

# An online bioinformatics training method delivering practical and tailored workshops to distant trainees

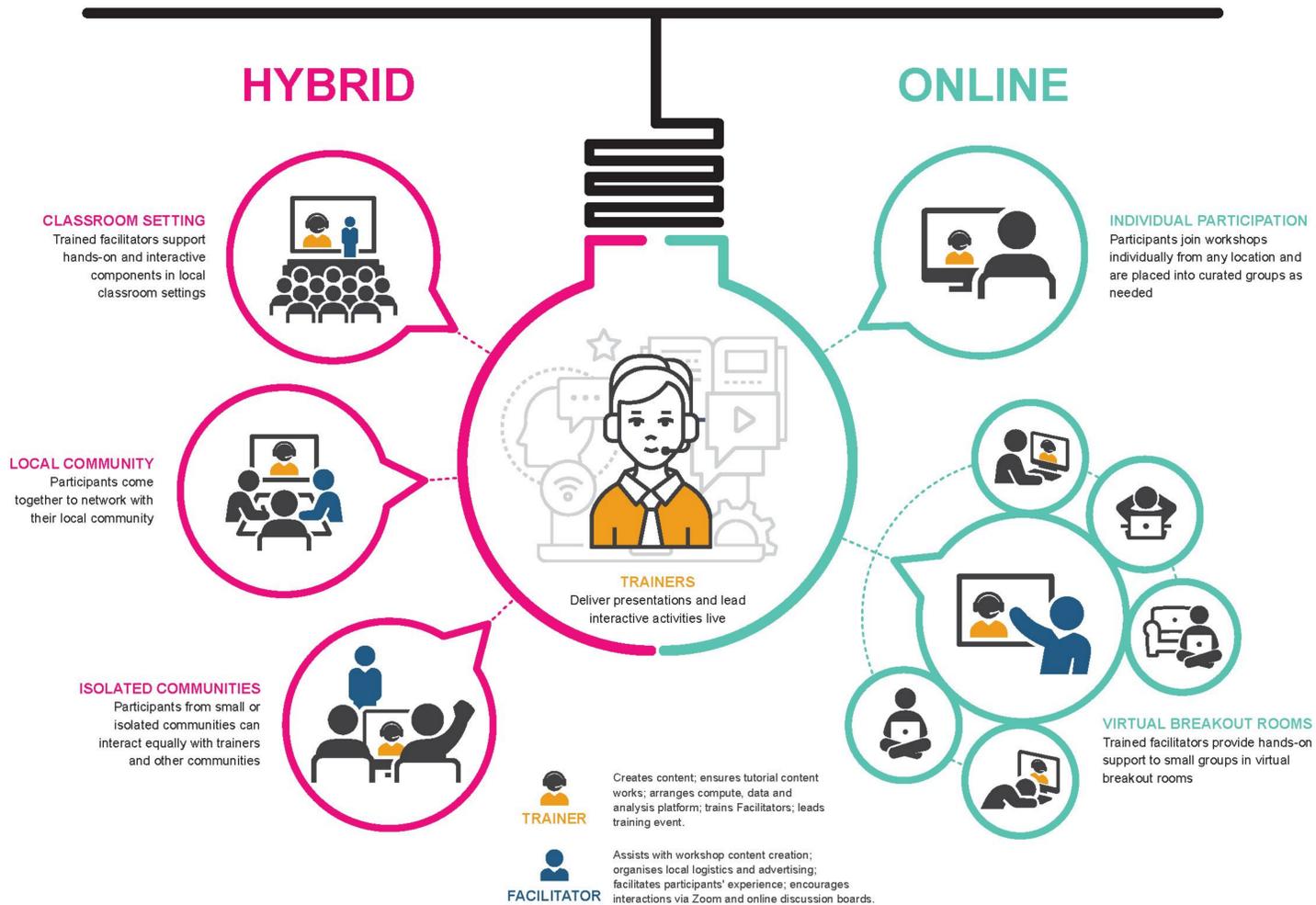
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Australian BioCommons supports life scientists to develop bioinformatics competencies.

Australia's large size and small, widely-dispersed population creates challenges to engaging trainees in tailored and interactive training events. Australian BioCommons has developed a method that successfully blends online and in-person training to deliver hands-on bioinformatics workshops to large groups of researchers across the country. The restrictions on gatherings associated with COVID-19 required an evolution of our technique to purely online delivery.

## AUSTRALIAN BIOCCOMMONS BIOINFORMATICS TRAINING

Online presentations are delivered by an expert Trainer and combined with hands-on practical tutorials. Interaction between participants is encouraged and learning activities are supported by local trained Facilitators.



When gathering together physically became restricted, we moved our training workshops completely online. In partnership with Pawsey Supercomputing Centre, we delivered a series of webinars and interactive workshops on 'Using containers in bioinformatics'. We augmented our delivery method to utilise 'breakout rooms' for personal interactions between small curated groups of trainees with trained facilitators. Pawsey selectively reformatted their content to provide opportunities for social learning that was customised for biologists.

Lessons learnt going online...

- **Preparation is essential.** The course convenors and trainers must spend more time organising the fine details before the event.
- **Repetition is necessary.** Provide clear information via multiple channels. It should be slow and repeated.
- **Everything takes longer.** It takes longer to deliver training and support participants online. Make sure to account for this in the program. Pare down the opportunities for participants to deviate, get lost or frustrated when undertaking tasks like logging on, downloading, or typing commands.
- **Provide quick and private troubleshooting.**
- **Avoid Zoom fatigue.** Don't schedule sessions > 3-4hr long and include regular breaks.
- **Interactivity needs strategic support.** Hands-on exercises, suggested questions, group size and makeup all need consideration. Old-fashioned encouragement helps.
- **Online is not as scalable as in-person events.** The ratio of about 5 participants to each facilitator worked well.
- **Knowledgeable facilitators are key.** Helpers who are well versed in the content and who are interested in networking with their community are priceless.

Our online hybrid training preserves what makes our training valuable - the provision of hands-on, interactive and tailored learning opportunities even in absence of a face-to-face component. The method has become a key tool for us to ensure scalable and more equitable delivery of short-course bioinformatics training nationally.