# Training Teaching Assistants as Active Participants in Large, Active Learning Lectures

# Amy E. Kulesza and Stephen A. Pearson

The Ohio State University, Center for Life Sciences Education, 1735 Neil Ave., Columbus OH 43210 USA

(kulesza.5@osu.edu; pearson.246@osu.edu)

#### **Extended Abstract**

Active learning has been conclusively illustrated to reduce the number of failing students and increase student learning when compared to traditional lectures in STEM courses (Freeman, et al., 2014). As active learning is incorporated more and more in the college biology classroom, instructors typically ask: how do I conduct active learning in my large biology classroom? The answer lies in careful training of Graduate Teaching Assistants, Undergraduate Learning Assistants, or other helpers in the classroom (collectively called TAs). In this active session, participants will undergo training given to TAs and then apply what was learned to the training of their own TAs. Specifically, participants will describe active learning, cite evidence of why active learning is useful, evaluate active learning examples, and understand the role of a TA in a large active learning classroom. Using group discussion, think-pair-shares, and video analysis, participants will understand the type of positive behaviors TAs should exhibit during lectures. Best-practices will be explored, and participants will reflect on application to their own institutions.

Keywords: active learning, teaching assistants, large lectures, TA training

#### **Cited References**

Freeman, S, Eddy, SL, McDonough M, Smith MK, Okoroafor N, Jordt H, Wenderoth MP. 2014. Active learning increases student performance in science, engineering, and mathematics. Proc. of the National Acad. of Sci. 111(23):8410–8415.

1

## 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 <a href="http://www.ableweb.org/">http://www.ableweb.org/</a>.

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**

Kulesza AE, and Pearson SA. 2019. Training teaching assistants as active participants in large, active learning lectures. Article 39 In: McMahon K, editor. Tested studies for laboratory teaching. Volume 40. Proceedings of the 40th Conference of the Association for Biology Laboratory Education (ABLE). http://www.ableweb.org/volumes/vol-40/?art=39

Compilation © 2019 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.