

Global Relevance 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 communicators?

Science and the varied publics for Science Communication straddle borders and interact on an increasingly global level. By adopting globally relevant practices we can better represent and respond to the interactions between science and societies around the world.

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1. Introduction



“A global citizen is someone who is aware of and understands the wider world – and their place in it. They are a citizen of the world. They take an active role in their community and work with others to make our planet more peaceful, sustainable and fairer.”

(Oxfam, 2008)



The world is constantly changing and science and technology has played a major part in that change. Science and technology have improved the quality of life for many, including transportation and digital technologies that have brought the world closer together than ever before. Improved communication technologies have increased the speed at which knowledge and ideas can be transferred, as well as the number and diversity of people who can be involved in this transfer. On the other hand, improved transportation has made the world more physically accessible, increasing the propagation of products and ideas (Renn & Hyman, 2012). Although, inadvertently it also played a key part in the spread of many historical pandemics, including the most recent Corona outbreak (Luke and Rodrigue, 2008; Park & Kim, 2021). Nonetheless, improved transportation and communication not only meant that news of the recent pandemic and potential solutions could be shared quickly and effectively across the globe, it also meant that aid could be more effectively distributed to the places that needed it most. In many ways, the global response to Corona virus exemplifies the growing playing field that modern Science Communication must navigate.

Science is inherently a global enterprise and that means science communicators literally have a world of opportunities. In particular, global issues such as climate change, sustainability, global pandemics and pharmaceutical development (Murdan, 2014) have increasingly made us aware that to solve some of our biggest problems requires sharing, collaboration and actions that reach beyond national borders. Good Science Communication, including the research behind it, has a major part to play in this, although some nations appear to have more capacity than others (Guenther & Joubert, 2017; Gascoigne et al, 2020; Trench & Bucchi, 2021). However, despite the uneven distribution and development of Science Communication across the globe, its widespread presence is still encouraging.

As Science Communication practitioners, we fundamentally feel value in what we do but our experiences and perceptions are vastly different. This can be seen amongst different types of Science Communication practitioners both within countries and between countries. Thus, to really appreciate the value of Science Communication on a global level, it would help to understand a bit more about the experiences and contexts of science communicators across the globe. The GlobalSCAPE project is one step towards that, with the principal objective of generating a detailed picture of Science Communication in a global context, with particular attention given to the lesser heard voices in Science Communication. In short, our notions of Science Communication should not just be developed and sourced from the usual voices in science and Science Communication, but should come from a wide range of sources across the globe. After all, many of the problems we face are Global in nature and so activities/collaborations should reflect that to ensure we can develop and rely on more globally relevant approaches to Science Communication.



2. Workshop Overview

This Global Relevance in Science Communication workshop is intended to be a means of bringing Science Communication practitioners from diverse fields and backgrounds into closer contact with each other and some of the research supporting the global field of Science Communication.



After introducing the presenter and background to the workshop, there is an opportunity for participants to get to know each other. They will discuss the opportunities and challenges in their region to learn first hand about different global perspectives for Science Communication. A pre-workshop activity already sets them up for this interaction.

Various global comparisons of Science Communication are then explored in the following slides to look at differences in the research and practice landscapes across the globe, as well as considering ways to actually compare Science Communication between nations. This includes a consideration of what actually constitutes Science Communication within different nations.

The Global spread of Science Communication is then explored, through the lens of globalisation before arriving at the notion of what it could actually mean to be globally relevant in Science Communication. Part one ends with the suggestion of a post session activity where participants are encouraged to think about their goals for communicating science, as well as how global relevance could help them achieve those goals.

In Part two of the workshop the idea of 'Glocalisation' is introduced, along with a framework for exploring it further, based on the principle of localisation. Participants then get an opportunity to consider how local influences impact their own Science Communication practices before splitting into groups to reflect upon how this compares to some of their global colleagues.

The session then comes together at the end to summarise and outline what participants should consider when hoping to use a 'glocal' approach for their own Science Communication practices.

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 Pre-Workshop

5.1.1 Global Views on Science Communication

Mode of engagement

Personal exercise

Purpose

To recognise the presence and different perspectives of Science Communication practitioners in different regions

Resources (Online)

Internet access, relevant links to online platform (e.g. Padlet)

Description

There are two things for participants to do in preparation for this workshop. Combined they should take less than 10 minutes. To do the activities, participants just click on the relevant links, provided below.

For **Activity 1**, they are asked to share what they feel are the opportunities and challenges for Communicating Science in their region. When they open up the Padlet link, they can see instructions on the top left of the webpage, along with information from previous participants' responses. They should be encouraged to add to this information and also to feel free to look at how varied or similar their colleagues' perceived situations are.

This is the link they can follow: <https://padlet.com/globalscicomm/what-are-the-opportunities-and-challenges-for-communicating--ltzxzs14s3ovp5b>

Activity 2 asks “What are your preferred definitions for Science Communication?”

It's widely known that we don't all operate within an exact definition of Science Communication, and later in the workshop we also discover that we don't all use the same terminology. So this is an opportunity to get an idea of what practitioners feel they are doing when they talk about doing Science Communication. You can collect responses only for your workshop(s) or feel free to get them to add their responses to the accumulative resource at the following link: <https://padlet.com/globalscicomm/favourite-definitions-for-science-communication-jaapwe8th97afx6>

Things to consider

The **facilitator** should aim to send this information to the participants at least a week before the session.

5.2 Global Relevance in Science Communication

PART 1

5.2.1 Workshop Agenda (Part 1)

Guide times	Section	Section lengths
09:00 – 09:10	Introduction	10m
09:10 – 09:25	Opportunities and challenges	15m
09:25 – 09:40	Global comparisons	15m
09:40 – 09:55	Global Science Communication?	15m
09:55 – 10:05	BREAK	10m
10:05 – 10:40	Globalisation in Science Communication	35m
10:40 – 11:00	Globally relevant Science Communication	40m
11:00	End Part 1	

5.2.2 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 add to their name the country they are from. This can give a rough indication of the contexts each person is speaking from. If using an online platform such as Zoom, ensure that the option is selected that allows participants to change their names. If you don't have administrator control over this option, then an alternative is for participants to share their response via the chat function. Feel free to spend a minute highlighting a few (or all) of the participants responses so everyone knows how diverse (or not) the room's nationalities/contexts are.

Read through the next slides to outline the relevance and goals of the module, before introducing the icebreaker task.

5.2.3 Icebreaker: Opportunities & Challenges: 15 minutes

Mode of engagement

Breakout group discussion

Purpose

To initiate relationships between participants and highlight their particular regional perspective

Resources

- Access to the relevant web pages, workbook
- Opportunities and Challenges Padlet map: <https://padlet.com/globalscicomm/tzxzs14s3ovp5b>
- Science Communication definitions Padlet: <https://padlet.com/globalscicomm/jaapwe8th97afx6>

In groups, participants will share some of the opportunities and challenges that they experience in their region or country when communicating science. The idea here is to get to know each other but also to share each other's experiences with Science Communication, which may be similar or very different.

Some space is provided in the workbook for them to make personal notes on any opportunities or challenges that other regions have in common with their region, or any other interesting factors that they find relevant.

Things to consider

- Instructions for this activity are provided in the workbook.
- The **facilitator** can separate the room into groups or let the room choose their groups.
- Around four or five participants per group is ideal.
- Let participants know how much time they will have to discuss and mention that it would be nice to hear from anyone afterwards who found they had interesting things in common with others
- Often participants quite enjoy sharing with each other, in which case feel free to extend it by a few minutes.
- Provide a two/three minute warning before the groups must rejoin the main room

5.2.4 Global Science Communication Indicators: ~ minutes

Mode of engagement

Self reflection. Participants explore this in their own time

Purpose

For participants to consider the presence and range of Science Communication in their own country and to know what aspects can be useful to consider when doing so

Resources

Workbook

The three publications presented on the slide have thought about aspects that can be used to compare the state of Science Communication within different nations. Ask participants to consider which ones they personally have involvement with or rely on. How prevalent do they feel the indicators are in their own country? How do they regard the state of Science Communication in their region?

Focussing on the fourteen indicators used by Gascoigne et al, 2020, participants should consider how many they are aware of in their own country. The workbook has a template where they can record their thoughts. Encourage participants to see if they can find more specific details from anywhere, to update their initial thoughts. This is a useful exercise for getting more knowledgeable about the presence and range of Science Communication in their own country.

Things to consider

This could also be included as a pre-workshop activity and then time could be taken within the session for participants to compare the apparent situations within their own regions. This could be taken a step further by considering it alongside the opportunities and challenges they perceive in their countries.

5.2.5 12 Quality Indicators of Science Communication: 5 + 5 minutes

Mode of engagement

Watch a video individually, to reflect on content as a full room

Purpose

To consider what could be involved in providing quality Science Communication and whether this can be equally applied globally

Resources

Access to the relevant web pages, workbook

Webpages

12 Quality indicators video: <https://www.youtube.com/watch?v=a2rE1FEkDuA>

This activity is only given a short, introductory treatment within this workshop but participants should be encouraged to revisit the activity in their own time, spending longer to consider how it applies to their own practices. Within this workshop, the activity is introduced before the break and concluded after the break. The intention is that the break provides a little mental space for ideas to settle and initial opinions to form, due to the limited time allocated in the workshop.

Briefly introduce the indicators, and then provide a link to a video, which provides a quick overview of the Indicators. The link is provided in the additional resources. When online, participants follow the link on their own system so they can better respond to any connection or bandwidth issues. If in person then it can be showed to everyone at once. It is in English but consider translating if you feel it will be of benefit to your participants.

After the break, ask participants to share how relevant they feel the indicators are to their area of Science Communication (e.g. journalists, museum staff, researchers, performers etc) and also how relevant they are within their region. This can also be done using a voting system, where they can choose between very relevant, quite relevant, or not relevant at all. After the quick vote, ask if anyone would like to explain further, especially if they didn't find anything to be very relevant.

Things to consider

Extend the activity by a few minutes if the conversation require it. There are definite reasons why they will have different relevance for participants E.g. Entertaining children requires a different approach than communicating a global pandemic for example. This activity could also be used as a bigger activity where participants spend more time considering the application of the indicators to their own region and field of Science Communication and then discuss ways to embed the ideas within their practice.

5.2.6 Global Spread of Science Communication Formats: 30 minutes

Mode of engagement

Work in groups, to explore online sources. Groups record their thoughts online

Purpose

To consider Science Communication in the context of globalisation by assessing globally successful Science Communication formats

Resources

- Access to the relevant web pages, workbook.
- For in-person you might want to use Marker pens and large sheets of paper.
- Workspace templates: <https://padlet.com/globalscicomm/template-how-can-science-communication-formats-spread-across-b017cqyi86tb7gzp>

(Please create your own free account on Padlet, then go to “remake” in the options panel, to make your own duplicate of this template, for use in your workshops)

In groups, **participants** will spend around 20 minutes investigating one of the global Science Communication formats.

They will be looking to assess the format via the four considerations of globalisation, presented on the slides. The workbook has a brief description of the activity along with space to record participant’s thoughts. It also has website links that participants can follow to learn more about their particular format. Reassure participants that this exercise is ultimately a reflective exercise based on their own **OPINIONS** of what they can gather in the short allotted time. If you wanted to spend longer on this activity, there are more links provided in the Appendix, where they can delve deeper. You should double-check that all the links work **BEFORE** you deliver the workshop. Also be prepared to post a set of links directly in the chat so the participants can just click on them, if working from a printed workbook. Links should also be added or removed if needed or as appropriate.

You can also create an online working space for groups to record their thoughts. A link to a Padlet template is provided above and in the workbook. (Remember to adapt it and include a link to your own version in the workbooks you provide to your participants, as the template provided here will **NOT** allow posting or editing).

The groups could spend about ten minutes or so looking thorough the webpage links and then spend about 10 minutes consolidating their thoughts, however it depends on what works best for them. Be sure to let them know when there’s ten and then five minutes left so they can prepare to finish up the activity. Ask them to consider someone in their group who would be prepared to present back to the rest of the room, if time allows. It could be one person or split between them.

While the teams are working, it helps if you look at what they input on the Padlet, to try and consolidate some of the ideas for a brief discussion afterwards. It’s important that participants don’t get too in-depth with their assessment. It’s just to get a general idea of how the formats function globally, and it’s okay to express a loose opinion based on what has been seen.

When back in the room, there will be less than ten minutes for groups to report back and discuss anything interesting as a room. So first ask if any groups would particularly like to share their comments first and just do a few groups, highlighting interesting notes as you progress. Feel free to adjust this activity's length depending on your particular goals for the workshop.

The aim is to reflect upon the similarities or differences between the global formats to see different ways in which Science Communication formats have successfully spread globally.

Things participants might notice

Simplicity of formats makes them easy to follow/adopt, relevance to needs of local scientists.

5.2.7 Post-session Activity: 15 – 30 minutes

Mode of engagement

Self reflection. Participants explore this in their own time, before Part 2 of the workshop

Purpose

For participants to start thinking about HOW they can apply the lessons of this workshop into their practices

Resources

- Workbook
- Khan academy: How to write a SMART Goal: <https://www.youtube.com/watch?v=U4IU-y9-J8Q>
- Better than yesterday: Setting SMART Goals: <https://www.youtube.com/watch?v=PCRSVRD2EAK>

This activity gets participants to record their personal goal(s) for communicating science and goes further in asking them to think about how being globally relevant could help them to achieve those goals. In particular, the aim is to prompt an awareness of setting goals that are SMART i.e. specific, measurable, achievable, relevant, time bound.

Mention to participants that the videos should be watched before the next session if they are unfamiliar with SMART goals. If they write their goals in the workbook, they can adapt and extend upon it, as needed, throughout the remainder of the workshop.

Learning how to write SMART goals could be the topic of a whole workshop in itself but as it's not the main goals of this workshop, this is at least an opportunity to introduce the idea to anybody who might be unfamiliar with it.

5.3 Global Relevance in Science Communication

PART 2

5.3.1 Workshop Agenda (Part 2)

Guide times	Section	Section lengths
13:00 – 13:05	Introduction to Part 2	5m
13:05 – 13:20	'Glocal' Science Communication	15m
13:20 – 14:00	Prioritising the local	40m
14:00 – 14:10	BREAK	10m
14:10 – 14:45	7-steps for a 'glocal' approach to Science Communication	35m
14:45 – 15:00	Summary and Reflection	15m
15:00	End Part 2	

5.3.2 Glocal Science Communication: 15 minutes

Mode of engagement

Inform, outline, discuss

Purpose

To introduce the idea of glocalisation and how it can be considered within Science Communication

Resources

Workbook. Access to relevant online platforms

Introduce the terms and concept of glocalisation. Once the idea of local lenses is introduced, ask the room what local lenses they feel would affect the communication of science in their region.

It can be a good idea to get them to join an online voting platform to gather their responses. Mentimeter is an option which allows a Wordcloud to be produced of participants' responses but they could also add responses directly into the chat function on Zoom the instant Wordclouds was unavailable for any reason. For in person events suggestions could be placed on Post-it notes and then stuck to a wall. This could take a little longer than if done online, so adapt the timings accordingly.

Once suggestions have been collected, then outline the 5Ps (publics, practitioners, producers, places and pillars) as a way to categorise and identify potential "local lenses". (See slide deck for more information). Do any of the participants suggestions not fit under the 5Ps?

Stress that the 5Ps are not an exhaustive list and that there may be other things that could be considered. Participants should be encouraged to suggest any others they can think of and open up the room for thoughts and comments about 'glocalisation' and the 5Ps.

The next ten minutes or so should be spent going through each of the 5P local lenses in a bit more detail to provide more insight into what they can entail. While each one is detailed, participants should use the workbook to write down their initial feelings about how the lens can help or hinder Science Communication in their region, in their opinion. They shouldn't think too hard about each one, but just write down anything and everything that springs to mind as they hear the descriptions. They will have an opportunity to think about each one further and for a longer time when they breakout into groups to compare their perception of the lenses in their region, with that of participants from other regions.

They can use the first two columns in the workbook for this stage.

5.3.3 Prioritising the Local: 40 minutes

Mode of engagement

Inform, explore, discuss

Purpose

To explore 'localisation' and how it can be applied in Science Communication

Resources

- Workbook. Access to relevant online workspace. For in person consider using A3 or bigger sheet and Markers/pens.
- Link to template for a shared workspace: <https://padlet.com/globalscicomm/template-prioritising-the-local-5ps-9dhus3xdce92h1i8>

Note: You must 'remake' this template to create a different link for use in your own workshop.

Participants are split into groups of no more than 5 per group. This gives an opportunity for them to meet with colleagues from different regions and to share some more about their particular contexts but in terms of the 'local lenses' that can affect communication. They should consider how the **strengths** and **limitations** vary or overlap

between them. Groups should note down their thoughts on a **shared online workspace** (such as the Padlet template provided on the link above) so the whole room can access everyone else's comments.

Alternatively, if in person, all the groups' contributions can be pinned up on a wall or laid out on a table. The facilitator and/or participants can also take a picture for their records or to share with the group later. Participants should be encouraged to also note down any interesting/relevant thoughts or points at the end of their workbook, to inform their own future practice.

Participants have ~20 minutes to share and record in their groups. While they do so, ask them to keep in the back of their mind, what's does the local lens have to gain from Science Communication activities. This can help to indicate how they might become motivated to take on behaviours that could help or promote the communication of science, if they do not already. Global colleagues may already hold insights into how they could be approached.

Before they break into groups, let them know that it would be nice to hear back from some of the groups about their experiences in this activity. Did they find anything particularly interesting?

It might be a good idea to suggest they choose someone to report back, or even share the responsibility if preferred. There should ideally be up to 5 min of reflection time at the end for participants to reflect on whether and how they already localise, and if not, whether any of these approaches seem feasible for them to adopt and adapt. In practice, the more varied the regions of the participants in each group, the more they seem to gain from this exercise.

5.3.4 A 7-step Guide for a 'glocal' Approach to Science Communication: 35 minutes

Mode of engagement

Outline, create, share

Purpose

To practice implementing a glocal approach to Science Communication practice

Resources

- Workbook. Time to reflect
- Access to relevant online workspace

The final part of the day involves participants applying a glocal approach to their own science communication practice.

Introduce the 7-step guide and go through each of the steps. It should be mentioned that they should be seen more like things to think about when aiming to increase global relevance and that doing any one of them can contribute positively. Although the real benefit would be in using it as a way of reassessing our own practices to see where we could make them more suitable for specific global audiences.

Participants have twenty minutes to sketch out a plan for glocalising one of their own activities. This part depends

a great deal on how much experience they have with Science Communication and on whether they already have clear goals that they have been pursuing. As such, they should be encouraged to seek clarification or assistance from the facilitator as often as is needed, as any answers can help to provide insight to others. Another option is to suggest that participants send direct messages to you as a facilitator.

You might even find it useful to open up a few breakout rooms, each one addressing a different theme or step, so that participants can join to share and gain particular insights into one of the steps. This is great when their are vastly different levels of experience, as often there are people that have much more expertise and experience in some areas than others, and so can collectively provide perspectives and insights that exceed the capabilities of a single facilitator.

Note: In practice, this would take hours or even days to plan or implement properly through researching the various needs of the intended locale, consulting or setting up partnerships with local groups or individuals (i.e. 5Ps), and constantly reflecting on the relevance of our Science Communication practices to these local groups. As such, this short exercise is just to get a basic idea of how to apply a glocal approach, based on a very limited assessment of particular local contexts.

It should be stressed again that it's unlikely that ALL the elements described in this guide will always apply or that they all have to be implemented to attempt glocalisation. However by making an effort to apply as many as is feasible, practitioners can better cater for potential global audiences that they might communicate with, be more targeted in their global Science Communication practices, and ultimately increase the relevance and scope of their communications.

After about 25 minutes and/or depending on the participants, participants should be asked if they would like to share their glocalised activity with the room for peer feedback and also to discuss any difficulties they experienced in applying the approach.

5.3.5 Summary and Reflection (Wrap up): 15 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



Videos

Introduction to Science Communication (YouTube course)

<https://www.youtube.com/watch?v=e7AykRyW3QI>

12 Quality indicators for Science Communication (Video summary)

<https://www.youtube.com/watch?v=a2rE1FEkDuA>

How to write a SMART goal (Khan Academy)

<https://www.youtube.com/watch?v=U4IU-y9-J8Q>

Setting SMART Goals (Better than yesterday)

<https://www.youtube.com/watch?v=PCRSVRD2Eak>

Localisation: What does it mean? (Viewed in a humanitarian context)

<https://www.youtube.com/watch?v=Syj2zkljqs4>

Global Trends in Science Communication

(The SciComm Huddle 2021 – Has some sound/audience issues but the video overall is very insightful)

<https://www.youtube.com/watch?v=hDpp-bmgi7E>



Books, Papers on global issues

Communicating Science: A Global Perspective (Free PDF download)

<https://press.anu.edu.au/publications/communicating-science>

Global Science Journalism Report 2021: Working Conditions and Practices, Professional Ethos and Future Expectations

<https://www.scidev.net/wp-content/uploads/Global-Science-Journalism-Report-2021.pdf>

UNESCO Science Report 2021: The Race Against Time for Smarter Development – Executive Summary. UNESCO Publishing: Paris

<https://www.unesco.org/reports/science/2021/en>

Wellcome Global monitor 2018

<https://wellcome.org/reports/wellcome-global-monitor/2018>

Wellcome Global monitor 2020

<https://wellcome.org/reports/wellcome-global-monitor-covid-19/2020>



More about some of the topics in this workshop

Márquez MC and Porrás AM (2020) **Science Communication in Multiple Languages** Is Critical to Its Effectiveness. *Front. Commun.* 5:31. doi:10.3389/fcomm.2020.00031

https://www.researchgate.net/publication/341574117_Science_Communication_in_Multiple_Languages_Is_Critical_to_Its_Effectiveness

Globalisation to Glocalisation: A Conceptual Exploration

https://www.researchgate.net/publication/277171100_Globalisation_to_Glocalisation_A_Conceptual_Exploration

Globalisation and localization

<https://www.semanticscholar.org/paper/2-GLOBALIZATION-AND-LOCALIZATION-Voisey-O'Riordan/6130a9da10fb70a2104ac8539563d3cd305d40b5>

12 Quality indicators for Science Communication (guide booklet)

<https://questproject.eu/download/12-quality-indicators-for-science-communication-guide-for-science-communicators/>

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- Trench, B and Bucchi, M. (2021), Global spread of Science Communication: Institutions and practices across continents. In Routledge handbook of public communication of science and technology, 3rd Ed, Routledge

8. Appendices



Appendix A: Slide guide for Part 1

Section guide times	Slide number and title	Approx. activity length
Introduction 09:00 – 09:10	1. Global Relevance in Science Communication	–
	2. Disclaimer	1m
	3. Introduction to presenter and Warm up	2m
	4. Workshop relevance	1m
	5. Session 1 goal	1m
Global perceptions 09:10 – 09:25	6. Opportunities and challenges	10m
	7. Global perceptions of Science Communication	5m
Global comparisons 09:25 – 09:40	8. Challenges: Global research literature	3m
	9. A World Map of Science Communication research	2m
	10. A global perspective	4m
	11. Global Science Communication indicators	5m
	12. Worldwide database of programmes and courses in Science Communication	1m
Global Science Communication? 09:40 – 09:55	13. Terminology	6m
	15. Favourite definitions	4m
	16. 12 Quality Indicators (watch video)	5m
BREAK 09:55 – 10:05	–	10m
Globalisation in Science Communication 10:05 – 10:40	18. 12 Quality Indicators (Share thoughts on relevance)	5m
	19. Global relevance in Science Communication	1m
	20. Globalisation	1m
	21. Negative associations	1m
	22. A broad definition of globalisation	1m
	23. In a Science Communication context	1m
	24. Global spread of Science Communication formats	25m
	26. Globally relevant Science Communication	2m
Globally relevant Science Communication 10:40 – 11:00	28. Examples of globally relevant Science Communication	3m
	29. What goals can I achieve through global relevance?	5m
	30. Summary of session 1	2m
	31. Useful to consider for the next session	3m
	32. 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 – 13:05	33. Introduction	1m
	34. Recap of session 1	2m
	35. Session 2 goal	2m
'Glocal' Science Communication 13:05 – 13:20	36. Glocalisation in Science Communication	1m
	37. Dochakuka	1m
	38. Localisation	2m
	39. Glocalisation	2m
	40. Local lenses to consider (5Ps)	1m
	41. Publics, practitioners, producers, places, pillars	10m
Prioritising the local 13:20 – 14:00	46. Thoughts on Glocalisation and local lenses	1m
	47. Prioritising the local	1m
	48. Template guide	1m
	49. Localisation through 5Ps	27m
BREAK 14:00 – 14:10	50. Common strengths or limitations	11m
	–	10m
7-steps for a 'glocal' approach to Science Communication 14:10 – 14:45	52. 7-step guide for a glocal approach	1m
	53. 7-step guide for a glocal approach	6m
	54. 7-step guide for a glocal approach	18m
	Share and discuss	10m
Summary and reflection 14:45 – 15:00	55. Summary of session 2	3m
	56. Any questions?	10 min
END OF PART 2 15:00	58. Evaluate the session	–
	59. References	–
	60. Additional resources	–



Appendix C: Pre-Evaluation Survey

Global relevance 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!

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)

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In which country does most of your Science Communication activities take place?

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In which way(s) does your Science Communication work apply outside of your country?

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What do you hope to gain from this session?

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Appendix D: Post-evaluation survey (Example)

Global relevance in Science Communication (Pre-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 about Science Communication across the globe has...

Increased a lot

Increased a little

Stayed the same

As a result of this workshop, my knowledge about Science Communication across the globe has...

Highly agree

Slightly agree

No difference

Slightly disagree

Highly disagree

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

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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

Appendix E: Additional links for Global Science Communication formats



Source	Famelab	Pint of Science	Science Cafe/ Cafe Scientifique
Main websites of the format	<i>Brief history of Famelab</i> <i>Effect on young STEM researchers</i>	<i>Brief overview</i> <i>List of countries</i>	<i>Brief information and country map</i> <i>More information</i>
Articles/ Research papers	<i>Egypt/UK comparison (2016)</i>	<i>More in-depth report by founders of the format (2016)</i>	<i>Cross cultural adaptation (2009)</i>
Articles/ Research papers	<i>Italy PR and guide (2021)</i>	<i>First in Asia (2017)</i>	<i>Analysis of effectiveness (2014)</i>
Articles/ Research papers/ YouTube link	<i>Famelab Spain</i> <i>Famelab Egypt</i> <i>Famelab International Final (2021)</i>	<i>African research to the public (2018)</i>	<i>Oman success story (2017)</i>
Articles/ Research papers (Open access)/ Webpage	<i>Malaysia 2022</i>	<i>Evaluation of Thailand event (2019)</i>	<i>Lockdown experience in Italy (2020)</i>

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Global Relevance in Science Communication

FACILITATOR GUIDE

