

The Educational Impact of Working in a Statistical Collaboration Laboratory

Eric A. Vance*, Thomas Metzger*, and Tonya Pruitt*, Ayele Taye Goshu[^]

**Laboratory for Interdisciplinary Statistical Analysis,*

Department of Statistics, Virginia Tech

School of Mathematical and Statistical Science, Hawassa University, Ethiopia

Abstract: Since 2008, Virginia Tech's Laboratory for Interdisciplinary Statistical Analysis (LISA) has sought to provide meaningful, impactful statistical analysis and collaboration to researchers across the university. To achieve this, LISA focuses on training statistics graduate students to become effective interdisciplinary collaborators (Vance, 2012). Such training has resulted in many positive impacts for researchers at Virginia Tech (Vance, Casement, and Pruitt, 2015). This study determines how statistics graduate students have been impacted by their training and experience in LISA.

Current and former LISA collaborators (n=173) were surveyed to assess the impact LISA had on their technical skills (including theory, methods, computing, application, and data analysis); non-technical skills (including communication, collaboration, teamwork, and project management); and how their work as statistical collaborators affected their job acquisition, performance, success, and advancement.

An overwhelming majority of students surveyed described their work in LISA as having had a positive impact on their education at Virginia Tech in acquiring technical (94%) and non-technical (95%) statistics skills. Students believed experience in LISA enhanced classroom topics as well as touched upon ideas not seen in the standard curriculum. They also benefited from work with diverse research topics from across the university in regards to communication and other necessary job skills. Four-fifths (80%) of these students reported that these skills directly led them to obtain jobs and succeed in them.

Overall, the results from this study can be used to augment educational practices in statistics at Virginia Tech and at other universities around the world, especially those that want to create statistical collaboration laboratories. Work as a statistical collaborator will become increasingly important and sought after as data and rigorous analysis become more influential in research and innovation (Vance, 2015). Most students recognize this importance, and value their collaboration experience as an important part of a comprehensive education in statistics.

References:

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