

Reflections on a Student Research Journal: What are the impacts, and are they worth it?

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Abstract:

A key to ensuring the success of co-curricular, post-secondary programs is evaluation: How do we know we are having the impacts that we planned for? In this article, we draw on our research, reflect, and invite dialogue on the impacts of hosting a co-curricular opportunity, an undergraduate research journal. The impacts of student publishing have received some attention in recent literature but the discussion has not kept up with the growing prominence of student research journals in North American academic institutions. In this paper, we focus on three areas of impact: the lateral impacts, such as the administrative commitment of running a journal, the direct impacts, such as on student authors, and the indirect impacts, like on the state of knowledge. Further, this paper questions how we as researchers and authors should consider the impact of student research and how these types of publications could be more than a means of showcasing the integration of research and teaching at the undergraduate level. We hope to add to the existing literature and inspire an ongoing dialogue regarding the direct, indirect, and lateral impacts of undergraduate research journals and other related models of student engagement and research-inspired teaching, and whether these impacts outweigh some the challenges and concerns.

Key Words:

student publishing; undergraduate publication; student author; author experience; undergraduate research; program evaluation.

Introduction

In times of increasingly restricted resources and a heightened institutional demand for evidence-based programming, the importance of impact evaluation for all academic initiatives is becoming ever more important, and undergraduate research journals are no exception. Yet, impact, defined here as any positive or negative outcome of a program, can be measured from a number of perspectives and remains a topic relatively unexplored in the literature. Through reflections on our experience of running a research journal at a medium-sized Canadian university as well as on the results of our research focusing on the qualitative and quantitative measurement of impact, we aim to start a discussion on the impacts on administration and broader academic community, impacts on student authors, and the impacts on the state of knowledge. Concluding each discussion of these three areas of impacts are questions designed to invite dialogue as to how to weigh the value of student research, whether the benefits offset the drawbacks, and how these types of publications can be rethought to enhance positive outcomes.

Lateral impacts

In 2010, the Learning and Teaching Centre at the University of Victoria was tasked with publishing an online undergraduate research journal to help students share their research and to help the university celebrate research-integrated undergraduate teaching. Laurie Waye, one of the authors, was the Managing Editor 2010 - 2016; Allie Simpson, the other author, was the Editor for the 2015 and 2016 issues. Each year, issues are created from an average of eight accepted student submissions which have their instructor's approval. Submissions are vetted by the editorial team, scrutinized through a blind peer review process, and coached by the editor to a publishable level. Despite the journal's many successes, after several issues we began to wonder about the true benefits and drawbacks of such an activity.

There are a number of ways of looking at the costs associated with university-run student publications. One is to look at the simple financial cost, e.g. staff or faculty time. However, a full understanding of the costs should also include the lateral costs. First, there may be pressure on undergraduate instructors to supervise students in a research project and coach it to publication standards. This pressure can be problematic if the instructor is not adequately rewarded or evaluated on this contribution to student learning. As well, journals such as ours tend to be produced "off the side of the desk" – a project that is added to a workload, rather than a project around which a position is created.

Increasing costs related to publication also play a role. For example, in our journal, substantial changes to the Copyright Act in 2012 resulted in the unexpected purchase of a one-year license to reproduce original artwork. While artists deserve what they are paid, our journal's budget was limited to the hours we could put toward it. To avoid this cost, in 2013 we replaced reproduced artwork with links, which in some cases has led to articles that seem to us somehow less academic. Lastly, a journal can seem like a never-ending, precarious project, without funds securely set aside to ensure its longevity. Currently, publishing our university's journal takes about 150 hours to read and select incoming submissions, coach accepted submissions into a publishable form,

edit revised submissions, and lay out the article for the online environment. It takes an additional 150 hours to find suitable peer reviewers and match them to submissions, coax reviewers for their feedback, compile the feedback into a positive, helpful form for the student authors, and investigate possible copyright and academic integrity infringements. As the reader can imagine, this project was one of many in our respective portfolios.

What could guidelines, or a practical and approximate way measuring something, look like to gauge the sustainability of a co-curricular program/project?

Direct impacts

Publishing has educational benefits (see Caprio, 2014, p. 146 for an overview) and is integral in helping research intensive universities fulfill some of the transformative recommendations to help integrate research and teaching outlined by Boyer (1995). This American collaborative project aimed at reinventing undergraduate education in research-intensive universities by offering ten recommendations, many of which are met by undergraduate publishing. For example, undergraduate publishing matches the type of out-of-class “academic activity” that Kuh (1995) describes as an opportunity “to apply knowledge obtained from coursework” (p. 136) that improves learning and personal development (p. 131). As such, this academic activity can serve as a voluntary capstone project, fulfilling another of the recommendations, aimed at helping undergraduate students “utilize to the fullest the research and communication skills learned in the previous semesters” (Kuh, 1995; p. 27).

Publishing may also impact students’ professional lives (Ware & Burns, 2008), because it speaks to the idea of blending research and learning at the undergraduate level, a third recommendation from the Boyer Report (1995). Despite student journals being rated low by faculty when considering graduate applications, an applicant with a published paper is more highly considered than his or her unpublished counterpart because of this blending of research and publishing (Ferrari, Weyers & Davis, 2002). Despite these positives, researchers have noted that the peer review process can be deflating and even crushing for authors (Cromer & Schwartz, 2014; Gilbert, 2004).

In order to explore the impact of publishing on our student authors and determine whether they perceived the experience as positive or not, we decided to ask them. Following Bramburger’s (2012) description of program assessment using both quantitative and qualitative data, we received ethics approval to use an online survey distributed to the student authors. The survey was sent in February 2015 to 43 authors who published articles in one of the five issues from 2010-2013. We received 18 responses, for a response rate of 41.8%, an acceptable response rate for an online survey (Centre for Teaching and Learning, para. 6). Here is a summary of the relevant survey results:

What was your experience publishing in *The Arbutus Review*?

- 50% responded “good” and 50% responded “very good”

How has having published in *The Arbutus Review* impacted you?

- 14 of out 18 respondents indicated “positively” or “very positively”
- 4 indicated there was no impact

What have you published since your article appeared?

- 6 respondents had published journal articles, fiction pieces, and a lesson plan

Themes that emerged:

1. Helping students move forward

Six of the 18 respondents described that the journal was of use in graduate school, grant, and job applications. One student shared that she has “pointed to my publication in *The Arbutus Review* on cover letters, resumes, etc. as evidence I can write for a variety of audiences,” while another stated: “it probably helps to have it on my LinkedIn profile, and I can refer to it in job interviews.” Another stated that in addition to helping him write successful grant applications, “I have been contacted by several people and/or organizations/departments regarding my article.”

2. Helping students learn

Six students shared what the process of publishing in the journal taught them. They became better writers: “the writing feedback was great; I definitely learned to be a more reflexive writer. My writing significantly improved because of the process,” while another wrote that she enjoyed the editing experience because “it really helped me to fine tune my writing.” The experience also “demystified the publication process and boosted my confidence as an academic writer.”

3. Providing a capstone to their studies

As one respondent wrote:

It was very interesting to receive feedback on my statistics paper from experts in other fields.... As my first experience submitting to a peer-reviewed journal, it was a bit challenging to have my work exposed in that way. At the same time, I found it rewarding to have my work published. While research sometimes feels like it is never really finished, publication felt like something concrete that I put my name to and that realized the fruits of my labor.

It can be argued that the student publishing process, and the resulting product, helped more than hurt. However, for the 58% who did not respond to the survey, we have no way of knowing whether one reason they did not respond was because it was a negative experience. For those who did not respond to the survey, and to those who indicated that the publication process and product resulted in no impact on their learning or future endeavors, how can we as editors, within the limits of resources available and institutional mandate, create a better experience for student authors?

Is helping a few students a “good enough” direct impact? How many need to be positively impacted, and by how much, to make the program/project “worth it?”

Indirect impacts

So far we have explored the human cost of the publishing endeavor, but we have not discussed the products themselves. While student authors perceive that the published articles have generally helped them, we thought an objective analysis of what happens to the articles would provide insight in to their value for the public. Do many people read them? If they do, do they do so because of, or despite, their student authorship?

Impact on the state of knowledge

In order to explore these questions, we looked to the literature to understand the options for measuring the impact of our students' published pieces. While there are a number of student publications that produce articles, there is little research regarding how to assess their impact (Ferrari, Weyers & Davis, 2002). One of the questions that arose for us was whether or not student articles should be measured by the same standards as other journal articles. In the absence of other measures, we applied the two common methods of impact measurement: 1) how many times the articles had been opened as a PDF (and therefore we assume they were read), and 2) analyzing how often the articles have been cited and in what kind of publications.

In terms of readership, the articles were seen by an average of 224 unique users a year. With an average of 835 times viewed overall to date, it seems that the student authors' work is being read by others. For the citation impact, we used a plug-in for the online journal management system to determine where the articles published in *The Arbutus Review* had been cited. Of the 42 articles published, by February 2015 seven have been cited by other works connected to Google Scholar, with one article being cited twice. Of the eight citations, two were in PhD dissertations, four were in academic journal articles, and two were in academic books. This is of interest because these are articles published by undergraduate students, being cited by graduate students, professors, and other experts. Is this appropriate? Should student research be somehow marked as such? And yet, isn't well done research simply well done, regardless of who conducts it?

While only one-sixth of the articles have been cited, it seems that there is some impact on the body of knowledge, especially when coupled with the number of times the articles have been read. As previously stated, it would be very useful to compare this information with that of other undergraduate research journals. In 2008, there were 35 undergraduate science-related journals but no indication that they are measuring their impact (Tatalovic, 2008). Indeed, there is a dearth of information on the assessment of these journals (Weiner & Watkinson, 2014). It is challenging to know, then, what the numbers mean if the goal was to compare impact against other journals. However, that is not a goal of the current program evaluation process; it was to learn if the articles

were being woven into the fabric of the academy. What we have found is that there is a start: a few citations and many views.

And yet we are left with the question of whether this is the best measurement of the impacts of students' articles.

*How much does it matter that the product
created by the program/project be used by
others after it has been completed?*

Impact through alternative agendas

Another indirect impact may be the ability to have an extra agenda folded in to the program. For example, given the Calls to Action of the Truth and Reconciliation Commission (TRC) Report (2015), a university-hosted student research journal is an excellent avenue to help meet what we see as our collective responsibilities to influence the education of future professionals, understand best practices in approaching the issues affecting Indigenous communities, support research done by Indigenous undergraduate students and/or research done with Indigenous communities, and explore the continuing ripples of past wrongs. To some extent, we have integrated this type of agenda into our program. For instance, we have noticed that since the 2012 special issue on Indigenous governance, there has been a slight increase in the number of articles written about Indigenous content and/or by Indigenous student authors. Since then, we have published three more articles on issues affecting Indigenous peoples; while these numbers are slim, the three issues before the special issue in 2012 had no Indigenous content. As one Indigenous author wrote in her survey response about her article: "I know that the article has been viewed/downloaded by many of my own WSANEC peoples. Thank you!"

Going forward, the journal could be used more actively to further some of the Calls to Action (2015). For example, students in the Faculty of Education could be encouraged to submit articles that carry out the directives, such as sharing "information and best practices on teaching curriculum related to residential schools and Aboriginal history" (p. 7). Or, Nursing students could present research on best practices in the workplace for "skills based training in intercultural competency, conflict resolution, human rights, and anti-racism" (p. 3). There are many Calls to Action, and the roles that higher education can play in these directives are numerous.

We know that our institution appears committed to the better support of Indigenous students and the implementation of the relevant TRC Calls to Action. Therefore, can we then assume that it is appropriate for us to fold in this agenda into the mandate of the journal? If so, do we further agendas only if they are in line with those that there is an official strategic plan for? What about other agendas?

As well, the adding of an agenda or agendas might weaken the original mandate of the journal, which is to publish research articles from across the disciplines that are produced by third and fourth-year students. If we were to create a situation where our agenda overshadows our interdisciplinary mandate, we may be in danger of reducing the submissions from certain fields, e.g. the hard sciences, and losing this main focus.

The agendas, if added, would need to be carefully managed to ensure that we do not lose the journal's focus – but this is no easy feat. What we are left with is the balance between publishing the best institutional journal we can and how we think that can and should be done – if it should be done at all.

When is it appropriate (if ever) for a program/project to serve an agenda in addition to providing a student experience and creating a display of the university's mission?

Final reflections

Opening this paper, we outlined the importance of impact evaluation and its role in developing sustainable, evidence-based programming. Through our reflections and research findings, we discussed some opportunities and challenges in evaluating the direct, indirect, and lateral impacts of student research journals and invited dialogue on a number of key questions related to these impacts. With respect to direct impacts, the results of our research show that publishing in this journal has had a positive impact for the few students who publish, with the publication experience acting as both an educational tool and as a springboard for future endeavors. Further, providing a space for publishing can create a capstone event. As one author wrote, "I think it's a wonderful space for publishing and a great opportunity for me personally."

Yet, the question as to whether these impacts are worth the costs remains a problematic question to answer. As resources are tightened and concerns regarding the lateral impacts remain, the question regarding whether helping so few students is a "good enough" direct impact to offset the costs requires substantial and ongoing examination. Going forward, we will continue to evaluate the impacts of our student research journal from the perspectives discussed in this paper and seek ways of reducing the administrative costs of running it. We will also revisit the idea of folding in extra agendas as they align with the university's vision. One of the benefits of doing so is to invite a greater diversity of student authors and of research topics. While balancing the disciplines, mandate and agendas will be challenging, we think that doing so may strengthen the final product for both readers and student authors.

In conclusion, we emphasize the invitation for researchers, authors, practitioners, and other professionals involved in higher education to reflect on the impacts of student journals and other co-curricular activities they are involved in and the many questions we presented throughout this paper. We hope that by inspiring dialogue on this topic, more literature, resources, and discussion can be developed to allow for more comprehensive program evaluation that can be used to increase both the sustainability and positive impacts of these "off the side of the desk" projects.

How do the answers to the questions we have asked apply to other types of student programming and models of engagement?

References

- Bamberger, M. (2012). Introduction to mixed methods in impact evaluation. *Impact Evaluation Notes*, 3, 1-38. Retrieved from <https://www.interaction.org/sites/default/files/Mixed%20Methods%20in%20Impact%20Evaluation%20%28English%29.pdf>
- Boyer Commission on Educating Undergraduates in the Research University. (1998). *Reinventing undergraduate education: A blueprint for America's research universities*. Stony Brook, NY: The Carnegie Foundation for the Advancement of Teaching. Retrieved from <http://files.eric.ed.gov/fulltext/ED424840.pdf>
- Caprio, M. (2014). Student publishing: Future scholars as change agents. *OCLC Systems & Services: International Digital Library Perspectives*, 30(3), 144-157. Retrieved from <http://dx.doi.org/10.1108/OCLC-01-2014-0003>
- Centre for Teaching and Learning, University of Texas at Austin. (2015). Instructional Assessment Resources: Assess Teaching. Retrieved from <https://www.utexas.edu/academic/ctl/assessment/iar/teaching/gather/method/survey-Response.php?>
- Comer, D. R., & Schwartz, M. (2014). The problem of humiliation in peer review. *Ethics and Education*, 9(2), 141-156. doi:10.1080/17449642.2014.913341
- Ferrari, J. R., Weyers, S., & Davis, S. F. (2002). Publish that paper--but where? Faculty knowledge and perceptions of undergraduate publications. *College Student Journal*, 36(3), 335. Retrieved from <http://search.proquest.com/openview/e3bcd473118bf923de33f557c57cfdc2/1?pq-origsite=gscholar>
- Gilbert, S. F. (2004). Points of view: Should students be encouraged to publish their research in student-run publications?: A case against undergraduate-only journal publications. *Cell Biology Education*, 3(1), 22-23. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/22031792>
- Kuh, G. D. (1995). The other curriculum: Out-of-class experiences associated with student learning and personal development. *The Journal of Higher Education*, 66(2), 123-155. Retrieved from <http://eric.ed.gov/?id=EJ499695>
- Tatalovic, M. (2008). Student science publishing: An exploratory study of undergraduate science research journals and popular science magazines in the US and Europe. *Journal of Science Communication* 7(03). Retrieved from: <http://jcom.sissa.it/sites/default/files/documents/Jcom0703%282008%29A03.pdf>
- Truth and Reconciliation Commission of Canada. (2015). *Truth and Reconciliation Commission of Canada: Calls to Action*. Winnipeg: Truth and Reconciliation Commission of Canada.
- Ware, M. E., & Burns, S. R. (2008). Undergraduate student research journals: Opportunities for and benefits from publication. In R.L. Miller, R.F. Rycek, E. Balcetis, S. Barney, B. Beins, S. Burns, R. Smith, & M.E. Ware (Eds.), *Developing, promoting and sustaining the undergraduate research experience in Psychology*, 253-256. Retrieved from <http://teachpsych.org/ebooks/ur2008/ur2008.php>
- Weiner, S.A., & Watkinson, C. (2014). What do students learn from participation in an undergraduate student journal? Results of an assessment. *Journal of Librarianship & Scholarly Communication*, 2(2). Retrieved from <http://jisc-pub.org/articles/10.7710/2162-3309.1125/galley/36/download/>