

Collaborative Futures Academy

*Can we push the boundaries of how we engage and who we engage with?
How do we break out of our comfort zones, address historic inequities and initiate challenging conversations
in challenging times?*



Summative Evaluation Report

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Executive Summary

The Collaborative Futures Academy (CFA) was an international, interdisciplinary training Academy for early career researchers. This weeklong online masterclass supported researchers in pushing the boundaries of engagement. A cohort of 46 participants joined experts and professional trainers to build the skills, confidence and competencies required to foster a positive culture of engagement.

Sessions took the form of panel discussions, practical workshops, creative evenings and reflective networking sessions, which focused on each day's distinctive theme. Themes addressed diversity, equity and inclusion in research culture, building personal skills required to engage communities and non-academic stakeholders with the complexities and challenges of research.

This initiative was a collaboration between the University of Cambridge Public Engagement team, Wellcome Connecting Science and the Berlin School of Public Engagement and Open Science (Museum für Naturkunde Berlin, Humboldt-Universität zu Berlin), and delivered in collaboration with grasshopper kreativ.

Method

This evaluation analyses qualitative data from the participant feedback questionnaire, completed by 29 participants. Collective feedback from participants and organisers support these findings. Further data was captured in participant pre-survey, digital analytics from the Academy digital platform and participant interviews. Evaluation is centred on the Academy participant outcomes, which fall under the broad categories of 1. Networking, 2. Critical thinking and reflection, 3. Confidence, skills and practical takeaways, and 4. Next steps in engagement.

Key Findings and Recommendations

Overall

- **Connect with issues important to your participants and embrace the challenges together.**
Participants appreciated that topics centred on diverse and challenging issues in research culture that directly affect them as individuals, from their career progression to engagement practice. The Academy addressed a clear need by providing expertise and facilitating a productive exchange on how to navigate key challenges that early career researchers face.
- **Use a variety of engagement formats, facilitator styles, and digital tools to create a dynamic programme and maximise online engagement.**
Participants loved the variety of topics, formats and ways to engage. The mix of networking, theory and practice with practical tools and techniques to build confidence resulted in a positive learning experience. Participants valued that CFA led by example, illustrating how to engage online.
- **Connect across cultures and disciplines to explore issues from new perspectives.**
There was overwhelmingly positive feedback on the diverse, international nature of the cohort that indicates that this is a strong aspect of the programme, which should be celebrated. Participants from different countries and disciplines brought new perspectives and possible solutions to shared challenges.

Networking

- **Bring your whole self to your research by creating opportunities for vulnerability.**
A focus on personal resilience and sharing lived experience at the start of week built an atmosphere of trust and participants appreciated this set the tone for the week by creating a confidential, safe space to share ideas.
- **Ensure everyone feels heard and seen.**
Smaller breakout groups were key support group learning, making sure everyone felt heard, seen and able to contribute. Flexibility was required to adapt facilitation techniques to the needs of the group, bringing quieter members into the fold.
- **Build participant agency in virtual networking events through guided exercises.**
Structured networking sessions were more effective than open connection spaces in facilitating interactions

Critical thinking and reflection

- **Bring in new perspectives and community advocates.**
Participants valued hearing directly from people with lived experience of marginalisation and disability. Sharing lived experience and bringing in voices outside of mainstream viewpoints expanded horizons.
- **Consider the pace of virtual trainings to allow space for reflection.**
Participants valued having time to reflect after sessions, continuing the conversation on Wonder, taking time for their reflective journal. The journal was an important tool to consolidate learning, crystallise new questions and next steps, particularly in supporting individual reflections personal values and wider goals of their engagement practice, such as societal impact.

Confidence, skills, practical takeaways

- **Extend the learning journey to embed engagement practices.**
Participants expressed a desire for pre-reading literature and a follow up practical toolkit to continue learning asynchronously.
- **Build in differentiated outcomes when training participants with varying levels of experience in engagement.**
Most participants valued the holistic approach of CFA in addressing overarching challenges in engagement and research culture, which supported participants to identify their next steps for further training and collaborations however, those new to PE wanted more concrete formats.
- **Measure changes in attributes to monitor impact.**
Develop an evaluation framework to assess changes in attributes as a direct result of training to build an evidence base of the impact of public engagement on researcher professional development.

Next in Public Engagement

- **Allow time to absorb training and translate learning into practice.**
Both organisers and participants recognised the need to follow up on the training, to evaluate which aspects resulted in action and changes in practice. A short follow up training session is planned for 6-months after the Academy, to assess the impact of the training, and offer further guidance and support.
- **Support community building.**
Participants were keen to have a platform for long-term connection and socialising. Researchers created their own CFA Slack group to nurture sustained connections. As the Berlin School platform and capacity grows, we can offer support through the online Community Hub and our international networking events.
- **Build in tangible outcomes to bridge the gap between theory and practice.**
Practical tools and techniques were incredibly important in building participant confidence. As there was no final engagement project outputs, there was a desire to develop personal action plans and developing mock projects for group critique.

Conclusion

Academies style training support high profile collaborations across institutions, which allow pooling of expertise and capacity, resulting in high visibility and high impact projects. The strength of digital training programmes lie in their ability to connect international, interdisciplinary researchers and practitioners, erasing barriers of distance. However, it should be noted that programmes, which are 'open to all', are not accessible to all given time zones differences, language barriers, access to technology, and prior understanding and experience of public engagement. Aside from these barriers, online training Academies have demonstrated success in empowering researchers to engage, and this format has huge potential to connect researchers in Germany with research cultures all over the world, supporting international networking, knowledge exchange and communities of practice.

Introduction and background

Engaging the public with research has never been more important. The Earth's natural systems are struggling under the weight of climate change and biodiversity loss, and the impact of Covid-19 has demonstrated in real time the need for constructive dialogue between science and all of its societal stakeholders, as we have witnessed the consequences of misinformation. Fostering a culture of engagement helps research institutions break down barriers between science and society by connecting with communities, to engage with different views, ideas and concerns beyond our institutional perspectives. This two-way exchange can bring real long-term benefits to research and its impact on society.

Early career researchers will shape the future of our research institutions, so it is crucial that they have the skills and confidence needed to engage people, communities and society with their research, to work towards a collaborative research culture. With this in mind, The Collaborative Futures Academy set out to support early career researchers in their journey into engaged research, through a weeklong engagement masterclass. The Academy was designed to support a culture of positive engagement and resilience by building researcher skills and confidence to engage non-academic stakeholders with the complexities and challenges of their research.

This initiative was a collaboration between the University of Cambridge Public Engagement team, Wellcome Connecting Science and the Berlin School of Public Engagement and Open Science (Museum für Naturkunde Berlin, Humboldt-Universität zu Berlin), and delivered in collaboration with our creative partner, grasshopper kreativ.

This evaluation is intended for use within the collaborating institutions, primarily as a tool for critical reflection to generate learning that will inform future collaborations and benefit our respective Public Engagement training offers. It also documents evidence of impact by measuring the value and benefits of the activity for participants.

This record of activity can be used for internal advocacy and proof of concept to support proposals for future collaborative training initiatives.

The aim of the Collaborative Futures Academy was ***“To create a cohort of early career researchers empowered to adopt fresh and challenging approaches to Public Engagement”***. As such, the focus of the evaluation centres on the participant learning outcomes, to measure indicators of success and identify any barriers to learning that can be addressed in future activities.

More broadly, the evaluation captures feedback from participants and the organising team about the experience of the Academy as a whole, to understand which aspects were most valuable and what could be improved upon.

Key Aims and Objectives of CFA

Aim: To create a cohort of early career researchers empowered to adopt fresh and challenging approaches to public engagement

Objectives:

- To support networking and exchange by providing opportunities and confidential spaces for researchers to connect, plan and reflect on their practice.
- To provide opportunities to listen and engage with different views, ideas and concerns with the understanding of how these can bring real long term benefits to research and its impact on society.
- To support researchers to develop skills, confidence and competencies to support their future careers.
- To inspire creative ideas for engagement

Learning Outcomes were based on the Arts Council England Generic Learning Outcome (GLO) framework and focus on attitudes and values, skills and capacity building, and inspiring activity, progression or behavioural change.

Participants will

1. Connect, plan and reflect on their practice by actively engaging with each other, showing a commitment to group learning and peer-to-peer exchange.
2. Be curious to listen to and engage with different views, ideas and concerns beyond their lived experience with the understanding of how these can bring real long-term benefits to research and its impact on society.
3. Feel more confident and better equipped for engaging non-academic stakeholders with their research.
4. Plan to continue their journey into public engagement (or collaborative research).

In addition to the above learning outcomes, the evaluation also sought to capture information about the overall participant experience and the insights of the project team. These broader feedback mechanisms paint a more accurate picture of the Academy as a whole, capturing successes, areas to improve, and lessons learned that can be applied to future endeavours:

- Evaluation of the overall participant experience. This was gathered via the participant survey and during a collective feedback session using a virtual whiteboard.
- Post-Project Review feedback to gain insights into the overall collaboration across institutions and project teams, reflecting on the development process and delivery of the week.

Format of Collaborative Futures Academy

The Collaborative Futures Academy (CFA) was an intensive weeklong, online professional training course for early career researchers. The Academy focused on a holistic approach to Public Engagement training, supporting researchers from across disciplines to push the boundaries of engagement. Themes encompassed diverse aspects of creating a positive culture of engagement, from addressing historic inequities to exploring the complexities and challenges of discussing sensitive research topics. There was a strong focus on personal skills including building resilience, collaborating effectively with stakeholders, and engaging digitally.

Each day had a distinct theme, led by keynote speakers and professional trainers including:

- Equity, diversity and inclusion
- Personal skills and understanding
- Challenging content
- Digital Identity
- Collaboration

A full breakdown of the programme can be found in the Appendix.

The Academy took place from 22-26 November 2021 and comprised 18 sessions, including eight masterclass workshops delivered by experts and professional trainers, daily networking sessions, two panel discussions, and three creative and social evening sessions. In addition to the core programme, participants could sign up for an optional 1:1 mentoring session at the end of the week.

The course was delivered across 18.5 hours of core delivery time, with a further 3.5 hours of evening sessions.

The initiative was a collaboration between the University of Cambridge Public Engagement team, Wellcome Connecting Science and the Berlin School of Public Engagement and Open Science (Museum für Naturkunde Berlin, Humboldt-Universität zu Berlin), and delivered in collaboration with creative partners, grasshopper kreativ.

The development and delivery team consisted of six collaborators from the three partner institutions, 26 invited experts and professional trainers, including the Academy facilitator, and three members of the grasshopper kreativ team who provided technical support and led on the documentation of the week.

Throughout the week grasshopper kreativ captured video footage of the Zoom sessions, as well as conducting detailed individual interviews with participants and the organising team members. Along with participant video applications, this footage will form the basis of a CFA trailer, which documents the experience of the Academy. Key takeaways from sessions were also summarised in a daily report newsletter that served as a memory aid for participants and a repository further reading, links and recommendations shared that day.

Evaluation Methods

There were four main methods of data collection:

1. **Questionnaires** collected before and after the Academy:
 - Pre-survey to establish the wants, needs and barriers for participants prior to the Academy
 - Participant questionnaire to capture feedback and measure learning outcomes after the Academy
2. **Collective Feedback**
 - Reflection and Next Steps workshop session, to capture collective feedback at the end of the week
 - Post-Project Review Meeting to capture feedback and lessons learned from the project team
3. **Digital Analytics** from the CFA digital platform
4. **Video Interviews** collected by project partner grasshopper kreativ, as part of the documentary filmmaking process. Participants, organising team members were interviewed about their own perspectives during the Academy.

The end of course questionnaire was the primary method of evaluating the participant experience and the findings are studied in detail in this report, along with wider feedback from the cohort and the project team. All participants were invited to complete the questionnaire, open from the final day of the Academy, 26 November 2021 until 17 December 2021. In January 2022, participants were given a one-week extended deadline and reminder to contribute their feedback. Of the 46 participants in the cohort, **29 completed the survey, a 63% response rate.**

A follow up session is scheduled for six-months after the Academy to monitor the progress of the cohort by establishing any changes in practice or learnings that have been implemented following the training.

Report Structure

For transparency, the data analysis is clearly structured by the data source as reflected in the report sections:

1. Participant Survey Findings
2. Reflections on the Week – collective feedback from the cohort
3. Project Team Feedback – collective feedback from the organisers

The participant learning outcomes provided the framework for the questionnaire, to measure indicators of success using a combination of qualitative and quantitative data.

The collective feedback was gathered on virtual whiteboards in separate sessions with the cohort and the project team. These were structured differently, with the cohort giving feedback on their experience of each day of the programme, following on from small breakout room discussions in their final workshop session. The project team gave feedback in a post-project review, focusing on what went well, what could be improved, and lessons learned across strands of the development and delivery process.

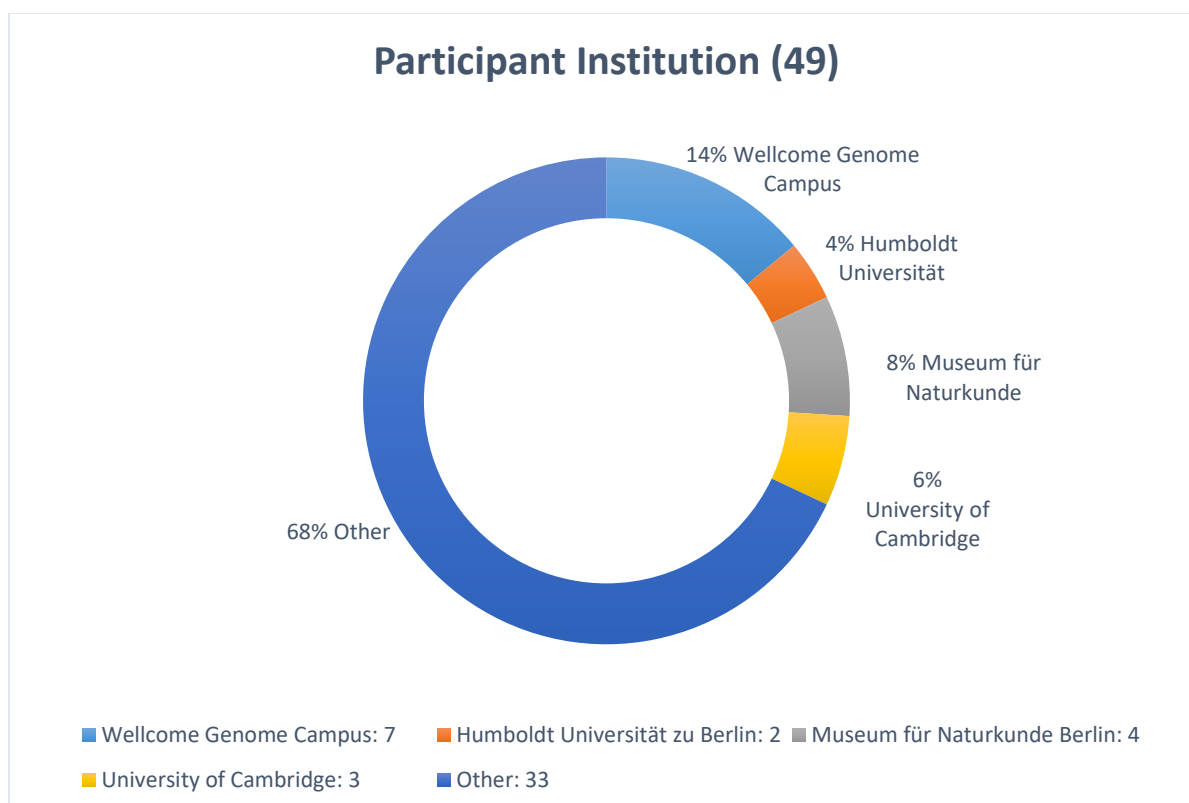
The evaluation data as a whole was then coded to identify crosscutting themes, which recurred throughout the data. Clear themes emerged which were then summarised in the Key Findings section, using the learning outcomes to categorise the findings and recommendations.

The Cohort

In total 49 applicants were awarded a place at the Collaborative Futures Academy, with 44 participants engaging in the Academy.

Of the 49 applicants, 2 formally withdrew due to personal circumstances prior to the Academy commencing, and so were not registered on the CFA Hub. Another participant fell ill shortly before the Academy and was unable to commit to the week.

Platform data indicates that a further 2 participants had limited engagement on the course platform however all live session links were included in the daily report that was emailed to the cohort, so participants may have accessed sessions through these rather than via the CFA Hub.



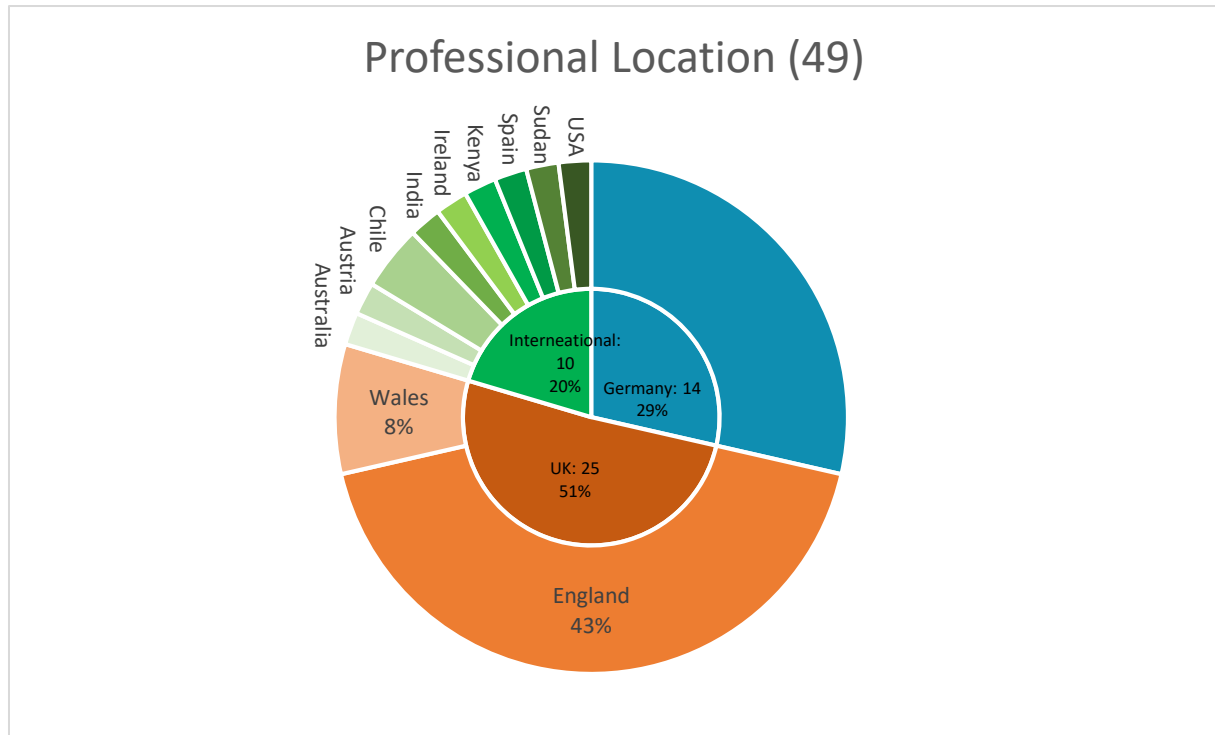
There were successful applicants from across the partner institutions however representation could have been higher: Wellcome Genome Campus (7), Humboldt-Universität zu Berlin (2), Museum für Naturkunde Berlin (4), University of Cambridge (3), and there were another 33 external applicants that were awarded places. While it is difficult to pinpoint exactly why there were few applicants from the partner institutions, internal buy in, time, and recognition are often cited as barriers for researchers¹ to taking part in Public Engagement training. November is a busy period in the academic calendar, with teaching, conferences, trainings and events competing for researcher time. Along with adjusting the time in the calendar, a longer promotion period with more targeted internal recruitment could increase reach and help ensure time is blocked in the calendar in advance. Follow up research may be needed to understand the barriers and incentives for early career researchers in engaging in an Academy training format.

The vast majority of those taking part were professionally located in the UK and Germany, as the initial recruitment strategy focused on early career researchers based in the respective institutions, and the opportunity was promoted through national networks. International applicants, Public Engagement professionals and support staff were also accepted but were not actively recruited until later in the four-week

¹ TNS-BMRB & PSI. (2015). Factors Affecting Public Engagement by Researchers: A study on behalf of a Consortium of UK public research funders., (December), 1–69. Retrieved from https://wellcome.ac.uk/sites/default/files/wtp060033_0.pdf

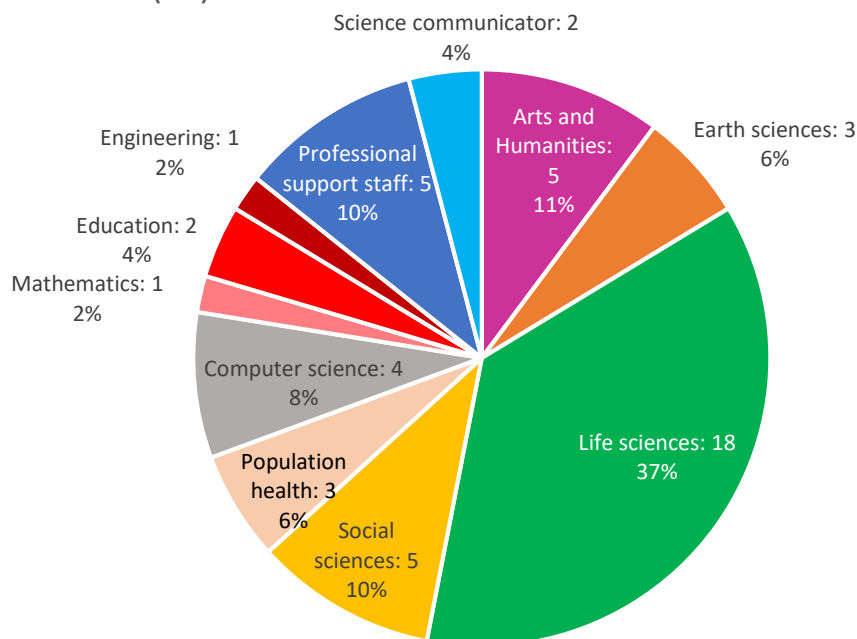
recruitment period through Public Engagement mailing lists and adjusted recruitment call outs on social media. The application deadline was also extended by one week, attracting a further 21 applications.

Participants reported that they were professionally located in the UK (25) and Germany (14), with International participants (10) spanning the globe including; Chile, USA, India, Sudan, Ireland, Austria, Portugal, Kenya and Spain.



Many early career researchers relocate for their research, and indeed participants were more globally diverse than the professional locations captured, although we did not collect demographic data to evidence this. Future projects should consider if it is worthwhile collecting demographic data, such as nationality, if it is ethical to do so. There was overwhelmingly positive feedback on the diverse, international nature of the cohort that indicates that this is a strong aspect of the programme and should be celebrated.

Research Area (49)



Areas of Expertise (49)

Arts and Humanities	Computer Science	Earth Science
Art Conservation & biochemistry Classics and ancient history Game design Health Humanities Music & social justice	Computer science Data Engineer - Chemistry Data science Software developer	Environment and ecosystem services Geosciences, Paleoceanography Palaeontology
Life Science	Other	Population Health
Biodiversity and conservation Bioinformatics: 2 Biomedical Sciences: 2 Biotechnology Citizen science – biodiversity: 2 Genomics and Genetics: 3 Molecular biology: 2 Neuroscience: 3 Stem Cell research Zoology	Education: 2 Engineering Mathematics	Health and Wellbeing Population health Public Health
	Social Science	Professional Support Staff
	Agricultural economics Digital Wellbeing Ethnography Social science: 2	Communications: 2 Impact assessment Professional Development: 2
		Science Communication
		STEM education Social enterprise

Participation

In total there were 46 Engaged participants on the CFA online Hub. These participants completed their registration to access the online aspects of the training on the platform. Over the course of the week there were 978 total visits to the Collaborative Futures Academy platform pages, with an average of 46 participants actively engaging on the pages each day, however this figure includes the project team and facilitators. The pages with the highest engagement were the Social Space (91.5%) and Reflection Space (65.6%) as these were used in workshop sessions.

Based on the CFA platform data and observations, 2 participants dropped off during the week without further communication, despite both registering on the CFA platform. While it is disappointing that these participants did not engage with the programme, it shows that the detailed platform registration form was not a barrier.

One participant had been contacted prior to the course to determine its suitability for their needs due to a scant application, while the other had submitted a full video application, so it is difficult to determine what factors led to lack of participation.

While most of the core workshop sessions and panels had a very good turnout of participants and most of the cohort attending, there was no formal tracking of participant attendance across workshops. This made it difficult to monitor an individual's level of participation, particularly with the quieter members of the group. Monitoring of participant lists would give a clearer overall picture of individual participation and flag up participants that are tailing off during the week, so that the project team can proactively check in with them and address any issues. Another feedback and support mechanism is to create smaller learning groups within the cohort. This would help identify participants who are not engaging, as well as create a support structure for quieter members of the group, and perhaps help forge stronger connections between participants.

1. Participant Survey findings

1.1 The survey respondents:

Of the 46 active participants in the cohort, 29 individuals completed the survey, equating to a 63% response rate. All participants were invited to begin the questionnaire during the final workshop session of the Academy however in-progress or incomplete surveys cannot be monitored on the CFA platform, so the drop-off rate cannot be measured.

Responses covered a good range across the career stages but fewer PhD candidates completed the survey.

As seen in Figure 1, the responses covered a range of career stages, from students, PhD researchers, post-doctoral researchers and research fellows, and professionals. One respondent selected "other" explaining that they are between positions with their PhD on hold as they look for a professional role.

PhD researchers were underrepresented in the survey responses with only 4 of the 13 participants completing the survey, a 31% response rate. Other groups were better represented with 70% of professionals completing the survey, 77% of Postdocs and research fellows, and 2 out of the 3 students participating, 66%.

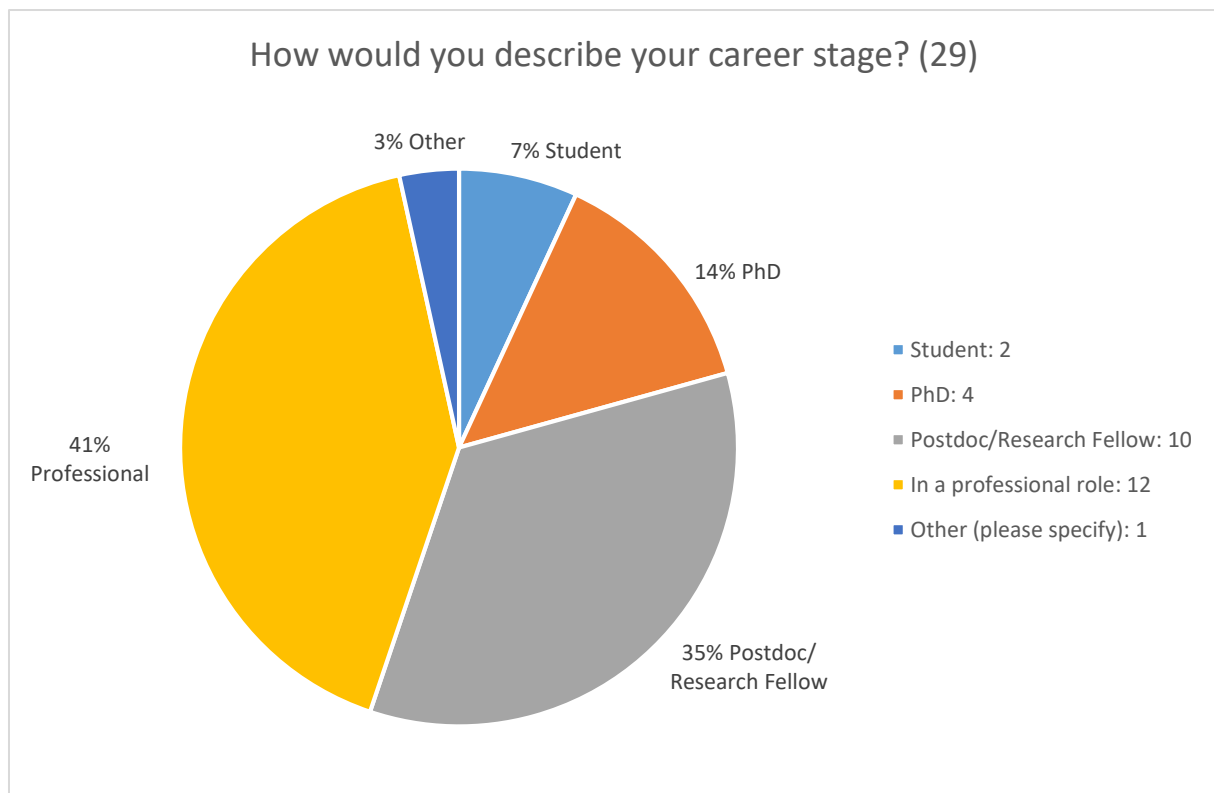


Figure 1: Career stage (29)

Survey respondents were asked to select multiple options in response to the question, **“What motivates your interest in Public Engagement?”** (See Figure 2).

Respondents selected a broad range of motivations with Learning new skills (83%), and Giving back to society and making research more accessible (79%) the most popular motivations.

Other motivations included, Growing my network (55%), Working more closely with publics and stakeholders with my research (55%), and Making a career change into PE (45%).

Only 28% of respondents selected improving their research via PE as a motivation, indicating that further work is needed to show early career researchers the two-way benefits of quality engagement. Monitoring changes in attributes would build an evidence base to show the value of engagement training for professional development.

The 3 respondents that selected “other” gave more nuanced feedback, including *“advocating for the underrepresented and marginalised groups to increase diversity in science”* and *“Improving communication in difficult/confrontational topics with different stakeholders, such as politicians and private sector.”*

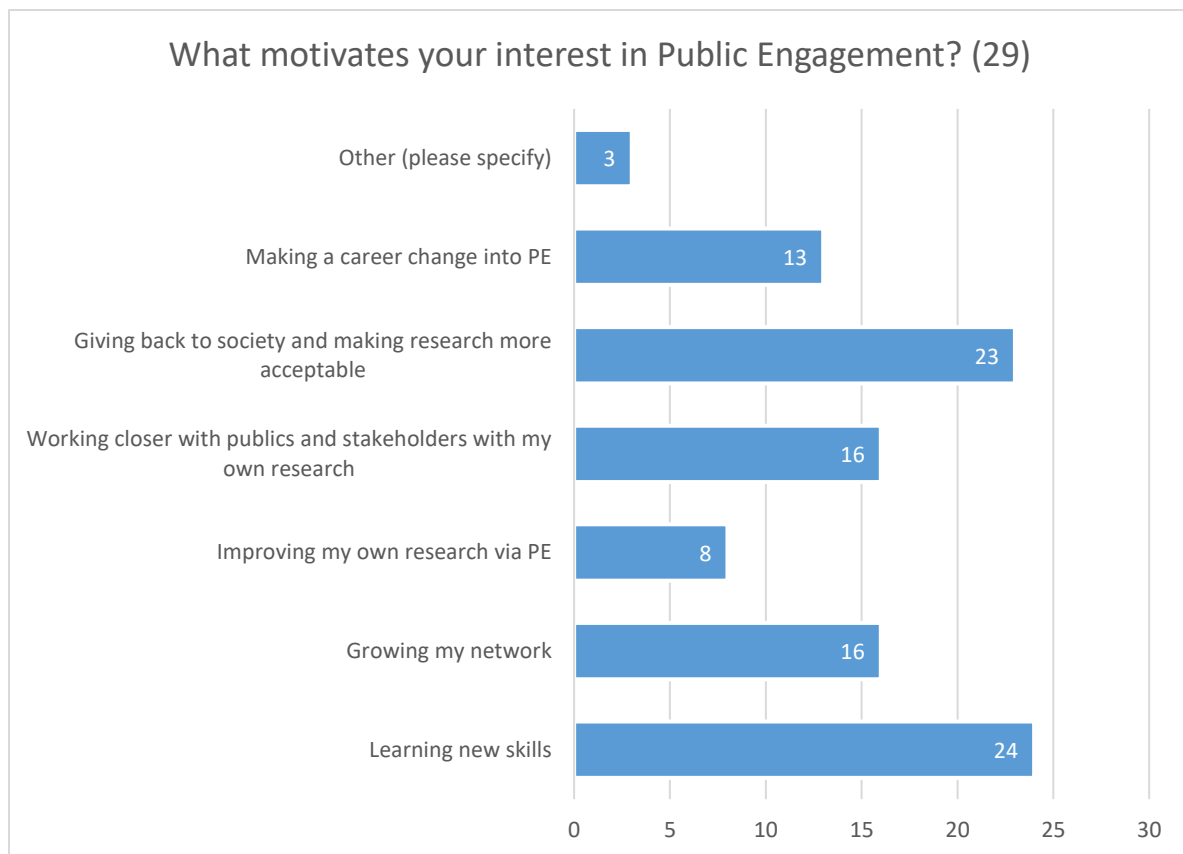


Figure 2: Interest in Public Engagement. (29).

Cross-comparing career stage with motivations showed that motivations were similar across the career stages, with respondents selecting 3 motivations on average and some respondents selecting all 6 options. Future survey design could limit multiple choice responses to the top 3 choices or use ranking questions to get a clearer picture of top priorities.

A wider piece of research on motivations with a larger sample size could help inform the development of future training offers, from course design to creating targeted messaging for different groups.

Most popular motivations segmented by career stage

Professionals (12)

100% of professionals cited learning new skills as a motivation, followed by giving back to society and making Research more accessible at 75%, and 66% are motivated to grow their networks through Public Engagement.

Postdoc/Research fellows (10)

Giving back to society and making Research more accessible, and working closer with publics and stakeholders with my own research were the most popular motivations for post-doctorate researchers or research fellows with 80% of respondents selecting these motivations. This was followed closely by learning new skills at 70%.

PhD (4)

All PhD researchers (4) selected that they are motivated by giving back to society and making Research more accessible.

Student (2)

Both students also chose learning as a motivation however the small sample size should be considered.

When asked to **rate their level of experience in Public Engagement** (Figure 3), respondents encompassed a full spectrum of experience, from complete beginners to project leaders. On the more experienced side of the scale there were engagement professionals including independent science communicators, leaders of social enterprise initiatives, and Public Engagement support staff.

There were also engaged researchers including citizen scientist practitioners and researchers who had led their own engagement projects.

This is an indicator of how diverse the group was but this information could have been gathered in the pre-training survey to get a picture of the cohort as a whole, along with mirrored questions to measure any immediate differences in confidence or skills following the training. Probing questions could be included in future surveys to break down experience into activities that participants have taken part in and initiatives that they would like to take part in in the future. This information could help tailor course content and support materials.

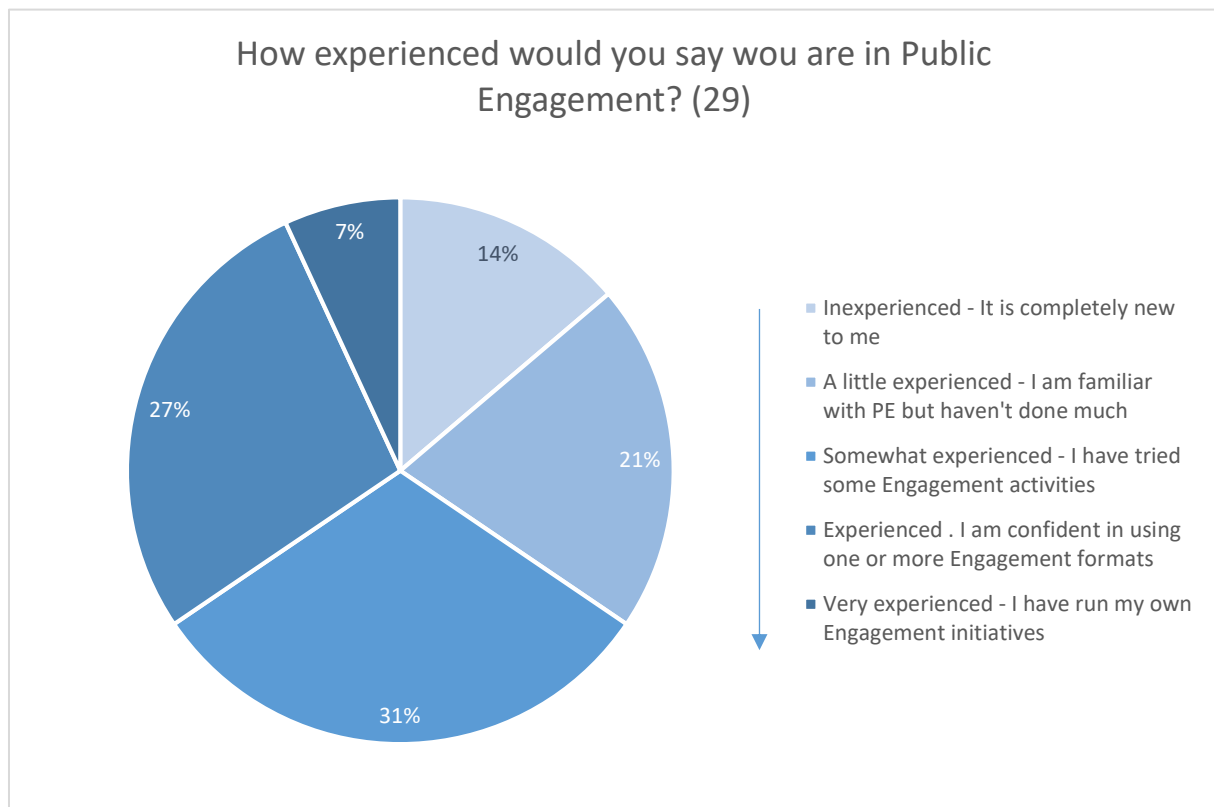


Figure 3: Experience in Public Engagement. (29).

1.2 Overall experience of CFA

When asked “**How satisfied were you with the week in general?**” (Figure 4) on a scale of 1-5 the majority of respondents gave positive responses with 86% either very satisfied or satisfied. Of the 29 responses, 3 respondents that indicated that they were somewhat dissatisfied, selecting 2 on a scale of 1-5, however it should be noted that each number on the scale was not labelled, only the highest and lowest ends were indicated.

There was no clear correlation between level of satisfaction and career stage or experience level.

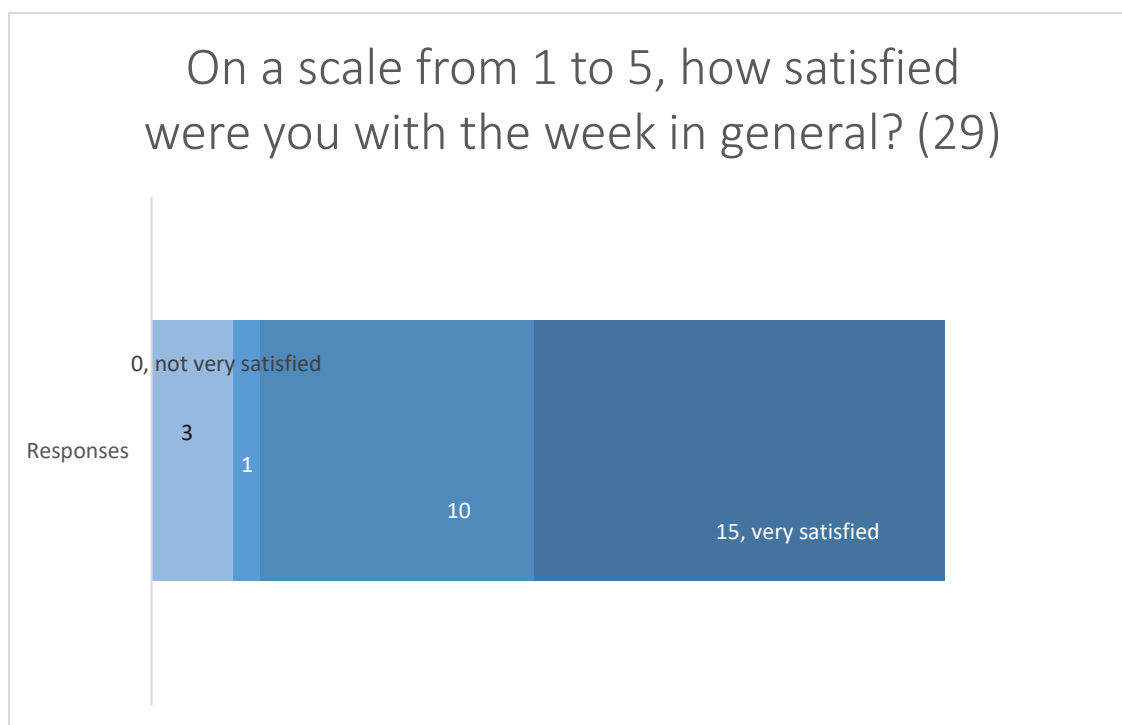


Figure 4: Overall satisfaction. (29).

Respondents were then asked to expand on this and specify any specific reasons that influenced their response. The majority of the feedback here was overwhelmingly positive with 87.5% positive sentiments, 10.7% negative and 3.6% mixed feedback in a sentiment analysis.

Most responses gave feedback that encompassed many aspects of the Collaborative Futures Academy, which contributed to the overall participant experience from the content, to the format and delivery of the week. The strongest recurring themes include; the diversity of topics covered and the quality of speakers, the opportunity to discuss and connect with other participants, and the diversity and energy of the cohort itself. Feedback on the overall atmosphere, format and pacing of the week, as well as the facilitation and organisation of the week itself, paints a positive picture about the experience of the week as a whole. These findings are explored in more detail below.

The variety of topics and selection of speakers was the most common thread running through responses. The course syllabus was described as broad with a diverse selection of topics, however the negative feedback was concerned with the prior knowledge requirements and practical takeaways, these responses are explored in detail further on. Speakers were described as inspirational, friendly, open and communicative.

"The CFA exceeded my expectations. I have new skills, have been introduced to diverse topics and some really interesting speakers and learnt so much that I can apply in both professional and personal contexts."

"An amazing spread of subjects with some great workshop leaders."

"the diversity of participants and speakers, sharing their perspectives with such integrity and respect, which I have learnt a lot from"

Positive responses highlighted the interactive approach of the Academy, with the opportunity to actively engage in small group discussions and make personal connections through the networking sessions.

"I really liked the chance for open discussion both during and after the panels. It was lively rather than didactic, and that really held my attention."

"There was plenty of space to discuss in smaller groups, which I think it was fundamental to create a nice environment."

The energy and diversity of participants themselves emerged as a strong theme in the feedback, which is a testament to the international, interdisciplinary nature of the Academy.

"Most of all because the participants were so lively, diverse and energetic. I've had some lovely conversations. A close tie in second-place were the speakers and the excellent organisation. I really liked the format of each day, which allowed sufficient breaks and tried to accommodate multiple time zones."

"Fascinating to learn from others and hear different perspectives from attendees from all over the world working with Public Engagement in different ways and different disciplines!"

Many respondents commented on the positive atmosphere of the Academy, highlighting that the week was fun and personal, and that it was a safe, inclusive space that provided an opportunity for them to build their confidence.

The formats and pace of the week also drew positive feedback, particularly allowing for time for breaks and reflection, and incorporating multiple formats to keep participants engaged.

"The variety of formats, e.g. panel (my fave - I would usually find these the most awkward but during CFA these were my fave), presentations, break outs, icebreakers."

"The pace of the week, I am almost full with the information to take away and read up on but not overwhelmed. I was excited for each day. The format of 3/4, 2/3hr sessions per day really worked for me. I enjoyed the evening sessions too, it was nice to have the change of feel - the speakers were inspirational and so friendly."

Participants also noted throughout the survey that the whole experience of Collaborative Futures Academy was cohesive and worked well as an online experience with different platforms and ways to engage.

"I also thought it has been really well-organised - you've managed to make a completely online conference run so smoothly and in a really engaging way, so thank you."

Of the twenty-eight responses, three were negative and these focused on the accessibility of the course content in terms of prior knowledge and a lack of practical takeaways to put theory into practice.

"I found it a difficult mix- we went from straight forward topics to ones that seemed to presume a prior knowledge / a certain kind of institutional support that we may not all have."

"I was expecting to have more hands-on sessions, with actionable feedback, steps to take to make a change. I felt that most sessions were very theoretical, exposing the problems but not providing answers or guidelines on how to overcome or work together to solve the problem."

"In comparison to the time I invested, the learning outcome was very little."

Conversely, other participants commented that they found the progression of the course structure helpful and that they can apply their learning outside of the course.

"Monday and Thursday topics changed my life, gave me tools to understand better the subjects and deal with the daily difficulties to face them."

"I enjoyed the construction of the academy and how it was built-up. The order seemed logical on how to get from one topic to the next, as building fundamental blocks."

"I learnt so much that I can apply in both professional and personal contexts."

When asked **"Which session had the most impact on you?"** there were a broad spread of answers, with participants finding it difficult to narrow it down to one session and every session in the programme was

mentioned, so this was an incredibly positive response that illustrates the quality of the sessions. The session that was most cited, with eight mentions, was the Challenging Content panel. Other popular sessions included the Resilience session, Confronting Challenging Content, Building your own Personal Brand, Communication Skills for Collaboration, Power & Privilege and Media Training.

Positive feedback was a mix of practical skills, sparking ideas and helping to build confidence in approaching challenging topics and discussing emotions and feelings in public engagement.

"The communication skills one, as I've come back with a really solid idea."

"The third one about discussing controversial topics. I think it has given me quite some confident to engage in conversations that otherwise I wouldn't feel able or brave enough to conduct."

Participants were then asked to share any critical feedback to identify any areas where their expectations were not met, so that these can help improve future training programmes. In response to **"Was there anything you missed during the week or anything that could be improved?"** participants noted that they would like more practical takeaways and a follow up to the Academy, as well as making creative sessions accessible to all.

Four Creative Encounters sessions were run in parallel during the evening as an optional addition to the programme but several participants expressed a desire to be able to attend more creative sessions. In other areas of the survey, the timing of the evening sessions were also highlighted as being incompatible across participant time zones.

"I wish I could have attended to the other artistic sessions (how to make a Zine, photography, theatre...), Arts and collaborations with artist as a way to engage is something I am very passionate about. I just love arts!"

"I personally would have liked to participate in all four Creative Encounters, arts based engagements."

More skills building sessions with practical tools and techniques to take away.

"I was expecting to have more hands-on sessions, with actionable feedback, steps to take to make a change, how to be more effective on PE, techniques that can improve PE."

"something more hands-on' - I would have liked to take away a more practical toolkit that helps me advance in my e.g. career change plans."

Sharing action plans

"I think it would have been nice to help us sort of develop a mock or real projects as went through the week. And then we could post those on Miro/Social Space and get feedback."

"I would like to have more time to create action plans for our engagement activities and peer-reviews of them."

A few participants encountered technical issues, such as browser compatibility with Wonder, and others had suggestions for interactivity such as having a centralised forum for chat throughout CFA rather than interacting on session pages.

Several participants expressed the desire to keep in touch with the cohort via instant messaging platforms or getting permission to share contact details prior to the course. Several participants also mentioned that they would like to keep in touch with the Academy to extend their learning and reflect on their engagement journey.

"More time for processing. Meaning it in a positive way, maybe a reflection week and coming back later? Or a follow up Master Class to see what I could implement from the 'new years resolution'."

"I would be happy with more tips and tricks for engaging, illustrated with some successful engagement examples. I would also be happy to see how the academy continues to be a community further on and have more events in future!"

Participants have organised their own Slack group which has been shared with the cohort, so participants can keep in touch, and a follow up afternoon has been scheduled to take place six months after CFA to check in with participants and provide continual support. Sustaining long-term support through external platforms is not likely to be feasible given the resourcing and capacity required for community building. The Berlin School online Community Hub, monthly public engagement newsletter, and international networking events can create sustainable support structures for continued engagement.

One respondent also noted that they would like "less science proper, more research general focus" which indicates that future Academies could be clearer on the content and learning outcomes, as one participant noted earlier, to ensure that course expectations are clear. Another participant suggested "Better timing for people in EDT time zone." If opening applications to international and interdisciplinary researchers, it must be considered if the course is designed to meet their needs in terms of content and barriers to access, such as time zone.

When asked **"Is there anything else you would like to tell us about your overall experience of CFA?"** the feedback was overwhelmingly positive. Of the twenty-three responses, two responses were mixed with constructive criticism, one response was negative, as the respondent didn't feel every day met their expectations, and the remainder of responses were incredibly positive.

"I found CFA an amazingly supportive and open space. The whole "science" behind public engagement was amazing!"

"I haven't felt so emotional at the end of a conference program! I have learnt so much, way more than I expected to when applying for the CFA - thank you for letting me be a part of it."

There was a sentiment that we should strive to look beyond academia when considering best practice in engagement and reaching new audiences.

"It was brilliant! Excellent organization and brilliant choice of speakers. The only thing I would have maybe liked to see more of is speakers from outside academia/science. There's a lot we could have learned perhaps from people who do political content or beauty or makeup content about how to engage a wider audience. We needn't be snobby about that!"

"I think we made a nice collective effort of getting off the ivory tower, but there is still a lot to do. Also by understanding us in other dimensions more than the professional."

One participant re-iterated that they would have liked less theory and more hands-on activity to create tangible outcomes.

"Personally I felt that we were again discussing the problems that I was already aware, that have been discussed at length in podcast, blogs and other interviews. I wanted more actionable information. In such a large group of about 50 people what can we do individually or as a group to change this towards a resolution?"

1.3 Interactivity/ Networking/ Participation

Overall, a desire for tools of long-term connection and socialisation emerges here. Structured connection spaces are most likely preferred to loose connection spaces such as Wonder. Barriers to connecting with each other are identified as difference in communication style, technical issues with the platform and difference in openness to active listening.

The next sections of the participant questionnaire were structured around the participant learning outcomes. This section relates to the first learning outcome:

1. **Participants will actively engage with each other, showing a commitment to group learning and peer-to-peer exchange.**

In this section we asked participants about the social aspects of the Academy from networking to how much participants felt able to contribute during the week, along with identifying any barriers that could be removed to support participation in future trainings.

The overwhelming majority of respondents (Figure 5) felt able to socialise, one said they did not socialise. A follow up question could have been used to probe into reasons for not socialising.

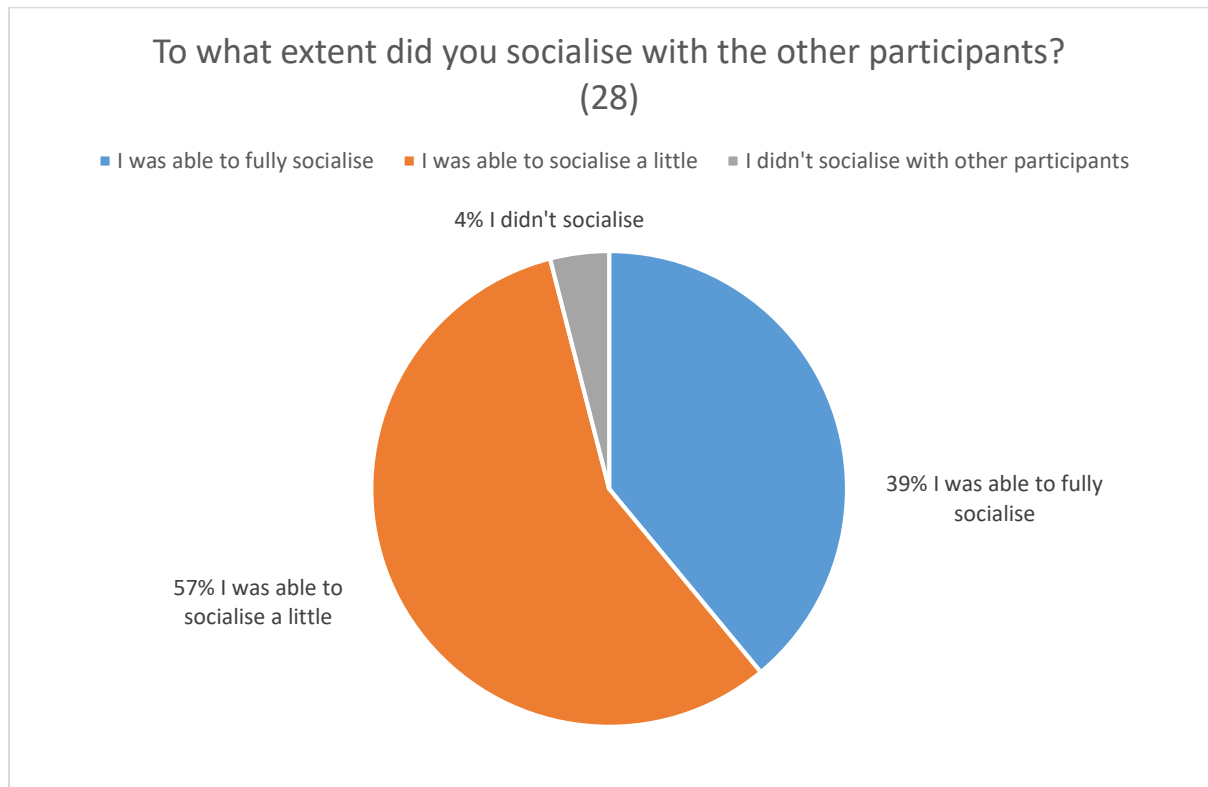


Figure 5: Level of socialising with other participants. (28).

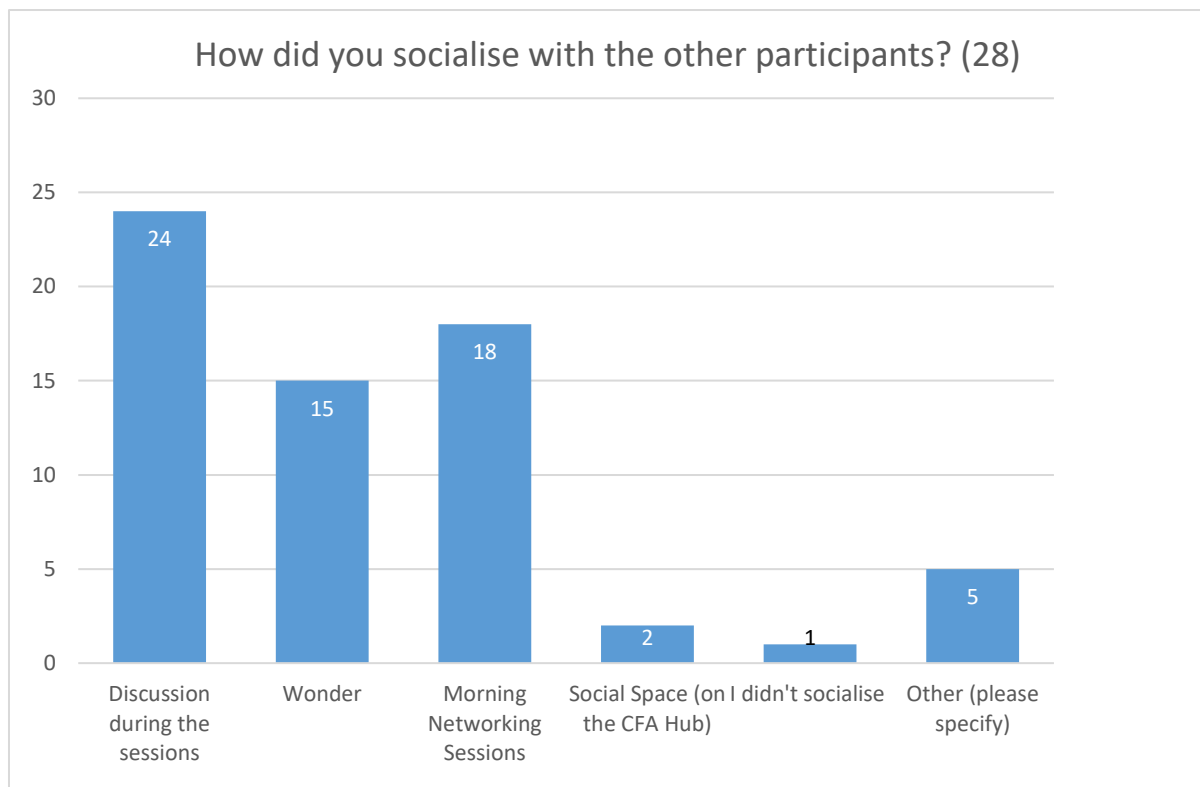


Figure 6: Ways of socialising. (28).

Structured discussion and networking opportunities proved most popular (Figure 6) including facilitated discussions and breakout rooms during workshop sessions and guided networking sessions, several of which took place on Wonder. Five responses selected “other” and these included Twitter and LinkedIn, along with breakout rooms and the Zoom chat feature.

Throughout the survey there are references to breakout rooms and Wonder with very positive feedback overall aside from individuals encountering technical issues on the Wonder platform, which were resolved. In the final comments section at the end of the questionnaire one respondent reflected that although they appreciated the Wonder platform for informal discussions, structured sessions are more effective to make connections and scaffold group learning.

“I unfortunately did not find Wonder very helpful, because it was too...’on’? I love the idea of ALWAYS being able to get into exchanges with others, but I found the scheduled networking sessions with some guidance more helpful.”

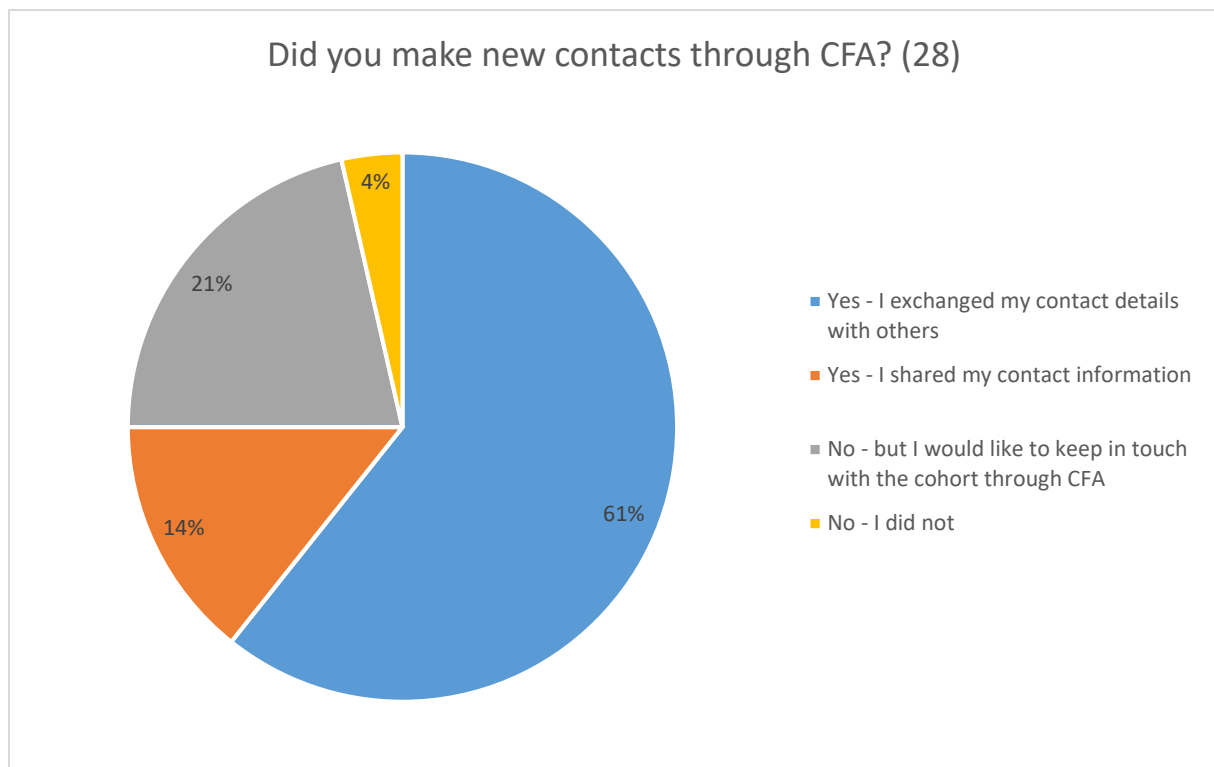


Figure 7: Making new contacts. (28).

A high portion of respondents said that they exchanged contact details with others (61%) and a further 36% of respondents were keen to make new connections either by sharing their contact information or keeping in touch with the cohort via CFA.

Throughout the survey, many respondents expressed enthusiasm to keep in touch with the cohort beyond the Academy itself with several suggestions of a CFA Slack channel to provide a platform for continued networking. Following the Academy, two participants from the Wellcome Genome Campus set up a Slack channel with the encouragement of the Wellcome Connecting Science team. This invite link was then shared with the cohort.

When asked **“Was there anything you missed in the week or anything that could be improved?”** one respondent suggested that permission to share contact details should be sought ahead of the Academy to facilitate connections among the cohort:

“I'd suggest asking participants, before the week start, if they would like to share their contact details in a list and which (either LinkedIn, email,...).”

A delegate list with biographies could also help participants identify any shared interests or areas of expertise that can be shared with the group. An ‘introduce yourself’ tool was created on the CFA online hub and it formed an activity within the Welcome and Introduction session but a takeaway resource would be more accessible and last beyond the duration of a programme.

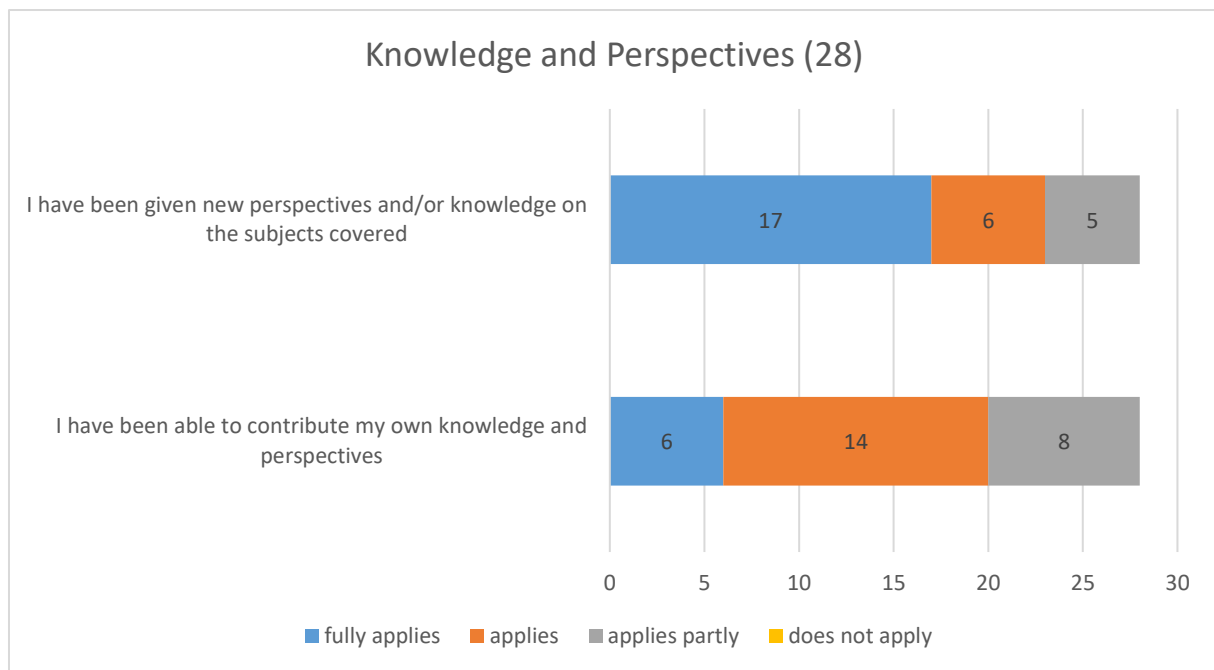


Figure 8: Contributing and gaining knowledge and perspectives. (28).

On the whole, participants felt like they were able to contribute their own knowledge and perspectives at the Academy (Figure 8) but this varied by degrees. This was followed up by a clarifying question to understand more about the barriers to contributing.

Eight participants gave further detail in response to, **“If you didn't feel able to contribute, can you share why?”** What factors would have made it possible for you to contribute?” Answers varied from prioritising active listening, to differences in communication and learning styles.

During the week dominant voices emerged in the workshop question and answer sessions, and in the Zoom chat feature. Participants were encouraged to pause and challenge their instinct to dive in or hold back from participating. This approach resonated with several respondents.

“I was one of the more privileged participants in the room, and so I felt I learnt more from listening to others perspectives than others might have from sharing my own. It was eye opening and refreshing to see out of my "bubble", that's something that will not go away now.”

“I didn't want to dominate the spaces so I held back a little but that's good for me as it was good to listen and learn from others.”

Another respondent expressed a wish for more homework assignments, so that participants could respond to the course material individually and share with the group for feedback on written assignments.

One participant felt that some subjects were so overwhelming that they were treated flippantly. For example, their group discussions on climate change led to the respondent withholding from the group as a joking tone was established which prevented any constructive conversation.

1.4 Critical Thinking and reflection

Interdisciplinary knowledge sharing is highly valued. Hearing voices that are not mainstream, such as voices by the disabled community, is seen as expanding the horizon significantly and helping participants to reflect on their own positionality and need for diverse collaboration. The connection between individual reflections and development with societal impact is very apparent. Participants left with unique questions emerging from a growing investment in the concept of Public Engagement.

The next section of the survey focused on the second learning outcome:

2. Participants will be curious to listen to and engage with different views, ideas and concerns beyond their lived experience.

Appreciating the value of diverse perspectives and non-academic stakeholders.

Questions in this section focus on new perspectives, acquired knowledge and lasting questions. This outcome is intended to understand any changes in attitudes and values prompted by critical thinking and reflection.

As seen above, all participants confirmed that the Academy had provided new perspectives on the topics covered or imparted new knowledge but the level varied across the responses (Figure 8). To follow up on this, participants were asked **“If applicable, which new perspectives and/ or knowledge were particularly interesting to you?”**

Equity, diversity and inclusion emerged as a strong theme as did tackling challenging content and techniques to manage challenging conversations, in addition to personal skills such as practical advice, developing your personal brand, and digital wellbeing and productivity.

EDI

“The need to go the extra distance to amplify voices that are generally silenced or not heard.”

“Comparisons, and assumptions around the western society and things we take for granted. Equity vs Equality - I now understand what this is and why it is important from a disabled person's perspective.”

Branding

“Personal branding: tells a story about values and goal, it's easier to be more efficient and productive on social media once we know and show what drives us.”

Wellbeing & digital habits

“Getting to know my working-self better, allowing myself a break: it will have a positive impact on my productivity and wellbeing.”

Other areas mentioned were working with a press office, advice on building resilience and changing careers, and hearing directly from people with lived experience of marginalisation and disability. Several respondents also highlighted their interest in the projects shared, particularly from an arts and humanities perspective, which reinforces the value of the interdisciplinary nature of the Academy.

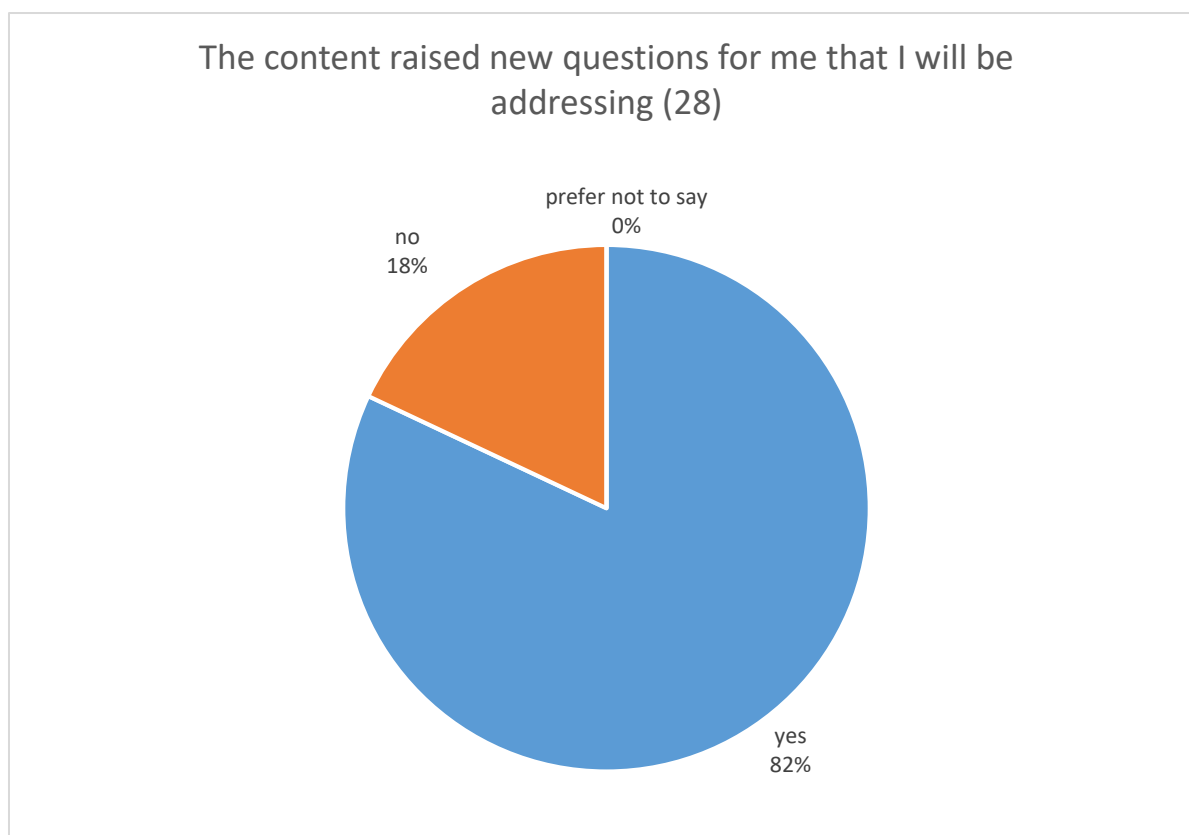


Figure 9: New questions. (28).

Q19 If applicable, can you specify which new questions were raised for you?

Of the nine responses, the overall sentiment was of a deep reflection on individuals' engagement practice, from looking inwards to focus on personal motivation, skills and productivity, to looking outwards at engaging diverse audiences and meeting their needs.

Questions raised included; how to build sustained engagement models rather than one-off activities or interventions, how to take an audience-centred approach to engagement, how can we reach audiences in a trustworthy way, how can we champion diversity and inclusion without pigeonholing individuals by their protected characteristics. There was also a question about how we can evidence impact through monitoring and evaluating engagement activities.

"Questions about my own integrity and questions about why PE is important to me. Making me rethink the 'bigger picture' of what matters to others and how I can help with that, rather than what PE I would like to do next."

1.5 Confidence, skills and practical takeaways

Much confidence and inspiration stemmed from seeing Public Engagement done virtually through the format of the Academy. Seeing a well executed example seems to be one of the greatest means to inspire proactive engagement. Overall, a desire remains to gain specific tools, approaches and methods for PE.

The next section of the survey focused on the third learning outcome:

3. Participants will feel more confident and better equipped for engaging non-academic stakeholders with their research.

Identifying personal areas of growth, feeling positive to bring these to their research.

Participants were asked about their confidence in judging positions and theory in Public Engagement, if they felt their engagement skills had improved, and about their perceived level of self-efficacy.

Participants were also asked if and how they plan to further explore topics discussed at CFA. This was asked as a proxy indicator for learning outcome 4:

4. Participants will plan to continue their journey into public engagement (or collaborative research).

Defining aspirations, intentions and commitments.

Although participants were asked to make a commitment to their own engagement practice during the Academy, this pledge was shared between individuals rather than formally recorded. The 6-month follow-up event will give a more accurate indication about individual progress following the Academy.

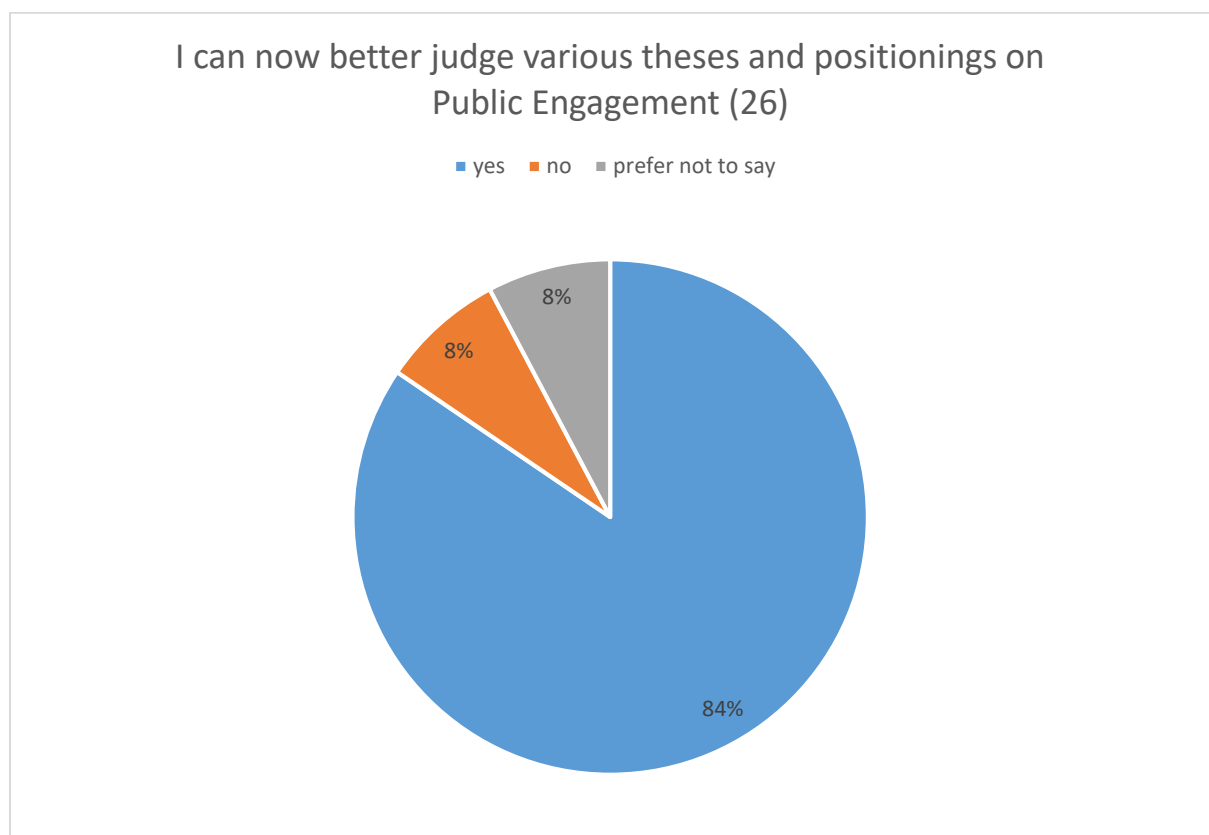


Figure 10: Conceptual positioning on PE. (26)

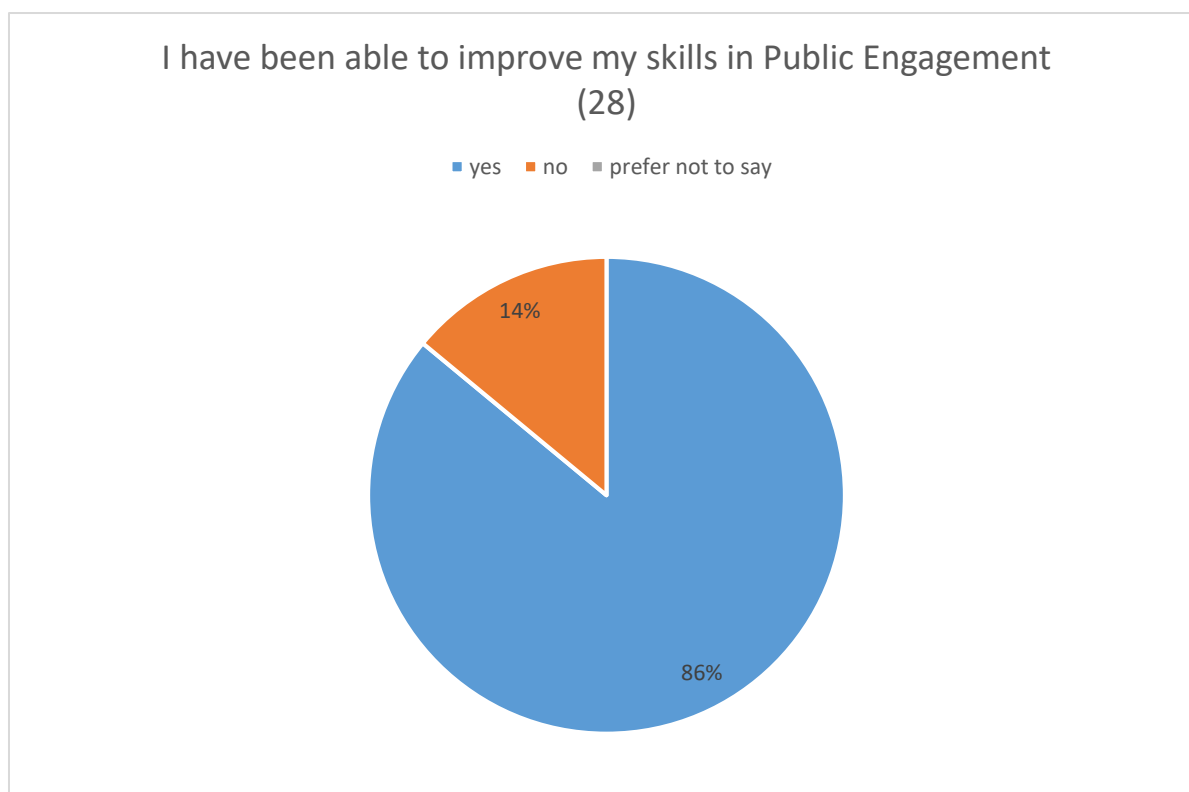


Figure 11: Improved skills in PE. (28).

84% of respondents felt that they could now better judge concepts and positions on Public Engagement, while similarly 86% felt that they had improved their Public Engagement skills as a result of the training Academy. This was followed by a probing question, **“If applicable, which skills in particular did you learn?”**

Over a third of respondents mentioned communication skills including approaching challenging topics, intercultural communication, collaborating effectively with different stakeholders, and having constructive conversations when dealing with divisive issues, for example one respondent is eager to implement techniques learned when in conversation with climate deniers. Clarity of language and connecting with emotions were also recurring themes.

“influencing across different cultural contexts”

“how to connect from empathy and shared feelings”

“How to better approach people, e.g. with non-jargon, and address complex topics.”

Channels of communication was also another strong theme. Working with a press office and crafting your own online presence featured in several responses with participants highlighting social media strategy and practical tools like Canva and video creation. One participant said “thinking about assessment and goals” while another said that the format of the Academy has taught them about digital engagement, which is a sentiment that was echoed by different participants throughout the survey.

“CFA was run so well online, using many different tools. That in itself has taught me a lot.”

Another respondent later in the survey commented on the format of online engagement could influence his or her future work.

“I think the format of the week is the most interesting part to me and I will take on board when organising conferences online in the next couple of years.”

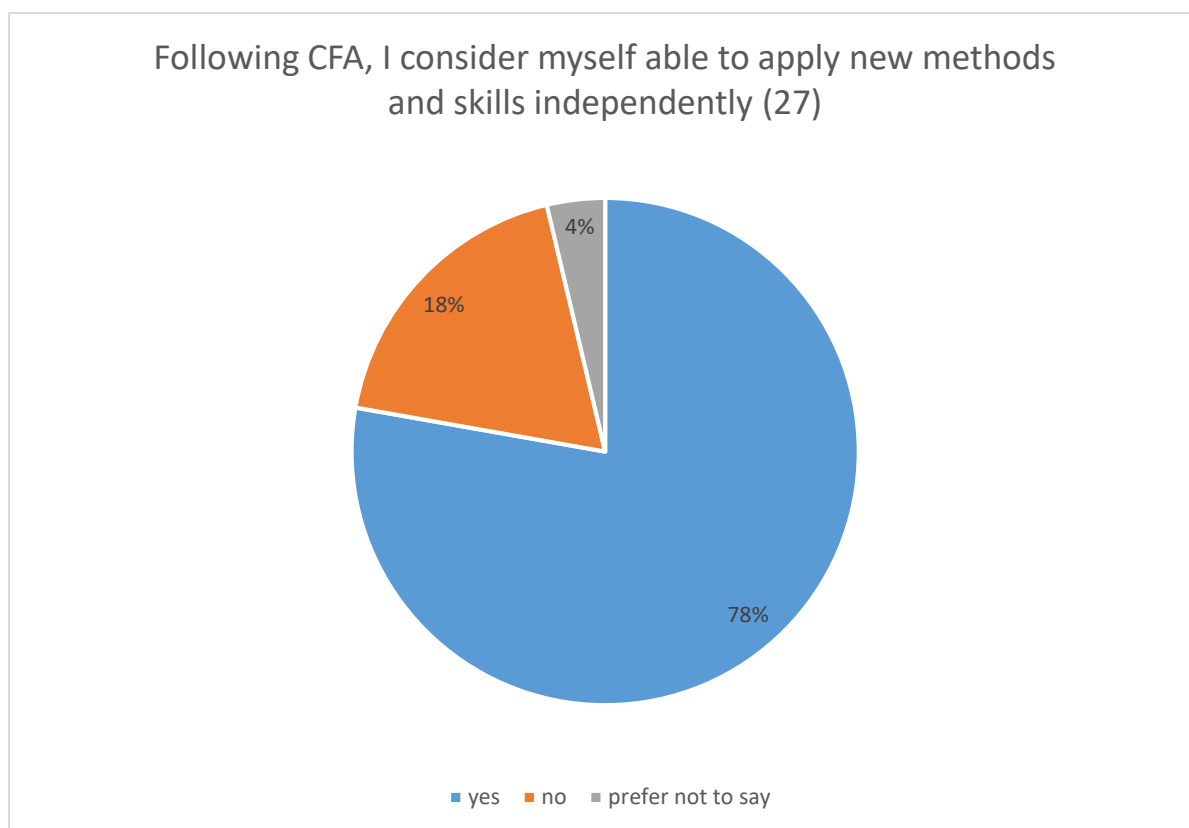


Figure 12: Self-efficacy following CFA. (27).

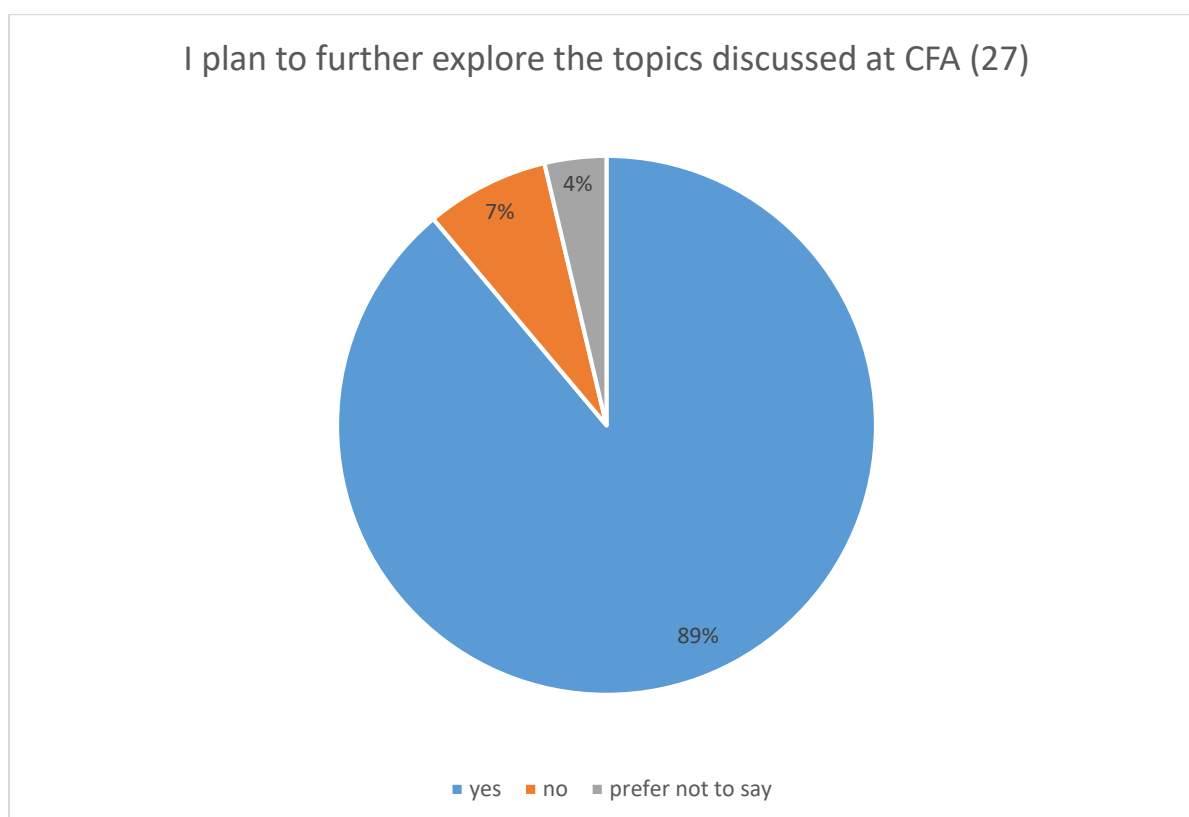


Figure 13: intention to further learning. (27).

78% of participants felt able to apply their learning independently (Figure 13), while 89% planned to further explore topics discussed at CFA (Figure 14). Participants were then asked to expand on their response with specific examples of how they might continue to explore topics of interest from the Academy, **“If applicable, how are you planning to further explore the topics? (Collaborations, independent projects, further resources or training...)”**

The most popular responses included, further exploring the resources that were shared during the week, building sustained connections with participants, and pursuing future collaborations and independent projects.

Throughout the survey, many participants expressed the sentiment that the Academy's holistic approach has provoked a deep reflection which they believe will lead to longer term, fundamental shift in their approach to engagement.

“I’m not sure if it was the aim of CFA, but for me it’s been a lot less about short term practical skills, but long term approaches, which is amazing. And I hope that’s not a criticism to the CFA; CFA has provided more than just tools, but something bigger that will change my approach to PE as a whole.”

For others this proved a frustration, as they would have preferred to learn more tangible approaches that could be applied straight away.

“I am not sure of the how, because this is specifically what I think we missed in the workshop, a more detailed recipe of what to do to engage different public. But I hope we can keep in contact and I can find out more about the how, and apply it as soon as possible.”

One respondent noted the opportunity for peer-to-peer learning and applying the tacit skills observed from the session leaders and facilitators.

“I will be connecting with some participants from whom I think I can learn more. I will also be applying the skills I learned from the general observation of the panelists, organizers, and participants in engaging virtually.”

Another participant mentioned the potential collaborators and stakeholders they plan to approach to scope engagement activities *“access lab, contacting charities and patient associations to start planning PE activities.”*

1.6 Final thoughts

A longing for extended and structured connection and collaboration emerged. Possibility for this is seen in pre-scheduling social engagement events so that time zones are thought through and it is not left to spontaneous connections alone. The same goes for having more space for discussion and discussion spaces that are facilitated for equity. In wanting to engage deeper with PE, participants are looking for events that support their journey in a more long-term style, which structures, inspires and furthers their journey into a field that is still budding.

The final section of the survey used open questions to give participants the opportunity to share any key thoughts that were not captured elsewhere on the questionnaire such as elaborating on closed questions or identifying any other issues they would like to share. These questions focused on the most valuable aspects of the Academy, any pain points that could be resolved in future activities, and an opportunity to reflect on any final thoughts.

In response to **“Which aspects of the Academy were most valuable to you?”** the majority of respondents found that the people involved in the Academy were the most valuable aspect of their experience. This includes networking with participants, the international nature of the cohort, the expert session leaders and the mentoring opportunity with the project team.

The emphasis on EDI and challenging topics were a highlight of the programme content.

“Listening to so many personal experiences helped me to broaden my horizons. Reflect on how I can contribute to improving the perception that the public has of science. To reflect on some controversial topics and how to address these.”

Many participants appreciated the opportunity to have time for reflection and places to gather their thoughts and resources. Having a community hub that also functions as a resource repository encouraged the group to share recommendations and grow the resource collection. The participant reflective journal gave individuals a place to capture their thoughts and feelings, and document the learning process.

“I think it had an impeccable organization, everything started on time with a clear agenda and safe spaces to ask, comment and write down.”

“The reflective journal - it's full of notes and reflections from the week and has helped to crystalise some thoughts.”

“CFA web hub for starting a collection of tools for engagement.”

Twenty-three participants offered critical but constructive feedback when asked, **“If we could do it all over again, is there anything you think we should do differently to improve the experience?”**

Scheduling of social events was highlighted as an area that could be improved on, as some participants had evening commitments or were based in incompatible time zones. There was a suggestion that these hands on activities could be held earlier in the evening or moved to a separate day.

The opportunity for small discussion groups and one-to-one conversations in break out rooms during sessions was a valuable aspect of the programme. There was feedback that some of the more lecture-based formats could have included more breakouts for in-depth exchange. One respondent felt that the pitching of content did not always feel accessible to the whole group, as some session leaders did not tailor their content for an audience with mixed experience in public engagement. There was also a suggestion to invite more people from outside of science and academia, including wider stakeholders, cultural influencers and community advocates, to bring new perspectives.

There is a recurring sentiment that many participants would like to continue to extend their learning and that training modules with tangible outputs and learning outcomes would be welcomed.

“Additional speakers/facilitators, some more interactive sessions which facilitate the interaction on more specific subjects and training modules with these.”

“Rather than doing it all over again, I think there should be a follow-up of how some of the skills discussed have been applied in real-life successful engagement exercises. A demonstration of how to approach a project from scratch till the end will help put a lot of these skills in perspective.”

Several participants also mentioned the value of creating space for those who are quieter to be able to speak up and share their views. Techniques were introduced mid-way through the Academy to redress the balance, such as inviting participants to challenge their first instincts when engaging with the group, and posing a question to the group then taking a moment to pause and allow everyone to formulate their response in the Zoom chat before hitting send together and unleashing a ‘Zoom Waterfall.’

“It was great, I think discussions were often dominated by the same people, but I think you did adjust this along the way by inviting others to speak.”

One participant shared that they would like a centralised place for course materials on the platform, which was added during the Academy in response to feedback, as initially session materials were shared on the

individual workshop pages. Future training hubs can use one overview page to ensure it is easy to navigate to all materials and interactive tools.

Several participants expressed that they would like an in-person training, with another mentioning the *“difficulty to fully disconnect and immerse”* themselves in online events due to other work commitments.

In the final question, participants could share any final thoughts in a completely open question **“Is there anything else you would like to share with us?”**

Of the sixteen responses 87.5% were extremely positive using the opportunity to give thanks to the project team and that the week has left them refreshed and keen to do more public engagement, *“I end up energized, motivated, and full of new ideas.”*

Several participants expressed that the week will have a lasting impact on them and they are looking forward to putting their learnings into practice.

“Thanks, it was a great experience and looking forward to applying the new tools in the new project I am about to start.”

“Thanks so much for this inspiring week. It has changed the way I will approach my future, for sure!”

Two participants gave feedback that they did not feel comfortable across all the digital platforms and there was a suggestion for consolidating learning with a practical toolkit.

“I unfortunately did not find Wonder very helpful, because it was too...‘on’? I love the idea of ALWAYS being able to get into exchanges with others, but I found the scheduled networking sessions with some guidance more helpful. Also...maybe the outcome of the Academy could be some sort of after-care. A Skills toolkit or something?”

“I feel I’ve could have done more. There were many opportunities and I feel I did not take all of them. I am not comfortable speaking in public and moving from a room to another, from an activity to another, made it harder.”

Future training could consider encouraging a continuous feedback loop with participants, so that any barriers to engagement can be identified and addressed iteratively through the week.

Leaving some flexibility in the schedule could allow space for emerging themes to be explored further building on this approach and helping address any areas that participants felt were lacking support. Given the diversity and wealth of experience in a group of early career researchers and engagement professionals, a BarCamp² or un-conference style format could be incorporated to support community-led sessions and sharing of expertise among the cohort.

As mentioned previously in the report, smaller learning groups could offer more of a support network for an online group learning environment and this could even be narrowed down further by pairing participants. One exercise at the start of the week encouraged participants to work in pairs and share their commitment to their engagement practice which could be revisited at the end of the week. We didn’t gather feedback on this exercise specifically but many participants gave excellent feedback on working in pairs during breakout sessions.

Optimising formats can be explored further with cohort feedback ahead of the next Collaborative Futures check in workshop.

² BarCamp is an international network of user-generated conferences, which originated primarily focused around technology and the web. They are open, participatory workshop-events, the content of which is provided by participants. Unlike traditional conference formats, they have a self-organising character, relying on the expertise and the responsibility of the participants. <https://en.wikipedia.org/wiki/BarCamp>

Participant reflections on the week

Overall, participants strongly appreciate integrative approaches: when workshops meet their expectations in the title, when proactive steps are suggested and clear advice is given. The strength of the community lay in proportion to how seen, listened to, and able to express themselves, participants *felt*. An overall desire for more practicality, long-term support and diversity of voices emerged. CFA was seen as a success in the outcomes it put forth and the model is not only an example to other PE aficionados but also an excellent launchpad into future events.

On the final day of the Academy in the last workshop session, participants were asked to discuss the week in small breakout groups and give collective feedback via a virtual whiteboard. Each day of the programme had a distinct theme, and so the whiteboard was structured by days of the week to capture key thoughts about the overall experience.

Most of the points made were reiterated in greater detail in the participant survey, so will not be reviewed in detail here.

Monday: Equity, Diversity and Inclusion

Participant feedback for the first day of CFA was overwhelmingly positive with responses mirroring the energy and enthusiasm shown in the workshop sessions.

The different perspectives on diversity, power and privilege, and representation were considered insightful with many participants inspired by the vulnerability of speakers sharing their lived experiences, one participant described the opening sessions as “incredibly positive and moving.”

Many participants echoed the importance of creating a safe space through Public Engagement and how they can take steps to address inequality. There was a reflection that the open, inclusive atmosphere was important for group learning.

“the Academy is truly an inclusive safe space to grow collectively”

“such a safe space - terms that i would have ordinarily avoided have been discussed in so many contexts that I now feel much more comfortable”

“I would like to move to Europe soon, I had fears about the environment for someone of a different community. 50 diverse people were thrown into a week of sessions together and we all completed it as friends. This week has been a safe space like no other!”

One participant described this day the weakest of all as they found that issues were discussed on a personal level but not tied back to social engagement.

Tuesday: Personal Skills

In general, participants found that sessions on this day shared lots of useful tools, links and resources, and participants also found it useful to have examples of engagement projects. Critical points included that one session felt more of a lecture format and less of a dynamic discussion.

There were positive comments about unconventional approaches to engagement including exercises in improving techniques and a project that challenged the traditional power dynamics of engaging non-academic stakeholders with research.

“AccessLab struck me as a great example of engaging with scientific thinking, rather than your specific field.”

“I loved the Workshop on thinking through science communication as Improv Theatre - saying 'yes, and' - actively listening to people and not refusing their inputs when you are surprised by them.”

A critical point was made that they felt that prior knowledge was taken for granted at times. This should be considered when bringing together researchers with different levels of experience in engagement and international participants as terminology is inconsistent across different countries, so a shared understanding should be established to ensure everyone can participate.

Wednesday: Challenging Content

Many participants remarked on the importance of engaging the public with complex and challenging topics in relation to their research, and these sessions prompted reflection on the tools and techniques that can facilitate these discussions.

Participants were inspired by speakers and dynamic discussions between participants in breakout rooms and on Wonder. The importance of emotions in effective engagement was a clear takeaway.

"Amazing panel with such different research, but a take away is that its the emotional two-way connection that makes PE special."

Thursday: Digital identity

Overall participants appreciated the practical nature of the sessions this day, particularly all of the curated resources that were recommended such as links, tools and books. This was considered a change of pace in the week, with less emotional topics and more tangible takeaways, which provided balance in the week. Practical advice on digital wellbeing and shaping your online identity were appreciated but there were comments that the programme titles did not reflect the content such as cyber security. One participant noted that not all of the content areas that they were interested in were addressed.

Friday: Collaboration

Participants appreciated the practical writing tips, particularly recommendations on what to do and what to avoid that can be easily applied to their work. Many also commented that they would like to keep in touch with the cohort. One participant seemed keen to continue to explore the potential of collaborating with non-academic stakeholders through the Academy network.

*"How can we make this Academy be a PRACTICAL asset in our lives & sustainable for the future?
An actual collaboration that works at contacting those groups whose idea of research does not imply
'researchers are a platform/contact point to help me get my voice heard/change my life.'"*

General feedback

An additional section was added for general feedback, here participants commented that the summary emails were a great feature of the week, and that diversity of the panels and panellists were fantastic. Participants appreciated the opportunity to share their reflections in small groups at the end of the week before sharing these on a virtual whiteboard and the collective feedback approach was considered conducive for participants to organise their thoughts.

"I loved how we collaborated on giving feedback, it's easier to put order to my thoughts while talking to people."

"Surprised by how BROAD the school was!"

*"My take-away is that:
HUMAN engagement was crucial.
Emotions, feelings play a central role.
Planning for an emotional journey is vital to the success of any engagement."*

2. Project team feedback

The project team were invited to give feedback in a post-project review, focusing on what went well, what could be improved, and lessons learned across strands of the development and delivery process. This information was captured on a virtual whiteboard to allow for anonymous but collective feedback.

Feedback was gathered as part of a two-hour meeting, and so feedback focuses on key elements.

Project Management

There was positive feedback about the collaboration overall and it was agreed that there was a positive working atmosphere. In addition to this it was felt that having a central point of contact and project manager to oversee all aspects of the process was hugely beneficial. However, it was felt that responsibilities could have been more equally divided earlier on in the project.

Lessons learned:

- Establish roles, responsibilities and time commitments at the start of the collaboration
- Make a central point for resources and reminders, such as Trello which would also support task allocation and collaboration between meetings.

Programme Development

Again, there was very positive feedback about the development of the programme and how the original concept evolved with the different perspectives, expertise, and contacts of the collaborating institutions. The iterative development process and flexibility to bring in additional perspectives to sessions was seen as a positive outcome that enhanced the overall programme.

"The programme development benefited immensely from all the experience, contacts and cultural backgrounds in the team. Bouncing off ideas within the group constantly improved our planning and content."

Having the technical expertise and support of grasshopper kreativ was considered very reassuring when delivering a large-scale event across multiple digital platforms.

Several areas were identified for improvement; these included more practical project insights from PE professionals, more of an international outlook in the content and greater clarity on session content. The event descriptors for the end of the week should have been updated to reflect changes in the content to make sure that we met participant expectations, and having more international representatives would reflect the global nature of the Academy, as at times the content was too UK-focused.

There were further suggestions relating to the content, including having more practical sessions in the core workshops, and recruiting session leaders earlier on to allow time for co-creation and tailoring of session content to the varied experiences, backgrounds and expectations of the group.

Lessons learned:

- Establish participant outcomes from the start to give participants a clear idea of what to expect
- Follow content focused sessions such as talks or panels with a practical afternoon workshop session, to explore the topic further by putting theory into practice
- Include more people from outside science or academia and diverse stakeholders
- Give session leads more information about participants ahead of sessions to allow for tailoring of content

Marketing – Communications and visual identity

It was felt that the visual identity and marketing materials were strong. A themed Zoom background also made the project team easily identifiable to participants, session leaders, and technical support. There was a shared view that social media communication could have been stronger if one institution could take the lead on strategic communications. A greater variety of images was also suggested to support social media promotion across channels.

“I think having a more adjunct comms strategy with shared responsibilities across institutions would improve our reach. We all picked up Social Media on the go and the comms wasn't always in tune.”

Lessons learned:

- Create a portfolio of diverse images that can be used across social media channels
- Appoint a communications lead if possible and share collective responsibilities on communications in advance to leverage institutional support and amplify reach.

Recruitment and participant communication

Wellcome Connecting Science found that one-to-one conversations were important in gaining the buy-in of researchers. There was a suggestion that the promotional materials did not give enough detail about the training to get researcher commitment without a supporting conversation. The video application process was considered effective at getting participants to invest in the process. It was felt that more internal communication was needed to encourage and support internal applicants and that there can be a culture of researchers unwilling to take time away from their research to focus on PE. In addition to this, the time of the year was considered not to be the most convenient for early career researchers as there are a lot of conferences and activities scheduled for later in the year.

Lessons learned:

- The target audience should be clarified from the beginning, and if targeting international applicants then this should be reflected in the recruitment strategy
- Careful consideration of course design is needed to deliver something effective and challenging for an international audience with different levels of experience
- Scheduling of events and trainings should be carefully planned in the calendar to optimise timing and allow ample time for internal recruitment

Event delivery

Behind the scenes:

Teamwork was a key area for positive feedback. Slack was considered very effective for communications between the delivery team, particularly for answering quick questions or addressing pressing issues. The timings of the programme worked well for the project team with sessions dispersed throughout the day with long breaks in between.

“Working with a big team of partners really took the stress out of the deliveries as we shared responsibilities and always had a back-up.”

Participant facing activities:

It was felt that the focus on power and privilege set a positive and inclusive tone for the week but time should have been set aside for participants on boarding, particularly to give an introduction to the platform. Wonder had positive feedback but it did not work as a constant open room for participants to drop in for an informal chat, as it was originally intended. Instead it worked better as part of structured sessions.

“Conversations in Wonder were really insightful and helped build connections”

“Wonder was only active for 5-10 minutes after each session. It might have been nice for participants to have a way to contact each other in between sessions.”

Further thought is needed on how best to support all participants to contribute and a chat etiquette could be established to stop the chat feature becoming overwhelming to speakers and participants. One participant in the final survey was offended that a comment was not picked up upon and addressed by a facilitator but the volume of messages meant that important questions or salient points could get lost in the chat.

“The same group of people were very vocal, while others never spoke out”

“Agreeing on a chat culture as it was highly energetic but many seemed to find it distracting.”

Lessons learned:

- Establish chat function etiquette to set expectations.
- Offer participants a means of asking anonymous questions, such as a questions whiteboard that is less lively than a chat feature and can allow for curation of questions in advance.
- Address dominant voices and offer a variety of ways for participants to contribute so that no one feels left out

Documentation and Evaluation

It was noted that the combination of data from the platform, interviews, and recordings from the live sessions built a strong foundation for the documentation and evaluation. Participants were sent a daily newsletter to summarise the key points of the day and this was well received.

It was felt that there could have been more interviewees to capture a more accurate impression of the participant experience. It was also noted that evaluation requirements should have been established at the start of the process to make it clear the different institutional preferences for evaluation and establish a baseline for any future Academy formats.

Lessons learned:

- Given the popularity of the daily report newsletter, this could be made more interactive with video footage or a vlog or spoken summary of the day in review. Participants appreciated that all the recommendations for further reading and resources were captured in the daily report. An overview of practical tips could address the need for practical advice.
- Several participants enquired if there was an on boarding welcome video for the Academy, this could be used in the future to help set participant expectations.

Conclusions and next steps

Overall the Academy was successful in meeting its aim of **empowering a cohort of early career researchers to adopt fresh and challenging approaches to public engagement**.

By providing safe and inclusive spaces for networking and reflection, participants were able to engage with new perspectives and challenging aspects of engagement, and consider the value of meaningful exchange with their non-academic stakeholders. Participants reported feeling more confident and better equipped with skills and tools for engaging non-academic stakeholders with their research. Participants have indicated that they plan to continue their journey into public engagement and many suggested the next steps they plan to take to further their learning and engagement practice. A follow up workshop is planned to take place 6-months after the Academy.

The strength of the Collaborative Futures Academy lay in the international, interdisciplinary nature of the programme. One key aspect of digital training is the opportunity to build an equitable community of practice by bringing together diverse perspectives, and this aspect of the Academy had a deep impact on participants. Although recruitment targeted early career researchers, the perspectives of the early career Public Engagement professionals enhanced the cohort. Catering to the needs of such a diverse cohort across disciplines, at different career stages, and with different levels of experience in Public Engagement would never be straight forward or one-size fits all however the overwhelming majority of the cohort had a positive experience with many thriving with the unique conditions of the programme.

The Academy itself was an experiment in exploring the best practice for large scale, digital training in engagement, and many lessons have been learned and summarised as recommendations in this report to iteratively improve future training offers. Future training could use a skills and attributes framework to monitor the perceived changes that have taken place in researchers as a direct result of the training.

The collaboration between institutions brought real benefits to all of the partners involved particularly bringing together new perspectives to identify and interrogate the challenging aspects of engagement that could be progressed together, in collaboration with the next generation of engaged researchers.

Key Findings and Recommendations

Key findings are listed in bullet points, followed by recommendations, which are signified by arrows.

Delivering international, interdisciplinary training

- Participants found the international nature of CFA to be one of the most valuable aspects of the experience. When asked to share positive aspects of the training, many participants cited the diversity of the cohort, and the opportunity to discuss topics and connect with participants from all over the world.
 - The programme was scheduled for GMT and CET time zones but it became apparent that some participants were in time zones that were not compatible with the scheduling. This is a disadvantage of working with participants across multiple time zones.
 - The variety of backgrounds and experiences in the cohort resulted in a diverse and dynamic group but this also meant that there were different levels of prior knowledge and participants had different interpretations of terms such as Public Engagement, Science Engagement and Science Communication (Sci Comm), as these are used interchangeably in different countries.
- When targeting international applicants, the recruitment strategy needs to be carefully considered to ensure appropriate reach.
 - Careful consideration of course design is needed to deliver something effective and challenging for an international, interdisciplinary audience with different levels of experience.
 - Terminology and experience levels vary across international, interdisciplinary groups. Care should be taken to ensure assumptions are not being made around shared language and prior knowledge.

Facilitating online group learning

- Wonder proved very effective for structured group networking sessions however there were some technical issues with browser compatibility and it did not serve its intended function as virtual drop-in space for spontaneous meetings between sessions.
 - Several participants shared that the Academy almost re-created the experience of an in-person conference or training. Online learning can be carefully curated to replicate many elements of in-person training. Considering change of pace, formats of activity and structure of the day can help overcome screen fatigue and build in many familiar aspects of networking and exchange. Live sessions can be participatory and engaging through the use of small break out room discussions, interactive digital tools, and clear guidance on how to participate.
- Virtual networking platforms such as Wonder can be used to effectively support informal networking however, this is most effective when participants are guided through structured activities to facilitate exchange.
 - Smaller learning groups within a cohort may help to provide more of a support structure for participants and create more individual accountability.
 - It's important to ensure that everyone has the opportunity to contribute during live sessions. This can be achieved in multiple ways:
 - use techniques to encourage whole group interactions such as group polls, reaction buttons or using cameras off/on to answer yes/no questions that lead to smaller 'fishbowl' discussions
 - allow time for individual reflection on a question before encouraging a "Zoom waterfall" to unleash whole group responses in the chat feature

- offer participants a means of asking anonymous questions, such as a questions whiteboard that is less lively than a chat feature and can allow for curation of questions in advance.
 - address dominant voices and encourage questions from participants that have not had the opportunity to contribute
 - consider using pairs in the breakout rooms to ensure everyone has the chance to share their views on a topic. This needs to be carefully monitored to ensure that no one is left alone in a room.
- Consider sharing participant biographies ahead of training sessions to facilitate connections. Participants could be asked if they would like to share contact details as part of the biography.

Supporting critical thinking and reflection

- The diversity of topics and speakers was an aspect of the Academy that clearly surpassed participant expectations, with participants appreciating the curation of content and quality of delivery. The interactive nature of sessions was an important feature that ensured that experts and trainers responded to the needs of the room.
- Share learning outcomes, course structure, and tangible outputs ahead of participation to ensure that participant expectations are clear.
- Give session leads more information about participants ahead of sessions to allow for tailoring of content.
- Consider how participant feedback can be collected continuously to ensure that longer trainings can be iteratively improved throughout and any concerns or issues addressed.
- Reflective journals can be a powerful tool for individuals to document their learning journey. A journal was provided at the Academy but there was no further opportunity for support or exchange, so it was an optional learning tool. Providing a forum for participants to share exercises and learnings either anonymously or collectively would create further opportunity for reflection and exchange, enhancing group learning.

Building capacity and capability: Confidence, skills and practical takeaways

- Follow content focused sessions such as talks or panels with a practical afternoon workshop session, to explore the topic further by putting theory into practice and consolidating learning with tangible outcomes. This would help to distinguish between experts and professional trainers, and set expectations around session outcomes.
- Include more people from outside science or academia and diverse stakeholders.
- A toolkit could build upon learning and provide practical guidance beyond the training.

Inspiring action: Aspirations to do more

- Action planning should be incorporated into trainings to support participants to set goals and tangible next steps to build on training.
- Follow up training session has been set. Participant feedback will be used to inform the practical training content, addressing any which did not completely meet expectations. This session will also be used to measure any changes in practice.
- Assigning a group mentor could also help to guide learning.

Measuring success

- Baseline data could be gathered prior to training to measure any changes in skills and attributes as a direct result of the training.
- Participant numbers were monitored in sessions but levels of individual participation were not, meaning that it was difficult to identify engagement patterns. Monitoring of participant lists throughout would give a clearer overall picture of individual participation.

Collaborating between institutions

- A project management tool, such as Trello, would support more asynchronous collaboration and create a repository for collating shared resources.
- Appoint a communications lead if possible and share collective responsibilities on communications in advance to leverage institutional support and amplify reach.

Engaging researchers in our institutions

- Scheduling of events and trainings should be carefully planned in the calendar to optimise timing and allow ample time for internal recruitment.
- The Wellcome Connecting Science (WCS) team met researchers individually to recommend the training and clarify the content. This professional support and relationship building led to strong recruitment within their institution. The WCS team also have a Slack channel for their researchers interested in engagement training opportunities.
- Gathering evidence of change by using an evaluation framework before and after trainings could help to build an evidence base that can be used as a tool to advocate for public engagement support within our institutions, and persuade senior managers to allow their researchers to participate in professional development.

Appendix

Full Training Programme:

Monday, 22 November: Equity, Diversity and Inclusion

- **Welcome and Introduction to CFA! 09.00-09.45 GMT**
with Sarah Cruise
In this interactive session Sarah Cruise, our CFA facilitator, will kick-start the week with introductions to the project team and some of the tools we will be using to collaborate with throughout the week. We will take the time to pause and get to know each other, reflect on what we hope to achieve through the Academy, and consider how we will engage with one another over the course of the week.
We look forward to seeing you there!
- **Resilience, 10.00-11.30 GMT**
with Dr Em Dixon, Dr Rahma (Red) Elmahdi and Dr Furaha Asani
This session - and indeed all day - is focused on equity and resilience. We have a great selection of speakers who will share some of their own experiences of considering and challenging power and privilege, why issues of equity are so important to consider at the start of our thinking about engaging the public and how we bring our 'whole selves' to the process of engaging with people around our research.
- **Power and Privilege, 14.00-15.30 GMT**
with Dr Emily Dawson
The exclusive, inequitable failings of the multidiscipline we call public engagement & science communication have had demonstrable implications for life and death on a mass scale in 2020. Accusations that in previous years may have seemed like hyperbole have become inescapable conclusions about the world we are living in. Under these circumstances, how might we think about meaningfully inclusive public engagement & science communication practices? What language, concepts and practices do we need to transform public engagement & science communication and create a more useful, more equitable field?
- **Panel Discussion // Challenging our Power and Privilege, 17.30-18.30 GMT**
Moderator: Dr Red Elmahdi
Panel: Suzanne Alleyne, Sir Jim Smith & Rob Berkley
This panel discussion brings together different perspectives on how power and privilege play out in research and in engagement with people with experience of marginalisation. Among the topics, speakers will be considering are how to build authentic relationships, being an effective ally and how to challenge structural inequity.

Tuesday, 23 November: Personal Skills

- **Communication Skills for Collaboration, 09.00-10.30 GMT**
with Christina von Rotenhan
Effective public engagement is a two-way communication, with the researchers listening to and learning from participants and vice versa. The session introduces key communication skills in the context of a collaborative approach to public engagement: from identifying engagement goals and key stakeholders, to crafting messaging and adapting your communication to be relevant to audiences beyond your field of research. This interactive training session combines short lectures with practical exercises to put theory into practice.

- **Intercultural Communication, 10.45-11.30 GMT**
with Dr Kasia Launcha
Can we still talk about nationality as a factor that has an impact on the way people think, behave or communicate? Can we still rely on cultural models from the 70s and 80s? The world has changed since - we all use English, the Internet is the norm, and we're much more well travelled than 50 years ago...we can indeed still observe differences in expectations regarding professional communication and this session will focus on three interesting cultural dimensions that might come in really handy when trying to effectively INFLUENCE across cultures:
1. Hierarchy - how to position yourself so that people want to listen?
2. Persuasion - what might be the cultural preferences in argumentation when receiving information?
3. Communication - what might be the cultural preferences for verbal and non-verbal communication styles?
This session promotes cultural awareness, which can translate into practical strategies and skills to talk about one's research to an international (and intercultural) audience.
- **Psychology of Communication: bias, receptiveness and eliminating hierarchy, 14.00-15.30 GMT**
with Dr Lottie Brand
Challenging topics can often lead to polarising views that are difficult to reconcile. How can we have constructive conversations when dealing with controversial issues? How can we challenge the dynamic of 'experts and non-experts' to eliminate hierarchy and support positive collaborations? In this interactive workshop we will explore key communication and psychological strategies to support a culture of positive engagement. Here we will introduce 'prestige bias', and how it relates to science communication and practice 'conversational receptiveness' techniques which can be used to de-escalate a dialogue.
Lastly, we will get an insight into lessons learned from AccessLab, an initiative designed to pair local researchers with their communities while challenging assumed roles and power structures.
- **Creative Encounters, Arts Based Engagement, 18.30-20.00 GMT**
with Dr Suzanne Hecker, Hana Ayoob, Ryd Cook & Nick Saffell
After an intensive day of exploring communication from different perspectives, now there is an opportunity for exploring creative ways to communicate your research. In this hands on workshop, you can choose one format to bring your ideas to life: from the visual language of zine making, to capturing a concept through photography or moving image, or even learning techniques to think on your feet with the art of improv.
These workshops are fun way to learn new skills and try your hand at weaving your research storytelling into a new format!

Wednesday, 24 November: Challenging Content

- **Networking, 09.00-09.45 GMT**
with Sarah Cruise
Networking sessions will be hosted by CFA facilitator, Sarah Cruise. These sessions are an opportunity to get to know each other better by working in smaller groups to explore topics raised in workshop sessions.
- **Confronting Challenging Content, 10.00-11.30 GMT**
with Dr Richard Milne
Engagement that foregrounds the concerns and questions of the public (rather than broadcasting about research) will often mean that people ask difficult questions and question the ethics of research. Dr Richard Milne will explore public attitudes to ethically challenging research questions and give participants the chance to consider how best to respond to the big questions in the ethics of research.
- **Panel Discussion // Challenging Content, 14.00-15.30 GMT**
Moderator: Rebecca Winkels
Panel: Dr Laura Davies, Dr Anindya Raychaudhuri & Anna-Zoë Herr
'Difficult', i.e., emotional, intimate and/or potentially triggering research content can pose particular

challenges for engagement. Engaging on such 'difficult' content can benefit from reframing. Three researchers focusing on death, genocide, and climate change respectively discuss why and how they have approached engaging wider audiences. From humour to spirituality and narratives of hope, each panellist has explored different formats and framing to connect audiences with their research.

- **Quiz Night, 18.30-19.30 GMT**

This is a chance to get to unwind with some fellow participants and potentially be crowned the quiz champions of CFA. With fun and 'engaging' questions will your team be the winners?

Thursday, 25 November: Data, Security and Cyber Identity

- **Networking, 09.00-09.45 GMT**

with Sarah Cruise

Networking sessions will be hosted by CFA facilitator, Sarah Cruise. These sessions are an opportunity to get to know each other better by working in smaller groups to explore topics raised in workshop sessions.

- **How Can We Manage Our Digital Wellbeing and Productivity? 10.00-11.30 GMT** with Tyler Shores
Our time at work and at home are greatly shaped by our digital habits -- how can we strike the right balance between productivity and our wellbeing? In this interactive seminar, we will look into some of the existing research on how we spend our time onscreen, and discuss ways in which we can manage our online and work habits in ways that work best for us.

- **Building your Personal Brand, 14.00-15.30 GMT**

with Amanda Hepton-Patchett

William Shakespeare said that, "all the world is a stage, and the men and women are merely actors". Personal branding is about how you appear on that stage. In today's competitive academic world, this has never been more important. Your personal brand already exists in the way that you are perceived by others - with or without your input. This session will give you some practical tips on how to manage that perception and engage with your key stakeholders in the most constructive way. It will also provide an opportunity for self-reflection and enable you to take steps towards creating a personal brand that will serve you throughout your career.

- **Engaging One-Liners, 19.00-20.00 GMT**

with Sarah Cruise

We often have very little time to capture someone's attention online. People also make judgements, assumptions and opinions about us and our content within milliseconds. This creative session explores how to craft engaging one-liners to capture attention and influence most positive judgements.

Friday, 26 November: Collaboration

- **Media Training, 09.00-09.45 GMT**

with the University of Cambridge

How does the media work? What is newsworthy? What does the media need from researchers? Sarah Collins shares tips and hints on communicating challenging subjects and explores how working with your institutional press teams can help you share your research more effectively.

- **Reflection and Next Steps, 10.00-11.30 GMT**

with Sarah Cruise

In this interactive session we will reflect on the week we have spent together, with the opportunity to feedback on your experience and set personal goals to continue to push the boundaries of engagement!

- **Mentoring Sessions, 14.00-15.30 GMT**

After the Collaborative Futures Academy programme has officially wrapped up, there the option to sign up for a 1-to-1 mentoring session with a member of the project team. The project team are around all week, should you have any questions, need support or would like a chat before then!