



Shaping Thinking

Mel Brown

ORCID Number: 0000-0002-4440-8492

Sam Rowe

ORCID Number: 0009-0006-8453-1256

Output Date: 2022-24

Overview

Shaping Thinking explores the potential of democratising creative problem-solving tools traditionally siloed within creative education. At its core, the objective of this project is to empower individuals and organisations to generate ideas and visually communicate them effectively.

This research was initially conceived to support STEM academics to visualise their own complex research, but it's scope evolved as the potential for broader application was recognised.

'Shaping Thinking' was supported by AUP and UKRI Knowledge Exchange funding, our aim to develop frameworks and materials supporting self-facilitated workshops, providing accessible and adaptable visualisation tools for all.

Associate Professor Mel Brown

Assistant Dean | Principal Lecturer
Arts University Plymouth

Sam Rowe

Senior Lecturer | Course Leader (BA) Hons Illustration
Arts University Plymouth

Background

In 2019 Mel Brown and Sam Rowe alongside Jason Hirons and Dr Mark Kerrigan were invited to develop and deliver a 'Visualising & Communicating your Research' workshop for members of the Society for Research into Higher Education (SRHE). This workshop was requested in response to SRHE's concern that the valuable research from academics and researchers engaged with STEM research wasn't being represented as well as it could be. Our remit was to empower researchers with the visual problem solving skills to do so.

As we designed the workshop, we were informed by our experiences as both educators and creative practitioners, and in particular we drew upon our experience of teaching undergraduate Illustration students. In the paper 'Drawing Thinking: Illustration as Pedagogy' (Hirons & Brown 2019) we had explored a variety of our approaches to inject creativity and visual communication techniques to support critical thinking in theoretical modules. Working with the SRHE allowed us to open up to the possibilities of exploring our Illustration Pedagogy approach with a broader, external audience.

Knowing the majority of participants would be from disciplines outside the creative industry, it was crucial to develop a series of non-threatening, hands-on, playful tasks to put the participants at ease; to create a 'safe' environment in which they could engage with creative activities. The original workshop was delivered in person to researchers at the SRHE Headquarters in London, and was subsequently delivered in-person and online through workshops by Sam Rowe to SRHE members.

From the outset we were asking: what is it about the illustrators skill, knowledge, and way of interpreting text and image relationships which can support professions outside the creative industries?

Visualising & Communicating Your Research

Home / Visualising & Communicating Your Research

Research impact is linked to the ability to engage others with it. Indeed, peer review, publication and presentation are core academic standards but so is public/stakeholder engagement - formal and informal. Importantly, and as researchers, we need to be able to communicate our research effectively so our work can inform future activities be these continued research, linked activities or contextual application.

This workshop will be delivered in partnership with academics and artists who specialise in illustration. Specifically, it will explore the medium of message and the development of visual communication. This will include the use of illustration, presentations, posters, and the psychology of communication/visual impact. The workshop will be hands-on and participants will engage in creative activities.

To get the most out of this workshop, participants are asked to bring a piece of their research they would like to work on. This could be an abstract, poster, presentation, paper or other output. They are also asked to bring a laptop.

Outcomes:

By the end of the workshop, successful participants will be able to:

1. Articulate the necessary elements for impactful visual communication;
2. Construct a visual presentation for a named piece of research;
3. Critically analyse visual research communication to discern elements of good and poor practice;
4. Explore the role of creativity in research communication.

Facilitators:

Dr Mark J.P. Kerrigan; Mel Brown; Sam Rowe; Jason Hirons, Plymouth College of Art



After many iterations of these initial sessions (with the SRHE and with our own postgraduate students) we could see the value in these ways of thinking being applied beyond academia.

With the original workshop, what we thought the researchers would achieve was a straightforward visual interpretation of their research projects – when *actually* it was the processes of completing the workshop activities and then talking through and explaining their drawings and designs to each other that actually led them to view their ideas from new perspectives, leading to questions that had not necessarily surfaced through more traditional methods of presenting their research. It became clear that as well as helping individuals and groups visualise their ideas, we were also helping people actually think through and around their ideas.

However, facilitating workshops can be restrictive in terms of time and cost, hence from this starting point Shaping Thinking emerged in 2022 when Mel Brown and Sam Rowe applied for funding via AUP and UKRI Knowledge Exchange.

Between 2021-2023 Arts University Plymouth received £393,000 funding from Research England's Knowledge Exchange Funding for Small Providers. Staff members were invited to create proposals for projects that shared expertise alongside ambitions to engage with audiences outside academia, aimed at developing *"mutually beneficial collaborative partnerships that provide innovative solutions to real-world challenges. The aim of this work is to share Arts University Plymouth's knowledge, including research, expertise and physical assets with non-academic communities."* (AUP 2022).

Having successfully submitted a proposal for Shaping Thinking, we were awarded an initial £5000 of funding for phase one of the project: to produce a suite of workshop materials and facilitate a pilot session with a local business. This was followed by further, phase two funding of just over £6000 to refine the materials. The funding from UKRI went towards freelancer costs for a designer and illustrator, as well as website development, prototyping and staff buyout for Sam Rowe to free up time to work on the project.

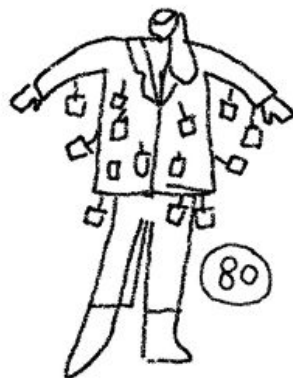
Phase One of Shaping Thinking

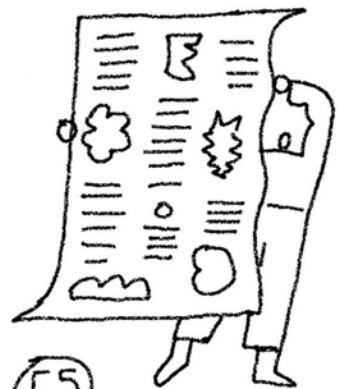
Sam produced a creative brief for the project with a full framework of the workshop delivery, including a proposed website, slideshow, and accompanying 'sketchbook'. Two freelancers were commissioned: Julia Takorska, at the time an AUP BA (Hons) Graphic Design student, and Charlotte Leadley, alumni from AUP's BA (Hons) Illustration course.

Shaping Thinking questions developed throughout the process:

- Is it possible to present or package these approaches in a way that removes the need for a specialist's involvement in real-time?
- What assumptions do we currently make about the way our students think of ideas, and how are these revealed by working with others outside the creative industry?
- How can the modes of delivery we use in creative education be turned outwards to benefit those in other areas?







55



59



9



14



64a



64c



65



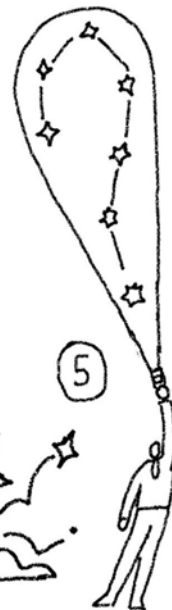
12



16



17

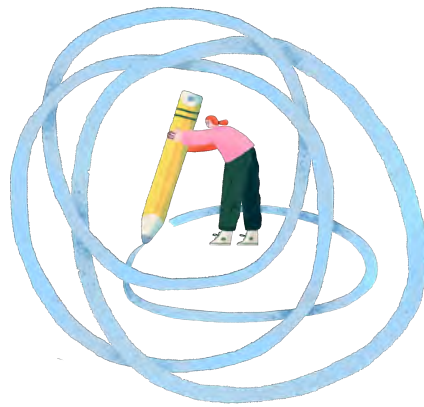


5

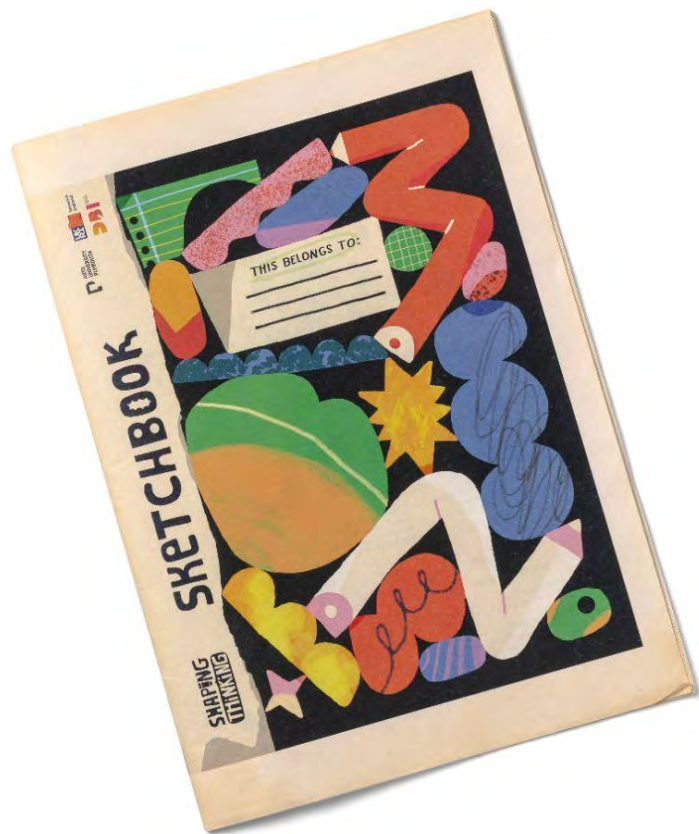


6













partnership with SRHE, this workshop evolved and was delivered across multiple platforms, beginning as a session to help non arts-focused postgraduate and doctoral students visualise their complex or unwieldy research. This helped them put together conference posters, presentations, and social media campaigns.

Shaping Thinking was supported by UK Research and Innovation under the Knowledge Exchange funding stream, as well as a close partnership with Diversity Business Incubator who bring a wealth of knowledge on our local communities and minority ethnic groups, helping ensure this project has a meaningful impact for everyone.



The team behind this project

Mel Brown is Assistant Dean (Design) at Arts University Plymouth, with a long-

Sam Rowe is a Senior Lecturer and Course Leader of BA (Hons) Illustration at

Charlotte Leadley is an illustrator and current student of MA Illustration at



[About](#) [CONTACT](#) [Run a Workshop](#)

Get in touch

For general enquiries about the initiative, or if you have any questions or feedback about running a workshop, email: shaping@aup.ac.uk.

- 📍 [Arts University Plymouth](#)
- ✉ [UK Research and Innovation](#)
- 🏠 [Diversity Business Incubator](#)



What makes clear visual communication?



A silly, playful task to get you thinking visually in a low pressure environment!

Open your sketchbook at the centre spread, take it out, scrunch it up into a ball and then flatten it back out again.



→ 1. Turn to **page 4** in your sketchbook.

2. Write one key word in each bubble which relates to the idea you want to communicate.





Shaping Thinking was intended to be primarily a free resource, with online access to the presentation materials available to anyone. This was considered to be of real economic benefit to our locale; providing access to resources for building on ideas to any organisation or business. Meanwhile, there was potential for a paid aspect to Shaping Thinking with access to higher tiers of support, such as printed material and consultation.

To test and feedback on the development of materials for Shaping Thinking, a pilot workshop was planned with local CIC Diversity Business Incubator (DBI). Working with local businesses, including self-employed people and non-profit organisations, DBI's primary goal is to aid both established and aspiring entrepreneurs, focussing on supporting the minority ethnicity community. Ultimately, the pilot gave us some real insight into how else local communities might benefit from these tools.

Initially we intended to work through the Shaping Thinking materials in one workshop but soon discovered that working in DBI's context, our delivery naturally slowed down. In our University context we're driven by time and efficiency, but with DBI, making meaningful connections with people is what they do and they gave us permission to slow down and do the same.







Phase Two of Shaping Thinking: Reflection

In 2023, we reflected upon the two key achievements so far as we made an application for the second round of funding:

- Partnership and Collaboration: through our direction, Charlotte and Julia's illustration and design successfully transformed our in-person workshop into a physical/digital resource for individuals and organisations to facilitate themselves.
- Pilot workshop: Plymouth-based DBI (local CIC and business hub for minority ethnic entrepreneurs) had kindly offered us their time and enthusiasm to pilot and feedback on the Shaping Thinking resource.

The pilot workshop was a rich experience that produced a huge amount of feedback and reflection, both formal and informal. Running the pilot with DBI had been invaluable in moving Shaping Thinking away from its original intention for use in education and research.

We were able to see the potential of our work in practice, applied to business and community contexts. In practical terms there were some design adaptations to be made to the resources - most important being a move towards more modular formats, allowing users to adapt the content and timescales to suit their own needs.

The resources needed to develop from being one singular presentation and sketchbook (for delivery in one session) to a suite of modular tools, which can be delivered in any order, together or separately.

Phase Two of Shaping Thinking

We continued the development of tools and resources for individuals and organisations to help visualise ideas. The activities related to further design and preparation of the materials themselves, leading to:

- Pilot Workshop facilitation – To see the Shaping Thinking tools in practice. The workshop took place with new inhabitants of AUP's incubation space Workroom in partnership with local business consultant, Jess Holliland, who's expertise was important to define clear outcomes for the workshop.
- A prototype card deck – The primary physical output aimed to help businesses and individuals build on and generate ideas creatively.

In phase two, funding from UKRI paid for additional hours for Sam Rowe, facilitation fees for Jess Holliland, and prototype card deck printing.

In reflection on the pilot workshops, we looked at the format of Shaping Thinking itself. In applying it to real-time workshops, we found the main limitation was the linear nature of a book and presentation. While it could be flipped back and forth - it was ultimately designed to go in one direction; and for an inexperienced facilitator (our primary audience) it may not be easy to adjust in real-time.

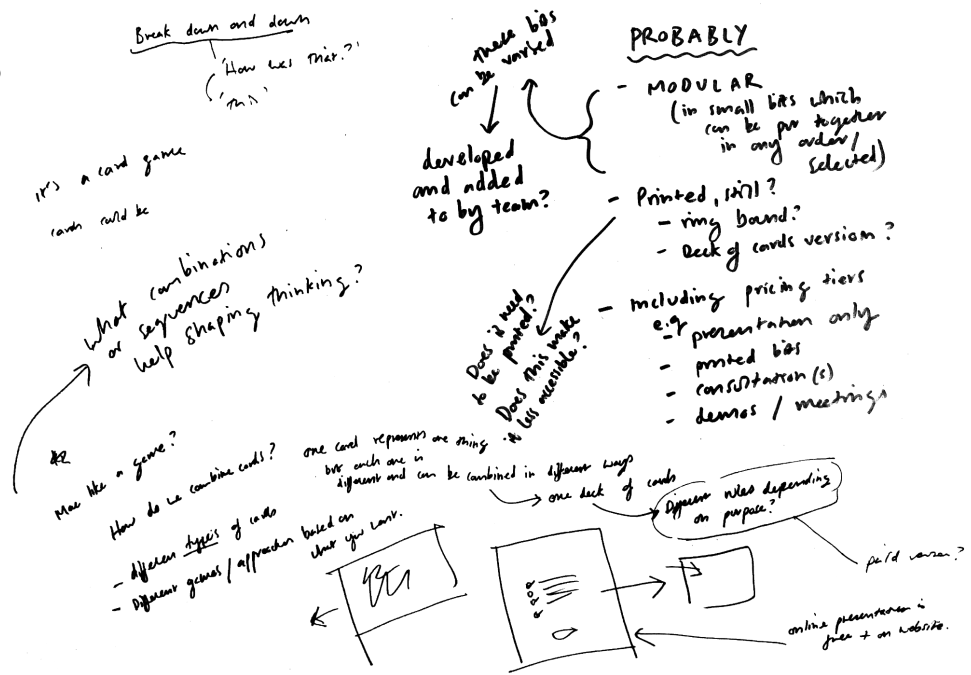
Additionally, the combination of website, facilitator slides and participant sketchbook could feel precarious, and increased the barrier for entry. We wanted to make it easier, and more customisable.

As a result, we moved towards the format of a card deck - with no other materials attached, and whatever paper and pens participants had access to. A card deck offered several key advantages over the combined presentation and workbook:

- It was truly non-linear, and allowed for re-order in any direction.
- It allows for simultaneous view of more than one 'page' at a time when needed.
- It can facilitate controlled randomness, with decks placed face down and drawn blind.

In combination, these factors result in a system which can be guided and controlled as well as open and random - used as building blocks, behind the scenes tools, or audience-facing interaction.

Development of the Shaping Thinking card deck was the result of a process of 'breaking down' the workshops first delivered with Diversity Business Incubator. By separating each part of the workshop into its smallest possible elements, we could see which things were repeated. In testing this system, we worked to recreate the pilot workshop from scratch with these smaller pieces to prove it's viability.

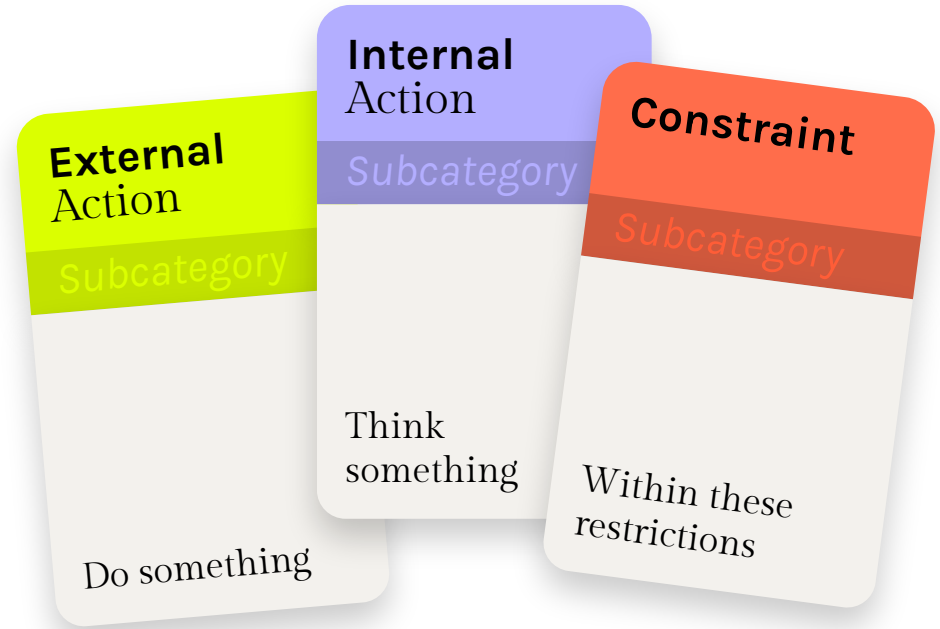


To further test this new approach, the card deck was initially produced digitally to be shown on screen at a second pilot workshop. This early version had no illustration, and distinguished card types using colour.

In the development of this workshop, Sam Rowe worked with local business consultant Jess Holliland - providing a clear list of potential demo cards, and collaboratively using these to build a new workshop. As such, the second pilot workshop served two functions:

1. To demonstrate how effective a workshop could be delivered using Shaping Thinking as a starting point.
2. To demonstrate how effective the new format of Shaping Thinking was when employed by someone outside the research project.

In both instances, Shaping Thinking was successful. Positive feedback from Jess provided vital insight into the value of similar tools for consultants and facilitators like her, and showed us that the idea - on the whole - had value beyond our immediate field.



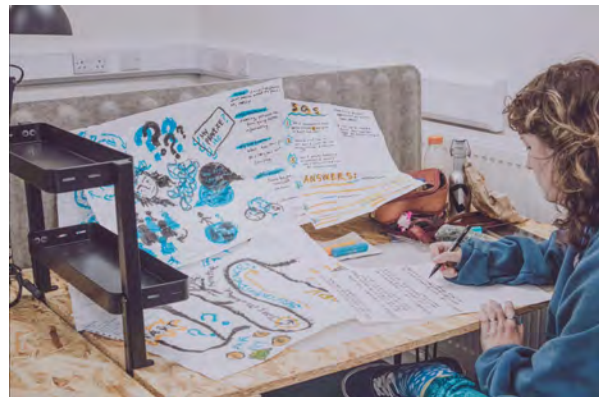
The second pilot workshop was planned with new residents of Workroom, an AUP funded incubation space.

This was the first group workshop that the new Workroom residents had taken part in, and it also worked well to build bonds and dispel nervousness around each other. It also prompted cognitive change within individuals about their personal and professional journeys, and gave them tools which helped level the playing field as new members of the community.

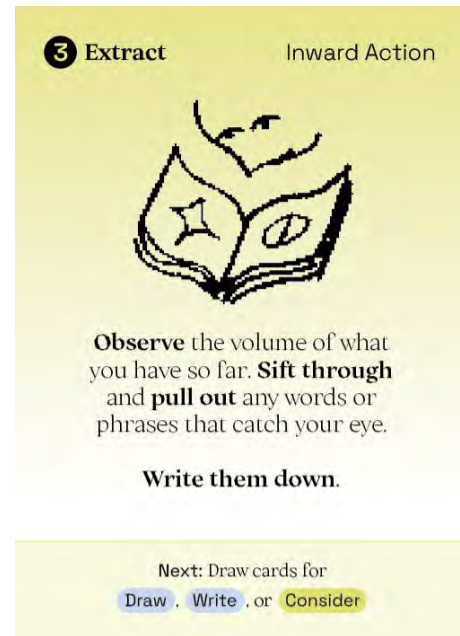
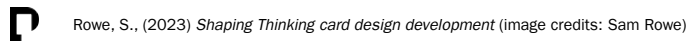
Participant Feedback:

- *It was very explorative internally. I enjoyed that although the tasks were structured in of themselves the outcomes could be messy / imperfect.*
- *Amazing session! Made me think deeply and gave me tools I can use to keep growing. Thank you!*
- *It was a really valuable session, it gave me answers for some questions, it was also nice to get to know the more 'real' version of everybody!*
- *Great for solving linear problems with abstract thinking.*
- *Helpful for tackling elusive or seemingly unsolvable challenges in a supportive group environment.*
- *I found the beginning a little overwhelming, but as we continued through each task I found them easier to tackle. I think more shorter (maybe 5 mins) breaks would be nice.*





Visually, the cards were developed quickly, alongside a single 'ruleset' card to provide guidance without explanation from a facilitator.



Card **Weight / Impact**





Heavy ——— Light

Card **Category**

 Inward Action
  Outward Action
  Constraint

Additional Considerations — (Optional)

 Follow if alone
  Follow if in a group or as a facilitator
  Follow if not planned in advance

 Current Action card
  Current Constraint card(s)
  Draw 1 Inward Action card
  Draw 1 Outward Action card
  Draw 1 Constraint card
  Ignore Constraint(s)
  → Then / next

Design & Illustration:
Sam Rowe

 For questions & info:
illustration@aup.ac.uk



Reflect





Reflect on what you have so far.
 Take note of any **surprises** or **unexpected discoveries**.

Share highlights with each other.
 Next →  + 



Draw





Draw **this room** with **you** in it.

Point of view must be outside the room.
 Draw others too.
 Next →  + 



Time





You have **10 minutes**.

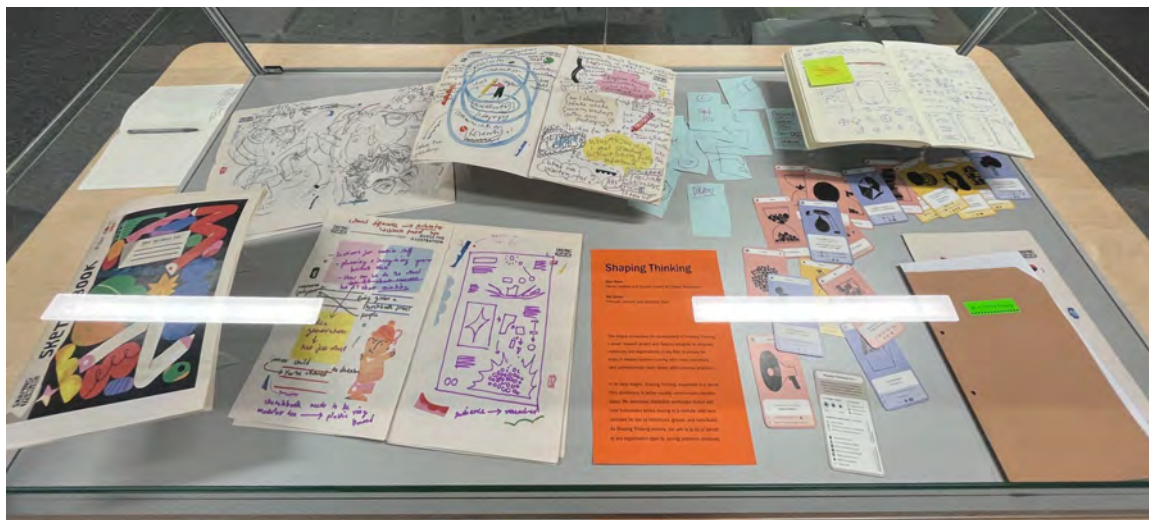




Arts University Plymouth Library Cabinet Gallery

In March 2025, the developmental materials for Shaping Thinking were displayed in the Arts University Plymouth Library Cabinet Gallery. This display featured several key parts of the development for Shaping Thinking:

- Notebook pages from initial development meetings
- Used workbooks from Phase 1 pilot workshops
- Drawings and prototypes for Phase 2 card deck
- Final set of cards used in the printed demo deck



Shaping Thinking

Sam Rowe

Senior Lecturer and Course Leader, BA (Hons) Illustration

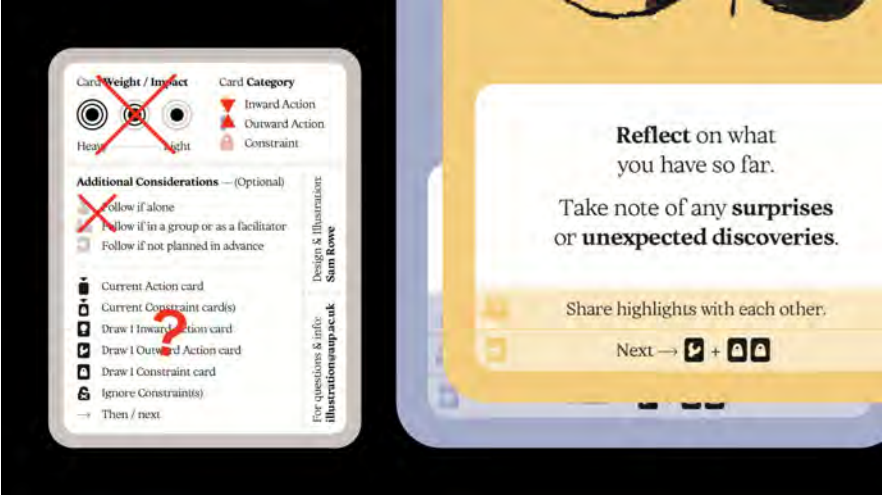
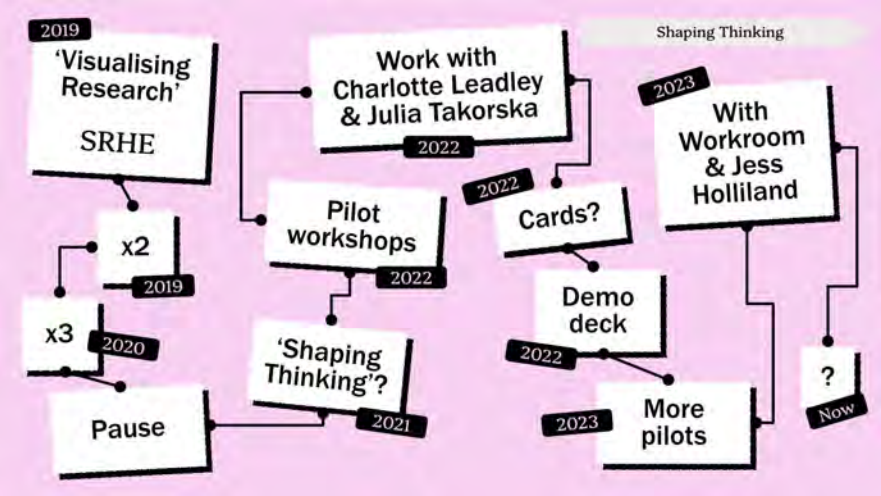
Mel Brown

Principal Lecturer and Assistant Dean

This display showcases the development of Shaping Thinking: a broad research project with outputs designed to empower individuals and organisations in any field to employ the kinds of creative problem solving which have historically (and unintentionally) been siloed within creative education.

In its early stages, Shaping Thinking responded to a desire from academics to better visually communicate complex ideas. We developed interactive workbooks tested with local businesses before moving to a modular card deck intended for use by facilitators, groups, and individuals. As Shaping Thinking evolves, our aim is to be of benefit to any organisation open to solving problems creatively.

In addition to the display, Sam Rowe delivered a short talk detailing the developmental journey of Shaping Thinking to colleagues and postgraduate students in the Library in March 2025.





CREATIVE SKILLS WEEK 2025: SHAPING THE FUTURE OF CULTURAL AND CREATIVE SKILLS

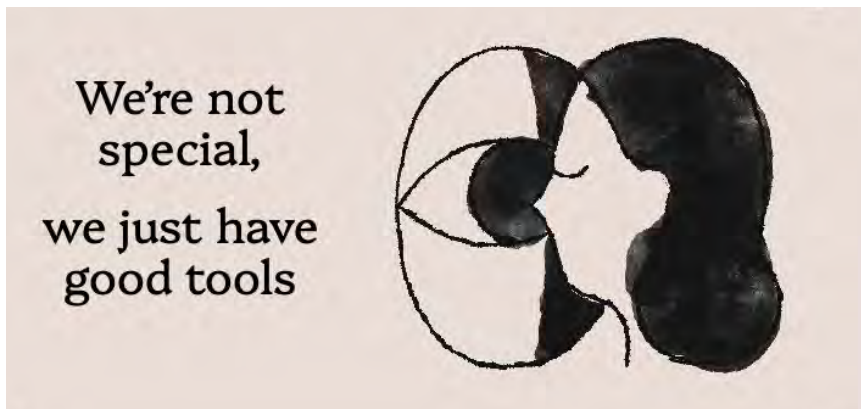
Co-organised by SECCORD and CYANOTYPES, the **Creative Skills Week** will gather the Cultural and Creative Sector Industries (CCSI) in Prague between the **22 and the 26 September**.

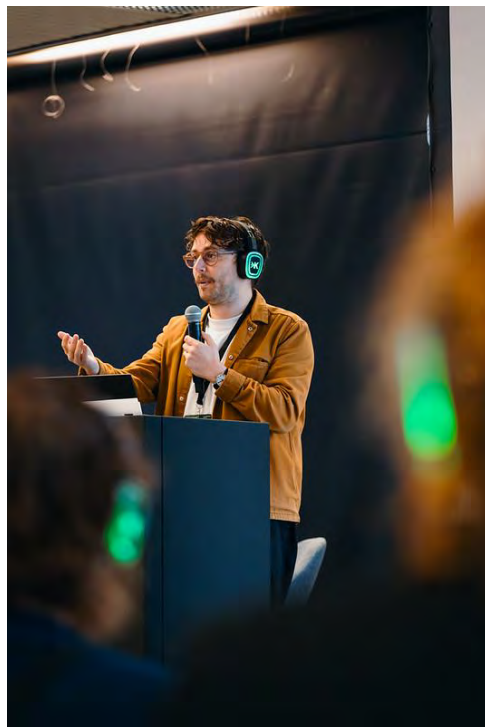
The event is dedicated to re-skilling, up-skilling, and fostering innovation in the sector. It will provide a platform for sharing knowledge, exchanging best practices, and exploring new approaches to lifelong learning.

It will bring together Higher Education (HE) institutions, Vocational Education and Training (VET) providers, and Small and Medium-sized Enterprises (SMEs) to strengthen collaborations and promote innovative skilling practices. Participants will be able to discuss emerging skills and strategies that will help sustain innovation and anticipate future workforce needs.

Sam Rowe was supported by funding from Arts University Plymouth to present *Shaping Thinking* at Creative Skills Week 2025 as part of the Regenerate Projects Marketplace:

“Across three simultaneous stages, 21 proposals were pitched in fast-paced rounds, offering a snapshot of emerging practices and bold visions across the cultural and creative sectors. Equipped with headphones, the audience navigates seven rounds of 10-minute exchanges—8 minutes of pitch—choosing where to focus their attention. This format fosters serendipitous connections and cross-sector insight, inviting participants to learn, challenge assumptions, and explore new potential collaborations. Project tracks will be announced on site—prepare to move, listen, and evolve.” (creativeskillsweek.eu)





SHAPING THINKING

Focus on the Shape. Ignore the rest of the image.

Focus on the Time. Ignore the rest of the image.

Focus on the Time. Ignore the rest of the image.

Focus on the Brain. Ignore the rest of the image.

Focus on the Job. Ignore the rest of the image.

Focus on the Job. Ignore the rest of the image.

Mapping Thinking (16 cards)

Focus on the Shape. Ignore the rest of the image.

Focus on the Shape. Ignore the rest of the image.

Focus on the Line. Ignore the rest of the image.

Focus on the Explain. Ignore the rest of the image.

Focus on the Focus. Ignore the rest of the image.

Focus on the Reflected. Ignore the rest of the image.

Focus on the Entries. Ignore the rest of the image.

Focus on the Audiences. Ignore the rest of the image.

Focus on the Line. Ignore the rest of the image.

Focus on the Time. Ignore the rest of the image.

Focus on the Brain. Ignore the rest of the image.

Focus on the Extension. Ignore the rest of the image.

Focus on the Imagine. Ignore the rest of the image.

SAM ROWE

CREATIVE SKILLS WEEK 2025

SLIDE 8

Conclusion

Access, Impact, and Audience

Internally, Shaping Thinking has been shared with approximately 20 colleagues of Arts University Plymouth via the cabinet gallery and talk and workshop with the Making Learning research group. Locally, the project has involved 20-30 people via pilot workshops with DBI and AUP Workroom. Nationally, the project involved approximately 60 people in its early stage supported by SRHE, presented at standalone events and at conferences. Internationally, Shaping Thinking was presented to approximately 80 people at Creative Skills Week in Prague.

The continued positive reception of the project validates the evolved format - both among participants as well as colleagues in a position to make use of these tools in their own areas. Shaping Thinking has also received modest press coverage, through social media promotion, a short film of our first pilot workshop, and publicised photos of Creative Skills Week 2025.

Through our own reflection reinforced by participant feedback, we concluded that Shaping Thinking fulfilled three core goals by:

1. Providing workshop and mentoring opportunities within the community to those outside of creative education, mixed academic backgrounds, diverse ethnic groups;
2. Encouraging people from non-creative backgrounds to expand their way of thinking in order to achieve success when presenting their ideas;
3. Supporting a sense of community, bringing people together to tackle problems by providing motivation, inspiration and a growth mindset.

Thanks & Credits:

Charlotte Leadley: Shaping Thinking Phase 1 Illustration

Julia Takorska: Shaping Thinking Phase 1 Sketchbook Design

Jabo Butera, Tania Nana, Azza Gazzim: Shaping Thinking workshop participants from Diversity Business Incubator

Jess Holliland (JCH Coaching and Consultancy): joint facilitation (with Sam Rowe) of the Shaping Thinking workshop with Workroom Grow participants

Blue Skye, Charlie Dyson, Molly McCarthy, Nicola Rickard, Hannah Cade, Natalia Lombard, Sam Grotzke, Stacey Hunter, Megan Trapnell, Zoe Crewe: Shaping Thinking workshop participants from Workroom Grow

Sam Rowe: Shaping Thinking Phase 2 demo cards design & illustration

Alexandra Murphy, Tifaine Dickinson & Danielle Parr: AUP Knowledge Exchange team

Jason Hirons and Dr Mark Kerrigan: collaborators with Mel Brown and Sam Rowe in the development and delivery of the first 'Visualising & Communicating your Research' workshops delivered to the Society for Research into Higher Education

Aden Barwick and Robert Marshall: Photography & Film (documenting Shaping Thinking workshops)

Paul Mounsey: Photography (documenting Shaping Thinking cards and participant sketchbook)



**Research
England**

Recommended citation: Brown, M., & Rowe, S., (2024) Shaping Thinking [Research Practice] (2024). Art University Plymouth. DOI: 10.66992/E1LMCC