Leapfrog

Summer School Report:
Action Research, Engagement, & Co-design

5th – 7th July 2016
The Glasgow School of Art | Forres, Moray

Leapfrog Summer School

Sharing co-design methods and tools for engagement, in July 2016 the Leapfrog Summer School aimed to develop Early Career Researchers' (ECRs) capabilities in carrying out Action Research with communities and to stimulate discussion and debate around the academic and societal impact of these approaches.

Taking place at the Institute of Design Innovation at The Glasgow School of Art in Forres, Moray, delegates took part in a series of paper presentations, discussions, and creative workshops to enrich their understandings and applications of Action Research in community settings. Featuring presentations from the wider Leapfrog team, the Summer School also welcomed a series of international speakers who delivered keynotes and lightning talks across the event. Areas of discussion included:

• Action research, participation, and co- production with communities
• Design-led methods and tools in Action Research
• Relationships, power, and ethics
• Engaging with diverse and minority communities
• Moving across disciplinary boundaries
• Case studies of research with the public, private, and third sectors
• Innovative research outputs; collaborative evaluation and dissemination
• The value, impact, legacies, and sustainability of these approaches

This program of activities offered an inspirational and supportive space for a network of ECRs to exchange insights on broader aspects of research and career development, including approaches to generating research questions, writing research bids, and dissemination to diverse public audiences, and to consider how they might work together in the future.

In this report we reflect on the activities that took place across the event, the insights and themes that emerged, and how this has informed the development of the 2017 Leapfrog Summer School.

Leapfrog

Summer School:
Action Research, Engagement,
& Co-design

The Summer School Programme

In designing the Summer School programme the Leapfrog team assigned each day of the event with a broad theme before arranging corresponding speakers and activities. Day 01 sought to unpack the fundamentals of Action Research as a form of inquiry, whilst providing tangible examples of this in practice. Day 02 focused on how Action Research can make a difference by contributing to academic knowledge and having a direct benefit to communities and wider society. Day 03 explored the ideas of participation and the ways in which researchers can engage productively with communities as a core element of Action Research. Activities comprised three keynotes; seven shorter lightning talks; two interactive workshop sessions for all Summer School participants; two evening sessions; and four sessions in which delegates were invited to present their own research and consider how it relates to Action Research. As a space for capturing their emerging responses to the prompts *What is Action Research?*, *How is Action Research done?*, and *How can Action Research make a difference?*, participants were encouraged to capture key elements from the activities that resonated with them on coloured paper squares and to pin these to the three large format boards. These formed a shared repository of insights to be build upon and referred to across the event.

What is Action Research?

Following a welcome to the Summer School and Professor Leon Cruickshank's introduction to the aims of the Leapfrog project, the group came together to take part in an icebreaker activity entitled *Sharing Research Stories 01*. Working in pairs, participants shared with each other their thoughts on the key elements of successful research collaboration, their own personal strengths and weaknesses as researchers, their research idols, and a research project that they would like to secure funding for in the future. Upon completing these details onto printed templates and pinning these onto large display board, participants introduced their partners to the wider group.

Director of Research at Research for Real (2017), Dr Cathy Sharp then delivered her keynote – *Action Research – Inquiry for Better Times* – and highlighted the nature of continuous inquiry, knowledge co-construction, and risk at the heart of Action Research. Through this, she positioned Action Research as a values-based exploration of future scenarios and the conceptualisation of improved public services. In practical terms, she gave examples of how people participating in the research are drawn together in conversation to share and analyse stories together. Drawing on key theorists including Gergen (2014), Reason (2002), and Wadsworth (2011), Cathy focused in particular on how appreciative inquiry, part of the family of approaches in Action Research, offers a generative method to help people to see old issues with new eyes.

This was followed by a lightning talk – *Fundamentals of Ethics in Action Research* – by Senior Lecturer of Philosophy at Lancaster University, Dr Garrath Williams. Taking a practical approach to ethics in Action Research, he talked about how, far from being a system of limits and restrictions imposed by academic institutions, ethics within Action Research can be viewed as a holistic framework for co-operation, sharing standards, dividing responsibilities, creating cohesion, and enabling people to generate new possibilities for change together. Where Action Research is inherently risky and open-ended, trust in each other is built through negotiating consent on an on-going basis. Within this we need to acknowledge our own position of power, that we are not neutral, and the limits to which we can protect others from risk.

The first day also saw a group of ten participants give talks on their understandings of Action Research and its relevance to their work. Ahead of the Summer School, delegates were asked to consider the question *What is Action Research and why is it an appropriate lens through which to explore my research?*, and to then deliver their response in a five minute presentation and through a maximum of five slides. These case studies and examples of research brought huge depth to the Summer School experience, through discussion, helping the group to draw out new themes, debates, differences, issues and examples of applications of Action Research.

Leapfrog Summer School | 5th – 7th July 2016 | The Delegates

The following delegates presented in the first session:

• Dr Melanie Rohse, Research Fellow at the University of Birmingham, spoke about her development of a Participatory Action Research framework within the *Stories of Change* project, which aims to innovate with co-production principles around people's everyday relationships to energy in the South Wales valleys.

• Laura Santamaria, PhD Student at Loughborough Design School, introduced her work using Action Research to develop tools for critical analysis in social innovation contexts, with the aim of encouraging wider adoption of sustainable lifestyle practices.

• Philémonne Jaasma, PhD Candidate at Eindhoven University of Technology, shared her design research, in collaboration with a political theorist, exploring embodied design for participatory spaces and the interaction between municipalities and citizens around public issues.

• Mirian Calvo, PhD Student at The Glasgow School of Art, spoke about her research journey to date and her progress analysing the impact of participatory design approaches in community development within the Leapfrog project.

• Annalinda de Rosa, PhD Candidate and Teaching Assistant at Politecnico di Milano, discussed her research focus on understanding mutual influences between design for services and spatial design for social innovation in urban public spaces.

The following delegates presented in the second session:

• Dr Dee Hennessy, Engagement and Impact Facilitator at Lancaster University, presented her insights into the relationship between facilitation and Action Research, and drew from her previous work to consider how groups can work effectively together to develop new ideas and new ways forward.

• Tanja Rosenqvist, PhD Candidate at Institute for Sustainable Futures, University of Technology Sydney, gave an account of her research with low-income communities in Indonesia exploring how citizens can move from being co-producers to become co-governors, specifically in the context of wastewater treatment systems.

• Laura Morris, Research Associate at Lancaster University, positioned her Action Research within the Leapfrog project, and spoke about its aims to enable public service providers to gain better knowledge about the issues within the communities they support and to co-design tools for creative engagement.

• Robert Djaelani, PhD Candidate at Northumbria University, framed his perspectives on Action Research in the context of working with Voluntary Community Sector (VCS) organisations England through design-led approaches to develop working groups that tackle issues present within services.

• Hayley Alter, PhD Student at Lancaster University, also shared her work within Leapfrog seeking to advance understandings of creative engagement tools, what makes them adaptable, and whether or not adaptability is advantageous.

The day ended with an evening session with Dr Kristina Lindström and Dr Åsa Ståhl around *Becoming a Response-able Stakeholder in Times of Uncertainty*. Part of the Hybrid Matters programme (2015), their project considered the impact of plastics on our environment, how it is found interlaced in our seas and coastlines, causing the need for change in our behaviour. The project drew on scientific research finding that mealworms can digest polystyrene, converting it to biological matter. Given that mealworms are edible, they created speculative work by hosting meals including mealworms as ingredients. To help bring that work to life, we got to sample some mealworms too!

Making a Difference through Action Research

Day 02 began with Professor Leon Cruickshank's keynote focusing on the research component of Action Research. Through this, Leon grounded his perspective in Bruce Archer's (1995) articulation of five fundamental requirements of research, which state that research must be:

1 Systematic because it is pursued according to a plan
2 An enquiry because it is seeks answers to questions
3 Goal-directed because the objects of the enquiry are posed by the task description
4 Knowledge-directed because the findings of the enquiry must go beyond providing mere information
5 Communicable because the findings must be intelligible to, and located within a framework of understanding for an appropriate audience.

From this he presented two major projects that adopted an Action Research approach: *Beyond the Castle* (2017) – a co-design project with 2,000 people funded by the PROUD project – and *The Creative Exchange* (2017) – exploring a new approach to PhD education in the arts by placing students in research projects with companies and academics. This led Leon to reflect on Leapfrog with a critical eye, highlighting some of the factors that can place great engagement in tension with great research. These included issues of:

• Tempo: if an activity goes well people want another one soon, they are enthusiastic! Its sometimes hard to do the required analysis of the data collected and create the next event in a timely manner.

• Resourcing: The analysis and communication of data takes resources (time and material) away from the often more tangible activities with communities and other stakeholders. There is a danger this is seen as 'wasted' resource.

• The 'invisibility' of research: linked to the above issue, publishing is needed to 'qualify' as being research but this can be a time consuming process that can take years to come into the public realm. This can make it harder to prioritise this over the more immediate needs of community work.

To address these issues Leon proposed the following framework of four activities to integrate research into Action Research processes:

1) Design the research cycle into projects from before day one
2) Have someone specially tasked to focus on research delivery
3) Accept effort on research (doing and reacting) will take resources away from the more visible engagement activities.
4) Have concrete goals in terms of research outputs

Carrying on the theme of making a difference through both the process and outcomes of Action Research, this was followed by four lightning talks. Professor Tom Inns – Director of GSA – shared his experiences of coordinating and facilitating co-design workshops and how the careful choreography of people, process, and place can enable spaces for collaboration.

Following this, Professor Rachel Cooper OBE – Distinguished Professor of Design Management at Lancaster University and Director of ImaginationLancaster – focused on the significance of carrying out *Impactful Research for Academia and Society*. Foregrounding the need for academic institutions to undertake public engagement, Professor Cooper recommended that researchers bear in mind the *Four Rs of Research*: Relevance (to themselves and to society); Rigour (thinking carefully about the research); Revelation (ensuring that the research produces insight); and Return (evidencing that the research makes a difference and that there is a return on investment).

Leapfrog Co-I, Dr Paul Smith, and Community Broadband Scotland Advisor for the Argyll Lomond and the Isle area as part of the Highlands and Islands Enterprise's Strengthening Communities team, Campbell Cameron then presented an account of their work together on GSA's first Major Project in Leapfrog, *Peer-to-Peer Engagement*. Speaking from the perspective of working in remote and rural areas of Scotland, Campbell emphasised the significance of engaging with communities on their own terms and working together to build a shared understanding of the local context and the issues therein.

These ideas were encapsulated in Leapfrog Co-I Madeline Smith's lightning talk on the role of evaluation, *How do we know Leapfrog is Making a Difference?*. In this, Madeline shared Leapfrog's Evaluation Framework devised as a means of categorising the ways in which the tools created and shared throughout the project have made a difference to our community partners' processes and enhanced their outcomes, as well as capturing additional learnings for Leapfrog around their sharability and adaptability in other contexts.

On the afternoon of day 02 we went on to hear from the remaining ten delegates about their experiences of working through an Action Research framework. The following delegates presented in the third session:

• Valeria Righi, Postdoctoral Researcher at Universitat Pompeu Fabra, presented her participatory work investigating ways of designing technologies with older people, with the aim of understanding how they engage with geolocation technologies.

• Jacqui Lovell, PhD Student at York St John University, shared her project's focus on engaging in Participatory Action Research and participatory video techniques to support members of diverse communities to creatively document their experiences and co-evaluate outcomes.

• Alison Mayne, PhD Student at Sheffield Hallam University, reflected on her perceptions of Action Research in relation to her studies exploring subjective wellbeing in women who knit and crochet alone at home and share making on Facebook.

• Dr Katherine Algar, Research Officer at Dementia Services Development Centre, Bangor University, discussed her work within the *Creative Conversations* project, exploring an arts-in-health approach to embedding person-centred care and improving communication between care staff and people living with dementia.

• Dr Catrin Hedd Jones, also a Research Officer at Dementia Services Development Centre, Bangor University, shared her investigations of transitions later on in life as people enter retirement or learn to live well with dementia through engagement with new and creative activities.

The following delegates presented in the forth session:

• Sarah Martens, PhD Candidate and Tutor at Hasselt University, presented her research around how different forms of social interaction can create opportunities for public debate, within the frame of an Action Research approach.

• Arthi Manohar, Research Associate at The Glasgow School of Art, shared her research interests around the role of human values to change the way we engage with communities to help us be more creative, responsive and reflective in our everyday life.

• Gavin Redhead, Children and Young People's Participation Officer at Blackburn with Darwen Borough Council and Associate Director at the Centre for Participation at the University of Central Lancashire, discussed his practice of supporting and training adults, children, and young people in children's rights and participation.

• Rosendy Jess Galabo, PhD Student at Lancaster University, positioned his Action Research within the Leapfrog project as a testbed for researching how co-design tools used for creative engagement can be improved.

• Dr Robb Mitchell, Assistant Professor and Course Leader at the University of Southern Denmark, provided an insight into his work around the design and evaluation of multi-user interactive artefacts and experiences, principally participatory toolkits and processes for workshops, dynamic furniture, responsive installations, and videoconferencing innovations.

In the evening Professor Eva Brandt from The Royal Danish Academy of Fine Arts, Schools of Architecture, Design and Conservation delivered her presentation *Co-creating Common Matters of Concern*. With a background in investigating methods and tools for experimental design research and open innovation processes and a particular emphasis on participation and learning, Eva discussed her work on the Senior Interaction project (Stald-Bolow et al., 2015) in Copenhagen exploring issues of ageing through the lens of unpacking older people's everyday experiences and social relationships. Through sharing the participants' stories captured through interactive workbooks, Eva's presentation crystallised societal challenges of loneliness and social isolation, and underlined the roles of both participatory design and Action Research in shedding light on the relationship between what is, and what could be.

Summer School 2016: Professor Eva Brandt

Engaging with Communities through Action Research

The final day of the Summer School began with a keynote entitled Empowering Communities through Design Research from Irene McAra-McWilliam OBE, Deputy Director (Innovation) at The Glasgow School of Art. In this, Irene talked about projects she has led, including *Flourish*, which aims to give a voice to invisible or challenged communities, and the *Scottish Leaders Forum* in 2014 – a creative collaboration with The Scottish Government, public and third sector leaders, and community organisations exploring the future of Scotland's economy, transforming public services, and achieving equality (McAra-McWilliam et al., 2014). From illustrating GSA's work with communities in smaller engagement activities called *flurries*, Irene reinforced the importance of creating high quality artefacts in design research to represent the time and care invested in establishing collaborative relationships.

Irene's presentation was followed by a lightning talk from Dr Gayle Rice and Josie Valley from IRISS, The Institute for Research and Innovation in Social Services. Gayle talked about IRISS and their aim to carry out research to support social services and make them better equipped for their work. Josie focused on the Pilotlight project (IRISS, 2017), which is working with co-design teams of service deliverers in Scotland to design pathways to self-directed support. She presented five top trump cards for a culture of collaboration, which were Equity, Level Playing Fields, Adaptation and Time.

In the afternoon the Summer School delegates travelled to the Altyre Estate to visit GSA's new Creative Campus (The Glasgow School of Art, 2017), and Findhorn beach for a picnic and a final lightning talk from Dr Paul Smith and Dr Cara Broadley on *Crafting Contextual Relationships in Research*. In this Paul and Cara critically reflected on their own work within the Leapfrog project to pose questions around how we design and evaluate participation in Action Research, the ethical and practical challenges of working with diverse cultures and in distributed contexts, and the need to embed researcher reflexivity into the process through creative approaches.

Returning to their base at GSA, the delegates formed groups to take part in *Sharing Research Stories 02*. For this activity, the formed groups to reflect on the keynotes, lightning talks, evening sessions, and their own presentations and together conceptualised five key ingredients for Action Research. For a final facilitated group activity, the delegates shared their core takeaways from the Summer School and set themselves an individual action to complete by a certain time. From these pledges, it became clear that the group valued immensely the network that had been formed over the past three days, and intended to stay connected through email and social media.

*Summer School 2016: Professor Irene McAra-McWilliam OBE*

Capturing Insights into Action Research

A core aim of the Summer School was to unpack the distinguishing features of Action Research, its significance in contemporary society, understandings of key debates in Action Research, and speculations around the future development of Action Research. As well as collecting delegates, speakers, and members of the Leapfrog team's reflections informally through the insight boards and collectively in Sharing Research Stories 02, their thoughts in these themes were also captured through filmed talking head interviews, and after the event in reflective blog posts. In the following section we will summarise the key insights captured.

What is Action Research?

Defining Action Research was a core topic of conversation throughout the Summer School, with attendees focusing on different aspects of the approach. Reflecting on her Summer School experience following the event, Cathy Sharp advised that we view action research as an approach to inquiry, rather than a methodology. With an emphasis on socially-engaged and experiential practice, Laura Santamaria expressed her view that Action Research is 'a way of engaging through practice with real life situations', that provides 'the opportunity to reflect and generate knowledge that might be useful for yourself, but also for others'. Relating these notions directly to design research, Professor Irene McAra-McWilliam echoed the view that Action Research involves the co-design of new knowledge with organisations and communities; whilst Professor Eva Brandt recognised Action Research's central tenets of actively involving people in solving the contextual problems that surround their working and living practices. Melanie Rohse also affirmed the collaborative nature of Action Research and the opportunities it affords for the cross-pollination of insights from different communities, sectors, and disciplines and a 'participatory way of building actions around what matters to the people we're working with'. Professor Tom Inns discussed the potential of Action Research as a means of 'solving problems in real time', and having a degree of openness and flexibility to support researchers to quickly make sense of a range of increasingly complex issues that confront society. The notion of delivering shared outcomes for academia and society were foregrounded by several attendees, and as delegate Robert Djaelani explained, Action Research is about 'trying to create change, as well as conducting some research in the field by asking questions'. These ideas were crystallised by Professor Leon Cruickshank, who highlighted that from their embedded position within the research, the Action Researcher stimulates engagement with people from community and business groups in such a way that there is a 'tangible benefit for the stakeholders, but there's also a tangible academic benefit'. Reiterating the literature resources presented by some of the delegates in their presentations, he also acknowledged the practical flow of Action Research as 'a cycle of planning, and doing, and reflecting; and planning, doing, and reflecting'.
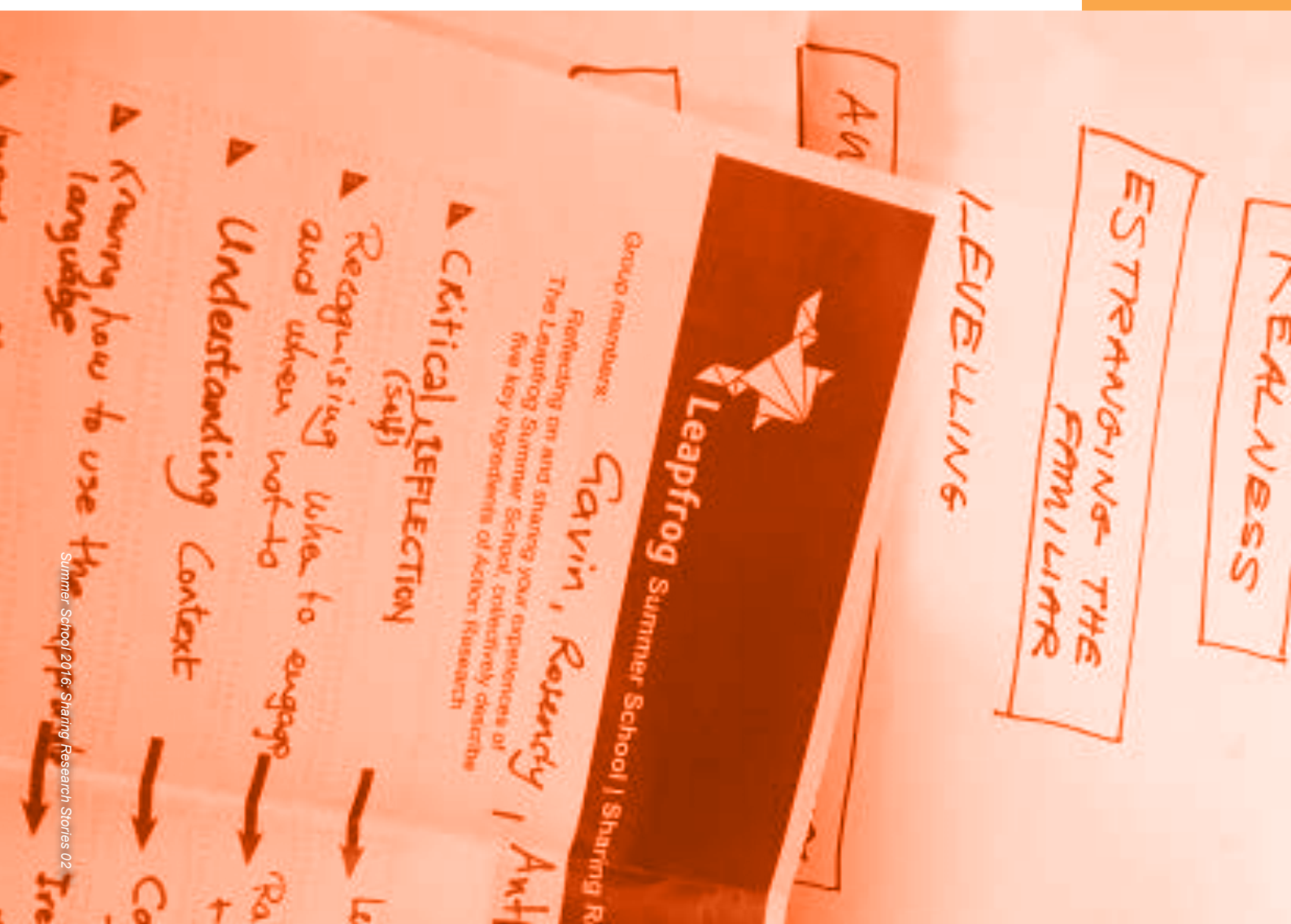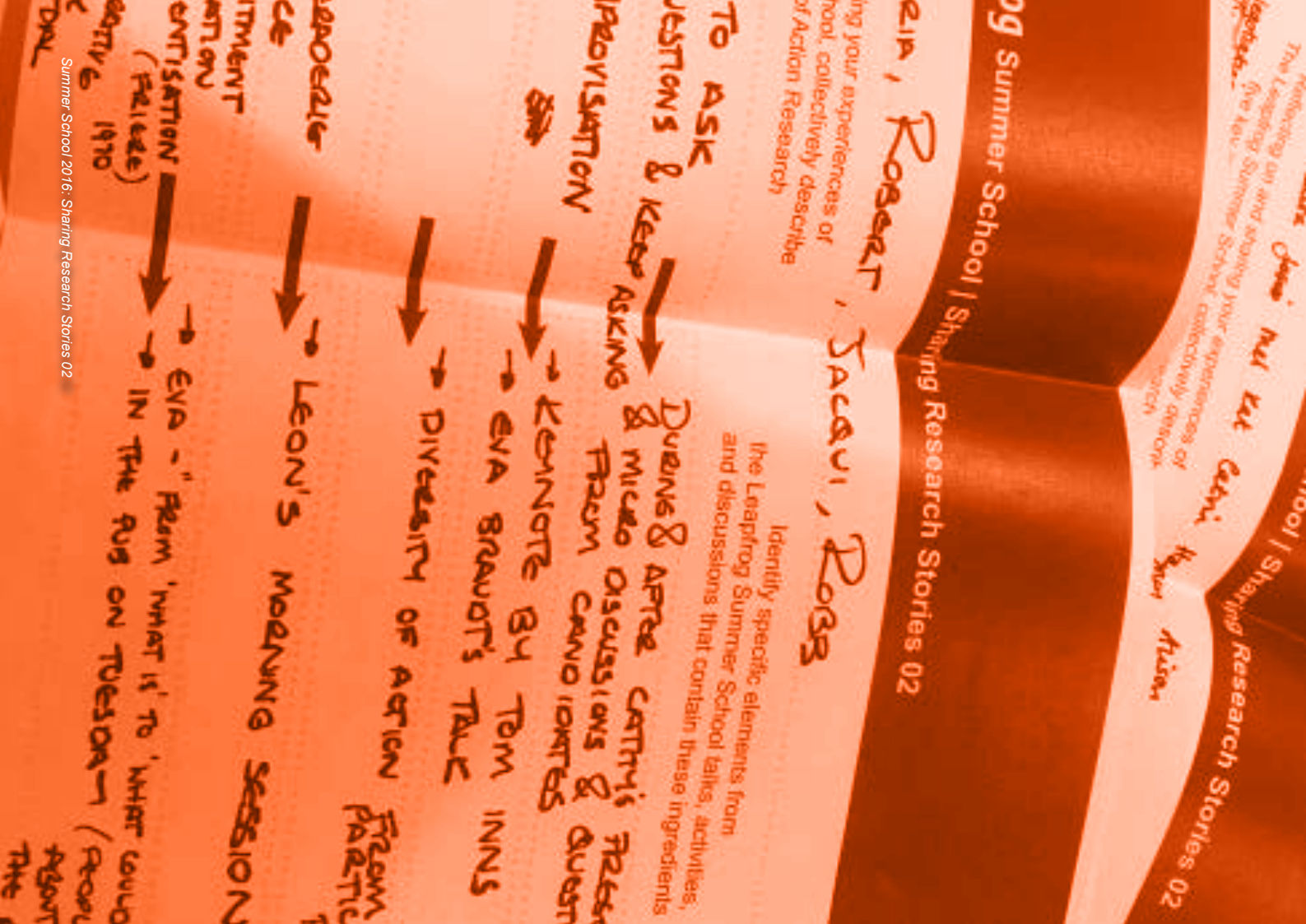
What is the significance of Action Research in today's world?

Throughout the Summer School activities, attendees questioned the role of Action Research in contemporary society. From a practical perspective, Robert Djaelani underlined the potential of Action Research to offer a 'direct route into making changes in this world', supporting the integration of research into existing social settings, and providing linkages between temporal research and long-term change. This view was shared by Professor Rachel Cooper, who noted that Action Research is becoming an increasingly attractive approach to those, such as designers, with a background in practice, as it allows for this to carried out in parallel to the research. Concentrating on the increased need for academic researchers to become more visible and active in addressing societal challenges, Mel Rohse recognised issues of accessibility and relevance in terms of the reach of research, and proposed Action Research as 'a very productive way of sharing that research and making it better'. This form of sharing was reflected in Laura Santamaria's responses, and in promoting opportunities for broader groups of people to participate in the research process, Action Research can be thought of as 'more democratic and representative', with the potential to 'get more voices heard so that the agenda for research can be affected to tackle problems that are most pressing for most people'. In turn, Professor Leon Cruickshank cemented that fact that academic researchers have a responsibility to demonstrate that their work is making a positive difference to society, and the significance in ensuring that there is 'a strong connection to real people and their problems'. Reiterating the value of building diverse teams to collaboratively undertake Action Research, Professor Irene McAra-McWilliam concurred that 'through Action Research we will bring that voice together and co-create that solution that is needed – an outcome that is positive.'

What are the key debates in Action Research today?

Some of the attendees shared their thoughts on the most pertinent areas for further development in Action Research. Evoking many of the discussions from across the three days of the event, Professor Rachel Cooper recognised the ongoing need for Action Research to be defined: 'What is it? How broad is it? Is it action? Is it research? What's the difference between doing action and doing research?'. Following on from her point around the need for enhanced accessibility in academic research, Mel Rohse questioned how researchers can enable communities with a research need to actively seek support from researchers and initiate the project from the offset. In turn, Robert Djaelani raised points around the role and responsibility of the researcher, the ethical tensions of making change, and the need for accountability in Action Research. Speaking within the domain of design research, Professor Irene McAra-McWilliam was critical of 'design becoming a form of the facilitation of creativity', and recognised the need to ensure that designed engagement leads to positive outcomes, and that the creative approaches we apply are capable of leaving a lasting legacy that people can then develop for themselves.

Projecting forward to envisage how Action Research could advance and evolve, the attendees considered the future of the approach. Discussing the role and potential of Action Research in Scotland, Cathy Sharp affirmed that 'it's important that wherever we locate ourselves amongst the extended family, we continue to talk to each other in ways that can extend our practice and impact. One way to do this may be through the growing 'social movement' of action researchers in Scotland'. Key to this area of reflection were notions of blended methods and the selection of contextually appropriate tools and techniques, and according to Professor Irene McAra-McWilliam, Action Research must experiment and develop ways of evidencing the research process. As Robert Djaelani observed, 'I see people taking elements of Action Research and using it in their own practice, but actually picking and choosing elements that appeal to them, depending on the context. It doesn't seem to fit everyone's practice, but I imagine people taking parts of it and adapting it for their own use'. In relation to this, Professor Rachel Cooper referred to the Action Research's blurred nature, and the need to develop and define transferable approaches that enable future generations of researchers to work within rigorous frameworks. Focusing on the core characteristics of Action Research as working with organisations and communities, Professor Eva Brandt proposed that as these practices develop, so too must new ways of co-evaluation and co-analysis. Ideas of enhancing Action Research's capacity to respond to contextual issues were underlined again by Melanie Rohse, who proposed that 'it would be great in the future if Action Research was about that locality and that interaction between the people who are around the university'. Reflecting on The Creative Exchange project that he was involved in, Professor Leon Cruickshank spoke of the need to train Early Career Researchers to become immersed and embedded in their research context, rather than operating as a lone scholar. In turn, he considered how the Summer School itself may have contributed to enhancing delegates' perspectives of the qualities of successful Action Research.

Delegate Feedback and Next Steps

Within the Summer School Delegate Packs, participants were provided with a small leaflet containing brief questions for evaluation purposes. In response to the first question – *Did the Summer School help you think differently? If so, how?* – delegates noted the significance of the event in exposing them to framings and application of Action Research from broad disciplinary perspectives, the need to carefully consider issues around language, culture, and ethics in the process, and highlighting pertinent questions around ideas of public engagement and societal participation. When asked if they could identify any surprising outcomes from the Summer School, the delegates comments ranged from an appreciation of the small and intimate nature of the event and the atmosphere of support and understanding, an increased awareness of and interest in the role of design and designers in addressing complex social challenges, a renewed desire to collaborate with others, and a sense of enthusiasm for Moray and the Scottish Highlands.

Many of these reflections have fed into the themes and programme preparations for the 2017 Leapfrog Summer School – *Exploring Community Engagement for Research: Power, Impact, & Collaboration*. Taking place in July, this year's Summer School will focus on participation and co-production with communities, methods and tools for community engagement, engaging with diverse and minority communities, approaches for capturing the value of effective community engagement, and the challenges of evidencing the impact of effective community engagement.

References

Archer, B (1995) 'The nature of research', in *CoDesign*, vol. 2. no. 11, 6–13

Gergen, K.J (2014) 'From Mirroring to World-Making: Research as Future Forming', in *Journal for the Theory of Social Behaviour*, vol. 45. no. 3, 287–310

Hybrid Matters (2015) *About*, available from <https://www.hybridmatters.net/pages/about> accessed 06.03.17

IRISS (2017) *Pilotlight*, available from <http://pilotlight.iriss.org.uk> accessed 06.03.17

McAra-McWilliam, I., L.S. McHattie, and C. Broadley (2014) *Flourish: Personhood and Collective Wellbeing*, available from <http://www.scottishinsight.ac.uk/Programmes/Wellbeing2014/Flourish.aspx> accessed 20.01.17

Reason, P (2002) 'Justice, sustainability and participation: Inaugural professorial lecture', in *Concepts and Transformations*, vol. 7. no. 1, 7–29

Research for Real (2017) *Our Approach*, available from <http://research-for-real.co.uk/our-approach/> accessed 22.02.17

Stald-Bolow, N.R., L. Malmborg, E. Brandt, and M. Foverskov (2015) 'Everyday ageing in Copenhagen', in *Ageing, Ingenuity and Design*, Y. Lee, and P. Moore, Eds. Desis Network, 123–131

The Creative Exchange (2017) About, available from <http://thecreativeexchange.org/about> accessed 20.03.17

The Glasgow School of Art (2017) *GSA Highlands and Islands: The Creative Campus*, available from <http://gsadesigninnovation.com/about-indi/gsa-highlands-islands/> accessed 06.03.17

Wadsworth, Y (2011) *Building in Research and Evaluation: Human Inquiry for Living Systems*, Sydney: Allen and Unwin

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