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.
Mission, Review Process & Disclaimer

The Association for Biology Laboratory Education (ABLE) was founded in 1979 to promote information exchange among university and college educators actively concerned with teaching biology in a laboratory setting. The focus of ABLE is to improve the undergraduate biology laboratory experience by promoting the development and dissemination of interesting, innovative, and reliable laboratory exercises. For more information about ABLE, please visit http://www.ableweb.org/.

Papers published in Tested Studies for Laboratory Teaching: Peer-Reviewed Proceedings of the Conference of the Association for Biology Laboratory Education are evaluated and selected by a committee prior to presentation at the conference, peer-reviewed by participants at the conference, and edited by members of the ABLE Editorial Board.

Citing This Article


Compilation © 2016 by the Association for Biology Laboratory Education, ISBN 1-890444-17-0. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the copyright owner. ABLE strongly encourages individuals to use the exercises in this proceedings volume in their teaching program. If this exercise is used solely at one’s own institution with no intent for profit, it is excluded from the preceding copyright restriction, unless otherwise noted on the copyright notice of the individual chapter in this volume. Proper credit to this publication must be included in your laboratory outline for each use; a sample citation is given above.