



**NOVEL WAYS OF
COMMUNICATING
SCIENCE**

PICK THE RIGHT FORMAT



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HOW TO COMMUNICATE YOUR RESEARCH

AN OVERVIEW OF DIFFERENT FORMATS



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Pecha Kucha, graphic recording, a hack day or science speed dating – scientists nowadays can use all kinds of different ways to communicate their findings to the public. Communication is a key aspect of the science system, and one that is becoming increasingly important. The goal is to convey abstract topics in a readily understandable manner and to give people ways to access complex issues. But which format is best suited to which topics and purposes? Which target groups should be addressed, and how? And which prerequisites need to be met? We have compiled a brief overview of the most effective and innovative communication formats – from scientists on soap boxes to fast-paced Japanese presentation techniques.

GRAPHIC RECORDING: LIVE AND IN COLOUR

Graphic recording means that an event is visually recorded in the form of images that are drawn by a person who is present at the event. Simple metaphors, representations and text are used by the illustrator to capture a group's discussions, decisions or brainstorming sessions in real time. The final result is not only a structured record of the event but a small piece of art.

HOW DOES GRAPHIC RECORDING WORK?

The drawing person listens to a group process, arranges the information and translates it into images drawn on a flip chart, a big projection screen or a tablet computer. Open issues, discussion points or meta levels can be highlighted through the visualisation that allows for new insights. Graphic recording can result in large-scale visualisations that are several square metres in size or in a picture the size of a flip chart. A tablet computer, drawing pad and beamer can be used to digitally transmit the graphic recording.



WHAT MAKES GRAPHIC RECORDING SPECIAL?

Images are processed more readily by the human brain than words. The drawn record enables the participants to perceive the event on a visual level. Unlike a person taking written minutes, the drawing minute taker is able to represent not only the things said, but also metaphors and comparisons used in speech, and to make nuances and moods visible. At the end of the process, all information is linked in a single image that may even clarify complex correlations that were previously unclear.

WHICH REQUIREMENTS NEED TO BE MET?

The drawing person needs a paper wall (flip chart, white board or similar) on site, in a spot where they can hear, follow and record everything. It should be placed within the room where there is plenty of light. The illustrators will usually bring their own pens. A beamer and a projection wall are needed, if the process is to be transmitted by technical means.

WHICH TARGET GROUPS ARE SUITABLE FOR THE FORMAT?

The format is suitable for grown-ups in education, research, all types of meetings, conferences, workshops and festivities. The illustrator will usually attend the entire process in real time, which can range between one hour and several days.

SPECIAL TIP

Graphic recording is also referred to as visual recording or scribing. There is a difference to 'Visual facilitation': here, the drawing individual is not just attending the process passively, but they comment on the process and point out visualised moods or differences of opinion for the group to discuss.

HOW DOES A PECHA KUCHA EVENT WORK?

At a Pecha Kucha event, one speaker after the other gives their oral presentation, each of which is illustrated with 20 slides. The topics include areas such as travel, design, art, nutrition, culture or architecture. A few examples of content presented in the Pecha Kucha format are poetry analyses, travel reports or explanations of political processes.

WHAT MAKES PECHA KUCHA SO SPECIAL?

The strict time limit and visualisation rules make for fast-paced, to-the-point presentations. Long lectures with often tiring PowerPoint presentations that contain too much text are avoided. The slides usually show images, designs or graphics that do not distract the listeners too much from the speech. The spoken word and the images complement each other without being redundant. It is a format that is suitable for giving comprehensible insights into processes, for concise accounts of short analyses, as well as for addressing a particular question briefly and intensely.

WHICH REQUIREMENTS NEED TO BE MET?

It should be possible to project the images onto a wall/whiteboard and to turn down the lights in the room. Outdoor events at night, much like open air cinema events, are also an option. The technical equipment available should include

a headset or handheld microphone for the presenter, as well as a beamer and a laptop for playing the visual presentation (e.g. using PowerPoint).

WHICH TARGET GROUPS ARE SUITABLE FOR THE FORMAT?

Pecha Kucha is suitable for short presentations by interested individuals, students or business partners. The technique can be used when a very short time period is allocated for the presentation, when there is a large number of speakers, or if the key goal is to introduce the audience to the essential facts of a topic, using a quick and enjoyable format.

about 5-10 x 6:40 minutes per lecture // in total approx. 1-2 hours

SPECIAL TIP

More than 10,000 presentations have been held in over 140 countries around the world to date. A list of all cities around the world, where Pecha Kucha events are held and recordings of many presentations are available at www.PechaKucha.com.



HACK DAY – PROGRAMME YOUR FUTURE!

Researchers, developers and designers come together at a science hack day to join forces to solve a problem. They discuss, plan, programme, build and develop ideas. The open-minded approach and shared joy in experimentation allow for unconventional solutions. The goal is to produce useful, creative, social or entertaining products (soft or hardware) or to develop new ideas for addressing future challenges in an interdisciplinary manner.

WHAT DOES A HACK DAY LOOK LIKE?

A hack day can have a particular motto or develop freely based on the participants' ideas. Technology-related topics are rather common. Science hack days often start with one or multiple keynote speeches from the area of research. The participants will then present project ideas and form teams. These should ideally be interdisciplinary to allow people with different skills to work together. The teams will then develop their projects, which can take several hours. All results are presented at the end of the event. In some cases, a jury will award prizes for the best ideas.

WHAT IS SPECIAL ABOUT A HACK DAY?

A hack day brings together people from various fields. They collaborate to develop collective ideas and their practical implementation. Mottos can include environmental ('What can be done for a cleaner city?'), social ('How can young people have a greater say in democracy?') or technology-related ('What will mobility look like in the future?') issues. The results include useful programmes, products and solution ideas. In addition, a hack day is also a good format for an interdisciplinary networking event.

WHICH REQUIREMENTS NEED TO BE MET?

It is important that participants must come from various disciplines, such as the areas of research, engineering and the creative industries, to allow for knowledge and experience to complement each other effectively. You will need a room with seating for groups, possibly a 3D printer or tools and a beamer for presenting software-based results.

WHICH TARGET GROUPS ARE SUITABLE FOR THE FORMAT?

The format is suitable for grown-ups, students and pupils. It is suitable for small as well as large groups of at least 15 participants.



SPECIAL TIP

On www.sciencehack-day.org you will find a list of all locations where science hack days are held around the world. Science hack days in Germany have taken place in Berlin and Halle. The page also includes a how-to guide for organising a science hack day in your own city.

IDEA CONTEST – SHOW US WHAT YOU CAN DO!

An idea contest seeks for innovative approaches for solving a problem or advancing a project, field of research or an open issue. A university, institute, ministry or foundation will hold this type of competition to address a particular topic. The goal is to collect ideas, to encourage young researchers, and possibly to bind them to the institution holding the contest.

HOW DOES AN IDEA CONTEST WORK?

Institutions often need a wide range of initiatives and formats, sometimes at short notice. Idea contests are held to create momentum for the creation and application of such new concepts. The institution will specify the participation conditions and analyse the entries at the end of the contest. A jury will usually select the best ideas and award prizes. This is an incentive for participants and can also give rise to media attention.

WHAT IS SPECIAL ABOUT AN IDEA CONTEST?

An idea contest encourages innovation and enables the winners to realise their ideas. It is a creative opportunity for networking and exchange. Some idea contests aim to attract large numbers of participants for realising a project, using the competition as a forum for exchanging experiences and ideas. The organisation that holds the contest can also draw the attention of young talents to itself, and thus expand its network strategically.

WHICH REQUIREMENTS NEED TO BE MET?

The topic or issue addressed in the contest as well as its conditions must be defined before it can be publicised. It must be clearly stated in the participation conditions who can take part, which assessment criteria should be met, and by when and in which form submissions should be entered. A jury is appointed and the prizes are specified. The call for applications and awarding of prizes should be published on all channels available (newsletter, press release, social media, etc.).

WHICH TARGET GROUPS ARE SUITABLE FOR THE FORMAT?

The format is suitable for researchers, doctoral candidates, students and pupils.



SPECIAL TIP

Some idea contests include support for the participants through consultation and seminars, to allow for close guidance during the development of ideas and the preparation of the projects.

SCIENCE SPEED DATING: FLIRTING WITH RESEARCH

Interested individuals attend a science speed dating session to ask scientists about their research work. Each pair has just a few minutes to talk, before the participants will move on to the next table where they will meet another researcher. The goal is to raise the participants' awareness of research work, and to enable exchange between experts and members of the general public.



HOW DOES A SCIENCE SPEED DATING SESSION WORK?

The first encounter can be determined by drawing lots or be picked spontaneously. After expiration of the allotted time, the participants will swap seats, for example by moving on clockwise. The participants meet one researcher at each table, where they have the opportunity to ask the scientists questions and learn about their respective area of research. After a set period of time that can range between about four and twenty minutes, all participants move on to the next table, to start their exchange with another researcher. Participants can continue to move on until they have spoken to everybody.

WHAT IS SPECIAL ABOUT SCIENCE SPEED DATING?

Science speed dating puts researchers in touch with laypeople. The challenge for the experts is to explain their work clearly and briefly. Participants are granted an insight into fields of research that they previously knew nothing or very little about. This form of direct exchange between researchers and laypeople rarely occurs in everyday life.

WHICH REQUIREMENTS NEED TO BE MET?

You will need a room with seating or bar tables for the researchers and participants. The individual tables should be far enough apart to allow for undisturbed conversations. Partition walls can also help here. You may want to prepare slips of paper to determine the first encounters. A person with a stop watch informs the researchers and participants when it is time to move on.

WHICH TARGET GROUPS ARE SUITABLE FOR THE FORMAT?

The format is suitable for interested grown-ups, students and pupils. The scientists can be from the areas of research and/or teaching. A science speed dating session lasts between about 20 and 90 minutes, depending on the number of participants.

SPECIAL TIP

Science speed dating is also used at scientific congresses and specialist events to facilitate networking among researchers and inter-disciplinary exchange.

SOAPBOX SCIENCE – STRENGTHENING GENDER EQUALITY IN SCIENCE

Soapbox Science is an interactive event in a public space aimed primarily at raising the profile of women scientists and their research and promoting gender equity in academia. The scientists stand on a soapbox and present their work by entering into a conversation with their audience, asking questions and encouraging people to participate. By doing so, they familiarise the general public with the issues in question, inspire society and act as role models for girls and young women.

HOW DOES A SOAPBOX SCIENCE EVENT WORK?

Building on the tradition of Speaker's Corner in London's Hyde Park, a speaker stands on a (soap) box in a public square, park or street and presents her research. This can be, for instance, in the fields of biomechanics, immunology, psycholinguistics or other disciplines. Passers-by who stop and listen stand in a semi-circle around the scientist. The minimal difference in height between the researcher and the audience means the exchange is intentionally 'eye-to-eye'. Public space thus serves as a place of learning and debate.



WHAT IS SPECIAL ABOUT SOAPBOX SCIENCE?

The format deliberately attempts to counter the preconception that research is performed by grey-haired, male scientists in ivory towers. Soapbox Science introduces female scientists and non-binary researchers into people's everyday lives, dispelling clichés and providing society with low-threshold access to science. Speakers completely dispense with power point presentations, a lab or handouts. By means of simple experiments or hands-on activities, they make their research intelligible and encourage people to ask questions.

WHICH REQUIREMENTS NEED TO BE MET?

A permit may be needed to hold an event in a park, on a street or in a square. Posters, flyers and social media can be used to convey information to the target group. Soapbox Science at its London headquarters offers free training for female scientists, giving them tips for their presentations. For the event itself, all that is needed is a (soap) box and at least four female scientists. Additional publicity can be generated by inviting members of the press. You can register a soapbox event with a date and location [here](#).

WHICH TARGET GROUPS ARE SUITABLE FOR THE FORMAT?

The concept is suitable for a group of children, pupils or adults with no prior knowledge.

Duration: approx. 15 min per lecture // in total approx. 2–3 hours

SPECIAL TIP

In Germany, there are local groups in Berlin and Munich that organise Soapbox Science events.

TEDX – THE STAGE IS SET FOR RESEARCH!

In line with its motto 'ideas worth spreading', the non-profit organisation TED ('Technology, Entertainment, Design') provides for a platform for experts to present their ideas. Independent events can be organised under the name TEDx. Speakers hold short talks (known as TED talks) from a wide range of topics before an audience. The lectures must be no more than 18 minutes long, and must be made available as videos after the event, allowing for ideas to spread further, for example via social media.

HOW DOES A TEDX EVENT WORK?

A TEDx event has a particular motto, such as 'science', 'superpowers' or 'democracy'. Topics can come from a wide range of fields including research, technology, design and culture. Each speaker presents their ideas related to the motto in an appealing, engaging and entertaining manner. The experts speak freely and move around the stage without being bound to a podium. Their talks are often based on the approach of storytelling, which means that their thoughts and ideas are linked to their personal story or to individual anecdotes. Many speakers will also present a simple PowerPoint presentation with images, graphics or quotes that illustrate their points. A presenter hosts the event and introduces the speakers.

WHAT IS SPECIAL ABOUT A TEDX EVENT?

TEDx events focus on inspiration and constructive contributions for a better society, environmental protection or technology, for example. The goal is to present solutions, suggestions, ideas and useful thoughts, rather than pondering on problems. The lectures form the basis for further exchange and discussion. A TEDx conference is also an opportunity for interdisciplinary networking.

WHICH REQUIREMENTS NEED TO BE MET?

A free licence must be obtained to organise a TEDx event. Certain requirements regarding aspects such as stage design and the publication of lectures as videos must be complied with. Organisers have to choose an event type, such as 'TEDxWomen', and a name, such as 'science', and draw up a programme. A TED talk video from another conference must be shown at the TEDx conference. TED provides further organisational support, for example through TED translators and by supplying subtitles for the videos. You will also need a room with a stage, a beamer for the lecture, technical equipment (lighting, sound, etc.) and a presenter.

WHICH TARGET GROUPS ARE SUITABLE FOR THE FORMAT?

TEDx is suitable for events at universities and research institutions, for students as well as for children. Topics can come from any discipline, and events can be one-off occasions or be held regularly.



SPECIAL TIP

You can watch close to 4,000 of the world's best talks on www.ted.com.

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