working safely with display screen equipment, Health and Safety Executive, <https://www.hse.gov.uk/msd/dse/work-routine.htm>
- Judd K and McKinnon M (2021) A Systematic Map of Inclusion, Equity and Diversity in Science Communication Research: Do We Practice what We Preach?. *Front. Commun.* 6:744365. doi: 10.3389/fcomm.2021.744365
- Medvecky F. (2018). Fairness in Knowing: Science Communication and Epistemic Justice. *Science and engineering ethics*, 24(5), 1393–1408. <https://doi.org/10.1007/s11948-017-9977-0>
- Mehta, D; Bediako, Y; de Winde, C M; Ebrahimi, H ; Fernández-Chiappe, F; Ilangovan, V; Quezada, C P; Riley, J L; Saladi, S M; Tay, A; Weissgerber, T. (2020) Research Communication: Ways to increase equity, diversity and inclusion, *eLife* 9:e60438, <https://doi.org/10.7554/eLife.60438>
- Pierce, R L. (2013). A Role for Social Justice in Science Communication?. Jean Goodwin, Michael F. Dahlstrom, and Susanna Priest (Ed.), *Ethical Issues in Science Communication: A Theory-Based Approach*. <https://doi.org/10.31274/sciencecommunication-180809-42>
- Polk, E and Diver, S (2020) Situating the Scientist: Creating Inclusive Science Communication Through Equity Framing and Environmental Justice. *Front. Commun.* 5:6. doi:10.3389/fcomm.2020.00000 – <https://www.frontiersin.org/articles/10.3389/fcomm.2020.00006/full>
- Ruzycki, S.M., Ahmed, S.B. (2022), Equity, diversity and inclusion are foundational research skills. *Nat Hum Behav* 6, 910–912. <https://doi.org/10.1038/s41562-022-01406->

8. Appendixes



Appendix A: Slide guide for Part 1

Section guide times	Slide number and title	Approx. activity length
Introduction 09:00 – 09:10	1. Justice, Equity, Diversity & Inclusion (JEDI) in Science Communication	1m
	2. Disclaimer	1m
	3. Introduction to presenter and warm up	4m
	4. Workshop relevance	2m
	5. Session 1 goal	2m
Getting to know (Icebreaker) 09:10 – 09:25	6. Getting to know	10m
JEDI in Science Communication 09:25 – 09:40	7. JEDI in Science Communication	–
	8. A Human Right	1m
	9. Why focus on JEDI?	4m
	10. Quick Poll	3m
	11. A Systematic Map of Inclusion, Equity and Diversity in Science Communication Research	7m
Science Communication and equity 09:40 – 09:50	13. Science Communication and Equity	1m
	14. Equality/Equity	5m
	15. Creating Inclusive Science Communication Through Equity Framing and Environmental Justice	1m
	16. Equity Compass: A tool for supporting socially just practice	3m
BREAK 09:50 – 10:00	17. –	10m
Considering Diversity 10:00 – 10:20	18. Considering diversity	–
	19. What is diverse about this group?	5m
	20. Diversity: Be aware of Biases	3m
	21. Discrimination	2m
	22. Levels of cultural diversity	5m
	23. A diverse world	5m
Audience profiles 10:20 – 10:45	24. Audience profiles: It's complicated	25m
Reducing the gaps 10:45 – 11:00	25. Reducing the gaps	–
	26. Practical Recommendations on Reaching Underserved Audiences	8m
	27. Summary of session 1	2m
	28. Any questions?	5m
END OF PART 1 11:00	–	–

Appendix B: Slide guide for Part 2



Section guide times	Slide number and title	Approx. activity length
Introduction to Part 2 13:00 – 13:10	29. Justice, Equity, Diversity & Inclusion (JEDI) in Science Communication	–
	30. Recap of session 1	2m
	31. Session 2 goal	2m
Seeking Inclusion 13:10 – 13:20	32. Seeking inclusion	–
	33. Exclusion	4m
	34. Inclusion = removal of barriers?	3m
	35. Inclusion	2m
	36. Equality/equity	1m
Inclusion through diversity 13:20 – 13:45	37. Inclusion through diversity, but not just of people!	25m
Inclusive Science Communication (ISC) 13:45 – 13:55	38. Inclusive Science Communication (ISC)	4m
	39. Inclusion: Guide from ISC starter kit	6m
BREAK 14:00 – 14:10	40. –	10m
A focus on Justice 14:05 – 14:20	41. A focus on Justice	2m
	42. Access to Justice	1m
	43. What is Justice?	1m
	44. Justice is not absolute, fixed and unyielding...	1m
	45. Seeking justice	10m
Science Communication for Social justice 14:20 – 14:50	46. Science Communication for Justice	3m
	47. Social Justice	3m
	48. Epistemic Injustice	–
	50. Environmental Justice	–
	52. Climate Justice	–
	53. Global Justice	3m
	56. Science Communication for Social justice	20m
Summary and reflection 14:50 – 15:00	57. Summary of session 2	2m
	58. Any questions?	8m
END OF PART 2 15:00	59. Evaluate this session please	–
	60. References	–
	63. Additional resources	–



Appendix C: Pre-Evaluation Survey (example)

Justice, Equity, Diversity and Inclusion (JEDI) in Science Communication (Pre-workshop survey)

So that we have a better idea of you and your interests we ask that you fill out this short pre-workshop survey. It should only take a few minutes.

Please fill in the survey at least three days before the date of the first session of your workshop.

Many thanks!

In which country do you mostly communicate science?

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**How many years of experience do you
have in Science Communication?**

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What area(s) of Science Communication are you involved in? (E.g. journalism, museums, scientist communicator, Science Communication research, performer, lecturer etc)

.....
.....
.....
.....
.....

How much of a priority is justice, equity, diversity and inclusion within your Science Communication practices?

Low priority Medium priority High priority Not sure

Justice

Equity

Diversity

Inclusion

What do you hope to learn/gain from this session?

.....
.....
.....
.....
.....



Appendix D: Post-evaluation Survey (example)

Justice, Equity, Diversity and Inclusion (JEDI) in Science Communication (Post-workshop survey)

Thank you for attending this workshop.

So we can improve on the workshop and understand what worked or did not work, we'd appreciate if you could fill in this short survey. It should only take a few minutes.

Many thanks!

**As a result of this workshop, my knowledge
of the following areas has...**

Not changed Increased a little Increased a lot

Justice

Equity

Diversity

Inclusion

**Can you write down two (or more) useful things
that you remember from the sessions?**

.....
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.....
.....
.....
.....
.....
.....

How has this workshop affected your confidence towards prioritising JEDI in your practices?

Less confident

Same confidence as before

More confident

Not sure

Is there anything you would change or improve about this workshop?

.....

.....

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.....

Would you recommend this workshop to a friend or colleague?

(1 = not likely at all; 10 = very likely)

1 2 3 4 5 6 7 8 9 10

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Justice, Equity, Diversity and Inclusion in **Science** **Communication**

FACILITATOR GUIDE

