

MEDIA REVIEW: Undergraduate Publishing Opportunities

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As science education incorporates more inquiry-based activities throughout the curriculum, students gain important opportunities to take active roles in scientific research via independent research courses and summer research, as well as within traditional lab courses. While some industrious student researchers will experience the process of publishing their research in a scientific journal, the nature of most undergraduate research projects yields results that are of insufficient depth and/or breadth to stand alone as journal articles. Consequently, undergraduates

may miss opportunities to develop the reviewing, revising, or editing skills that are critical for success in scientific research and publication.

While the typical undergraduate research project is necessarily limited in scope, many such research projects powered by undergraduates ask novel questions via intellectually and experimentally sound methods. Furthermore, undergraduate research represents significant investments of time, effort, and resources by the students who conduct the research as well as by their

BIOS http://www.tri-beta.org/bios.html <i>Focus: emphasis on undergraduate biology research papers as well as training and professional issues for biologists</i>				
Founded 1930	Publishes quarterly in print	Research articles by undergrads; reviews & histories by faculty	Faculty editors	Target audience = □□□ members
JOURNAL OF PSYCHOLOGY AND BEHAVIORAL SCIENCES (JPBS) http://alpha.fdu.edu/psychweb/JPBS.htm <i>Focus: articles in any topical area of psychology</i>				
Founded 1966	Publishes annually in print with abstracts on the web	Articles by undergraduates and graduate students	Graduate student & undergrad editors	Target audience = psychologists
MODERN PSYCHOLOGICAL STUDIES (MPS) http://www.utc.edu/mps/ <i>Focus: experimental psychological research, as well as theoretical papers, literature reviews, and book reviews</i>				
Founded 1993	Publishes biannually in print and on the web	Articles by undergraduates	Undergraduate editors	Target audience = undergraduates
PSI CHI JOURNAL OF UNDERGRADUATE RESEARCH http://www.psichi.org/pubs/journal/ <i>Focus: the work of undergraduate psychology students</i>				
Founded 1996	Publishes quarterly in print with abstracts on the web	Articles by undergraduates	Faculty editors	Target audience = Psi Chi Members
JOURNAL OF YOUNG INVESTIGATORS (JYI) http://www.jyi.org/ <i>Focus: undergraduate research in science, mathematics, and engineering</i>				
Founded 1998	Publishes research triannually and features monthly on the web	Research & reviews by undergrads; other content by all	Undergraduate editors	Target audience = undergraduates
JOURNAL OF UNDERGRADUATE SCIENCES AND ENGINEERING (JUSE) http://www.undergraduatejournal.org/ <i>Focus: research, reviews, editorials, and features on current scientific research or undergraduate education</i>				
Founded 2003	Publishes quarterly on the web	Articles by undergraduates	Undergraduate & faculty editors	Target audience = undergraduates
JOURNAL OF BEHAVIORAL AND NEUROSCIENCE RESEARCH (JBNR) http://academic2.strose.edu/Math_And_Science/flintr/jbnr/ <i>Focus: research in Psychology and Neuroscience, particularly studies that integrate behavioral and neuroscience techniques</i>				
Founded 2003	Publishes biannually on the web	Research articles by undergraduates and faculty	Faculty editors	Target audience = Neuroscientists
IMPULSE http://impulse.schc.sc.edu/ <i>Focus: undergraduate neuroscience research articles</i>				
Founded 2004	Will publish on the web	Articles by undergraduates	Undergraduate editors	Target audience = undergraduates

Table 1. Journals that publish undergraduate research in neuroscience and/or provide undergraduates with editorial experience.

advisors and their institutions and deserves recognition. Undergraduate research projects typically culminate in a thesis and/or manuscript submitted to an instructor or department. Even when instructors incorporate peer-review into this writing process, students still miss the experience of contributing to the body of scientific literature. Moreover, submitting a manuscript to a small, local audience does not fully reflect the process of scientific publishing where manuscripts must be reviewed critically by peers and then revised to address those criticisms before the data are accepted into the scientific literature.

Several academic institutions have created undergraduate research journals to provide opportunities for their undergraduates to become authors, reviewers, and/or editors. Other professional societies and organizations publish similar journals for student authors from any institution who wish to reach a wider audience. Table 1 summarizes seven journals that currently welcome manuscripts reporting on undergraduate neuroscience research. Each journal in table 1 acknowledges that undergraduate manuscripts may not be as broad or as deep as discipline-specific journals require and that undergraduate authors may have limited experience in scientific writing and the peer-review process.

Many of the journals that specialize in undergraduate research were initiated in the internet age. Not only did the internet make publishing more rapid, less expensive, and increase the size of potential audiences, but the internet also allowed undergraduates from multiple colleges and universities to form editorial boards and take active roles in all aspects of publication. Thus, students now have varied opportunities to participate in all aspects of the publication process - as authors, reviewers, or editors. Undergraduate journals thereby sharpen critical writing, revising, and reviewing skills to help young scholars become more effective authors, reviewers, editors, and scientists.