## **Clickers in the Biology Lab: A Tool Used for More than Just Taking Attendance**

## Ana Medrano

University of Houston, Biology and Biochemistry, Houston TX USA 77204 (aimedrano@uh.edu)

The University of Houston has a very large freshman student population and in order to meet the demand, we currently run 44 sections of Introductory Biology labs each semester. For the past two years we have been using clickers to assess students' preparedness by running a quiz at the beginning of most labs. Our lab (clicker) quizzes are designed to test students on knowledge based in the prior lab (75%) and on their reading for the lab to be covered that day (25%). Clickers are used in the lecture hall portion of the Introductory Biology course as a way to increase the interaction among students and between students and the Professor. They are a great tool to take attendance in big 200 - 500 student classes, as well as a good method to assess the understanding of concepts. The use of clickers has resulted a very effective and quick way to measure student performance in these courses. We are currently working on introducing activities that include the use of clickers, such as case studies, as part of a laboratory exercise. The participants for this mini-workshop will have an opportunity to practice using clickers as the students do in class. Examples of creative use of clickers will be provided with the participants playing the role of student. Participants will also have the opportunity to experiment with the software interface to learn how clicker questions are built right into a PowerPoint slide show and how to manage the data on the backend of the process.

## 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**

Medrano, A. 2015. Clickers in the Biology Lab: A Tool Used for More than Just Taking Attendance. Article 44 in *Tested Studies for Laboratory Teaching*, Volume 36 (K. McMahon, Editor). Proceedings of the 36th Conference of the Association for Biology Laboratory Education (ABLE), <u>http://www.ableweb.org/volumes/vol-36/?art=44</u>

Compilation © 2015 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.