A Decade of the Journal IMPULSE: International Growth and Impact

Jones LS1, Rossi A2, Kritzinger G2, Smith S2

1The Honors College, Appalachian State Univ., Boone, NC; 2University of the Free State, Bloemfontein, South Africa

Introduction

The journal IMPULSE was started by four undergraduate students and one faculty member in the spring of 2003. The first issue was posted in 2004, and a total of ten issues have been archived annually, the latest in the current, 2014 issue. The journal has evolved from a once-a-year to a once-per-year posting reviewed by students at a single institution, to rolling review and posting by students worldwide representing nine institutions. The first issue was reviewed by 18 students from three countries and two continents with a single Faculty Advisor and Reviewers Training Site (RTS). The 2013 issue was posted with over 100 student reviewers representing 24 institutions in six countries and four continents. There were seven RTSs, each with their own Faculty Advisor, and one of these in South Africa. An eight RTS was added in the spring of 2013. In the summer of 2012 the two were added (Wake Forest U and UCSB).

An average of 3.4 papers per year have been published by the journal. Approximately twice as many are submitted each year, with some being reviewed but not retained by the authors and others not reviewed due to inappropriateness of topic. The journal has been presented at 10 SSP meetings, three FENS conferences, and two BMIB meetings, in addition to having two articles published in JUNE as the impact of the journal on neuroscience outreach teaching. As the first cohort of students has now moved at least 4-8 years through their post-baccalaureate careers, the impact on students, reviewers, and authors can begin to be assessed. Anecdotal evidence has long supported the positive influence of the experience on career path choices and success, but now more systematic information on the impact was needed.

Methods

The names of all previous reviewers, editorial team members, and authors from the previous 10 years of IMPULSE were collected. An attempt to find small contact information for them was underway as a survey was created and submitted to ASS’s IBB for approval (Study 84-14-0808). The 26-question survey was launched using SurveyMonkey and sent to 152 addresses. Many of the addresses were sent back as invalid, but 45 responses were received, which is a 29.4% response rate. Response analysis was performed with SurveyMonkey.

Results

The respondents completed their undergraduate programs in 2005-2013 and reported reviewing 2.4 manuscript-years, except 2007 (1.7), 2012 (1.8), and 2013 (1.3). They were from 13 universities and there were 20 females and 20 males. Demographically 32 self-described as White/Caucasian, one as African-American, one as Indian, two as US Indian origin, one from Africa, one Hispanic, and one Gyn/Cyst. Five countries were represented.

The majority of respondents were individual reviewers (48.7%), followed by those who also served in some editorial role (46.4%), and RTS team members (28.9%) (note the results exceed 100% as editors were also reviewers at one time). Most experienced reviewer training through a formal course (41.1%), or other mentoring through an IMPULSE group (54.6%), with others having mentoring through a lab group (9.1%), the online tutorial (9.1%), or none (15.9%). Most reporting spending up to 5 hours/month reviewing manuscripts (48.9%), with 31.8% spending 5-10 hours/month, 22.7% at 10-15 hours, and one respondent each for 15-20 and over 20 hours/month, or selecting an informal mentorship (33.8%) (with 18.2% having one year and 9.1% having four+ years). While 37.2% said they reviewed 5-7 papers total, 23.5% reported 5-10 hours/month, 22.7% at 10-15 hours, and one respondent each for 15-20 and over 20 hours/month, or selecting an informal mentorship (33.8%) (with 18.2% having one year and 9.1% having four+ years). While 37.2% said they reviewed 5-7 papers total, 23.5% reported 5-10 hours/month, 22.7% at 10-15 hours, and one respondent each for 15-20 and over 20 hours/month, or selecting an informal mentorship (33.8%) (with 18.2% having one year and 9.1% having four+ years). While 37.2% said they reviewed 5-7 papers total, 23.5% reported 5-10 hours/month, 22.7% at 10-15 hours, and one respondent each for 15-20 and over 20 hours/month, or selecting an informal mentorship (33.8%) (with 18.2% having one year and 9.1% having four+ years).

Discussion

While the first report to such a study is only those that are happy and (unpublished) typically respond to that type of survey, it is noteworthy that the response rate was relatively high, (65/52 emails) and that the overwhelming majority of those responding rated the IMPULSE experience as generally very positive in terms of the time and its application in their post-collegiate, professional path. The free-response comments that many respondents added at the end of the survey also indicated that they found the experience rewarding and useful. Benefits volunteered included comments related to questions in the survey (as above), “learned about scientific papers—how to read them, cite them, improve them, I used it to be just like that, now in my postgrad school I can read them quickly and extract the important points,” and many comments that addressed some issues not assessed, such as managing a review team. “I believe I learned the most during the year I was an associate editor because I also had to be able to efficiently handle my team and be able to get reviews from others,” and reading other types of literature “While I’m better at reviewing scientific papers, my skills at reviewing non-scientific papers have improved at least as much, probably because they’re far easier to review in comparison.”

The conclusion to be drawn from this small, first study after a decade is that working on IMPULSE is seen as a useful teaching tool by the “alumni” who worked on it during their undergraduate years. It is an option for students who do not have the time or opportunity to do laboratory research and may serve as a means for faculty to provide some level of authentic research experience, at least on the publication side of science.

Most Strongly Agreed that it improved their ability to read scientific papers and that they would recommend the experience to others; they also indicated that they list it on their current resume (Figures below). The pie chart illustrates what these IMPULSE alumni are currently doing, with the largest number pursuing PhDs (26.9%), followed by currently working and pursuing M.D.s.

While the first report to such a study is only those that are happy and (unpublished) typically respond to that type of survey, it is noteworthy that the response rate was relatively high, (65/52 emails) and that the overwhelming majority of those responding rated the IMPULSE experience as generally very positive in terms of the time and its application in their post-collegiate, professional path. The free-response comments that many respondents added at the end of the survey also indicated that they found the experience rewarding and useful. Benefits volunteered included comments related to questions in the survey (as above), “learned about scientific papers—how to read them, cite them, improve them, I used it to be just like that, now in my postgrad school I can read them quickly and extract the important points,” and many comments that addressed some issues not assessed, such as managing a review team. “I believe I learned the most during the year I was an associate editor because I also had to be able to efficiently handle my team and be able to get reviews from others,” and reading other types of literature “While I’m better at reviewing scientific papers, my skills at reviewing non-scientific papers have improved at least as much, probably because they’re far easier to review in comparison.”

The conclusion to be drawn from this small, first study after a decade is that working on IMPULSE is seen as a useful teaching tool by the “alumni” who worked on it during their undergraduate years. It is an option for students who do not have the time or opportunity to do laboratory research and may serve as a means for faculty to provide some level of authentic research experience, at least on the publication side of science.