

Hybrid Training: a new model of bioinformatics training

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ABSTRACT

EMBL Australia Bioinformatics Resource (EMBL-ABR) is a geographically distributed network of organisations undertaking bioinformatics support around Australia. To overcome the problem of having widely dispersed researchers with urgent needs for bioinformatics skills we developed a novel training delivery methodology. The method, which combines an expert Lead Trainer delivering a presentation online in conjunction with a hands-on interactive practical session at multiple venues supported by trained local Facilitators, is ideally suited to the delivery of simultaneous training workshops around Australia. Referred to as the 'hybrid training model' the method combines the advantages of webinar presentations with some valuable components of in-person group training.

Events using the hybrid training model normally catered for approximately 100 participants located at up to 8 venues around Australia. Each participant attended with their own laptop and gathered around a single large screen and camera. Venues were hosted by one or more local Facilitators, who were responsible for the logistics including room bookings and WIFI connections. Critically, Facilitators had also received training in the workshop materials ahead of time. Presentations from the Lead Trainer were visible on a communal screen, and each participant logged on individually to the materials required to complete guided hands-on activities. Live camera feeds from each venue helped participants to feel like they were part of a larger community, and allowed the Lead Trainer to observe room dynamics in real time. An online shared 'Discussion Board' was active during the session, with participants interacting across venues, asking questions about their own specific challenges or interests. Participants with relevant experience responded almost immediately, and at least one expert that was allocated the task of moderating discussion and answering technical questions. The 3-4 hour events were run to a tight schedule to ensure nobody was left behind or rushed through tasks. The recording of the training events, presentations, tutorials and Discussion Boards were all freely available for continued use after the event has concluded.

Online evaluation surveys were completed at the conclusion of each workshop, and close to 100% of all participants responded that 'This was a useful workshop that enhanced my knowledge and skills', and that 'the format of the exercises and activities enhanced participants' learning and increased their level of skills'.

Engagement with skilled Facilitators was key to the success of each training event. Given these were volunteer roles, the availability of training at particular locations was dependant on there being a willing candidate. The size of the training groups was also determined by Facilitator availability, with an approximate ratio of 1:10 Facilitators to participants strongly encouraged. Experienced and active trainers and researchers themselves, the Facilitators were a valuable source

of feedback on the development of the model, as well as being integral local event organisers and workshop helpers. They were enthusiastic in their support of the hybrid training model and its ability to supplement their own local training programs. The delivery method allow regional universities with only a few participants to have direct access to training expertise that was equal to larger universities.

The hybrid method of training delivery provides an efficient way to reach many venues simultaneously, and is easily extensible to new sites. The events are particularly valued by regional locations that may not otherwise have access to the depth and breadth of expertise offered by national events. This methodology fosters the development of a community of people interested in bioinformatics training and can help to elevate the profile of local Facilitators and domain experts who participate. The recording of each event's presentations, cameras and links to materials allows for continued use by participants who trained on the familiar environment of their own laptop. By posting these resources online, the content is also suitable for self-guided use by the public.

There has been widespread interest from international and local colleagues who are implementing the hybrid training methodology into their own training activities. It will form an important part of the Australian Bioinformatics Commons training program in the near future.