

TinkerLib Online – Libraries, Tinkering & Inclusion in Practice

TinkerLib final event, workshops synthesis

Tuesday, September 16, 2025 - 14:00 - 16:00 CEST

A map of inclusive practices

Structure of the workshop:

- Icebreaker : write in the chat your favorite childhood book **(3min)**
- Mural with the short version of the map guideline (text only) + 4 pillars of inclusion
Brief presentation and a few minutes to read, sticky notes (what do I do/what I don't/why) to share feedback **(7min)**
- Example of adaptations we made on our activities **(5min)**
- Debrief on the notes, surprising aspects, reactions and questions **(5min)**

Synthesis of the feedbacks on the map:

This summary captures the main insights and reflections shared by participants during a recent online workshop focused on inclusive practices in education. The session was structured around different phases of an activity (General observations, Before, During, After the activity), and participants shared whether they already applied the practices presented, as well as the challenges they encountered. Some adaptations made on the activities created within the project for different audiences were

➤ **General observations**

There was broad consensus among participants on the relevance of the inclusive guidelines presented. Educators generally felt comfortable adapting their practices to accommodate varying levels of knowledge within their audience. Promoting collaboration over competition was widely practiced and viewed positively, though some noted that a sense of competition could also be a motivating factor for certain groups.

The idea of flexibility in participation – such as allowing late arrivals, early departures, or multiple modes of engagement – was well received (5 positive responses, 3 expressing challenges). While seen as desirable, implementation depends heavily on the context,

including the setting, institutional constraints, or audience (e.g. more feasible with adults than in formal school environments).

➤ **Before the activity**

This phase received strong support from participants, with the majority already implementing many of the recommended practices (10 green notes and several positive comments, 3 yellow notes).

Key reflections included:

- Adapting to the audience's schedule can be difficult due to institutional constraints (e.g. fixed opening hours).
- Recognising participants' needs in advance is seen as important, but time constraints and limited opportunities to engage with the audience beforehand can result in assumptions – which may or may not be accurate.

These points suggest a strong awareness among educators of the value of preparation, tempered by practical limitations.

➤ **During the activity**

Fewer notes were collected in this section (probably due to time constraints, the workshop duration being 20 minutes) but valuable insights emerged (6 green, 3 yellow notes).

- There was strong agreement on the importance of individual interaction between educators and participants.
- Three practices stood out as less consistently applied:
 - Encouraging horizontal communication and peer support, particularly challenging in school settings where maintaining structure and a calm environment is essential.
 - Involving participants in setup can be seen as a waste of activity time in some contexts.
 - Offering space to share outcomes at the end of the session

The tension between fostering autonomy and maintaining an inclusive, respectful group dynamic is noteworthy. Relatively to the sharing of results, an emphasis on giving participants the freedom to choose whether or not they wish to present have been highlighted as almost mandatory.

➤ **After the activity**

- Collecting participant feedback is a common practice, done either through formal evaluations or informal conversations.

- Encouraging connection beyond the activity was recognised as valuable but not always feasible. Its success mainly depends on the type of audience and whether the sessions are part of a recurring program.

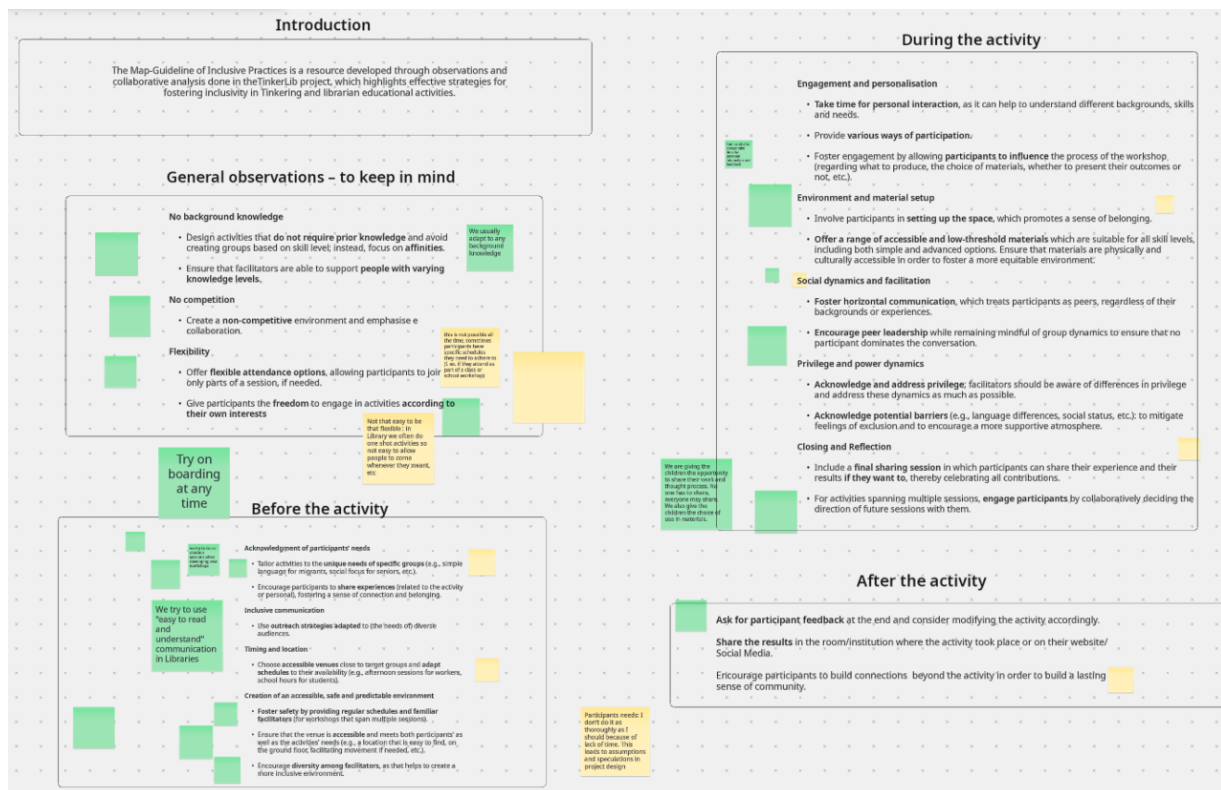


Figure 1: The map of inclusive practices (short version) with feedback from the workshop participants: green sticky note (What do I already do?) and yellow sticky notes (What I don't do (and why ?)).

As a general conclusion, educators acknowledged the importance to continue reflecting on their practices, sharing strategies with peers, and exploring ways to overcome common barriers to inclusivity. The map seems to be seen as a useful tool to do so.

The workshop revealed a high level of awareness and engagement with inclusive practices among educators. Many of the recommended strategies are already in use, though implementation of some of them depends on the context, available time, and institutional constraints.

Specific resources :

- Short version of the map of inclusive practices
- Report on the map of inclusive practices (extended version)

You can find these resources and more (in English, Dutch, French, German, Italian and Serbian) on the project website following the link or QR code :

<https://www.museoscienza.it/tinkerlib/resources.asp>



Tinkering for beginners

The workshop was divided in 2 parts:

1. A short introduction, using power point presentation, on what is the meaning of the word “Tinkering”, what are the main pedagogical theories supporting the tinkering approach and the main features of Tinkering.

You can find the presentation using the following link or QR code :

https://drive.google.com/file/d/1VSRuEVDm1Rlf-o8qIH8kLd8UAuLc8YD_/view?usp=drive_link



2. Through the Mentimeter app we ask participants to give us some of their impressions on some photos, taken during some tinkering workshop. We ask them to write 3 words coming to their mind looking at some photos showing different people in action, in different moments of tinkering activity. We use the cloud words of participants as starting points to introduce some qualities of tinkering activity:



Cooperation, Iteration, Multi-entry points, Different outcomes, Fun&Wimshy

Tinkering, storytelling - a deep dive

The workshop was structured into 3 main parts:

1. introducing and welcoming participants: Who is here? Which experiences do you have with Tinkering and Storytelling?
2. context: the role of language in Tinkering
3. example: in an interactive sequence, the aspect of working with a multilingual poem was introduced and tried out by the participants.

The 1st part consisted of a short mentimeter poll, in which participants were asked the following questions:

- Where do you work? (Science Center/Museum, Library, Other)
- To what extent do you agree with the statement: "I think storytelling and Tinkering go well together"
- How much experience do you have with Tinkering and Storytelling?

Participants followed the link to the poll and voted accordingly. Results showed balanced levels of experiences, with some participants new to combining storytelling and tinkering and others very experienced. We also had equal numbers of participants from libraries and science centers. All agreed that Storytelling and Tinkering go very well together.

The 2nd part included 3 minutes of input, showing that expressing oneself and telling a (personal) story are vital parts of the Tinkering methodology anyway. Using the example of the poetry in stop-motion workshop, we explored how Tinkering and storytelling can be combined to make multilingualism in a room visible and to enhance participation and agency.

The 3rd part consisted of a little trial run of using the multilingual poem KITE by Mark Klenk to show the multilingualism in a room. Two participants read the poem in their first languages - Dutch and German. Then, we used another mentimeter poll to discuss the main themes of the poem.

In conclusion, we discussed how multilingualism and language learning could be integrated into the participants' own practice and how that could further enrich the Tinkering methodology.

Co-creation methodology

This workshop was structured into three parts :

- 1) Methodology and Tools
- 2) Experience from the French Hub :
- 3) Experience from the Netherlands hub :

The presentation of this workshop can be found there : [LINK](#).

1) Methodology and Tools

During the Tinkerlib project, science communicators and librarians co-designed activities with and for underserved adults.

The details on the methodologies can be found in this document : [LINK](#).

Whatever the methodology that is really used, the main recommendations that emerge for any co-design process with underserved adults are as follows :

- Foster a shared sense of ownership and co-responsibility,
- Keep the focus on learners,
- Build on participants' strengths, not on their perceived gaps,
- Acknowledge and address asymmetries of power and expertise,
- Adapt activities in response to the specificities of the audience,
- Be open to spontaneous developments and prioritize the process,
- Value emotional engagement and moment of surprise.

2) Focus on the experience from the French Hub - Co-creating with inmates: managing inequalities between partners.

The French partners did co-creation with a group of long term prisoners. The process of co-creation was planned to follow a 5 step methodology :

- 1st workshop : Explore Tinkering, librarians activities and prisoners needs, knowledge.
- 2nd workshop : Ideation,
- 3rd workshop : Developing the idea and prototyping an activity,
- 4th workshop : test with other prisoners,
- 5th workshop : evaluation of the tested activity and adjustments.

This original plan was our reference, and before each workshop we planned carefully every moment of the co-creation. But during the workshops, most of this original planning had to be constantly adapted on the spot.

Most of the adaptations the French team did was related to how they coped with asymmetries between prisoners and other participants.

What kind of asymmetries are we talking about ?

- Asymmetries about autonomy and decision-making power.

External participants can still communicate together between sessions, calling themselves, read e-mails or organize meetings. Prisoners are excluded from these discussions. In the prison, propositions made by prisoners are refused by default by the penitentiary administration, even if these are very good propositions. The prisoners need the outside participants to have any impact on anything happening at the end of the co-creation process. It is also really difficult for prisoners to have an impact outside of the prison, and even to project on having such an impact.

- Asymmetries in knowledge and access to knowledge

Prisoners are not all fluent in French, nor able to read and write fluently. They do not have any access to the internet, thus they mostly can find new information by discussing with other prisoners or reading books in the prison's small library. In general, prisoners have very little control on their access to information, this is a big asymmetry with other participants.

- Asymmetries about legitimacy

It is usually really not easy for prisoners to speak out if they disagree with the outside participants, or to challenge a proposal : it can be risky for them, they can fear creating conflict that would have very negative impacts on them. They usually have a very low self esteem, more than other participants, and, especially in a man only prison, sharing their sensitivity and emotions can be completely taboo for them.

What can be done about these asymmetries ?

- Mitigate some

Let the prisoners have an impact on the methodology, the co-creation process. It is not possible to build this methodology with them before the workshops as it is not possible to discuss with them (no possibility to do meetings with them, to send emails or to call) ; thus this possibility to have an impact on the workshop must happen during the workshop. That is mainly why the French team had to do a lot of "on the spot" adjustments on their methodology.

By doing this, the facilitators learned to "let go" and focused on creating a relationship, first, with the group of prisoners.

Of course, in order to mitigate the asymmetries of the group regarding reading and writing skills, the facilitators had to use as little writing and reading as possible, and focus more on discussion, drawing, showing, mimicking...

- Cope with the rest

Most of the asymmetries with prisoners can't be erased. And Shouldn't : prison is not a neutral field, some rules has to be respected for the sake of the prisoners.

The best thing that can be done is to be explicit about the asymmetries that are going to happen : be clear on the impact that outside participants can have, be honest on the work that will be done without them between sessions... And in general let them explore their role in the co-creation as much as the facilitators explore theirs.

3) Focus on the experience from the Netherlands hub.

The Dutch Hub was working with Senior groups from the OBA participants. OBA has senior groups in ten different locations, we visited two and co-created with one group. They have weekly meetings on a set day, time and location and the meetings have 3 themes/goals: education, Meeting, Arts and Culture.

So as the tinkerlib team we took part in the existing activity program for seniors. We used the following steps:

- Observation of library activity
- Tried out and reflected on an existing Tinkering activity.
- Start the cocreation:
 - Step 1: Talked/interviewed the two groups to pick up where their interest in a tinker activity lies.
 - Step 2: Chose 2 ideas per group to develop a bit further
 - Step 3: Presented the ideas to the groups and let them decide which activity we developed further
 - Step 4: Create the activity and test it with the groups

Then we created the activity. When evaluating the activity some of the seniors were a bit disappointed that the activities weren't more in depth about Science and Technology.

What happened?

- Target group seniors: Mobility, fine motor skills, big differences within the group
- Balancing equality vs depth of the activity → when making decisions we always chose the most inclusive decision, which sometimes may have been less exciting or about the content
- Time: For us it was a linear process and felt logical but we visited the seniors about 1 month thus for them it felt more like separate visits than part of a process. For the seniors it were separate steps.
- Tinkering methodology: is a very creative and playful teaching method that some seniors feel like we underestimated them
- We cocreated with the whole group instead of with a small group.

What did we do?

The next time we saw them to test a partner activity we changed the following:

- We explained the project again, the steps we took with them and how it all fitted in the bigger plan of the project.
- We took more time to explain what we value about the Tinkering method and that playfulness and creativity is a very important part in it. And also explained what scientific and technical value we see in it.

- We started the next workshops with short lectures about the phenomena and history of the workshops topic. And also made the connection with use of this in everyday live.

The most important things we took away from this process are:

- Take more time to get to know the target group.
 - Set clear goals together in advance for what you are going to do.
 - Make clear what the restrictions are within the project.
 - Start each meeting with the above points to have the same starting point.
 - Try to have a dedicated group that is so involved that they also feel responsible for the end product.
-

Working with adult learners

Duration: 20 minutes

Introduction Activity (5 min)

- Participants answer via **Menti app**:
“What are the most important elements in adult learning?” (Access via link or QR code.)



Facilitators review responses together, pointing out that the word “**play**” is often missing. If it appears, they highlight it as a great entry point.

Main Activity – Tinkering (10 min)

- Participants imagine their favorite book.
- Using objects from their surroundings, they build a small construction representing the book, a part of it, or a character.
- 2–3 participants present their constructions, reflecting on:
 - Why did they choose those objects?
 - How did the process feel ?
 - Whether it was difficult or natural to “play.”

Key message: Playfulness is essential – adults often forget how much play supports learning (research, communication, experience).

Reflection (5 min)

Discussion questions:

- How does this connect to the way adults learn best?
- Could you adapt this activity for your own practice?
- Was it playful?

Final Menti question:

"How did you feel about representing a book without words, only with objects?"

Join at menti.com | use code 4690 5508

Mentimeter

How did you feel about representing a book without using words, only with objects?



nice challenge
challenged sharp curious easy creative
challenging fun use stuff differently
playful engaging
using other perspectives



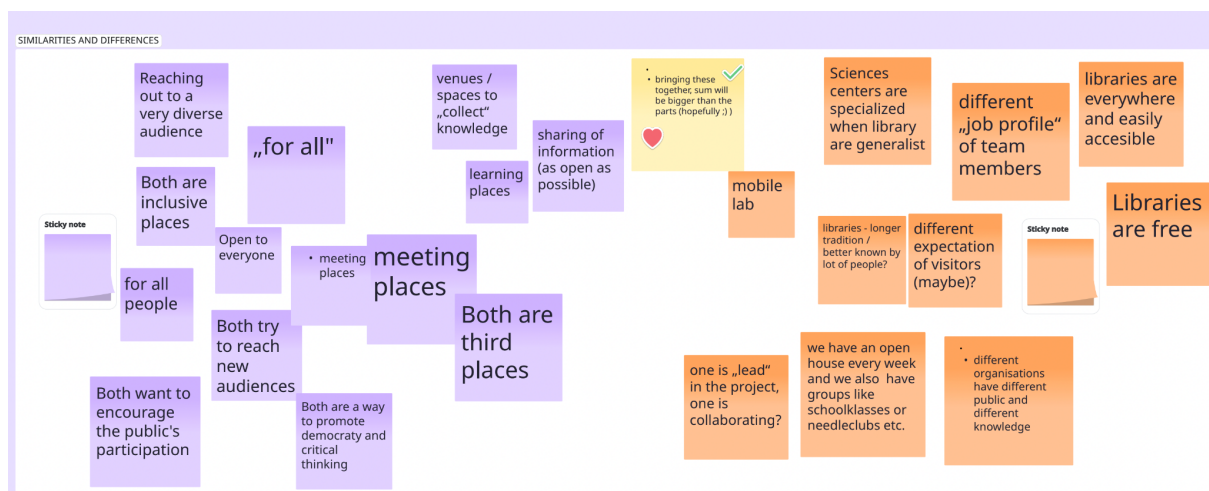
- **Closing**

Canva link: [Working with adult learners - Daily Agenda Display](#)

Building a hub partnership

Session on Building Hub Partnerships created space for participants to exchange experiences and explore future collaborations between libraries, science centres, and local organisations.

The session opened with a short introduction of the topic in the scope of the project, followed by an exercise on identifying similarities and differences between libraries and science centres. Through shared reflections, participants highlighted overlapping values such as community engagement and education, third spaces, but also noted differences in resources, audiences, and institutional priorities.



Italian and Serbian local hubs confirmed that, during our collaboration between science organisation and librarian organisation, also these differences and similarities were seen, and what kind of issues and solutions arose from it.

In the second part of the session, participants mapped potential local organisations for collaboration, discussing ideas, possible concerns, and next steps. Using sticky notes, they shared both examples of existing partnerships and aspirations for future ones, ranging from schools and NGOs to cultural associations and other social organisations.

PARTNERSHIPS MAPPING

With another organisations who work on local and share the same ideas.

- We work with several welfare/ social organisations and councils but want to expand it
- We want to work more with the public/inhabitants in our library branches in different towns.
- Sanneke, public library, coordinator digital inclusion & ontdeklab (discoverylab)
- Chair of CoderDojo Netherlands, working internationally with Code Club/Raspberry Pi Foundation

We work together with a cultural organisation that combines art lessons with digital competence
Eva Library

Library

with schools, cultural institution, museums, NGO-s

Schools (the most natural partner for Libraries)
NGOs (social centers, associations to learn french...)
Cultural institutions
Prisons
Medical institutions...

Libraries work with a lot of different partners and it is all the time rich and challenging at the same time... The main difficulty according to me is that you have to understand the "language" of your partner and the fact i

Non-formal groups

library
I coordinate our makerspaces (NL)
We work together with Tetem NL volunteer centers, social organizations schools

The workshop also featured experience-sharing from the Serbian and Italian hubs, offering concrete examples of collaboration between libraries and science centres. This input sparked further discussion, questions, and reflection on how cross-sector partnerships can support more inclusive and creative learning opportunities.

HERE IS OUR EXPERIENCE OF COLLABORATION BETWEEN LIBRARY AND SCIENCE ORGANISATION



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