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Supporting TA Training and Management Using an Evidence-Based Approach: A Visual Tool to Identify Outliers in Student Grades

Liane Chen, Megan Barker, and Laura Weir

University of British Columbia, Department of Zoology and Botany, 6270 University Blvd., Vancouver BC V6T 1Z4 CAN
(lchen@zoology.ubc.ca)

In large classes with multiple lab/tutorial sections and graduate teaching assistants (TAs), it can be a challenge to determine whether grade variations between TAs are a result of differences in grading or whether they reflect other factors such as underlying student ability. Instructors can assess grading quality by checking a subset of graded work, but the number of TAs and the amount of graded work to check can be prohibitive. Gillian Gass and I previously developed an Excel-based graphing tool that created a visual depiction of the grade distribution within and_between TA groups, allowing instructors to easily identify outliers (Proceedings of the Association for Biology Laboratory Education 34:310-313). Subsequent work has demonstrated that most outliers identified visually are also detected through statistical tests, underlying the rigor of the tool despite its simplicity of use. Here, participants are invited to interpret typical graphs and analyze their own class data, in order to propose underlying causes of grade outliers and to discuss subsequent TA training interventions.

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