

Development of ArgoJournals:

The Journal of Undergraduate Research in Psychology and Behavioral Science

QEP Final Report

October 18, 2007

Steven J. Kass, Rosemary Hays-Thomas, Sherry Schneider, and Sam Mathews

Department of Psychology

Abstract

The following paper describes the development of an online journal dedicated to publishing undergraduate research in the social sciences. The proposed journal was intended to improve undergraduates' ability to conduct and report on research, provide students with the motivation and reward for engaging in research, familiarize them with the publishing process, and aid in their development as future graduate students and professionals. The journal provides graduate students with the opportunity to demonstrate their knowledge of research design, report writing, and critical thinking by serving as manuscript reviewers. ArgoJournals is currently online (<http://uwf.edu/argojournal/>) and has been adopted by other University units. Although the journal is still in its infancy, preliminary results appear to be favorable and are discussed.

Project Overview

In the fall of 2005, members of the University of West Florida (UWF) Psychology Department proposed a Quality Enhancement Plan (QEP) project for the development of an online undergraduate psychology research journal. The journal was to be comprised of articles written and submitted by undergraduate students, edited by graduate students, and managed by a faculty member. The plan for the journal was in response to the UWF's request to increase the active learning of students through project management. The journal was intended to provide students with hands-on experience in creating, implementing, and evaluating a project for both undergraduate and graduate students of psychology, thus meeting this UWF QEP goal.

Journal Development

Through the development of this journal it was expected that undergraduate students would learn how to manage a research project all the way through to completion. Whereas individual class assignments may require students to conduct an experiment and write it up for the class, journal submissions require students to take their research paper, prepare it as an American Psychological Association (APA) style manuscript and submit it for review. In order to reflect the variety of research areas that would be considered, the journal has been titled "Undergraduate Research in Psychology and Behavioral Science." To submit a manuscript to the journal, undergraduate authors go through the same processes that faculty follow when they submit manuscripts for publication. That is, they have to gear their manuscript to the requirements of the journal (as detailed on the journal website), write a submission letter, and submit the manuscript for review using the online submission process developed specifically for this journal. The student's manuscript is then sent to two graduate student reviewers who review the manuscript, provide the editor with a critique, and make recommendations to accept the

manuscript, reject it, or revise and resubmit it. The faculty editor provides feedback to the reviewers and student editor regarding the quality of the reviews and appropriateness of the feedback (e.g., sensitivity). Accepted manuscripts appear online. When enough manuscripts are published online, a hardcopy version will be published and professional-appearing bound copies will be made available in the Department and in the library. By following this process, undergraduate students learn how to manage a research project (e.g., integrating literature, writing for an academic audience, following APA style, conducting research, analyzing data, and responding to a critique), learn about the details of publishing, and gain an appreciation for how the literature they read becomes published. In addition, by publishing a paper and adding it to their resumes, the students are better prepared and more likely to be accepted into a graduate school. Finally, by helping in the management of the journal, graduate students receive valuable training in research and communication skills and gain a sense of responsibility. By serving as editors and journal reviewers they will be able to apply what they learn in the classroom. That is, they review manuscripts for content, writing effectiveness, and use of statistics. In doing so, they also become better able to critically evaluate the literature they read and become familiar with the publishing process, which will be useful when they prepare to publish their own research. This project serves the Psychology Department's goals of providing students with the opportunity to improve their ability to manage a project, write effectively, critically think, and apply statistics to answer a research question.

Rationale

This project maximizes active student learning and engagement through the incorporation of a learner-centered paradigm at its core. Undergraduate and graduate students are encouraged to be actively engaged in all stages of the publishing process. Thus, the project has at its heart a

project management focus with an explicit commitment to active engagement in the broadest sense. As outlined in the University's QEP (UWF, 2005) there is substantial and convincing research that supports active student involvement in enhancing learning, increasing achievement, facilitating retention, and enhancing student well-being more generally (Astin, 1993; Fink, 2003; Light, 2001; McKeachie & Svinicki, 2005; Zhao & Kuh, 2004). Specifically, this project involves students actively in their educational experience, challenges them to engage in higher-order thinking, and encourages interaction with faculty members and peers. As a result, students acquire a depth of knowledge and an ability to transfer and apply the knowledge constructed to multiple real-world and personally meaningful contexts.

This project provides undergraduate students with the opportunity to practice what they have learned in class regarding conducting and reporting of research projects. Typically a student will receive a final grade and written feedback (e.g., writing style and ability, statistical usage, and critically thought) on a class project, but the student has little opportunity or requirement to utilize that feedback. When submitting a manuscript to the journal, the editorial process provides students with the opportunity to incorporate the feedback they receive and learn from their mistakes. This learning that takes place is readily demonstrated in the next iteration of the paper. Not only do they then produce a better quality product, but students also gain a sense of accomplishment and pride in their work when that final product is suitable for publication. Students who publish in the journal will likely become better researchers and writers because of the experience, and produce higher quality papers in future courses.

This process of submitting manuscripts for publication mirrors that followed by professional researchers and academicians in psychology and other behavioral sciences. That is, they conceptualize a research project, conduct research, and share the results with the scientific

community through publication. For students interested in furthering their academic studies, this process provides practice in science. For students who do not continue in the field of psychology, this project offers many benefits to them as well. For instance, students learn how to write better, improve their critical thinking, and work effectively with others to manage a project to successful completion.

McKeachie and Svincki (2005) proposed that experiential learning has both cognitive and motivational results. Through the experience of producing this journal students learn more about their research topic and the publication process. Seeing a concrete outcome of their work resulting from a competitive process should be rewarding and enhance their motivation for accomplishing higher goals in the future. Additional support for the goals of the journal in facilitating students' educational experience comes from the literature on peer learning and teaching. McKeachie (1999) holds that peer learning and teaching impacts a wide range of educational goals including the enhancement of motivation, stimulation for conducting research, and opportunity for elaboration and integration of learning.

Project assessment plan

Though the journal is currently in its infancy, its success will be monitored in numerous ways. The number of submissions that the journal receives is expected to grow each year and serves as an indicator of students' growing interest in conducting and publishing quality projects. The increased number of articles accepted over time would indicate improved performance of the students in Experimental Psychology and related courses. As a result of the increased practice in writing and publishing research that students receive through this journal, faculty-student collaborations (e.g., conference presentations, professional journal submissions, etc.) can be expected to increase as well. Faculty-student collaborations are already tracked by the

department, so the assessment of this outcome is readily attainable. Additionally, the Psychology Department tracks the number of students that are accepted into doctoral programs. An increase in that number would also serve as an indicator of project success. Finally, the Psychology Department faculty will meet once a year to address whether implementation of the journal has led to improvements in student learning outcomes and make any necessary modifications to the journal process.

Project Results and Interpretation

The project has met all of its deadlines in the development of the journal. The first author of this report and the graduate student Associate Editor worked with members of the UWF College of Arts and Sciences Technology Support to design and develop the online journal. The journal has a professional appearance and operates like many other academic journals. The initial editorial staff includes the faculty Editor, graduate student Associate Editor, Web Developer, and graduate student reviewers who work on an ad hoc basis. The journal web pages include a description of the journal, a call for papers, and the first published volume. The manuscripts are submitted in APA format, which is uploaded by the author through the online submission process as an MS Word file. After the manuscript is accepted for publication, the author must sign a copyright agreement (authors retain right to submit to a professional journal) and the Associate Editor converts the manuscript to a two column, single-spaced format and publishes the papers online as a professional appearing PDF file. Once at least 10 such manuscripts are published, we will print and bind the papers as the first volume of the journal. Although the project was proposed as a Psychology Department project, all design issues were made with the consideration of other departments being able to use the format for developing their own journals in the future. Because of this consideration, rather than develop a single journal, we decided to

place the Psychology Department's journal (i.e., Journal of Undergraduate Research in Psychology and Behavioral Science) within a family of journals called, ArgoJournals (see Figure 1). As of this writing, three different UWF units (i.e., Psychology, Chemistry, SEASTARS) maintain journals under the umbrella of ArgoJournals. ArgoJournals is a collection of Journals; each participating department chooses a unique name for its individual journal. Journals for each participating department are accessed from a menu on the ArgoJournals home page. Almost all journal business can be conducted through the website. Students can access information about the journals' purpose, view Frequently Asked Questions, and complete the submission process by following the "Submit a Paper" link. Manuscripts are published online when accepted.

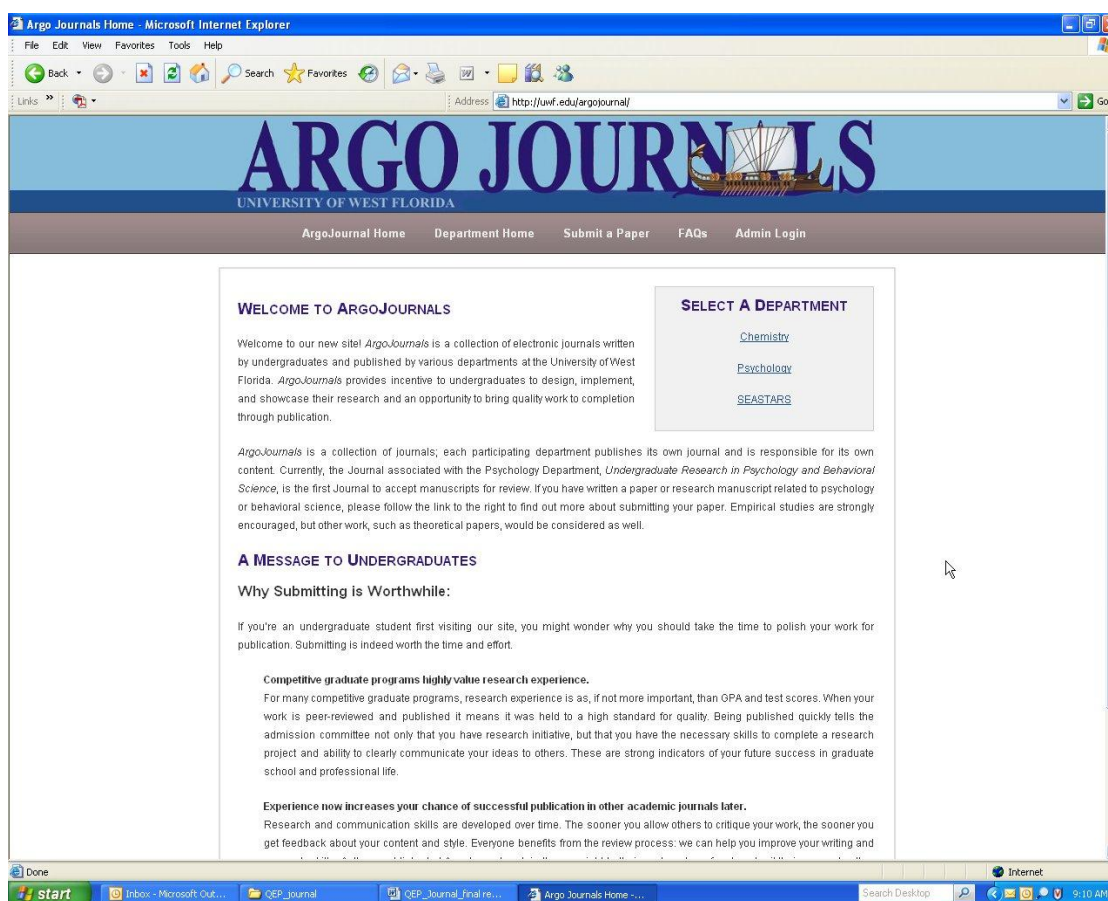


Figure 1. ArgoJournals home page

Currently seven manuscripts (two of which come from outside UWF) have been submitted to the Journal of Undergraduate Research in Psychology and Behavioral Science. Of these manuscripts two have been published after minor revisions (see Figure 2). The editorial staff has asked for minor revisions on four other manuscripts, and has rejected one manuscript outright. Because student class papers are typically due at the end of a semester, we anticipate more submissions after the conclusion of the current semester.



Figure 2. Journal of Undergraduate Research in Psychology and Behavioral Science

One of the goals of the journal was to provide graduate students with the opportunity to hone their critical thinking and research skills by serving as ad hoc reviewers. The following is a quote from a graduate student regarding his experience as an ad hoc reviewer for the journal:

“One of the most beneficial experiences for me as a graduate Psychology student was the opportunity to review and edit manuscripts submitted for publication to the

Undergraduate Research in Psychology and Behavioral Science, part of the University of West Florida Argojournals collection of electronic journals written by undergraduates. Participating in this process benefitted me in several ways, including enhancement of my skills as a consumer of scientific research, insight into the publication process, and improvement in my own writing skills. The task of reviewing the work of a peer requires a detailed process of critical reading. This requires attention to the subtleties of language, the explication of reasoning, and clarity of communication via the written word. Having participated in this process, I feel that I have improved my skills at critical review of any scientific publication. Another benefit of taking part in this process was the opportunity to improve my skills at critically evaluating statistical analysis. Participation in the publication process has given me a new appreciation for the effort and integrity of peer-reviewed scientific work. The exposure to a sample of undergraduate research has also given me a newfound respect for the creativity and talent of undergraduate students at the University of West Florida. Clear communications is also important in providing feedback to the authors of submitted manuscripts. I feel that the experience of writing these reviews has improved my own writing skills. The new Argojournals are certainly a great opportunity for undergraduates to practice scientific research and writing skills, but the benefits are many for reviewers as well. I have thoroughly enjoyed my involvement in this process.”

Dissemination and Institutionalization

Information dissemination

The Journal will be shared not only with others on campus, but with the state, national, and international community. ArgoJournals is now indexed on the University’s home website

and is linked off of the Psychology Department and College of Arts and Sciences web pages. On campus, Psychology instructors are encouraging students to submit papers from their classes and the first author has given talks to student groups to encourage their participation as well. The ArgoJournals: Journal of Undergraduate Research in Psychology and Behavioral Science will appear both in print (few copies to be held in library and department) and is currently available online where it may be viewed by anyone who visits the UWF website. We have already received two submissions from students from universities outside of Florida. Given that a large number of potential students view the UWF website, the online journal can serve as an effective recruiting tool to attract top-notch students wishing for an undergraduate degree that will best prepare them for graduate school and a career in psychology. Faculty from other universities may also view the journal which may motivate them to adopt this approach. The results of this project may be presented at professional conferences that address active learning and pedagogy and lead to a published manuscript reporting on its success.

Institutionalization

This project not only incorporates the students' regular curriculum, it relies on it. That is, most of the research submitted was conducted as part of a course requirement. The Psychology Department's Experimental Psychology course requires students to conduct an experiment. Instructors for that course have been encouraging their students who do exceptional job on their project to write it up for submission to the Journal. Other submissions come from independent study projects, senior honors theses, and student/faculty collaborations. The Psychology Department also requires graduate students to take a course titled Research Design. In this course, students learn about research methodology and how to critically evaluate research. The journal provides these students who volunteer to be reviewers with hands-on experience and

added accountability of having their reviews used to determine whether other students' research becomes published. The instructor of this course recommends student ad hoc reviewers. The best reviewers may apply for the position of journal editor and receive a stipend for that work when the current student editor vacates that position.

The journal format can easily be adapted for other departments in the University. A journal in the Chemistry Department on campus has now been developed, and a multi-discipline journal (SEASTARS) has been developed as well. By incorporating more departments, the journals may help increase cross-discipline collaborations. Because this project is not inherently content-dependent, the process can be used to meet the academic learning compacts for other departments. The principal participants in this project are eager to share their experience with others interested in initiating their own journals.

Outcomes Assessment Procedures

Like many professional journals, this journal identifies criteria for publication in the "Instructions to the Authors." Evidence of undergraduates' self-assessments of their performance comes from their submission letters in which they state why they believe their work meets the criteria stated in these instructions. Whether undergraduate students have achieved the learning outcomes of this project can be assessed tangentially by examining the acceptance/rejection rate of submissions to the journal. The number of revised and resubmitted papers which are eventually accepted for publication will also speak to the students' ability to master the research process.

The outcomes obtained by the graduate students performing the editorial duties of the journal are assessed by the faculty manager who serves as the journal's quality assurance. Graduate reviewers are asked to evaluate manuscripts on a prescribed set of criteria, just as

reviewers of peer-reviewed journals are often asked to do. The managing faculty member will periodically review the journal and check the published manuscripts against the criteria. We will evaluate how well the department is doing at engaging graduates in research projects by tracking the number of graduate students who volunteer to review manuscripts each year, the number of manuscripts reviewed, and the average number of manuscripts critiqued per reviewer.

Conclusion

Although results are preliminary, the journal project appears to be meeting its goals of engaging students in project management. Like any project of this magnitude, the journal will always be a work in progress as we continuously learn ways to improve it. For example, we modified the submission process, provided a list of frequently asked questions (FAQ) to readers, improved the review process to include more specific criteria, and we are still searching for new ways to encourage student submissions and revisions. We encourage other departments to follow our lead in developing their own journals and provide feedback on ways to improve. For more information about ArgoJournals, go to <http://uwf.edu/argojournal/>.

Acknowledgments

The authors would like to thank the following people for which the project would not have been possible without their help. We wish to thank Karen Goldschmidt, Dustin Mink, and Jeremy Moore from CAS Technology Support for their help in the design and implementation of the Journal website. We wish to thank M.Elaine Heard for her extensive help in designing the journal and for serving as the very first student editor paving the way for others through her hard work. We would also like to thank Donald Harrison and Eileen Linnabery for being the first graduate student ad hoc reviewers. We would also like to thank Dr. Maria Darcy for her help on the proposal and the rest of the Psychology Department because they are all important parts of

the process. Finally, we like to thank the Quality Enhancement Plan for providing the funds to make the Journal possible.

References

Astin, A. W. (1993). *What matters in college? Four critical years revisited*. San Francisco:

Jossey-Bass.

Fink, L.D. (2003). *Creating significant learning experiences : An integrated approach to*

designing college courses. Jossey Bass Higher and Adult Education Series.

Light, R. J. (2001). *Making the most of college*. Cambridge, MA: Harvard University Press.

McKeachie, W.J. (1999). *Mckeachie's teaching tips: Strategies*

research and theory for college and university teachers. Boston: Houghton Mifflin Co.

McKeachie, W.J., & Svinicki, M. (2005). *Mckeachie's teaching tips: Strategies*

research and theory for college and university teachers. Boston: Houghton Mifflin Co.

Zhao, C-M., & Kuh, G.D. (2004). Adding value: Learning communities and student

engagement. *Research in Higher Education*, 45, 115-138.

Enhancing student learning: Creating a community of learners through active learning and

student engagement [On-line]. Retrieved from

[http://uwf.edu/cutl/CUTL%20QEP/Template%20for%20QEP%20Project%20Proposal%](http://uwf.edu/cutl/CUTL%20QEP/Template%20for%20QEP%20Project%20Proposal%20(6-9-2005)1.d)

[20\(6-9-2005\)1.d](http://uwf.edu/cutl/CUTL%20QEP/Template%20for%20QEP%20Project%20Proposal%20(6-9-2005)1.d)