Using Impulse Reviewer Training Sites To Engage Students In Basic Research

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Impact of RTS Experience on Students

The students who participated in the first RTS starting in 2003 are now completing graduate degrees (e.g., first EIC completed Ph.D. and is now in final portion of M.D.; first EE to last year of Ph.D.). All seven of the other students in that group have gone on to graduate/professional school and all have reported anecdotally that the experience of the RTS, from reviewing to leadership responsibilities, helped them both in entering and succeeding in graduate programs from M.D., to E.I., to Ph.D. As new RTS programs are created and more students move through this experience, a larger survey will be possible. However, the reports to date from both students and their Faculty Advisors support the value of involving undergraduates in the reviewing and publishing aspects of the research enterprise.

Reviewer Training Sites

An RTS is a group of students who review submissions to Impulse under the oversight of a Faculty Advisor. In addition to the Faculty Advisor, each RTS has a student Associate Editor; this student is responsible for distributing the submissions to the team, and then collecting and compiling the team's final reviews, under the guidance of the Faculty Advisor. The RTS group itself can be as few as three or as large as 40. The smaller groups tend to revolve around a Faculty Advisor's laboratory group and meet informally to discuss and review the submissions. Larger groups may choose to create a university-sponsored club with officers and regularly scheduled meetings to conduct business beyond reviewing, such as hosting Brain Awareness Week events. In other examples, the group may result from a course that covers the principles of reviewing on a regular basis (perhaps using the syllabus suggested in an article in the J of Neuroscience Educ). The students who participated in the first RTS starting in 2003 are now completing graduate degrees (e.g., first EIC completed Ph.D. and is now in final portion of M.D.; first EE to last year of Ph.D.). All seven of the other students in that group have gone on to graduate/professional school and all have reported anecdotally that the experience of the RTS, from reviewing to leadership responsibilities, helped them both in entering and succeeding in graduate programs from M.D., to E.I., to Ph.D. As new RTS programs are created and more students move through this experience, a larger survey will be possible. However, the reports to date from both students and their Faculty Advisors support the value of involving undergraduates in the reviewing and publishing aspects of the research enterprise.

Introduction

The online, neuroscience journal for undergraduates, Impulse, was created in 2003 (see, Neur. Abs 25:25.3) to fulfill a need for training in scientific publishing and peer review. It has seven archived issues (http://impulse.appstate.edu and see abstracts 2004, Soc. Neur. Abs. 30:26-26; 2005, 31:20.19; 2006, 32:26.1; 2007, 33:26.13; 2008, 34:224.1; 2009, 35:23.9; 2010, 36:24.5). While primary research expectations of undergraduate pre-graduate, pre-secondary school) education programs have increased, work completed by undergraduates is still usually not published or is compiled into a study submitted by the mentor. Furthermore, undergraduate students may not be exposed to the peer review process, an important component of scientific publishing. Of wider potential interest to neuroscience educators is the opportunity Impulse offers to teach scientific writing and editing through Reviewer Training Sites (RTS). The current report highlights the use of the journal for enhancing the teaching of these skills through an RTS.

Reviewers are selected by the faculty advisor, and are supervised by the student Associate Editor. The Editor supports the Editor-in-Chief in handling the submissions, the Managing Editor keeps track of the many students now working on the journal, and the growing number of RTSs; this position oversees the GoogleAnalytics and GoogleBooks websites where records are kept on reviewer participation (sent to the Managing Editor by the Associate Editors after each round of reviewing). In addition, there are three Publicity Editors charged with publicizing the journal globally so that students continue to submit manuscripts and join as reviewers. One of these is charged with handling social media for the journal: Facebook and Twitter.