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Project Development in Citizen Science:

Strategic Communication & Diverse Audiences

JOHANNA BARNBECK

Citizen Science Summer School

June 8th, 2023

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Schedule

09:00 – 10:35	Internal and External Project Communication
10:35 – 11:00	Coffee break
11:00 – 12:30	Zooming in on Audiences & Target groups
12:30 – 14:00	Lunch break
14:00 – 15:10	Approaching Diverse Audiences

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Strategic Communication

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Strategic Communication - Communication Strategy

- Allows you to communicate effectively
- Makes it easier to shape messages for your target audience(s)
- Consists of internal and external communication
- Start as early as possible
- Develop in iterations
- Helps your project team to be active
- Initially requires time and is ultimately a time saver

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Communication in Citizen Science Projects

- What kind of communication takes place and with whom?
- What characterizes the communication in Citizen Science Projects compared to other research projects?

Toolbox: The SciComm Format Canvas

- Project visualization and management
- Planning of internal and external communication activities
- Shows your blank spots and open questions
- Allows you to work iteratively

You can use it either for

- for developing a specific communication format
- to develop your communication strategy or
- for the entire project as a project management tool

SciComm Format Canvas

Project Title

CREATED BY: _____

Topic & Aim

Audience & Target Group(s)

Idea

Medium & Style

Activities & Milestones

Project Team

Collaborators & Multipliers

Evaluation

Resources

Prototype

Timeline

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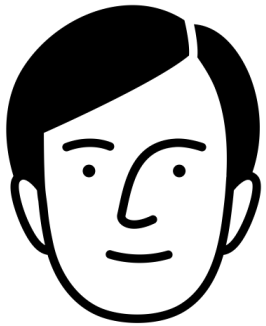
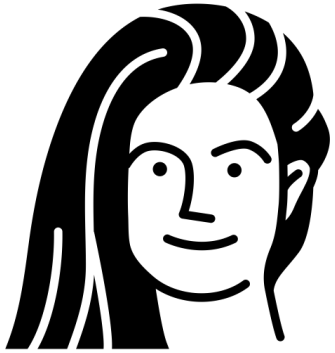
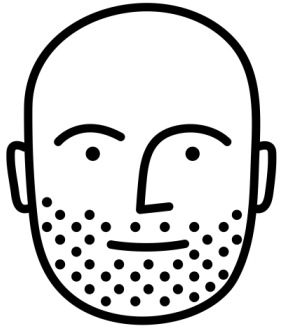
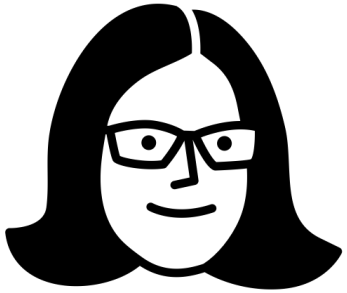
Zooming in on Audiences & Target groups









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Zooming in on Audiences & Target groups

Audience segmentation

- Demographic segmentation: on the basis of same or similar characteristics
  - i.e. Age, gender, educational background

- Psychographic segmentation: on the basis of similar values, perceptions, and mindsets
  - Group of “like-minded people“ and how these groups can be moved (i.e. Sinus-Milieus)

- Behavorial segmentation: on the basis on how people take actions and share patterns
  - i.e. Social media usage, gaming habits or bicycle riding

Zooming in on Audiences & Target groups

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    - What are benefits and pitfalls?
    - How do I decide which characteristics are suitable?

Persona method

- A persona is a semi-fictional profile based on your segmentation analysis
- Typically, there are 3 (to 5) persona profiles to develop
- Don’t think of clichees or stereotypes. A persona should have a certain depth. It is not John Smith (UK), or Jane Doe (US), Jan Janssen (BE) or Max Muster (DE)
- Make the persona as graspable as possible for someone who (until now) has never met that person
- Add an image or draw a portrait of the persona
  https://unsplash.com/ - https://commons.wikimedia.org/

Persona profile

Image

Name:

Age:

Gender:

Occupation & Role:

Interests:

Daily routine:

Social/ family life:

Values/ believes:

Frustrations:

Habits:

Technical gear:

Quote:

Does the persona know of my project? Why or why not?

Moodboard - add images, impressions, important info about the persona

Persona method

What are the advantages of the persona method?

- Persona’s allow to create empathy with the specific person and therefore understand their needs better
- The clearer the picture in your mind of that persona is, the better you can empathize with the person and create new ideas on how to reach them
- The persona can be based on a real person that you encountered in your work life. However, it should be a fictive person.
- The persona profile allows other people in the project to support the communication goals more easily
- When developing new communication measures, you can always ask yourself:
  Would persona X like that? Would it reach them? Would they have access to it?

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Audience Analysis

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Audience Analysis

Write down for yourself (10 min)

- Who do you include in or address with your project and how?
- If you could choose freely, would you like to include or address someone else in your project? And at which stage or in which role?
- What keeps you from including them?

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Audience Analysis

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Present your thoughts to your neighbours and discuss together (15 min)

- Who else would your neighbours want you to include - and why?
- What do you think would be the added value to include the newly mentioned people and their perspective to your projects?
- Which obstacles would you face?

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Which factors play a role when reaching out to audiences?

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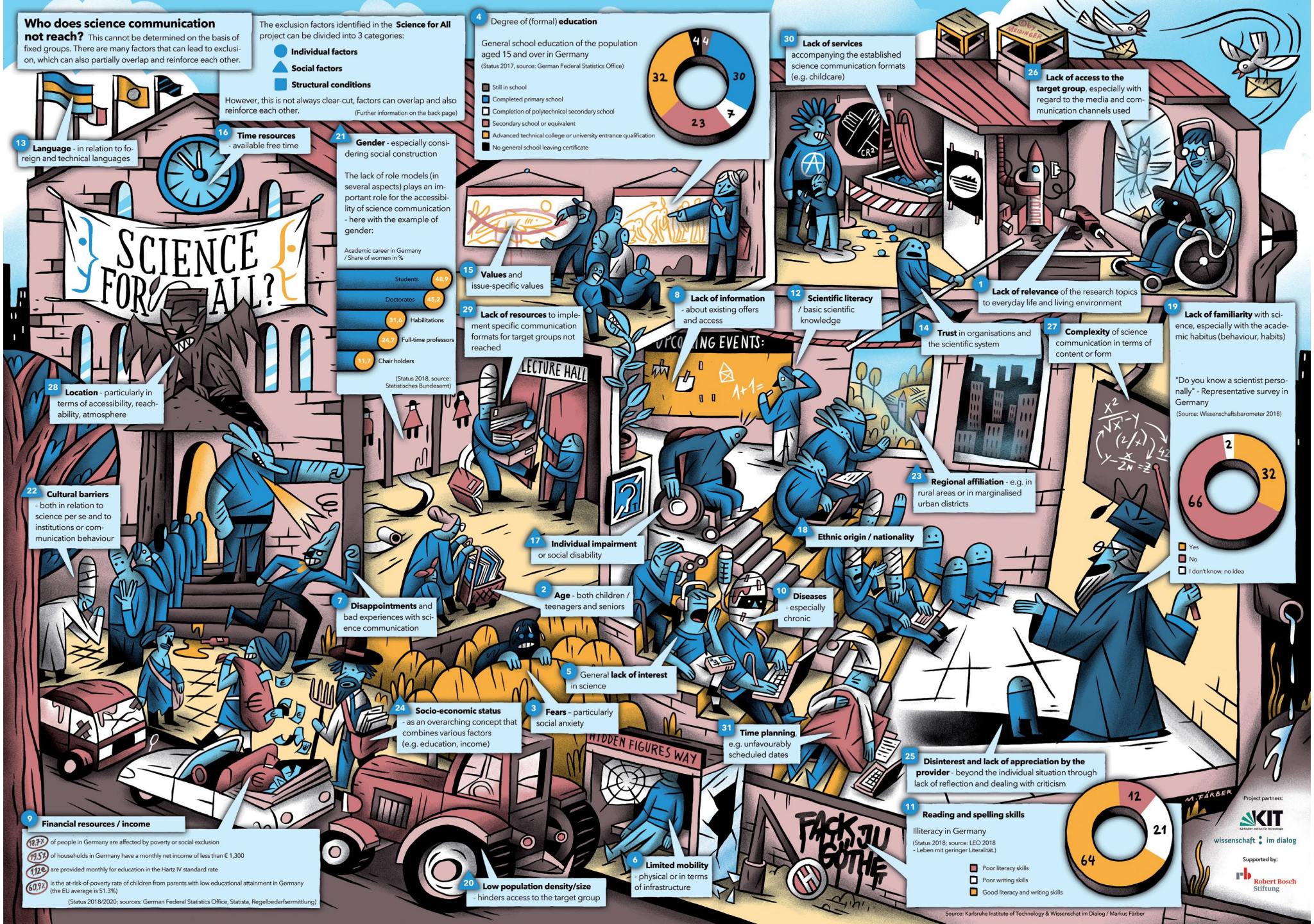
Toolbox: Who does Science Communication not reach?


Who does science communication not reach? This cannot be determined on the basis of fixed groups. There are many factors that can lead to exclusion, which can also partially overlap and reinforce each other.
The exclusion factors identified in the Science for All project can be divided into 3 categories:
Individual factors
Social factors
Structural conditions
However, this is not always clear-cut, factors can overlap and also reinforce each other.
(Further information on the back page)
SCIENCE FOR ALL?
13 Language - in relation to foreign and technical languages
16 Time resources - available free time
21 Gender - especially considering social construction
The lack of role models (in several aspects) plays an important role for the accessibility of science communication - here with the example of gender:
Academic career in Germany / Share of women in %
Students 48,9
Doctorates 45,2
31,6 Habilitations
24,2 Full-time professors
11,7 Chair holders
(Status 2018, source: Statistisches Bundesamt)
4 Degree of (formal) education
General school education of the population aged 15 and over in Germany
(Status 2017, source: German Federal Statistics Office)
Still in school
Completed primary school
Completion of polytechnical secondary school
Secondary school or equivalent
Advanced technical college or university entrance qualification
No general school leaving certificate
4 4 30 7 23 32
30 Lack of services accompanying the established science communication formats (e.g. childcare)
26 Lack of access to the target group, especially with regard to the media and communication channels used
15 Values and issue-specific values
29 Lack of resources to implement specific communication formats for target groups not reached
8 Lack of information - about existing offers and access
12 Scientific literacy / basic scientific knowledge
1 Lack of relevance of the research topics to everyday life and living environment
14 Trust in organisations and the scientific system
27 Complexity of science communication in terms of content or form
19 Lack of familiarity with science, especially with the academic habitus (behaviour, habits)
"Do you know a scientist personally" - Representative survey in Germany
(Source: Wissenschaftsbarometer 2018)
2 32 66
Yes
No
I don't know, no idea
28 Location - particularly in terms of accessibility, reachability, atmosphere
22 Cultural barriers - both in relation to science per se and to institutions or communication behaviour
23 Regional affiliation - e.g. in rural areas or in marginalised urban districts
17 Individual impairment or social disability
18 Ethnic origin / nationality
7 Disappointments and bad experiences with science communication
2 Age - both children / teenagers and seniors
10 Diseases - especially chronic
5 General lack of interest in science
24 Socio-economic status - as an overarching concept that combines various factors (e.g. education, income)
3 Fears - particularly social anxiety
31 Time planning, e.g. unfavourably scheduled dates
25 Disinterest and lack of appreciation by the provider - beyond the individual situation through lack of reflection and dealing with criticism
9 Financial resources / income
18,7% of people in Germany are affected by poverty or social exclusion
19,5% of households in Germany have a monthly net income of less than € 1,300
112€ are provided monthly for education in the Hartz IV standard rate
60,9% is the at-risk-of-poverty rate of children from parents with low educational attainment in Germany (the EU average is 51.3%)
(Status 2018/2020; sources: German Federal Statistics Office, Statista, Regelbedarfsermittlung)
6 Limited mobility - physical or in terms of infrastructure
20 Low population density/size - hinders access to the target group
11 Reading and spelling skills
Illiteracy in Germany
(Status 2018; source: LEO 2018 - Leben mit geringer Literalität.)
Poor literacy skills
Poor writing skills
Good literacy and writing skills
12 21 64
Source: Karlsruhe Institute of Technology & Wissenschat im Dialog / Markus Färber
Project partners:
KIT Karlsruher Institut für Technologie
wissenschaft im dialog
Supported by:
Robert Bosch Stiftung

Toolbox: Who does Science Communication not reach?

Write down for each of your target groups (10 min)

- which individual, societal or structural factors stand in the way when communicating with them?

Which factors stand in the way when communicating with my target groups?

Individual factors

1. Reference to everyday life
2. Age
3. Fear
4. Education
5. Lack of interest
6. Limited mobility
7. Disappointments/ bad experiences
8. Lack of information
9. Financial resources/lack of income (poverty)
10. Illness
11. Reading and Spelling skills / Literacy
12. Scientific Literacy
13. Language
14. Trust
15. Values
16. Time resources

Social factors

17. Disabilities/Impairment
18. Ethnic origin/Nationality
19. Lack of familiarity with science/Habitus/Science Capital
20. Low population density/size
21. Sex/Gender
22. Cultural barriers
23. Regional affiliation (urban/rural)
24 Socio-economic status

Structural Conditions

25. Disinterest/Lack of appreciation by the provider
26. Lack of access to the target group
27. Complexity
28. Place
29. Resources for the implementation of specific offers
30. Service offers
31. Time scheduling

Toolbox: Who does Science Communication not reach?

Write down for each of your target groups (10 min)

- which individual, societal or structural factors stand in the way when communicating with them?

Together with your neighbours (20 min)

- brainstorm and think of ways to work around those obstacles.
  Which creative, unusual, funny, serious, artistic, provocative, visual, soothing or simple ways can you think of together?
- Describe how you would work around the obstacles, no need to think of entire formats
- Visualize them

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Presentation of ideas

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Helpful Resources

- PLAIN language guide
- Hemingway Web-App: Paste text into the app to analyze complexity and allows users to edit directly in the app to get instant feedback.
- University of Michigan Plain Language Dictionary: Enter medical terms and view alternative phrasing to simplify the description.
- 50 Cognitive Biases in the Modern World
- Communicating with Diverse Audiences
- Principles & Practices for Effective Multicultural Communication
- When Does the Amount We Pay Research Participants Become "Undue Influence"?
- Webcast: Recruitment of Underrepresented Study Populations
- Reflecting reality: finding diverse and inclusive stock images for your designs
- TONL - Stock photo service specializing in diversity (Fee-based).
- Gender Spectrum Collection - Stock photos featuring images of trans and non-binary models.

Literature

- **Humm, Christian; Schrögel, Philipp (2020) „**Science for All? Practical Recommendations on Reaching Underserved Audiences", DOI: 10.5445/IR/1000121018
- **Paleco, Carole; García Peter, Sabina et.al. (2021)** „Inclusiveness and Diversity in Citizen Science", In: The Science of Citizen Science, https://link.springer.com/chapter/10.1007/978-3-030-58278-4_14#DOI
- **Schrögel, Philipp, Humm, Christian, Adler, Jona, & Färber, Markus. (2020).** "Who does science communication not reach?". Zenodo. https://doi.org/10.5281/zenodo.4173030

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