

Poster M-10
Effective strategies for
bioinformatics training on
genomics resources



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Short Abstract: A study of different training modalities showed that both online pre-recorded and on-site lecture style trainings proved equally and highly effective in training scientists on the use of bioinformatics databases and analysis tools.

Long Abstract:

There has been an exponential rise in the number of genome databases and bioinformatics resources created to access and analyze genomic data. Helping researchers find these resources and training them to effectively apply them to research is one of the main challenges in this “genomics era.” Though many studies exist on the effectiveness of training methodologies in science, none look directly at training researchers on the use of widely and publicly available online genomics resources. As part of a NIH SBIR grant research project conducted between March 1, 2005 and September 10, 2005, we studied the effectiveness of training biomedical scientists on the use of three publicly available genome browsers using three different training modalities; on-site live lecture-type tutorials, live online web conference tutorials and pre-recorded self-directed online tutorials. The study found that though one modality (live web conference) proved unpopular, two modalities (on-site, pre-recorded online) proved popular and effective. The study found that both modalities were statistically similar in their effectiveness in training scientists on bioinformatics tools and databases. This introductory training was valuable and pertinent to a broad demographic of scientists and students. Nearly 80% felt the introductory level was what they needed and later applied the training to their research. Trainees demonstrated a large increase in skill level and knowledge for both the on-site and online training modalities immediately after the training. This increase in skill was mostly retained two months or more after training for both modalities. Self-reported skill levels on the resources similarly indicated a significant increase long after training was complete. This study shows that both pre-recorded online tutorials and lecture-type on-site training can be very valuable and effective for resource and software providers in helping researchers apply online genomics resources to their research.