Rethinking R&D in Museum Learning

Tools to help put impact on audiences at the heart of everyday research and development

Leapfrog worked with V&A's Learning and National Programmes team to co-design tools to catalyse and sustain a new kind of research and development —

R&D focussed on the impact of museum learning on people, rather than audience numbers or demographics.

A toolbox for any team

- The toolbox we've co-designed together is about helping a team experiment with new ways of evaluating, iterating and improving their work.

- These tools are not fixed solutions or best practices, instead they are fuel for kick-starting new R&D approaches that ask the right questions, answered by drawing on visitor experiences and impact.

Beyond evaluation in isolation

- Evaluating events can lead to one-off questions that do little more than give you a thumbs up or down on the venue and timings.

- Connecting together the data and insights from evaluative work is the key to iterative R&D – finding ways to build up understanding of an audience and the impact your work has on them.
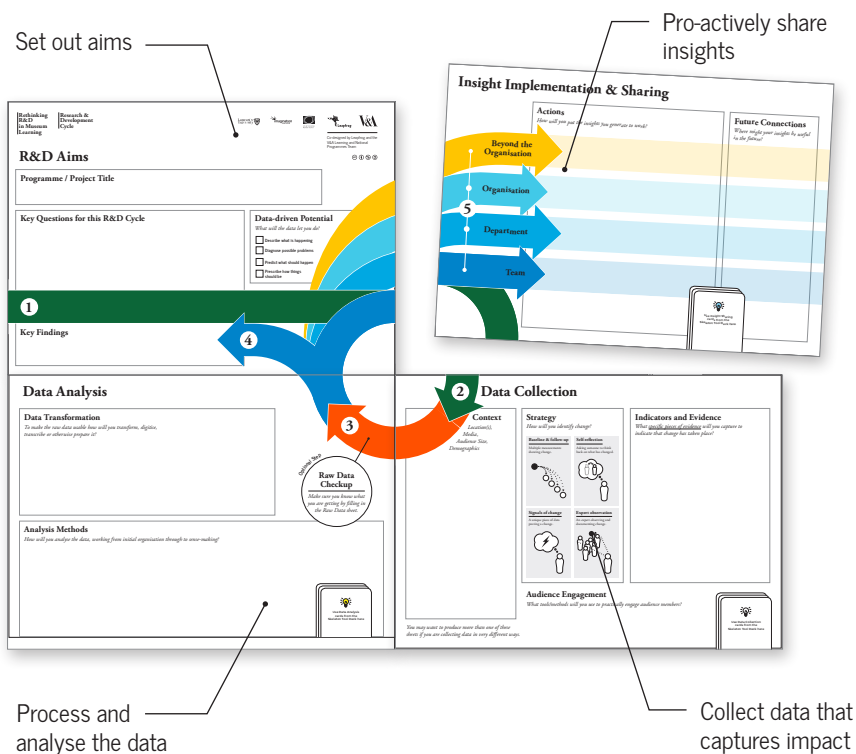
New practice not best practice

- Good R&D requires more than effective methods and processes, it needs teams to creatively engage with the opportunities that research brings, and together develop new ways of working.

- These tools help teams to imagine, plan and share new practice that is creative, data-driven and iterative.
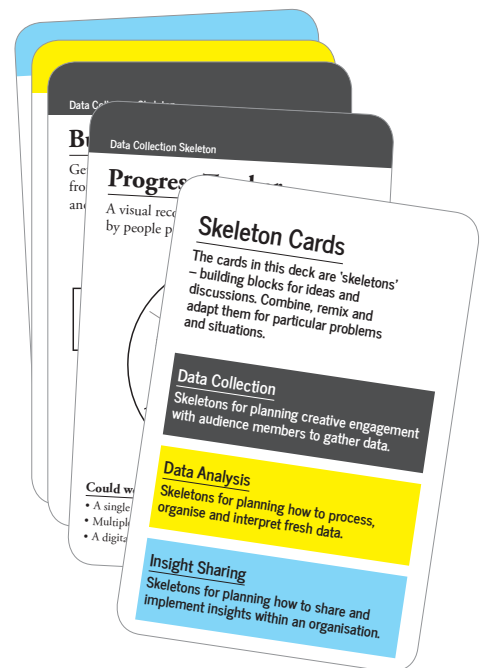
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Toolbox Contents

R&D Cycle Map

4 sheets that fit together, mapping out a full R&D cycle.

Set out aims

Pro-actively share insights

Process and analyse the data

Collect data that captures impact

Skeleton Tool Card Deck

44 remixable ideas for collecting, analysing and sharing data.

Skeleton Cards

The cards in this deck are 'skeletons' – building blocks for ideas and discussions. Combine, remix and adapt them for particular problems and situations.

Data Collection
Skeletons for planning creative engagement with audience members to gather data.

Data Analysis
Skeletons for planning how to process, organise and interpret fresh data.

Insight Sharing
Skeletons for planning how to share and implement insights within an organisation.

Raw Data Check-up

A bonus sheet to help you build and iterate R&D cycles.

Check over the actual data you will collect

Download these tools and over 70 others for free: www.leapfrog.tools

Rethinking R&D in Museum Learning | **Tool Guidelines**

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Suggested Use: Planning a full R&D Cycle

In these guidelines we describe how you might use these tools to plan a full cycle of R&D. You could use this process individually, in a small group or across multiple teams in a collaborative workshop.

The intent of the process is to plan a piece of R&D work that will capture the impact you have had on an audience.

The process will allow participants to think through goals for the work, the methods to use and plan what to do with the findings.

The result will be a visual plan that can be discussed with others, updated and iterated along the way.

Adapt and Remix

All Leapfrog tools are intended to be starting points for new ways of working, not recipes or solutions. You can use these tools as they are, or modify them however you wish – all under a Creative Commons license.

Preparation

People

This suggested process will work best where there are multiple people involved to discuss and compare ideas. Consider who you could invite and whether you can divide in to small groups or teams. The V&A Learning and National Programmes team found that groups of 3-5 worked well with these tools, and that comparing the results of 5 or more groups led to good conversations and further suggestions for improvement.

Space

Collaborative working requires space to work. Consider where the right space would be for the people you're inviting - you will need tables to arrange the printed materials, walls to stick up the results on and probably some cups of tea or coffee.

Consider where you could display the results of your work for others to see.

Printing

The materials in the toolbox will need to be printed.

- We suggest printing the R&D Cycle Sheets at A3, although they will still work at A4.
- The optional Data Check-up Sheets can be printed at A4, then cut in half.
- The Skeleton Tool Card Deck works best as a properly printed card deck, but you can also print it at A4 and then chop up the results in to cards with scissors.
  - We used moo.com to print the card deck for about £18. You can upload the PDF available from www.leapfrog.tools directly to moo.com or order a card deck.

Expect to iterate

It would be possible to plan a complete R&D cycle in one go, but usually there will be some unknowns and uncertainties.

The V&A Learning and National Programmes team have found it best to iteratively revisit and refine R&D cycles, meeting regularly to discuss progress, barriers and where changes are needed.

If planning with these tools becomes too speculative, switch in to action, collect some data and then revisit the later parts of the cycle once you know more.

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1. Setting R&D Aims

Use **R&D Cycle Sheet 1: R&D Aims**

- Select a programme / project to focus on for this R&D cycle and fill in the title.
  - We found it works best to think about something on the near horizon, or to reflect on a past project that could have featured R&D.

- Now set the key questions for the cycle – what do you want to find out about the impact of your work on its audience?
  - At the V&A, these aims often relate to the learning and ongoing impact of programme on audience members.

R&D Cycle Sheet 1: R&D Aims

Forming Good Research Questions

A good research question will be useful throughout the R&D planning process, allowing you to decide what data to collect, how to analyse it and know whether you have succeeded in answering it.

- <u>Make it specific</u> – The more specific a question, the easier it is to know when it has been answered.

- <u>Control the scope</u> – Make sure the question is narrow enough to be addressed in the time you have.

- <u>Build on existing knowledge</u> – Can you use findings or ideas that feature in past research?

- <u>Iterate as required</u> – Don't rule out changing the question as you plan your R&D.

- Now (or later on) identify the potential of this cycle for data-driven decision making.
  - Will the data simply describe what is happening, or will it reach further and let you diagnose problems. Going a step further, could the data help you predict what will happen or allow you to prescribe with certainty best practices for the future?

Example

The example accompanying these guidelines is for an imaginary public lecture on the Bauhaus movement.

The key questions driving this R&D cycle are are intend to:

- Evaluate how much attendees learnt from the lecture (in an unobtrusive, engaging manner)

- Find out whether the lecture prompted further learning about the Bauhaus or 20th Century design

Looking ahead to the data involved in this cycle, we can see that it will allow us to describe audience learning at the public lecture, and diagnose possible problems with the content and format.

Without a lot more data we won't be able to predict audience behaviours or prescribe best practices.

2. Planning Data Collection

Use **R&D Cycle Sheet 2: Data Collection** and the **Skeleton Tool Cards: Data Collection**

- Capture some basic details about the Context - the where, when and who of the programme / project.

- Next select a Strategy for identifying <u>impact on audience members</u>:
  - Baseline & follow-up – Multiple measurements showing change
  - Self-reflection – Asking someone to think back on what has changed
  - Signals of change – A unique piece of data proving a change
  - Expert observation – An expert observing and documenting change

- Identify the specific indicators you will use. These are the specific pieces of evidence that will show change as taken place – the crux of the research cycle.
  - The best indicators will cut to the heart of what you want to know without introducing biases or ambiguity. What evidence will prove change has occurred?

- Plan how to engage audience members so you can collect the data needed.
  - Creatively engaging your audience can unlock many possibilities for R&D, so we've included **18 co-designed Skeleton Tool Cards** in this toolbox.
  - An important goal for the V&A Learning and National Programmes team was to <u>embed evaluation</u> in to their programmes and activities, rather than tack a questionnaire on to the end of session.
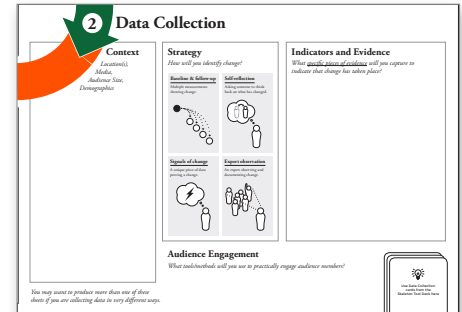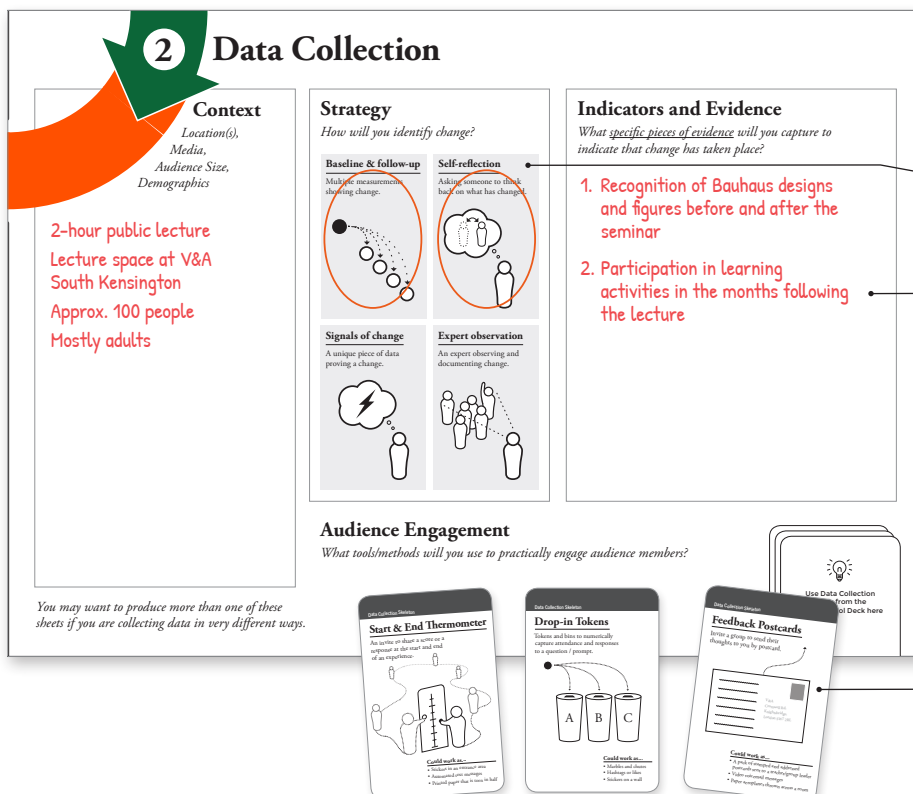

R&D Cycle Sheet 2: Data Collection

Skeleton Tool Cards: Data Collection

Example

In this example we are hoping to find out what attendees learnt during the lecture as a embedded part of the experience – without the need for questionnaires or interviews.

Two strategies are used – a baseline before-and-after during the lecture and then a self-reflection later on.

Two indicators are defined.

Firstly, the number of designed objects and key figures attendees recognise as being part of the Bauhaus movement.

Secondly, what amount and kind of further learning to attendees do in the months following the lecture.

Now the practical part. To capture the chosen indicators three skeleton card ideas are combined and adapted: On arrival attendees will vote using token for the objects and people they associate with the Bauhaus. They will do the same at the end of the lecture, and be given a postcard to send back to the V&A a month down the line.

Optional Step: Raw Data Check-up

Before thinking about analysing data, we have found it is good to get clear on what the data itself will be. To do this, complete the **Raw Data Check-up Sheet**.

3. Planning Data Analysis

Use **R&D Cycle Sheet 3: Data Analysis** and the **Skeleton Tool Cards: Data Analysis**

- Begin by thinking through how the raw data will need to be transformed to make it useful.
  - Do you need to digitise data that is in a physical form?
  - Does spoken material need to be transcribed?
  - Does visual material need to be described or coded?

- Next, consider the ways you will organise and analyse the data - what will you need to draw from the data in order to answer you question(s) you identified at on sheet 1?
  - To help this process we've included **18 co-designed Skeleton Tool Cards** in this toolbox, offering a starting point for thinking through what you will do with the data and how to avoid common problems handling data.
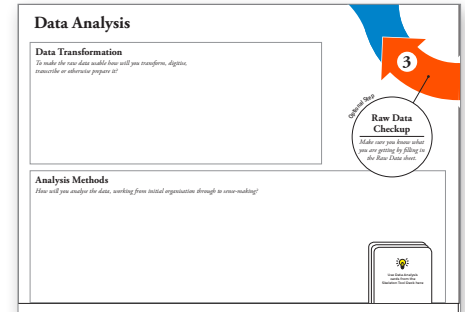
R&D Cycle Sheet 3: Data Analysis

Skeleton Tool Cards: Data Analysis

Example

Here we have the raw data – literally the voting tokens collected before and after the lecture, plus postcards received a month or two later.

Data Analysis

Data Transformation
To make the raw data usable how will you transform, digitise, transcribe or otherwise prepare it?

- Counting votes showing the designs and figures recognised attendeess
- Counting overall number of attendeess and number of votes (participation rate)
- Summarising postcard responses from attendees

Analysis Methods
How will you analyse the data, working from initial organisation through to sense-making?

Findings Correlations — Deep Dive — Finding Keywords

Use Data Analysis cards from the Skeleton Tool Deck here

Optional Step
Raw Data Checkup
Make sure you know what you are getting by filling in the Raw Data sheet.

Raw Data Checkup
When you've completed your data collection, what raw you have?
e.g. Hand written comments, Tweets from a Twitter Search, Voice recordings...

1. Voting tokens collected next to objects and pictures of people from early 20th Century design.

2. Hand-written postcards sent back by some attendees.

Transforming the data means counting the tokens, looking at how many people participated in the voting and summarising the written comments on the postcards.

The quantitative data is easily analysed by comparison – how many people could recognise lesser-known Bauhaus figure and designs after the lecture? How many errors?

The postcards require more work. Firstly a deep-dive to read all the comments, then coding to find, collate and quantify keywords.

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Iteration Required

It can be difficult to complete the full cycle without knowing your findings. We suggest pencilling-in some ideas initially, then revisiting and iterating in the future.

4. Implementing and Sharing Insights

Use **R&D Cycle Sheet 4: Insight Implementation & Sharing** and the **Skeleton Tool Cards: Data Analysis**

- To begin, return to **R&D Cycle Sheet 1**. Summarise findings, real or expected here before thinking how they might be implemented and shared.

- Now use **R&D Cycle Sheet 4** to think through actions to share insights from this cycle at a range of levels from your immediate team through to the organisation as a whole and beyond the organisation.
  - We've included **18 co-designed Skeleton Tool Cards** in this toolbox, each offering a starting-point for taking the outcomes of one R&D Cycle forward.

- The final section of the sheet prompts you to think about future connections for this work – what further R&D is needed or where might this work connect with other activities in the pipeline?
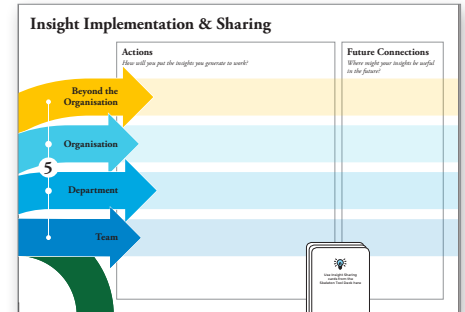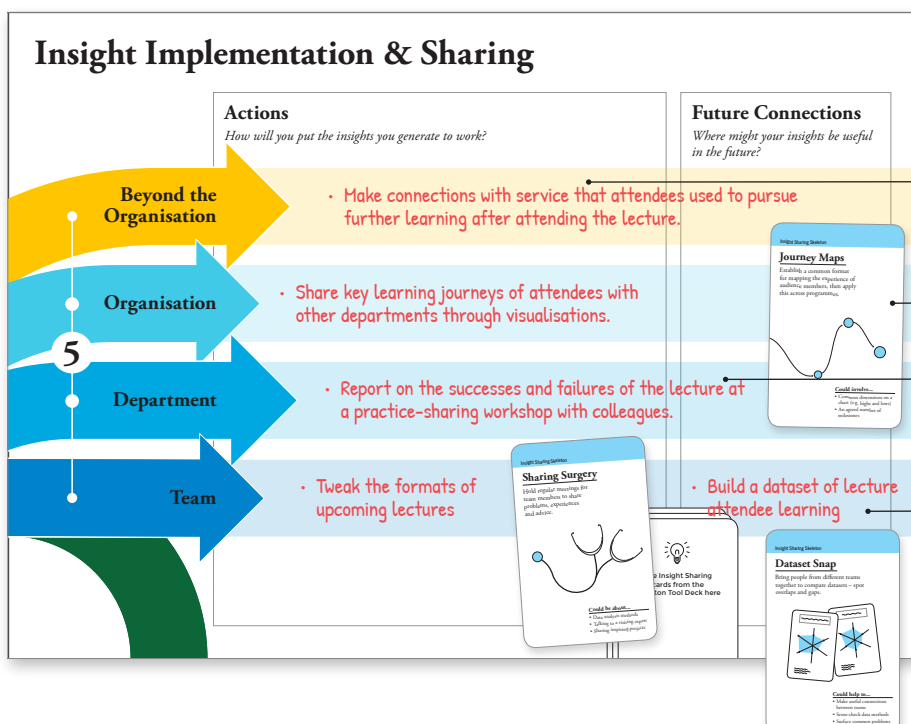

R&D Cycle Sheet4: Insight Implementation & Sharing
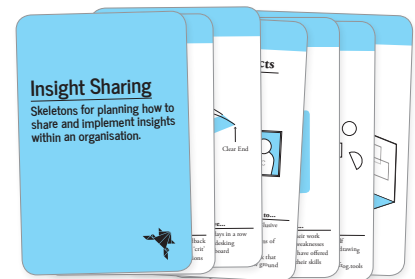
Skeleton Tool Cards: Insight Sharing

Example

This example has led to multiple outcomes that can be of future value:

Building affiliations with organisations attendees drew on for further learning.

Letting other departments see and understand the learning journeys of attendees.

Sharing learning from this R&D cycle with others who might run similar events and use a similar R&D approach.

Direct insights can inform future events run by the same team, and feed into a dataset of attendee learning.

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Iterating & Linking Cycles

Planning one cycle of R&D is just a starting point:
You can revisit and revise plans, setting new objectives based on your findings.
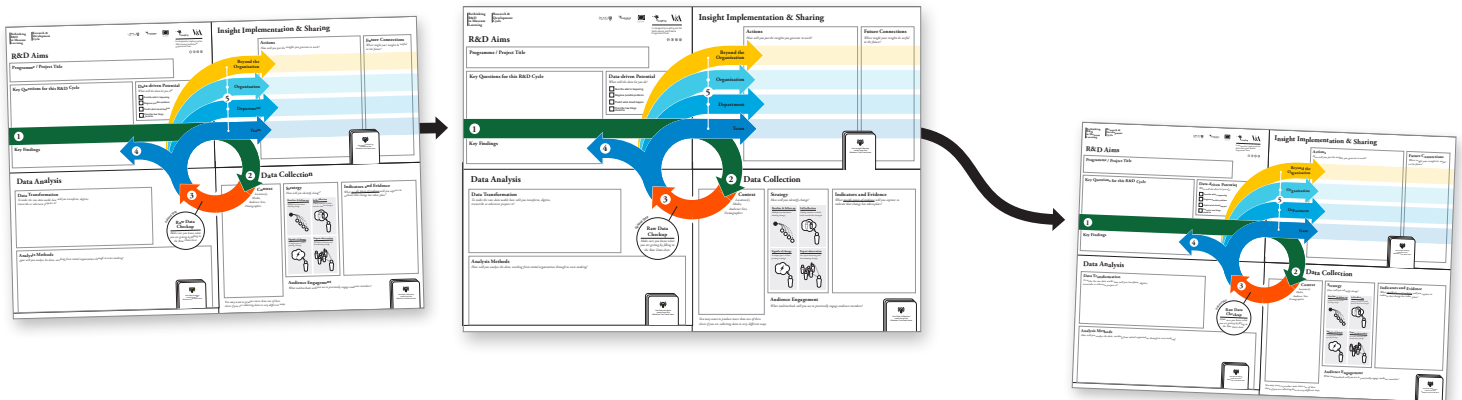
Check in on progress

Once created, you can use R&D Cycle Maps as a way to visualise and discuss progress with a team. We suggest keeping the cycle itself, or just a photograph of it to hand – it gives a team something to work from when discussing progress with an R&D cycle, and if you have multiple teams and multiple cycles, it will help remind everyone who is working on what.

Adapt and iterate the plan

Most plans will need to be adapted on the go, especially with R&D when data collection, analysis or the sharing of outcomes all might not work as expected. Treating R&D Cycles are starting points for further iteration and refinement can help teams safely experiment and learn together, rather than there being a right or wrong way to do things.

Link in to the next cycle

Once an R&D cycle is complete it can become natural to think about the next cycle of research that it leads to. Are there unanswered questions that could be addressed? Or, are their new projects or opportunities that link to the learnings from past initiatives?
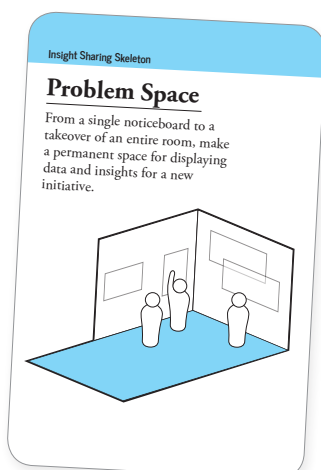
Connecting together the outcomes of completed R&D work with the start of forthcoming cycles will help to build on the team's shared knowledge.

Becoming more data-driven in R&D

The aspiration of the V&A's Learning and National Programmes team is to become more data-driven in the way they do R&D. This is a long term goal that means building on insights over time, collecting data that can answer new questions and respond to new opportunities as they emerge. The goal is to use data to predict some of what will work, rather than simply describe what has happened.

Insight Sharing Skeleton

Problem Space

From a single noticeboard to a takeover of an entire room, make a permanent space for displaying data and insights for a new initiative.

Space to think together

Creating a space to display and revisit your planned R&D work can be instrumental in enabling a team to understand, develop and share and new R&D capabilities.

V&A Learning's breakout space in South Kensington →

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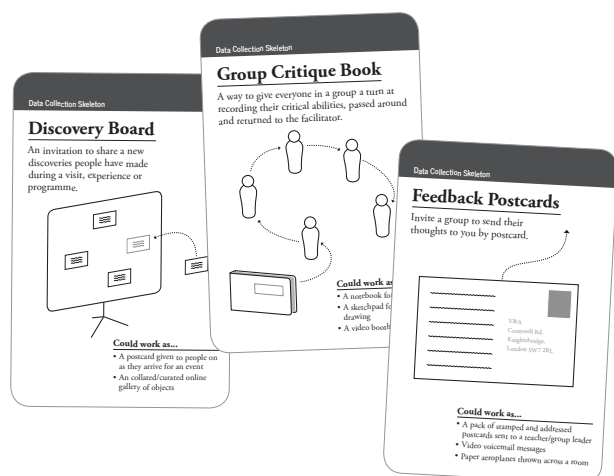the V&A Learning and National
Programmes Team

Case Study:
D/deaf Pop-up Performance for Families

How does co-creating a performance inspired by the V&A collections impact on the development of students' creative thinking, communication and ludic skills, and knowledge about the V&A and Victorian Britain?

What other skills are developed through this process, if any? Can such a project increase the museum's D/deaf family audiences and encourage repeat visits? To answer these questions, the V&A Learning team embedded creative evaluation into the project.

Over four sessions, we worked with a deaf storyteller, a hearing performer and native British Sign Lanuage speaker, and 10 deaf students, between 8 and 10 years old, from the Frank Barnes Primary School for Deaf Children to co-create a deaf-led Pop-up Performance for families. The performance was inspired by the Victoria and Albert bicentenary display and the V&A collections relating to Victoria and Albert. It was presented at the V&A on four separate occasions in July 2019 with spoken English voiceover.

Collecting Data

We creatively combined skeleton cards to form new tools:

Quote Posters: At the end of each session, students left comments or drawings on post-it notes on posters responding to the themes of creativity, communication and play. Over the project these revealed changes in their ability to come up with new ideas and connections, explain themselves, understand other people, and be playful

Discovery Mini Vlogs: Students made video recordings at the end of the school day, where they reflected on their experience from each session. We provided questions that students could respond to when giving their feedback and the school arranged voice-overs for the videos.

Group Critique Session: After the performance dress rehearsal at the school, we held a session where students were asked to take on the role of a director and offer feedback on what worked well and what could be improved.

Key Insights

The data analysis showed development of creative thinking, communication and ludic skills, as well as new knowledge about the V&A and Victorian Britain. The co-design approach enabled students to work creatively and collaboratively with adult practitioners and peers, to create a public performance.

Using drama and performance as a learning tool lent itself well to the development of creative thinking, embodied, empathy skills and knowledge, and we advocate for the next iteration of the programme to focus specifically on these outcomes.

No families attended the final performance, so we sent feedback postcards to parents/carers to identify barriers to attending.

Sharing Insights

We used our monthly Learning R&D surgeries to share insights from the project.

- Embedded evaluation tools have proven successful in generating quality data. We would advocate for incorporating tools such as Group Critique Session in other similar projects across V&A Learning.

- Evaluation tools such as Discovery Mini Vlogs and the Group Critique Session that allowed students to use their first language (BSL), as opposed to written English, generated richer data. Written English is D/deaf students' second language, which needs to be taken into consideration when using tools such as Quote Posters.

- To help welcome and direct D/deaf families to the museum, we created a visual map and an in-house introduction to key BSL signs with advice from our deaf storyteller partner and a member of the Visitor Experience team fluent in BSL. We have shared this training video with the Visitor Experience team and have recommended using it again to facilitate access to the museum.

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Case Study:
Fallen Fruit and the Joy of Co-creation

Families visiting the V&A during May half-term and Summer Holidays 2019 could take part in the Imagination Station drop-in activity. Using collage and storytelling families created participatory artwork with Fallen Fruit art collective who featured in the FOOD: Bigger than the Plate exhibition.

Our aim was to measure the impact of the activity on participants' creative thinking, self-efficacy and ludic skills, as well as the development of knowledge about the V&A. We were also interested in monitoring any other learning outcomes achieved by participants, and their overall learning experience. In order to obtain high-quality responses from both adults and children, we developed a creative evaluation tool which could make data collection a fun and playful process.

Collecting Data

In order to fulfil all the evaluation objectives, a new evaluation tool was designed. The evaluation was stylised into a fruit theme to be in line with the new FOOD: Bigger than the Plate exhibition at the V&A and matched with a set of fruit- and veg-themed half term activities.

The tool comprised three key elements:

1. 'What Fruit Are You?' quiz printed on an A0 foam board
2. A postcard with questions
3. Fruit stickers given to the participants in exchange for their filled out postcards.

Sharing Insights

The evaluation project showed that all 4 pre-defined learning outcomes (creative thinking, self-efficacy, ludic skills, enhanced knowledge about the V&A) were achieved by most evaluation participants.

In May half term and Summer holidays most people were 'Apples' (54%). The 'Apple' result marks the most positive experience meaning that 54% of participants felt creative, more confident about their abilities and learned something new about the V&A. The second largest group of responses was defined as 'Pineapples', meaning that these people (21% May 29% in Summer) were creative and more confident, however, did not learn much about the V&A during the activity.

According to the May results, a great number of respondents mentioned that they learned more about sustainability of fruit during the Pop-up Performance which took place alongside the making activity during May half-term, three times a day. The collage making activity was mostly perceived as a creative activity aimed at triggering emotional reactions ('I felt happy'), rather than intellectual ones ('I learned that banana is the most sustainable fruit').

The visitors experienced the feeling of creative participation and co-creation. They enjoyed being part of a larger group and contributing their creativity to the collaborative project.

Sharing of the insights

This work lead to reusable insights shared with the V&A Learning and National Programmes team:

· The Fallen Fruit evaluation was discreet and engaging. Personality Quizzes are a good way to engage families. We should visually theme evaluation activities in the future, closely connecting them to the activity.

· Rather than free space in questionnaires, varied tag words help to engage children in evaluation activities of this kind.

· We should discuss what 'content learning' is, when we design our next research. What value do we put to emotional learning vs intellectual learning?

# Micro Case Studies: Applying the Skeleton Tools
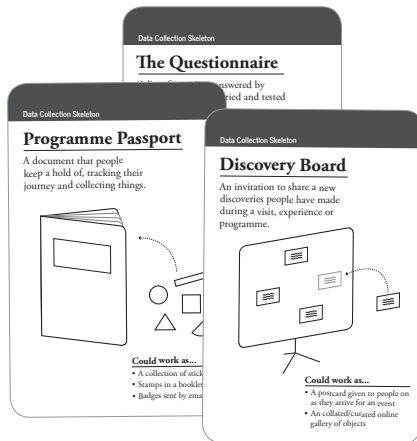
Leanne and Holly used Programme Passport, Questionnaire, and Discovery Board to evaluate the new national schools programme 'V&A Innovate' during its beta year to hone and iterate the programme to best meet the needs of KS3 teachers.
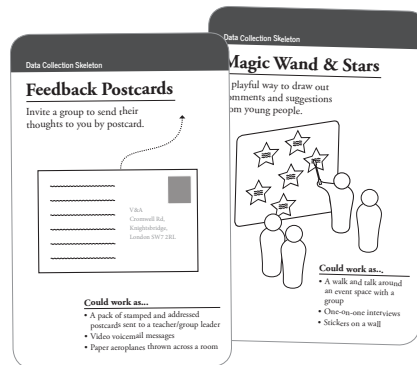

Cara, Becky and Bethan used Feedback Postcards and Magic Wand and Stars to evaluate if and how children participating in primary school programme 'Door to Design' use the museum with their families outside of school.
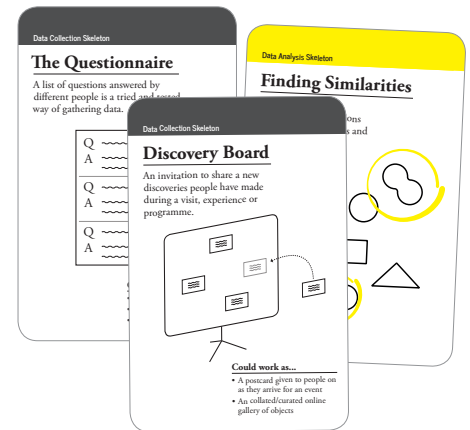
Marc combined answers from Create Voice sessions and Create workshops to help identify which digital skills young people feel they need to learn in priority. Feedback was collected with tools inspired from the Questionnaire and Discovery Board models and led to the programming of two workshops focusing on Architecture and CAD design that will take place during the London Festival of Architecture.
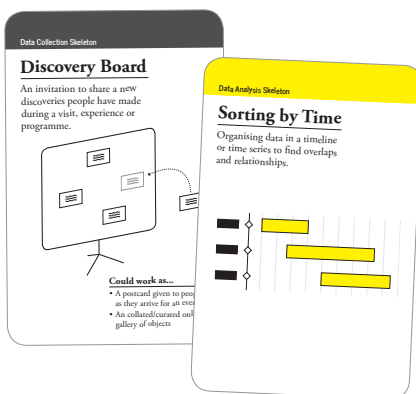
Stacy adapted the Discovery Board tool for use during a prototype session for a future Academy art class. She wanted to understand how people's confidence ebbed and flowed during the session, so she invited participants to write personal observations on Post-it notes throughout the class, including the time, and then fix them to the shared worktable. After the session, she was able to create an emotional timeline for the session, and use that to tweak content.
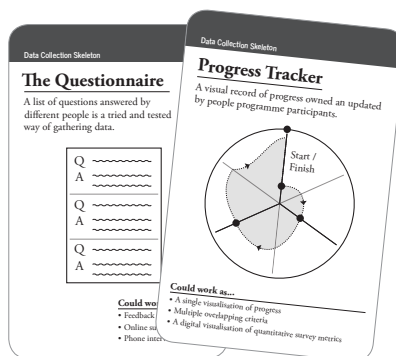
Lucy used the Questionnaire tool. At the beginning of a professional development course, she invited participants to record their expectations and anxieties about the upcoming intensive training on the same form that they would later record their reflections after the course. This way, students were given a useful mark of distance travelled.

Co-design Team

V&A Learning and National Programmes

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Our co-design process

Beginning in February 2019, Leapfrog researchers worked with the V&A Learning and National Programmes team to explore a new way of evaluating and enhancing their work – a radical shift from capturing who attended events to capturing the impact of the team's work on their audience.

Through a series of workshops we mapped out the area of impact the team's work might capture, ranging from 'traditional' forms of learning through to developing new creative and empathetic abilities.

From this starting point we began to develop concepts for approaching the challenge of data collection – ways of switching the scale and ambition of evaluation, away from capturing the immediate experience of audience members, and towards the more complex challenge of understanding changes in them triggered by the V&A's work.

The result are the 'skeleton' tool ideas included in this toolbox. No concrete solutions to data collection, data analysis or R&D implementation challenges, but instead starting points for new ideas specialised to the particular context and circumstances of the many programmes the Learning and National Programmes team pursue.

The result is not only the tools we've co-designed together, but an idea for how a team can transform their approach to understanding their audience. In a year of working with Leapfrog, the Learning and National Programmes team was able to better integrate R&D cycles in their work to ensure that they are audience-led and continually iterating their offer, designing and developing programmes that are exciting, relevant and rooted in the V&A collections and backed up by robust data.