

Increasing Scientific Literacy Through Hands-on Laboratory Work Guided by Journal Club Discussions

Nitya Bhaskaran, Rosie Albarran-Zeckler, and Dawn Eastmond

Scripps Research, 10540 North Torrey Pines Road La Jolla, CA 92037, USA
(nityabhas@gmail.com; RZeckler@scripps.edu, eastmond@scripps.edu)

Our goal is to stimulate undergraduate students, particularly from underrepresented backgrounds, at 2- and 4-year institutions to pursue scientific research by developing their science literacy and critical thinking skills. To this end, we hosted a series of guided journal club workshops (JCW) run by near-peer mentors (graduate students). Traditional journal clubs serve as a way for well-versed scientists to discuss and stay current in their research. However, undergraduate students often find themselves underprepared to fully participate in these discussions. The JCW takes students through the fundamentals of reading scientific literature, experimental design, and the scientific method using a collaborative and mentored skill-building learning approach. The format of the JCW allows the student to: (1) gain content knowledge in various fields of biomedical research; (2) interact and network with graduate student role models and build relational capacity; (3) get hands-on experience related to methods discussed in the literature, and (4) practice both written and oral scientific communication skills. As a final project, participants reflect on their next steps to learn more about the field and pursue research. Through various assessment tools, JCW participants report great satisfaction with the program and increased confidence in discussing complex scientific concepts.

Keywords: journal club, scientific literacy

Link To Original Poster File: <https://doi.org/10.37590/able.v42.poster54>

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 *Advances in Biology Laboratory Education: Peer-Reviewed Publication 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

Bhaskaran, N and Albarran-Zeckler, R. 2022. Increasing Scientific Literacy Through Hands-on Laboratory Work Guided by Journal Club Discussions. Article 54 In: Boone E and Thuecks S, eds. *Advances in biology laboratory education*. Volume 42. Publication of the 42nd Conference of the Association for Biology Laboratory Education (ABLE). <https://doi.org/10.37590/able.v42.abs54>

Compilation © 2022 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 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.