

**Electronic Undergraduate Research Journals:
A Survey of their Characteristics**

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Bio:

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Abstract:

The purpose of this research was to identify existing undergraduate student research journals that are published in an electronic format and to survey their characteristics. In reviewing existing lists of journals as well as searching the internet for additional journals, I found 41 in the United States and one in Canada. 73.8% of the journals were based at one institution, but 52.4% would accept papers from students at any institution. The modal journal accepted papers from only one discipline (40.5%) while 35.7% would accept papers from any discipline. Among the journals accepting papers from only one discipline, the most common single discipline was psychology (7.1%) followed by economics (4.8%) and political science (4.8%). Students were heavily involved in the editing process; 52.4% of the journals had a student as editor-in-chief while 47.6% had a student as managing editor. Faculty were commonly working with students at least as advisors. Only 23.8% of journals were edited entirely by students.

Introduction

I surveyed the existing electronic undergraduate research journals available to students in the United States and Canada. The information I have compiled through my research serves to assist colleges and universities that are interested in creating an undergraduate research journal. Beginning this process involves planning and deciding which direction to go on a wide variety of factors. I have gathered information on topics ranging from the composition of the editorial staff to the number of times per year a journal is published. Having this information compiled in a single location will help faculty and students who are interested in starting a journal by making them aware of the numerous decisions that need to be made and the assortment of solutions that different universities have used. By providing this information, I hope to promote the development of this very important aspect of undergraduate research.

There is no doubt that participating in research projects at the undergraduate level is beneficial to students hoping to achieve a graduate degree, but working to publish the results from this research in an undergraduate research journal is another question. There are numerous arguments for and against undergraduate students publishing in one of these journals. I will argue that the positive results from this experience far outweigh the negative results that some researchers perceive.

Literature Review

Undergraduate research journals have been available across the world for quite some time and some of them have been publishing for decades, but the importance of these journals has only recently been studied. Many undergraduate journals are currently working to expand their student author populations from only chronically over-achieving undergraduates to the general undergraduate population. These journals realize the beneficial nature of students

undertaking the publication of their research, but some scholars disagree with these journals and argue that undergraduate journals are actually harmful to students. Gilbert (2004) argued against undergraduate-only journals, writing that such journals would “ ‘up the ante’ and increase the pressures on students” (para. 1). He also stated that, “If the research is good enough, it should be published in a ‘real’ journal” (para. 4).

While these are viable counter-arguments for the undergraduate research question, they can easily be debunked by the popular belief that education needs no boundaries. Students being forced to “up the ante” in their graduate school preparation is not necessarily negative in terms of the effect on students. With the U.S. education system ranking near the bottom of the richest countries across the globe (Higgins, 2002), anything that can be done to encourage and reward undergraduate research should be done. These journals are indeed “real” and deserve the respect of researchers. Undergraduates have not had the training to produce research at the same level as doctoral students and faculty, but their research can still be valid and provide insight to the scientific community. Undergraduate research journals often times open the door for students to pursue higher level research, and, therefore, they should be encouraged.

For many undergraduates, the completion of a research project is the end of the research opportunity, but publication allows students to take the research experience to the next level. In an article entitled, “Undergraduates: Do Research, Publish!,” Jungck, Harris, Mercuri, and Tusin (2004) explain that, “Values for researchers necessarily include publishing, peer review, and priority, but these values are not part of textbook information, traditional labs, and mass lectures or accessible through passive learning” (para. 1). These authors assert that publication is an essential feature of learning from research. Publication in an undergraduate journal enriches the student’s experience by opening up doors to interests they might not have known they possessed.

It can also act as a guide, pulling a student into a specific area of interest within a subject. Working to publish in a journal encourages the student to find creativity in their field and fine-tune their critical thinking skills. According to the same authors mentioned above, “full engagement and benefit in undergraduate research will not be realized until peer review and publication are standard expectations of these critical experiences” (para. 1). In other words, publishing adds invaluable experience and skill to an undergraduate’s repertoire of expertise. Publication gives students a much deeper and more authentic research experience, and it gives them a more valid preview of the expectations for research and publication in graduate school.

In addition to the enrichment of the quality of research and students becoming more prepared for graduate work, publication also benefits the students by helping them to develop a more impressive application for a graduate program. In an article entitled “Swimming With the Sharks: How to Get Into Graduate School,” Abarca and Plunkett list “research experience resulting in a publication or professional conference presentation” as one of the top qualities that graduate programs look for in a student’s application. They then go onto provide two websites for undergraduate research journals.

If a student is uninterested in graduate school, publishing in an undergraduate journal also offers experience as an incentive. Publishing in an undergraduate research journal offers students the opportunity to learn how to work in a much more professional atmosphere. The ability to conduct thorough research, write about it, and publish it, are highly marketable skills that can only be fine-tuned by practice. According to Jungck, et al., (2004) “Research is not complete until it is published. A science education is not complete until students fully participate in all aspects of professional scientific literature” (para. 1). Students working in a research oriented undergraduate major are provided a well-rounded experience when they publish their research.

The skills gained from this experience can benefit students looking for a job in a field related to their research or students looking to further their education. After all, if the student wishes to pursue a graduate degree, she will have experience in creating the finished project that graduate work requires.

Publishing in an undergraduate journal also adds merit to the intensive research that students conduct throughout their undergraduate career. Undergraduate students participate in an immense amount of research within their universities each year. The publication of this research allows students to synchronize their research efforts with one another. Siegel (2004) states, “manuscripts are written to report and to advance discovery, and one measure of the impact of a research project is the use that others make of that project in their own work” (para. 1). Although Siegel overall disagrees with the need for undergraduate-specific journals, she does take note of the importance publication has on an undergraduate’s career. Undergraduates are able to learn from one another’s research experiences. This can encourage collaborative research among students, which can strengthen each individual’s communication skills and ability to work with others on a team.

The research that students undergo in the pursuit of an undergraduate degree is celebrated by publishing in an undergraduate journal, instead of being graded and then ignored. Jungck et al. (2004) stated that undergraduate research provides students with, “an actualization of dreams, a ‘professionalizing’ experience, and an opportunity to be an active contributor to the production of scientific knowledge” (para. 2). Publishing not only asks students to be involved in the writing process, but it also asks students to be more thorough in their research because their work will be scrutinized by reviewers and the public.

Publishing research also leads students to further their interest in their subject of study.

For almost all undergraduate research journals, participating students are required to have a faculty mentor during the research process. If a student has a mentor, they are more likely to advance in their studies because they have someone to guide them in the right direction. This relationship between mentor and student can open doors into the research community and link the student to other research based relationships. Publication can open the door for a student to receive commentary from other researchers or professionals.

The addition of mentors insures that publication in these journals is beneficial to not only students, but also to the faculty members who guide them through the process. In an article entitled “Undergraduate Student Research Journals: Opportunities for and Benefits from Publication,” Burns and Ware stated various reasons why this experience helps faculty members to grow along side their undergraduate counter-parts. They emphasized the benefits faculty members gain from being able to practice and fine tune their own scholarly skills and also develop and maintain collegial contacts. They discussed how faculty members can benefit from refining their writing skills and their knowledge of the APA writing style. Helping students in their research allows faculty members to gain experience in teaching this type of work, which can translate into success in future situations.

The benefits gained by students who prepare and publish in an undergraduate research journal are undeniable, but because there are so many journals emerging throughout the country, it might be difficult for a student to decide which journals to pursue. Big name journals aside, the most effective journals available are published electronically. Not only are these journals more environmentally friendly and cheaper for publishers to maintain, they also provide several advantages for students looking to publish their research. When a student publishes in an online journal, their research is much more widely available to the public. Anyone in any location with

a computer is able to access this research. Along with this reason, the page limitations can somewhat be more lenient. These journals also benefit the universities they are affiliated with by providing a symbol of a commitment to quality undergraduate education.

Publishing in an undergraduate research journal benefits the universities sponsoring them, the faculty members guiding the research, and the students working to publish. Universities are able to gain a prestigious image when they are associated with a journal; faculty members gain more experience in teaching, and students gain innumerable scholarly advantages. While there are some counter-arguments for publication in an undergraduate research journal, these aspects pale in comparison to the great skills and experiences students receive when working to achieve this difficult goal. Undergraduate students should continue to be encouraged to participate in this enriching research opportunity.

Methods

For my research, I first gathered various lists of undergraduate research journals from several sources, including searching various undergraduate journal-related web sites such as the Undergraduate Journals and Conferences Directory provided by Mercy Hurst College. I also used a list sent to my mentor by Donna Brown, Director of the Center for Undergraduate Research at the University of New Hampshire, and Jennifer Lee, Senior Editor, of *Inquiry*, UNH's undergraduate research journal.

I then accessed the websites of each journal and immediately eliminated the ones that had no site, or were out of date. From these sites, I gathered information on the 14 topics that I had decided to analyze prior to beginning the research process. Once I completed scouring each website for information, I created a table with the title of each journal and the questions. This allowed me to visualize the missing information and the information that was already gathered.

From this table I created a list of commonly missing questions and sent e-mails to every school. Most of the schools responded within two weeks. I was able to fill in the blanks because of the information they provided.

At this point I eliminated four journals because the journals were no longer active or because I was unable to gather enough information due to lack of a response by the staff. At this point, I was left with 42 journals with completed information. The journals included in the survey are listed in Appendix A. After I had a completed table, I analyzed the data using the SPSS program using percentages.

Results

Of the 42 polled journals, 22 allowed students from any institution to submit research papers to their journal, 15 journals allowed only students from their home school, and only 1 journal chose to allow students from within a given state to submit. The remaining 4 had no information available. Refer to Table 1 and Figure 1.

Of the journals polled, 73.8% stated that their journal belonged to only one institution, while 14.3% said that their journals had a collection of staff members from various universities throughout the country. The remaining 11.9% had no information available.

Of the journals polled, 52.4% asked that submissions be provided to them in an electronic copy only, 11.9% asked that the submitters provide both an electronic copy and a hard copy, 7.1% said that either an electronic or a hard copy would be acceptable, while the remaining 21.4% had an alternative preferred method or no information available.

Journals that accepted papers from only one subject were most common at 40.5% of the total. Journals that accepted papers on any subject accounted for 35.7% of the sample. Journals that focused on science and mathematics accounted for 21.4% of the sample, while journals with

an emphasis on only the humanities and social sciences included 2.4% of the sample. Refer to Table 2 and Figure 2.

The most popular single subject among the journals was psychology, with 7.1% of all the sample journals limited to this discipline. English and language studies, political science, and economics each had 4.8% of the sample of all journals. Refer to Table 3.

Among the journals surveyed, 47.6% of the journals published an issue once annually, while 16.7% published biannually. Another 14.3% of the journals published issues quarterly, and one journal published issues each month. The remaining 19% had either no set schedule or no information available. Refer to Table 4 and Figure 3.

Of the 42 journals polled, 90.5% had back issues available online, while 9.5% did not have an online back issue at the time of the poll. Refer to Table 5 and Figure 4.

The editor-in-chief for the majority of the journals (52.4%) was a student. Among the remaining journals, 35.7% had a faculty member as the editor-in-chief and 4.8% used a paid professional for this position. The remaining 2.4% were unclear. Refer to Table 6 and Figure 5.

For the managing editor, 47.6% of the journals had a student in this position, while 26.2% had a faculty member as the managing editor, and 4.8% had a paid professional. Of the journals polled, 19% did not have this position, while the remaining 2.4% were unclear. Refer to Table 7 and Figure 6.

Of the journals surveyed, 42.9% had an editorial staff that consisted of students with a faculty advisor available. Students entirely ran the journal in 23.8% of the cases while faculty entirely ran the journal in 21.4 % of the sample. Students, faculty, and paid professionals jointly ran 2.4% of the journals, while 4.8% of the journals had students, faculty, and graduate students on their editorial staff. The remaining 4.8% were unclear about the composition of their editorial

staff. Refer to Table 8 and Figure 7.

Conclusions

From our survey, it appears that electronic undergraduate research journals are alive and thriving. Forty-one such journals were identified in the United States and one in Canada. Most of the journals were based at one institution but most would take articles from students at other institutions. The modal journal accepted papers from a single discipline, with psychology being the most common, followed closely by journals that accepted papers on any subject.

Undergraduate journals take a lot of preparation, so almost half the journals are published annually, with only one journal being published as often as monthly. In addition to student authors, the journals also tend to have students heavily involved in editing as well. The majority of the journals have a student as editor-in-chief and nearly half have a student as the managing editor. With such a positive beginning, the future looks bright for electronic student journals.

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Appendix A: List of Journals Used in the Survey and Their Affiliations

1. *American Journal of Undergraduate Research*, University of Northern Iowa
2. *Augsburg Honors Review*, Augsburg College
3. *Berkeley Scientific*, University of California at Berkeley
4. *Berkeley Undergraduate Journal*, University of California at Berkeley
5. *BIOS*, Beta Beta Beta Biological Society, Montgomery College
6. *Catalyst: Rice Undergraduate Science Review*, Rice University
7. *Chrysalis: The Murray State University Journal of Undergraduate Research*, Murray State University
8. *Electronic Journal of Undergraduate Mathematics*, Furman University
9. *Harvard Political Review*, Harvard University
10. *History Matters: An Undergraduate Journal of Historical Research*, Appalachian State University
11. *Impulse: An Undergraduate Journal for Neuroscience*, University of South Carolina, Honors College
12. *Indiana University South Bend: Undergraduate Research Journal*, Indiana University South Bend
13. *Inquiry Journal*, University of New Hampshire
14. *Inquiry: Undergraduate Research*, University of Arkansas
15. *Interface: An Interdisciplinary Journal of Student Research*, Harvey Mudd College
16. *Journal of Undergraduate Chemistry Research*, Virginia Military Institute
17. *Journal of International Affairs*, Columbia University School of International and Public Affairs
18. *Journal of Psychological Inquiry*, University of Nebraska at Kearney
19. *Journal for Undergraduate Research Opportunities (JURO)*, University of Georgia
20. *Journal of Undergraduate Research in Physics (JURP)*, Sigma Pi Sigma and Society of Physics Students (SPS)
21. *Journal of Science and Health at the University of Alabama (JOSHUA)*, University of Alabama
22. *Lethbridge Undergraduate Research Journal*, University of Lethbridge (Canada)
23. *Meteorite: The Student Journal of Philosophy from the University of Michigan*, University of Michigan
24. *MIT Undergraduate Research Journal (MURJ)*, Massachusetts Institute of Technology
25. *Penn Bioethics Journal*, University of Pennsylvania
26. *Pittsburgh Undergraduate Review*, University of Pittsburgh, Honors College
27. *Stanford Undergraduate Research Journal (SURJ)*, Stanford University
28. *The Eagle Feather: A Publication for Undergraduate Scholars (TEF)*, University of North Texas
29. *The Journal of Undergraduate Sciences*, Harvard University
30. *The Journal of Young Investigators*, Sponsored by Swarthmore College, Duke University, and Georgetown University
31. *The Michigan Journal of Political Science*, University of Michigan
32. *The Oswald Review: An International Journal of Undergraduate Research and Criticism in the Discipline of English*, University of South Carolina, Aiken
33. *The UCLA Undergraduate Science Journal*, University of California at Los Angeles
34. *The Undergraduate Journal of Psychology*, University of North Carolina at Charlotte

35. *Undergraduate Economic Review*, Illinois Wesleyan University
36. *Undergraduate Psychology Journal*, University of California at Los Angeles
37. *Undergraduate Research Journal*, University of Texas at Austin
38. *Undergraduate Research Journal for the Human Sciences*, Kappa Omicron Nu Honor Society
39. *UCI Undergraduate Research Journal*, University of California at Irvine
40. *University Avenue: Undergraduate Journal of Economics*, Illinois State University
41. *University of Florida Journal of Undergraduate Research (UFJUR)*, University of Florida
42. *Young Scholars in Writing*, Penn State Berks

Table 1. Frequencies and Percentages of Categories of Students Who Can Submit Articles to the Journal

		Who Can Submit			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Only students at this school	15	35.7	35.7	35.7
	Students from any school	22	52.4	52.4	88.1
	Only students from this state	1	2.4	2.4	90.5
	No information available	4	9.5	9.5	100.0
	Total	42	100.0	100.0	

Table 2. Frequencies and Percentages for Subjects of Articles Accepted by Journals

		Subjects			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Any subject	15	35.7	35.7	35.7
	Single Subject	17	40.5	40.5	76.2
	Sciences/mathematics	9	21.4	21.4	97.6
	Humanities/social sciences	1	2.4	2.4	100.0
	Total	42	100.0	100.0	

Table 3. Frequencies and Percentages for Single Subject and Multiple Subjects Accepted by Journals

		Single Subjects			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Economics	2	4.8	4.8	4.8
	Political science	2	4.8	4.8	9.5
	Biology	1	2.4	2.4	11.9
	Psychology	3	7.1	7.1	19.0
	International affairs	1	2.4	2.4	21.4
	Chemistry	1	2.4	2.4	23.8
	Neuroscience	1	2.4	2.4	26.2
	Bioethics	1	2.4	2.4	28.6
	Philosophy	1	2.4	2.4	31.0
	History	1	2.4	2.4	33.3
	English/language studies	2	4.8	4.8	38.1
	Human sciences	1	2.4	2.4	40.5
	Multiple Subjects	25	59.5	59.5	100.0
	Total	42	100.0	100.0	

Table 4. Frequencies and Percentages for Frequency of Publication

		Frequency			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Annually	20	47.6	47.6	47.6
	Biannually	7	16.7	16.7	64.3
	Quarterly	6	14.3	14.3	78.6
	Monthly	1	2.4	2.4	81.0
	No set schedule	4	9.5	9.5	90.5
	Unknown	4	9.5	9.5	100.0
	Total	42	100.0	100.0	

Table 5. Frequencies and Percentages for Back Issues of Journal Available Online

Back Issues Online

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	38	90.5	90.5	90.5
	No	4	9.5	9.5	100.0
Total		42	100.0	100.0	

Table 6. Frequencies and Percentages for Student, Faculty, or Paid Professional as Editor-in-Chief

		Editor-in-Chief			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	2	4.8	4.8	4.8
	Student	22	52.4	52.4	57.1
	Faculty	15	35.7	35.7	92.9
	Paid professional	2	4.8	4.8	97.6
	Unclear	1	2.4	2.4	100.0
	Total	42	100.0	100.0	

Table 7. Frequencies and Percentages for Student, Faculty or Paid Professional as Managing Editor

		Managing Editor			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	8	19.0	19.0	19.0
	Student	20	47.6	47.6	66.7
	Faculty	11	26.2	26.2	92.9
	Paid professional	2	4.8	4.8	97.6
	Unclear	1	2.4	2.4	100.0
	Total	42	100.0	100.0	

Table 8. Frequencies and Percentages for Students, Faculty, and Paid Professional Staff as Editorial Staff

		Editorial Staff			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Students only	10	23.8	23.8	23.8
	Faculty only	9	21.4	21.4	45.2
	Students and faculty advisor	18	42.9	42.9	88.1
	Students, faculty and paid Professional	1	2.4	2.4	90.5
	Faculty, students and graduate students	2	4.8	4.8	95.2
	Unclear	2	4.8	4.8	100.0
	Total	42	100.0	100.0	

Figure 1. Percentages of Categories of Students Who Can Submit Articles to the Journal

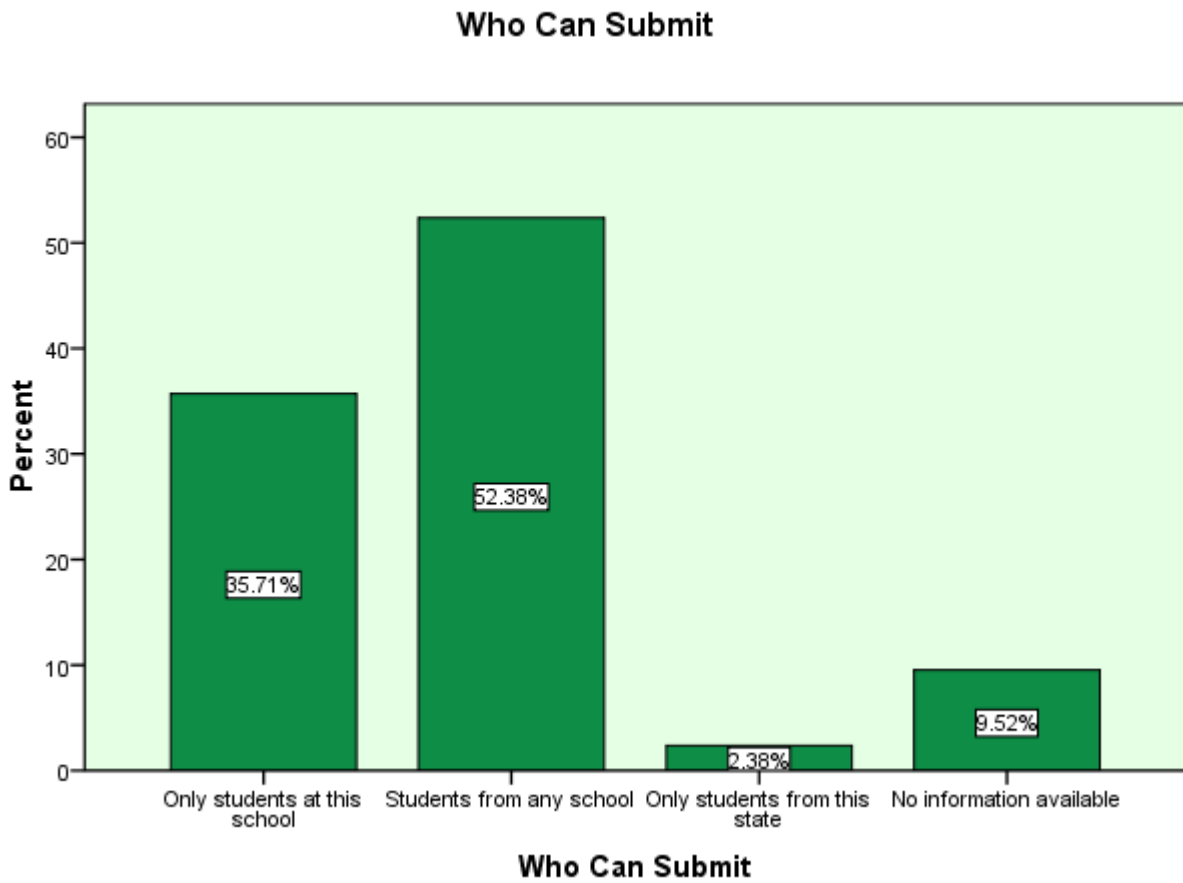


Figure 2. Percentages for Subjects of Articles Accepted by Journals

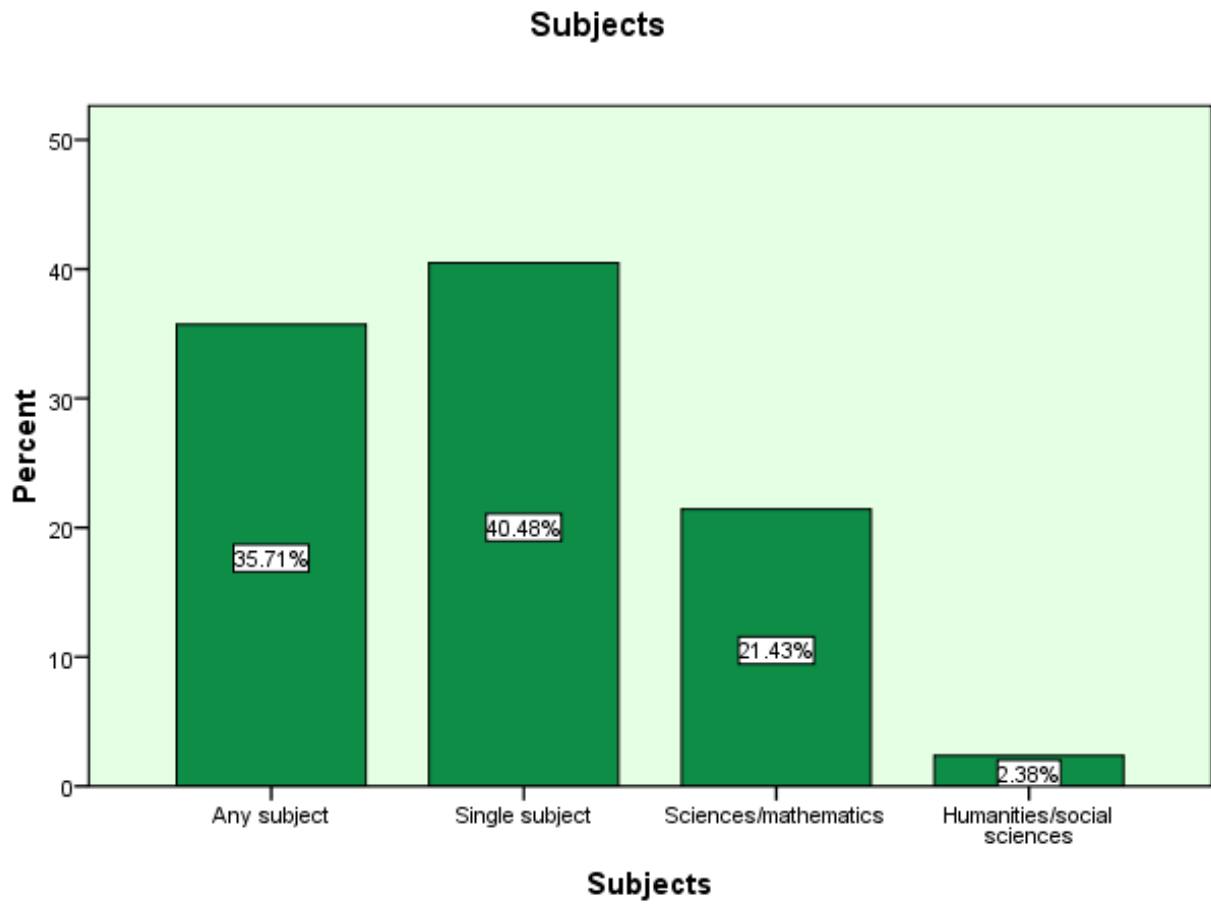


Figure 3. Percentages for Frequency of Publication

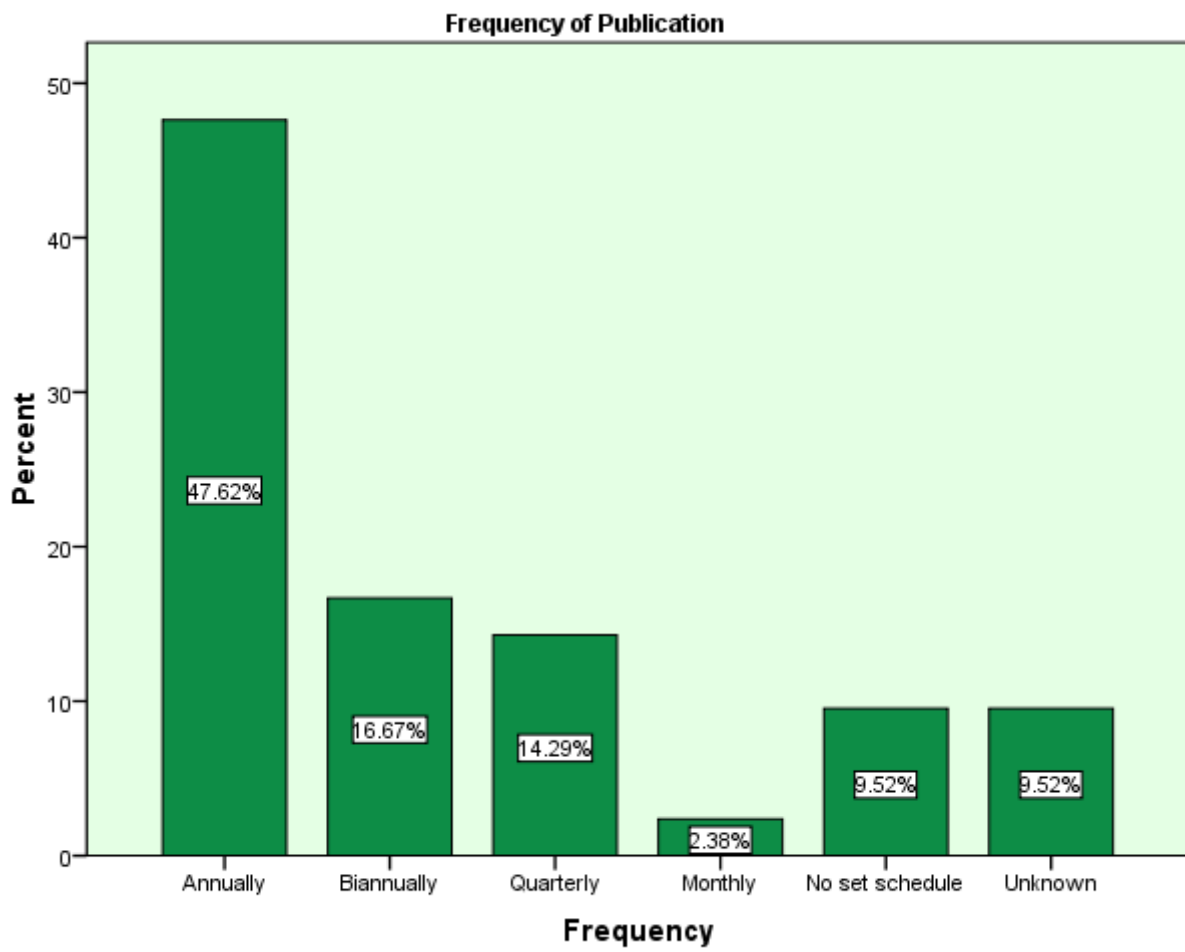


Figure 4. Percentages for Back Issues of Journal Available Online

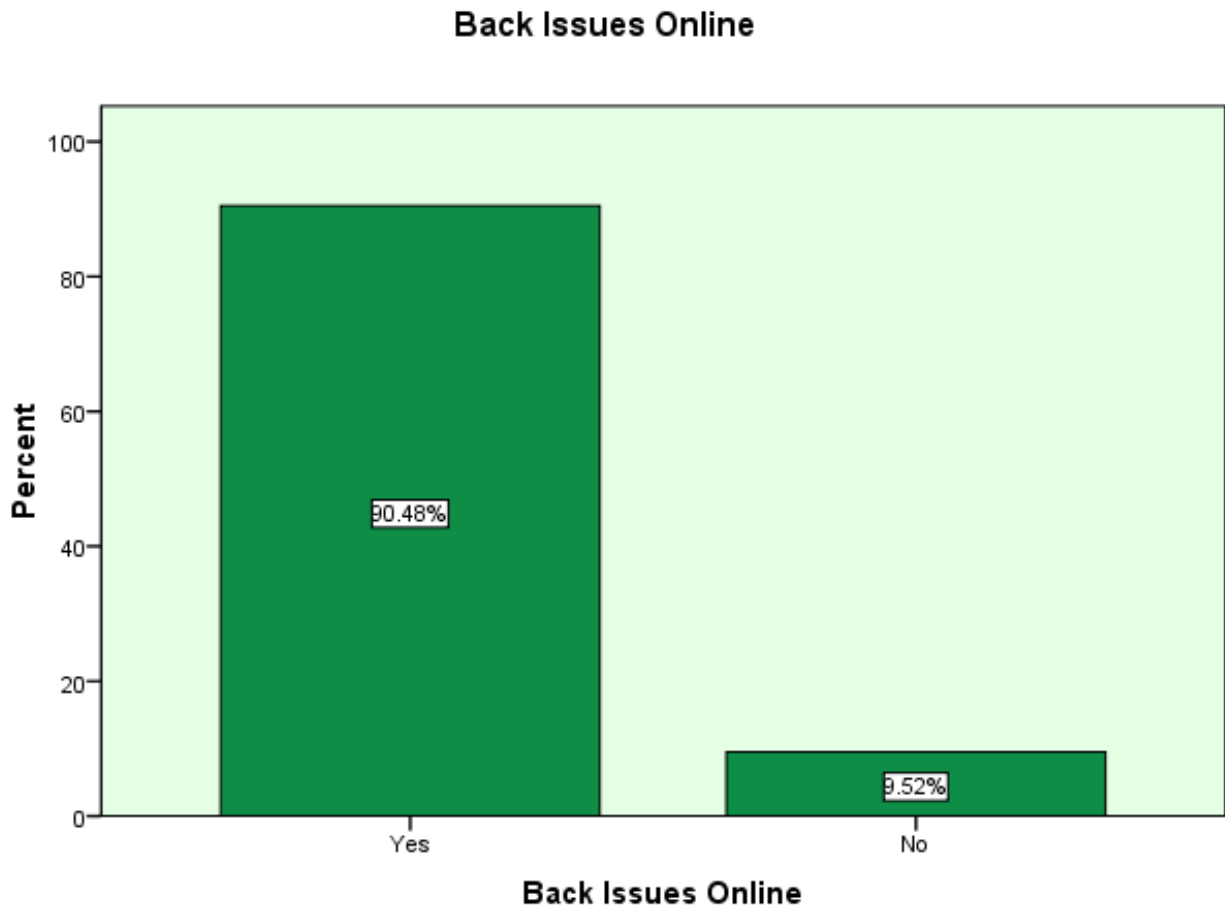


Figure 5. Percentages for Student, Faculty, or Paid Professional as Editor-in-Chief

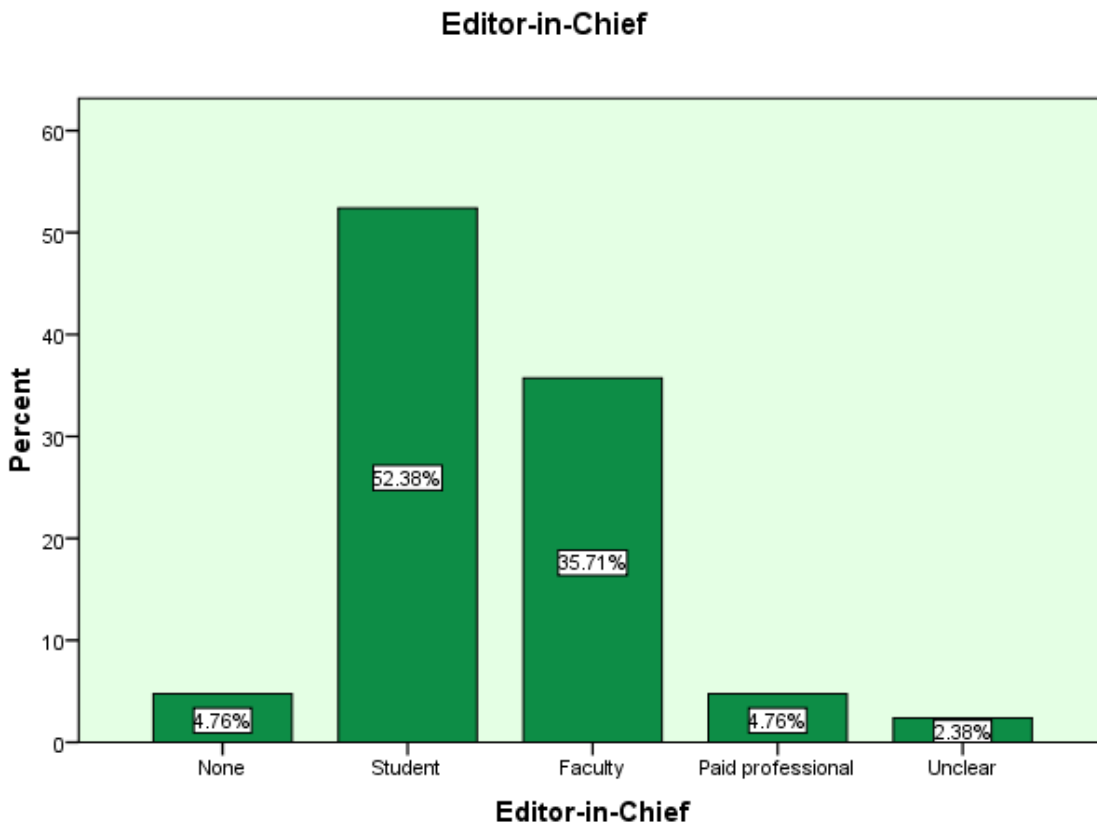


Figure 6. Percentages for Student, Faculty or Paid Professional as Managing Editor

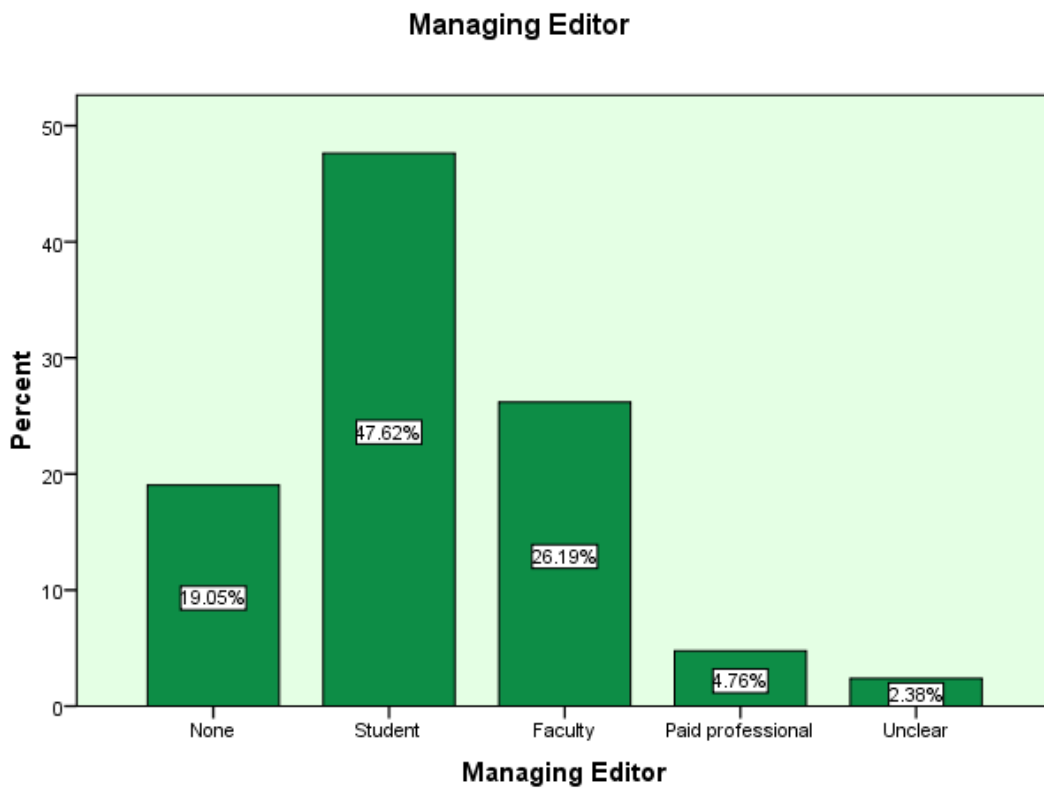


Figure 7. Percentages for Students, Faculty, and Paid Professional Staff as Editorial Staff

