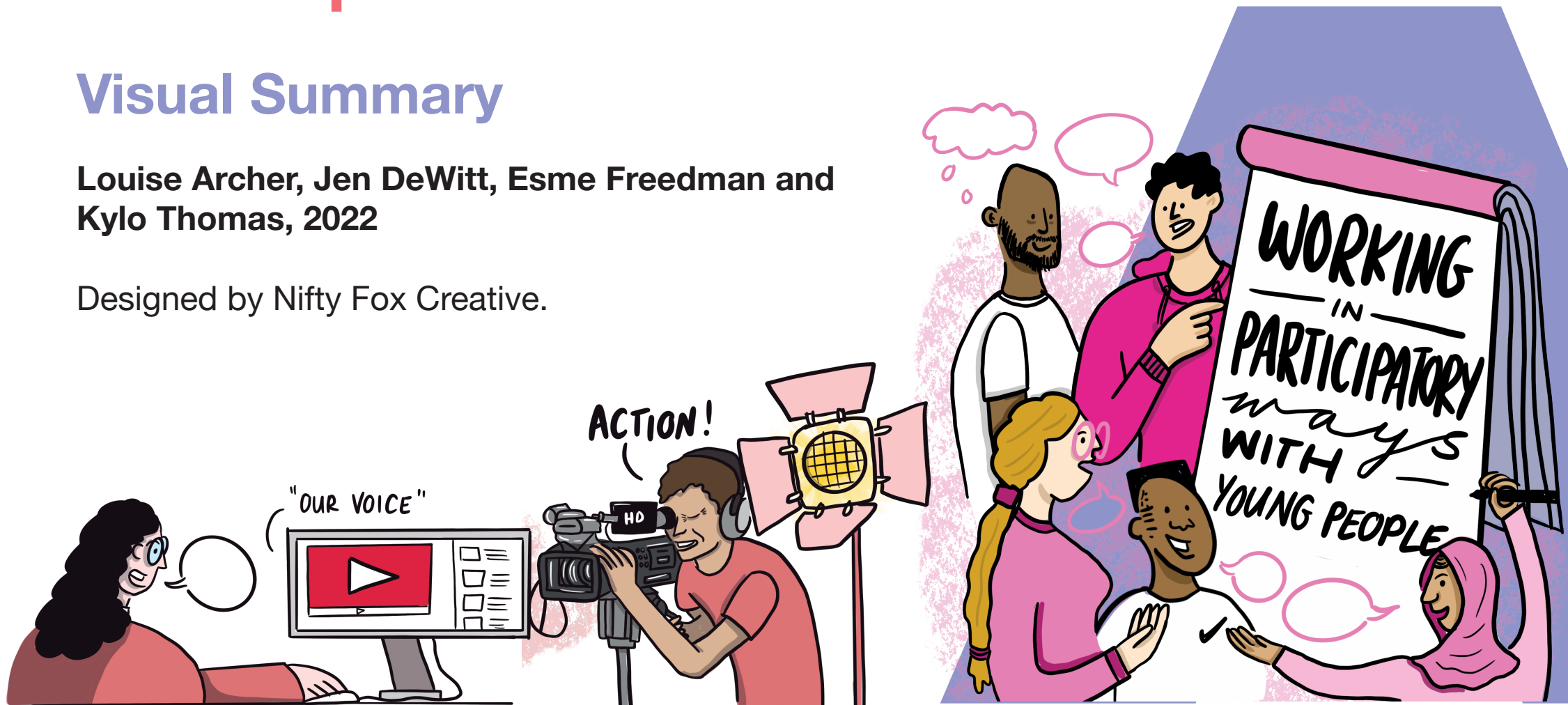MAKING SPACES

Supporting Equitable Practice for Makerspace Practioners

Visual Summary

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Designed by Nifty Fox Creative.

Contents

About the project

Makerspaces are informal multipurpose sites designed for collaborative hands-on learning and creative production, with or without tools.

These rapidly proliferating spaces can provide ideal settings for growing participation in science, technology, engineering and mathematics (STEM), but in the UK to date, this potential remains predominantly unrealised, especially for low income and under-represented communities. There are some inspiring exceptions, but these pockets of creative practice are not widely known.

MAKING SPACES PROJECT

The Making Spaces project sought to understand, identify and document forms of equitable practice. At the start of the project, researchers, practitioners and young people developed and shared ideas and experiences about what equitable practice might involve.

Practitioners then integrated these insights into their programmes, trying out and iterating specific ideas. Adult and youth co-researchers collected data to capture what this looked like in practice and what impact it had.

The first phase of the Making Spaces project was undertaken between 2020-2022 and involved a collaborative partnership between researchers, practitioners and young people from three UK makerspaces..

THIS SUMMARY

Here we share ideas emerging from the Making Spaces project, helping practitioners support equitable engagement of young people from communities under-represented in STEM.
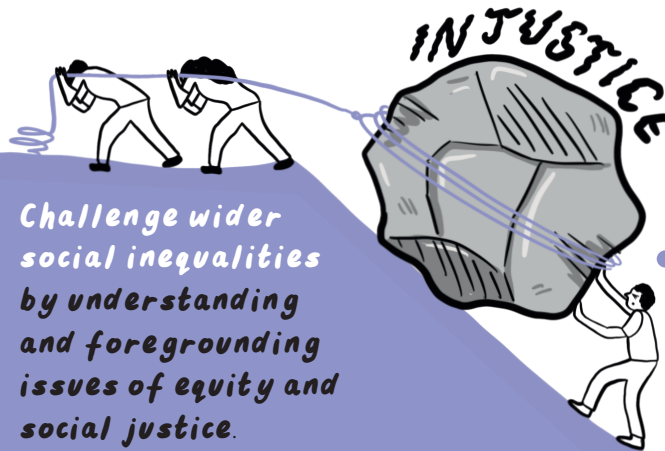
IDEA # 1

Developing a SOCIAL JUSTICE MINDSET & ORGANISATIONAL CULTURE

1. What's this about?

Makerspaces, like any other organisation, are part of society and will be shaped by inequality and injustice.

If makerspaces are to help challenge inequalities then they can:

INJUSTICE

Challenge wider social inequalities by understanding and foregrounding issues of equity and social justice.

Reflect on and identify aspects of their own culture and practice that can be exclusionary.

2. Case study

Challenge: A makerspace wanted to embed social justice in organisational culture.

Action: They developed a recruitment, induction and training plan that focused on embedding social justice.

They also monitored programmes for equity and justice, forged participatory relationships with local communities and embedded inclusive values across the organisation.

Result: All staff had a strong knowledge, commitment to, and understanding of social justice issues and were able to confidently articulate these principles to others and embed them into their practices.

INCLUSIVITY   SOCIAL JUSTICE   EQUITY

3. What can I do next?

Help practitioners adopt a social justice mind-set and approach by using equality and diversity training and sharing resources from the Making Spaces report.

Develop an organisational plan to create a culture and practice of ongoing, active listening and learning from staff, young people and communities.

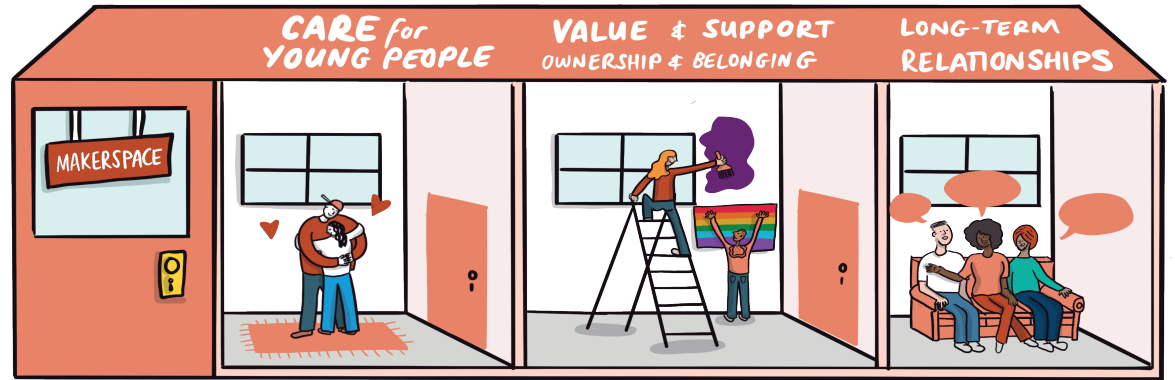# IDEA #2: Create SAFE, WELCOMING, INCLUSIVE SPACES
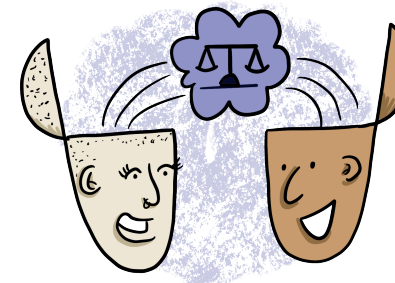
1. What's this about?

To support and advance equity and social justice, makerspaces need to be safe, welcoming, inclusive and sustainable spaces.

This means considering how to:

CARE for YOUNG PEOPLE

VALUE & SUPPORT OWNERSHIP & BELONGING

LONG-TERM RELATIONSHIPS

MAKERSPACE

Protect young people from physical harm as well as care for them socially and emotionally.

Value all young people for who they are and support them to feel a **sense of ownership and belonging.**

Support **long term social relationships** and sustainable participation.

2. Case study

Challenge: A makerspace wanted to make their offline and online learning spaces safer and more welcoming.

Action OFFLINE:
They ensured that the physical space felt informal, and supported young people's ownership of the space.

The makerspace built relationships with young people so they felt safe to express concerns with adults who care about their wellbeing.

WELCOME!

Hi!

Action ONLINE:
Ensured that all online sessions included check-ins and check-outs.

Used a learning format and structure that enabled participants to work at their own pace, ask for help, and receive regular feedback. Ensured that all young people had the equipment, support and conditions they needed for participation.

3. What can I do next?

Reflect together with young people and communities, to understand **how different participants experience your makerspace** and relationships within the spaces.

POWER

SAFE

EXPERIENCE

THIS SPACE IS YOURS
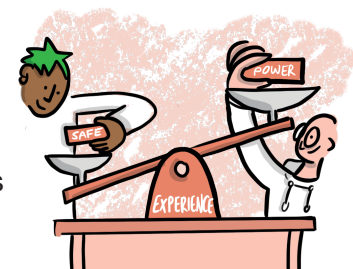
How can you: support young people to feel more **'ownership'** of the space; and recognise and address what helps different participants **to feel un/safe?**

IDEA #3

WORKING IN PARTICIPATORY ways WITH YOUNG PEOPLE

1. What's this about?

Participatory approaches provide ways for young people to play an active and meaningful role in any activity.

Support young people to play an active and meaningful role in planning, designing and decision-making.

Hear and enable young people's voices to make a difference and shape activity.

Recognise and respect young people's knowledge, expertise and experiences.

2. Case study

Challenge: A makerspace wanted to extend their participatory approach by co-designing youth-led programmes.

Action: They recruited youth co-researchers and trained them in research methods. The co-researchers were then tasked with researching what makes a good making workshop, and had 5 weeks to develop ideas into a workshop plan.

8 CO-DESIGNED WORKSHOPS

Result: The young people co-designed 8 workshops for the makerspace around different social causes - those involved felt like they had genuine authority and agency, and developed transferable skills in the process.

3. What can I do next?

Identify and develop partnerships that could help start your learning journey.

Be aware of uneven power dynamics in attempts at consultation and co-design.

If these approaches are already embedded, you may find it helpful to next **extend these principles to wider organizational governance.**
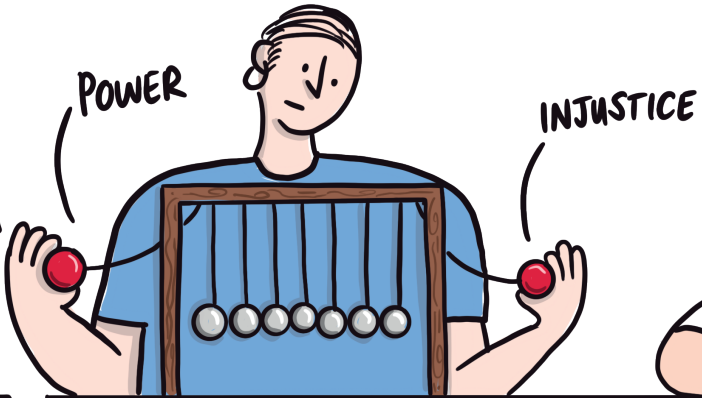
IDEA #4

FOSTERING CARING PEDAGOGIES & RELATIONSHIPS

1. What's this about?

The most important thing about a makerspace is not its equipment or resources, **it is the relationships, teaching and learning practices.**

POWER

INJUSTICE

EMOTIONAL

CULTURAL

PASTORAL

Makerspaces can: take account of **relations of power and injustice**, and centre young people and their needs;

and support young people emotionally, culturally, pastorally to foster wellbeing, progression and positive outcomes.

2. Case study

Challenge: A makerspace wanted to improve how they mentor and care for the young people they work with.

Action: The makerspace created an online community within its coding programme.

They provided each participant with a pastoral mentor to support their wellbeing, tracking engagement and building active relationships with their young people.

Result: Young people involved felt, looked after, supported and 'not alone'. The makerspace also successfully re-engaged participants on the verge of dropping off the course through meaningful, caring relationships.

WE'RE HERE FOR YOU

I NEED HELP

TRY THIS

3. What can I do next?

Start a conversation across your organization about **what caring relationships mean for different people.**

Identify and map out the different forms of care that young people in your setting might need.

Develop a collective plan for how care can be embedded across organizational policy and practice.

IDEA #5

SUPPORT young people's AGENCY & SOCIAL ACTION through MAKING
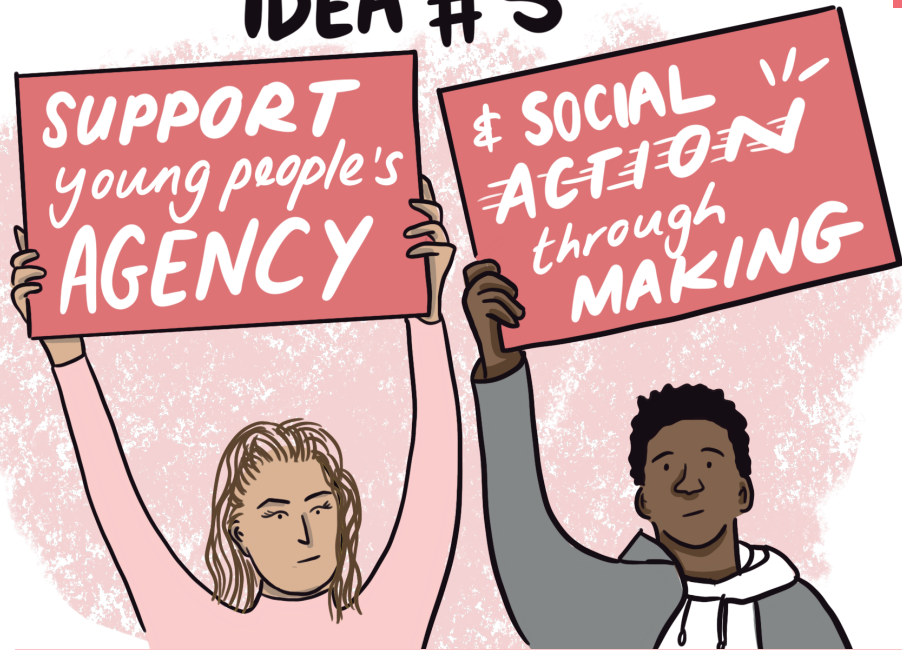
1. What's this about?

Makerspaces can provide valuable opportunities for young people to engage in making in ways that support their agency and social action.

Makerspaces can:

Provide opportunities for young people **to act and make decisions** in their own learning and experience **a sense of ownership and voice** in their making.

ACTION!

Support young people to **engage in actions that are directed at social change.**

2. Case study

Challenge: A makerspace wanted to embed agency and action into everything they do.
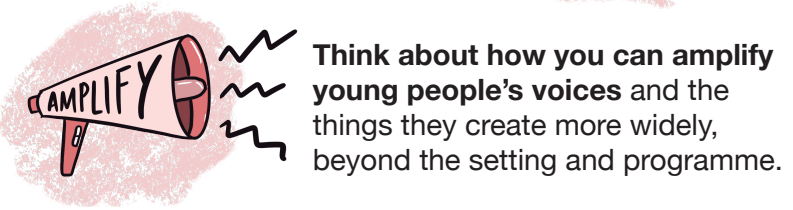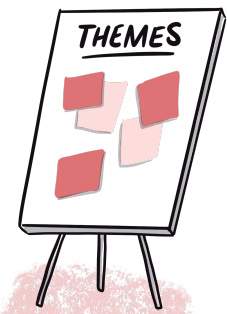
Action: The makerspace redesigned their programming to better focus on increasing young people's agency and helping young people to use making to make a difference in society and their communities.

For example, young people designed various objects as part of a social action campaign day representing their concerns about racism, climate change, political oppression, and transphobia, and created animations on the issues that could be shared more widely.

Result: Young people grew in confidence and agency through their participation, with their making benefiting themselves and their communities.

"OUR VOICE"

3. What can I do next?

THEMES

With pre-planning and consultation with young people, **build social action themes into making sessions** to enable young people to use their making to address their interests and issues that they care about.

AMPLIFY

Think about how you can amplify young people's voices and the things they create more widely, beyond the setting and programme.

IDEA #6

BUILD CAPITAL, SKILLS AND PROGRESSION

1. What's this about?

The capital and skills that young people build through their participation in makerspaces can support their progression.

Makerspaces can:

Provide opportunities for young people to **develop a range of capital and skills** in areas such as, but not limited to, science, technology, engineering, maths, art, crafts, creativity and beyond.

Support young people's pathways and progression in ways that benefit them, their communities and wider society.

2. Case study

Challenge: A makerspace wanted to better support young people's job readiness for STEM careers.

Action: The makerspace built extensive careers and job readiness support into their coding programme package.

They recognised that participants wanted not only new STEM knowledge and skills, but also practical help on how to access the labour market. Therefore, sessions such as 'interview skills' and 'portfolio creation' were included in the programme.

Result: Young people gained significant new STEM skills and also felt well prepared for the job market.
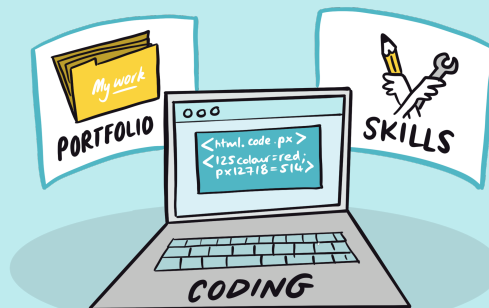
3. What can I do next?

Ask young people **what broader forms of support they might want**, need and find helpful for their lives and progression.

Reflect with colleagues, asking: **what do we and young people count as 'successful' outcomes for a young person in our space?**
How do we support and capture this? How can we help them progress to future opportunities?

m4kingspaces.org/

www.ucl.ac.uk/ioe/departments-and-centres/centres/centre-sociology-education-and-equity/making-spaces

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