The Alan Turing Institute

Widening participation in education

what can we learn post-pandemic?

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me @ Turing

Since: September 2019

Directorate: Academic Engagement

Team: Skills

2016-17
Research Scientist
In Genetics @Crick

2017-18
Cognitive & Computational Neuroscience
Mres @UCL

2019
Training Officer @Turing

2021
Skills & Training Manager @Turing

Agenda

1. About the Turing
2. Widening participation in education
3. Open discussion
4. Programme spotlight & how to engage with the Turing
5. Q&A

About the Turing

Envisioned future

The Alan Turing Institute

A centre of research and innovation that harnesses the power of data science and AI to make a lasting impact on the world's most pressing societal issues

Our goals

– Advance world-class research and apply it to national and global challenges

– Build skills for the future

– Drive an informed public conversation

Lead responsibly

Continually innovate

Build confidence, ensure independence

Collaborate and convene

Enable impact - at scale

Embed equality, diversity and inclusion

Drive interdisciplinarity

Learn and help others learn

Move with agility

Democratising access

Our place in the ecosystem

Independent, impartial and trusted advice for government, industry and civil society
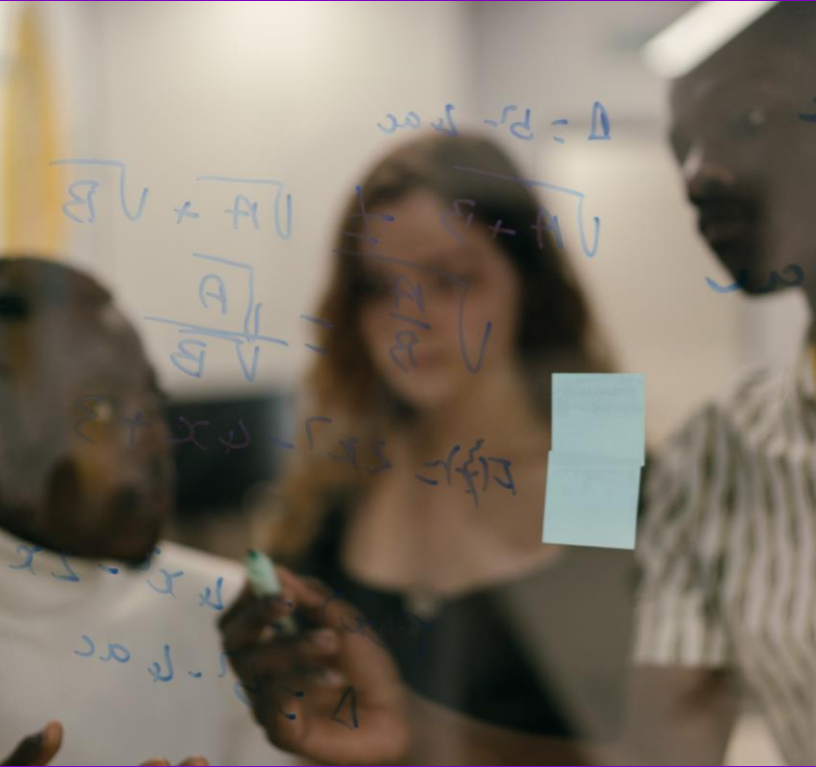

National leadership, providing focus on national priorities for the public good

Broker and convene cross-sector and interdisciplinary research and innovation capability at scale

Key asset to the UK internationally

Build skills for the future

The data skills gap is well documented. The Turing alone cannot solve all the problems in the skills pipeline. What we can do is fill some of the gaps by…

accelerating the transfer of skills across academia, industry, government and third sector.

Developing and improving data science and AI skills

– Placements and knowledge exchange

– Data science and AI training for domain experts in target sectors

– Capacity building initiatives for business leaders to improve application readiness of data science and AI
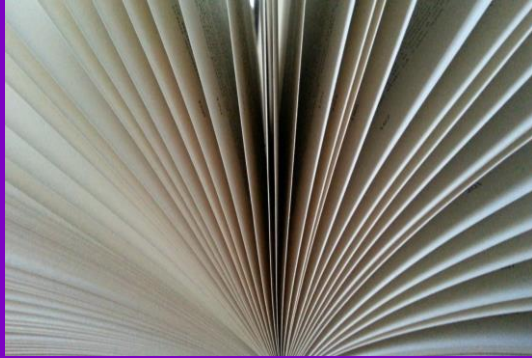
Data Study Groups

Enrichment scheme

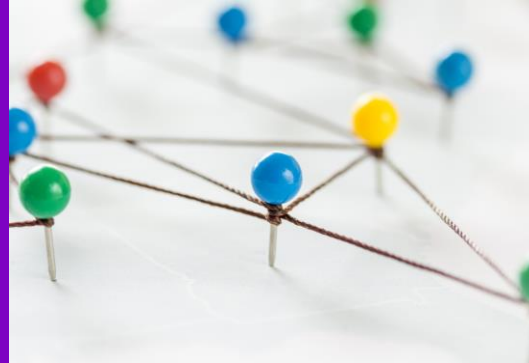Turing Internship Network

The Alan Turing Institute

Online Learning
Courses

Connections Initiative

Data Science &
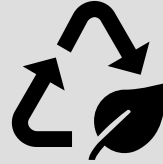Educators Programme

The
Alan Turing
Institute

Widening participation in education
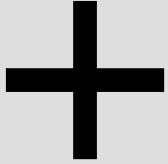
Designing **new** funding schemes and educational opportunities specifically aimed at widening participation

Re-designing **existing** opportunities with inclusivity & accessibility in mind

Keeping learners engaged **during** educational activities

Three tiers

Post pandemic teaching – some of the success stories

New opportunities

– Identify the gap & WHY there is a gap

– Seek allies, collaborators, funders / sponsors etc.

– Design with the target audience in mind (and ideally co-design)

– Continuously evaluate & improve

Neuromatch: Teaching Computational Neuroscience with global accessibility

Conversion courses in data science & AI

Existing opportunities

– Offer longer time windows & alternative ways to participate / apply

– Webinars, FAQ calls (and sandpits) are valuable to candidates

– Target directly underrepresented groups e.g., Women in STEM network

– LinkedIn reshares, endorsements & promotions from previous participants are testimony to the success of the activity

– Lottery ballot for equally qualified candidates

– Access fund, reasonable adjustments & covering expenses (cost neutral or cost neutral + honoraria)

During teaching

- Blended / flipped learning and / or a mix of teaching & discussion
- Hybrid is questionable, parallel in-person & online sessions can work
- Ongoing engagement - Slack, discussion forums, Mentimeters etc.
- Pre & post event engagement helps build communities
- Become savvy in using online learning environments
- Facilitation is a skill!
- Live coding / live sketching is incredibly effective
- Don't undervalue peer programming, peer learning or peer mentoring opportunities
- Code of Conduct
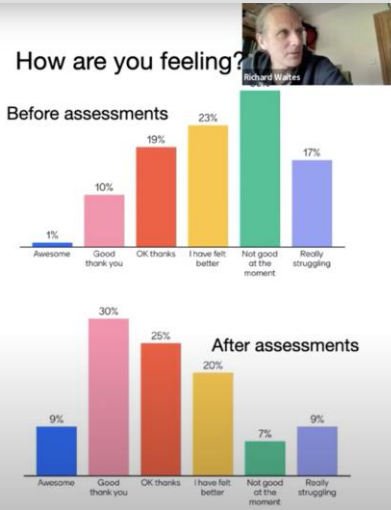
Post pandemic teaching

‘Post-pandemic teaching: what does it look like?’

Lockdown 1: Engaging students and responding rapidly

How are you feeling?

- Normalising conversations around well-being
- Knowing when to add or modify support in teaching and learning
- Why bother?
- Students struggled with changes to assessments and assessment rules
- Change to practice is better information at the start of the module
- Repeat the information
- More formative work
- Support students as they experiment with their method of studying

Before assessments

1% Awesome | 10% Good thank you | 19% OK thanks | 23% I have felt better | Not good at the moment | 17% Really struggling

After assessments

9% Awesome | 30% Good thank you | 25% OK thanks | 20% I have felt better | 7% Not good at the moment | 9% Really struggling

Richard Waites speaking about adapting to post-pandemic teaching

‘Post-pandemic teaching: what does it look like?’
Workshops

- An alternative to lectures
- Activities and active learning
- Interactions (feedback)
- Interactions (peer-to-peer and group)
- Engagement and attendance
- Tasks and group work short and long term
- Greater variety in assessments
- Enhanced contact time
- And time on task

Post pandemic teaching

- - 3000+ users in Y1 since launch

- Learning at scale

- Reaching international audience

- Engagement platform & learning material repository for different projects & communities

Turing Online Learning Platform – Course catalogue

10 mins

Open discussion – what have you seen working well to widen participation in education?

Highlighting a successful programme aimed at widening participation at the Turing

The data science and AI educators programme aims

– To identify, navigate and overcome barriers to data science and AI training practices to support quality enhancement, both nationally and internationally.

– To foster a community that supports knowledge exchange and sharing of best practices.

– To empower educators with the confidence and knowledge to continually enhance their practice.

– To stimulate the development of open and inclusive curricula.

– To support the uptake of data science and AI training across a range of disciplines.

Topics taught & discussed in the programme

No	Cohort Call Topic and Learning Outcomes
1	Identifying learner needs
2	Challenges of teaching Data Science and AI
3	Post-pandemic teaching: what does it look like?
4	Making learning memorable
5	Embedding ethics into teaching: the background
6	Assessment and feedback
7	Embedding ethics into teaching: let's get practical
8	Collaborative development and delivery of teaching materials
9	Working together to embed data science across disciplines
10	Making teaching relevant to real-world applications

How we built a community of educators

Key features of the **educators'** programme

- Identified a gap (in the UK) & addressed it through the programme aims

- Competitive applications rather than registrations / sign-ups

- [project-focused]

- Longitudinal programme over 12 weeks (fully online)

- Ongoing engagement before, during & after

- Cohort calls complemented by mentoring groups

- Opportunity to stay engaged & contribute further (eg develop, reuse & adapt, or maintain resources)

How you can engage with the Turing as an educator

– <u>Data science & AI educators' programme</u> (next run in 2024)

– Book dash for developing educator materials (applications opening in March for early June run) - <u>sign up to Turing Way newsletter</u>

– <u>Turing Way</u> – 500 folks in the community, many identified as educators

– <u>Data science education interest group</u> - 400+ educators meeting quarterly and loosely engaging with the Turing

– <u>Online Learning Platform</u> - a suite of courses in Responsible AI and a few other topics, free of charge and open source

Thank you!

Questions?

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