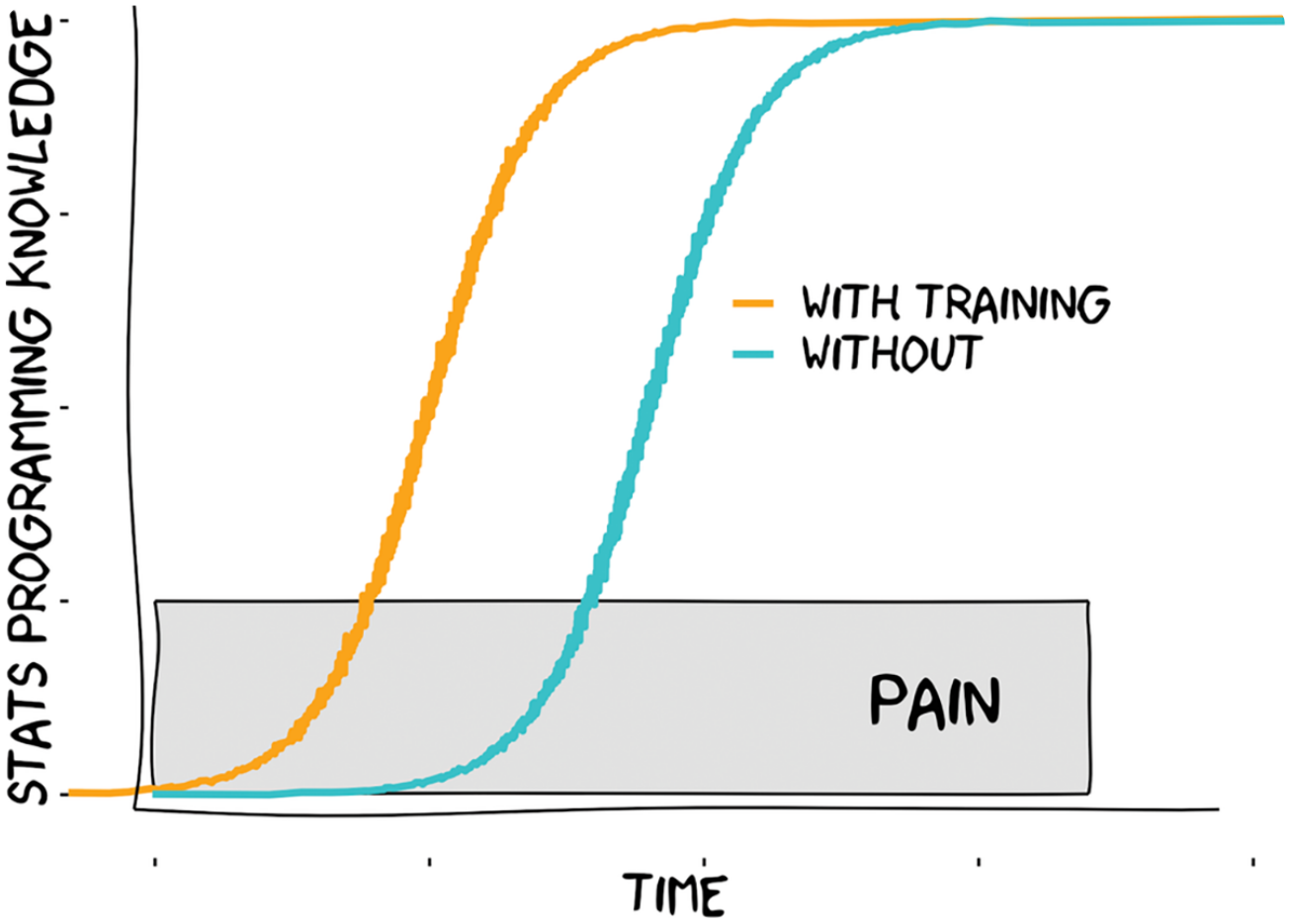
Science Societies

Know your community: Statistical education/training for researchers

By Julia Piaskowski

December 27, 2020



Figured inspired by xkcd (https://xkcd.com) of why workshops are useful. This figure made in R using the libraries "ggplot2," "extrafont," and "xkcd."

Hello from the Statistical Education/Training for Researchers Community of ASA! We are one of three communities located within the Society's Biometry and Statistical Computing Section. The other two communities, which many of us also belong to, are Bioinformatics in Crop and Soils and Spatial Statistics and On-Farm Research. We are largely, but not solely, composed of agriculture statisticians who support research benefitting field crop production and other agricultural disciplines. Our community goal is to promote education of best practices in statistics and data science in agricultural research and help meet the analytical needs of the agriculture research community. We are unique within ASA because not only do we discuss the research and outreach challenges we encounter, but we also actively work to support the needs of the entire ASA, CSSA, and SSSA membership.

During the 2020 Virtual Annual Meeting, we offered or co-sponsored these workshops:

1. Advanced Phenotypic Data Analyses: One- and Two-Stage Approaches and Genotype by Environment Interaction (GXE) Analysis
2. Intro to Python Data Analysis and Visualization Tools
3. Phenotypic Plasticity and Genotype by Environment Interaction: Dissection and Prediction
4. R Bootcamp for Statistical Practice in Agricultural Research (three consecutive sessions)

We also offered a poster session on biometry and statistical computing, a poster session and oral session on design consideration for digital agriculture, and an oral session titled "Novel Statistical Methods for Design and Analysis of Life Sciences and

Agricultural Experiments." These sessions addressed pipelines for data analysis, integration of computing infrastructure for analyses of massive data sets, and challenges and opportunities when conducting studies across multiple large data sets.

Our goal is to lower the barrier to entry that prevent researchers from using the optimal data and analytical tools for their research. The xkcd (**https://xkcd.com**)-inspired figure shown here is a rough demonstration of our overall aim: to provide quality education and training in order to reduce the time between unfamiliarity of a tool to mastery (and as a result, reduce the total amount of time spent in the zone of painful learning). Currently, we are building a "CRAN Task View" for agricultural research. This is a curated list of R packages and other R-related resources relevant to agriculture to help researchers navigate the constantly shifting R package terrain. Visit our community's discussion board (**www.agronomy.org/discussion-boards**) for more information and/or to become involved.

There are a number of other ways to get involved with this Community:

1. Join the community!
2. Participate in the discussion board. This is where we discuss upcoming activities, post jobs opportunities, and request help for ongoing activities.
3. If you are a community leader, talk with us about how we can support your community activities such as workshops, symposia, and sessions at the Annual Meeting or throughout the year.
4. Volunteer to give a workshop or webinar on a technical topic related to statistics. This can range from how to use ggplot to a Python bootcamp.
5. Help with a workshop at next year's Annual Meeting. Each live or remote workshop always requires helpers to assist workshop attendees troubleshoot.

6. Take our survey!We are currently conducting a survey of ASA, CSSA, and SSSA members regarding statistical training and education needs. As part of our target community, we want to know about your barriers to conducting statistical analysis and how we can best support your analytical needs. The survey can be accessed here: **https://bit.ly/2sewyHq**.

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