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Lesson 11: Other forms of scientific communication

Research Methodologies and Scientific Communiation

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Other forms of scientific communication

Welcome

In this lesson we will address the topic scientific communication. For researchers it is important to communicate their scientific achievements to different target groups. Regardless of the target audience, it is important to present the results in an appealing manner, either in the form of an oral presentation or a poster presentation.

We will learn and discuss how to design scientific posters, the format of the posters and in a second stage we will discuss how to do an oral presentation and which presentation tools can be used for the preparation.

Other forms of scientific communication

Why to present scientifically?

Why to present scientifically?

- The results must be made available to the public
- The latest findings must be communicated & discussed in the "community".
- Others can build on the results in their research, learn from it, or take other paths.
- Scientific presentations are also a part of university education, e.g. through lectures or the creation of a poster.

Where to present scientifically?

- Conferences,
- Congresses,
- Seminars,
- Different Events(summer schools, educational journeys,...)

How to present scientifically?

- Oral presentation
- Poster presentation

Poster presentation

What is a scientific poster?

In many scientific disciplines, the poster is an important medium with which scientists present their own research at conferences, congresses, etc. A scientific poster is about combining textual and visual elements in order to represent the result in terms of language.

Poster presentation

How to plan a scientific poster?

In principle, it is about recognizing the core of your own research in order to present it.

Following questions should be addressed in advance:

Why is my work important?
What are new insights to research?
Which methods do I use?
What are my results?
What conclusions do I draw from this?
What are my recommendations?

Source: utb: Die Gestaltung wissenschaftlicher Arbeiten

Poster presentation

This results in the following content of a poster:

- Title
- Author
- Subject and relevance
- Research question, hypothesis and goal
- Procedure: examined object, used methods
- Results
- Discussion and outlook
- Literature

Poster presentation

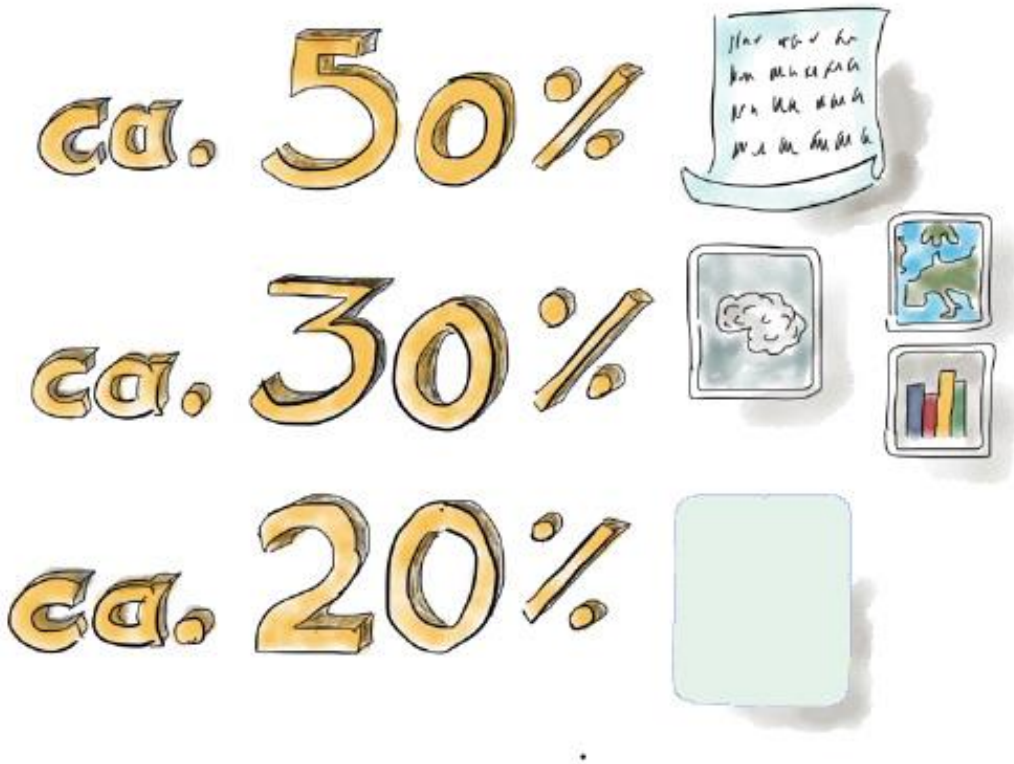
.... in simpler terms - based on W questions:

- WHO is investigating
- WHAT
- HOW
- with WHAT result
- for WHICH goal
- on WHICH basis?

Poster presentation

How to design a scientific poster?

The secret of a good poster is the interplay of text, picture elements and open space. The following variables help with orientation:



Poster presentation

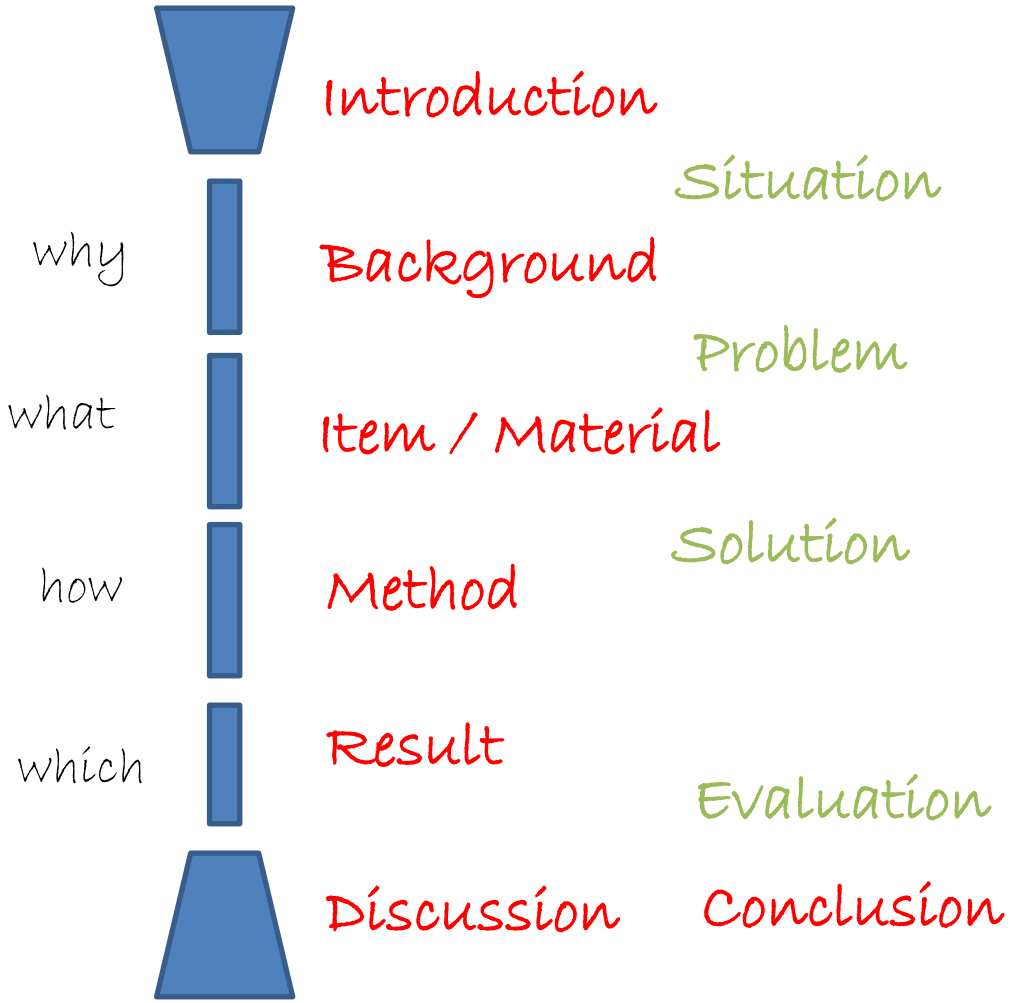
Structure of a scientific poster

A poster can be structured very differently. Apart from the logical structure of the research work, the conventions of the subject areas as well as individual preferences are decisive. The key is that the audience can quickly recognize the structure. Therefore, it is important to think carefully about what information the poster should transport. Careful planning of the logical structure is the A & O of a good poster.

It can help to recall the basic structure of a scientific topic (W-questions)

Poster presentation

This results in various options for arranging a theme for a poster. It is advisable to first sketch the idea with pen and paper.



Source: Own representation

Poster presentation

Poster design

- Obey basic rule of the design standards
  - avoid redundant and disturbing issues.
  - The use of colors, pictures and graphic elements should always be checked whether these contribute to the rapid comprehensibility.
  - A poster very soon appears overloaded, restless or too colorful and misses his goal to inform quickly and accurately.

Poster presentation

Poster format

Common format for poster presentation is format DIN A0 and DIN A1.

Horizontal format or landscape format

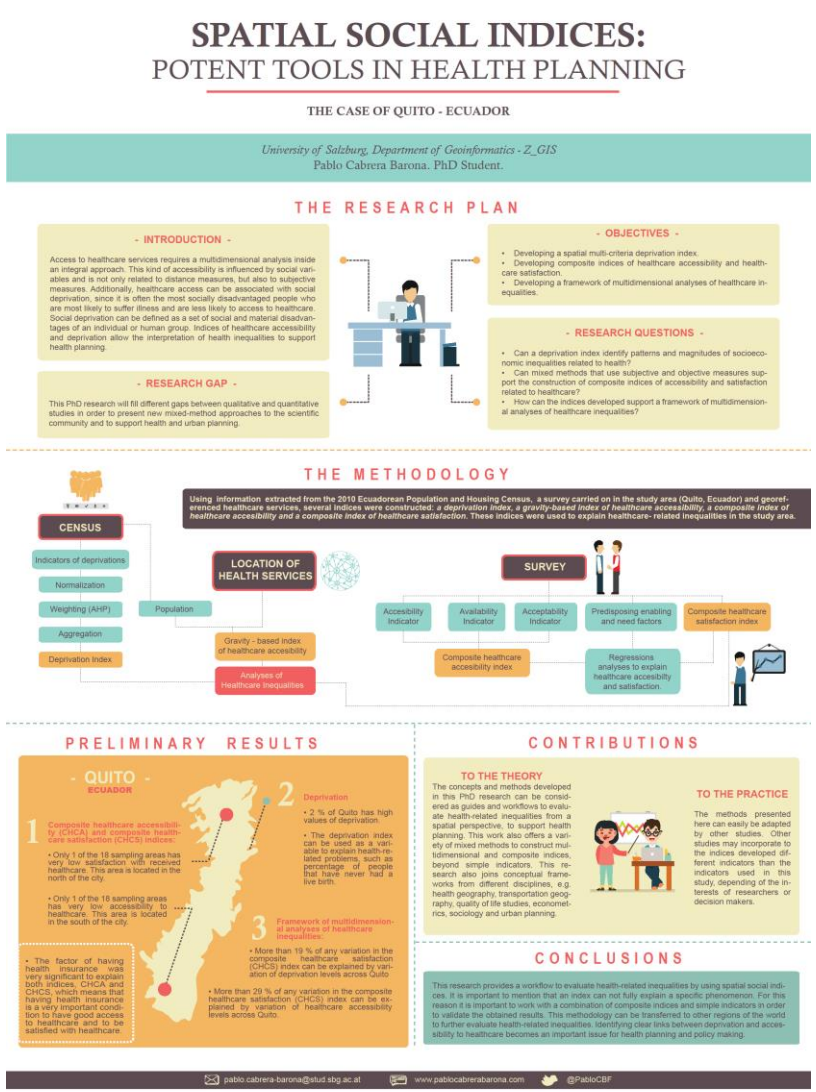
DIN-Formate	in mm	enthalten in A0	Pixel bei 300 ppi (dpi*)	Pixel bei 150 ppi (dpi*)	Pixel bei 72 ppi (dpi*)	Größe in qm	in qm bei Teilung von 1
A0	841 x 1189	1 x	9933 x 14043	4967 x 7022	2384 x 3370	0,999949	1
A1	594 x 841	2 x	7016 x 9933	3508 x 4967	1684 x 2384	0,499554	0,5
A2	420 x 594	4 x	4961 x 7016	2480 x 3508	1191 x 1684	0,24948	0,25
A3	297 x 420	8 x	3508 x 4961	1754 x 2480	842 x 1191	0,12474	0,125
A4	210 x 297	16 x	2480 x 3508	1240 x 1754	595 x 842	0,06237	0,0625
A5	148 x 210	32 x	1748 x 2480	874 x 1240	420 x 595	0,03108	0,03125
A6	105 x 148	64 x	1240 x 1748	620 x 874	298 x 420	0,01554	0,015625
A7	74 x 105	128 x	874 x 1240	437 x 620	210 x 298	0,00777	0,0078125
A8	52 x 74	256 x	614 x 874	307 x 437	147 x 210	0,003848	0,00390625
A9	37 x 52	512 x	437 x 614	219 x 307	105 x 147	0,001924	0,001953125
A10	26 x 37	1024 x	307 x 437	154 x 219	74 x 105	0,000962	0,0009765625

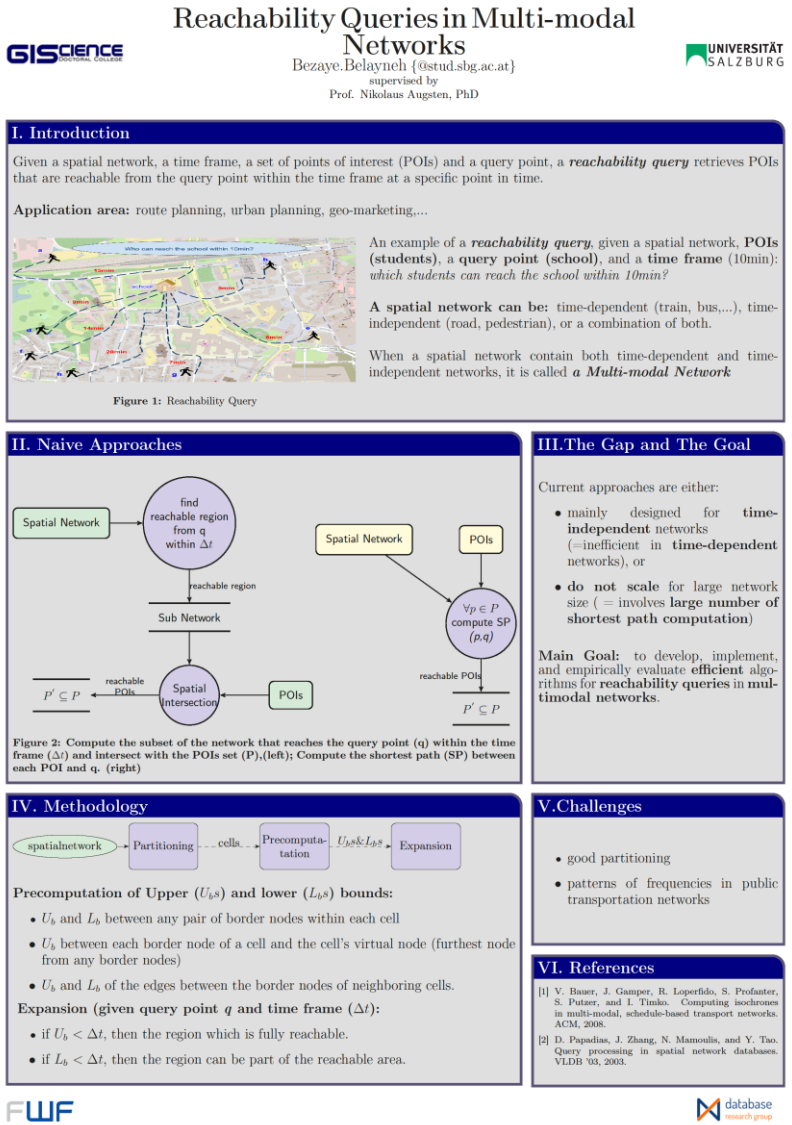
Poster presentation

Poster format – further information

- No abbreviations
- Text must be readable from 1m distanceCommon format for poster presentation is format DIN A0 and DIN A1.
- Horizontal format or landscape format
- Format A0: font size minimum 32 pt, title 58 pt, illustration: 17 pt

Poster presentation - examples





Poster presentation

Purpose of a poster

- A poster is a paper in size A1 or A0
- summarized on the introduction / theory, method & main results of a work summarized & discussed
- offers the audience the opportunity to get an overview of the research topic in a relatively short time
- serves as a basis for discussions

Zweck eines Posters:
A poster is a paper in size A1 or A0, summarized on the introduction / theory, method & main results of a work summarized & discussed.

Oral presentation

Eye-contact with audience

enthusiasm

blackout

Body language

convince

self-confidence

Oral presentation

Body language	
Positiv	negative
➢ Open hands	➢ Crossed arms
➢ Friendly face	➢ Gesture of embarrassment
➢ Calm, steady view	➢ Hectic, unfriendly face
	➢ Turn back to audience

Oral presentation

Dealing with nervousness

- Rehearsal at home
- Think about glitches and questions
- Familiar yourself with venue and devices

Oral presentation

- Involvement of the audience
- Circumstances (seating arrangements, daytime,…)
- Generate attention
- Contact to the audience: eye-contact!
- Show self-assurance
- Concentrate and focus on yourself
- Do not let the concept get out of hand

Oral presentations - common mistakes

- Cross arms in front of body - no body language
- Hectic, permanent movement
- too fast talking
- Too less or too many additional means
- Hands in trouser pockets
- No eye-contact with the audience

How to present scientifically?

Programmes to use

- PowerPoint
- Open Office
- Adobe Illustrator
- Indesign
- CorelDraw
- …

How to present scientifically?

Oral presentation:

https://www.youtube.com/watch?v=swIWHuIpubI
https://www.youtube.com/watch?v=QKOO99UjsSE
https://www.youtube.com/watch?v=6A3qofuTUGQ

Poster presentation:
https://www.youtube.com/watch?v=vMSaFUrk-FA
https://www.youtube.com/watch?v=IIr22p0jWjQ
https://www.youtube.com/watch?v=0ozwCEeaVWE