Journal of the Advanced Physics Laboratory Investigation (JAUPLI):
User’s Guide

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What is JAUPLI?

• Journal of the Advanced Physics Laboratory Investigation
  • Online journal that publishes work students do in their undergraduate laboratory courses
  • Opportunity for students to experience the entire submission and review process
    • Student submission
    • Double-blind peer review by students at other institutions
      • Students who submit articles are also expected to review other students’ papers
    • Feedback from reviewers and faculty editor
    • Opportunity for revision and resubmission
  • Goal: Publication!!
Why JAUPLI?

- JAUPLI is a way to combat several common issues in the advanced lab
  - Students are only exposed to experiments at their own institution
  - There can be inherent bias in peer reviews done within a single advanced lab section
  - Students write for the wrong audience – their professors, not their peers

- JAUPLI benefits
  - Develops scientific communication skills (specifically writing and review) through an authentic, higher-stakes process
    - It’s not just another lab report!
  - Provides a scientific community in which the students are active participants and contributors
  - Provides a built-in, rigorous assessment mechanism
Participation in JAUPLI gave me a greater understanding of how a scientific peer reviewed journal functions.

Student comments:

- As one of the first peer-reviewed journals I have had the opportunity to be a part of, it was a huge help for the future.
- I learned how to write in a more formal and educational manner, plus I learned how to format a paper so it looks more professional.
- Spending time trying to write a well written paper was a great way test my writing skills. Getting a review of the article I submitted was a good review for my own skills.
- I was able to experience the review side of science. It is a bit harder then I thought.

• 2011-2012 survey data (N=35)
Trying to write a manuscript for an unknown student reviewer improved my own understanding of the experiment.

Student comments:
• Not knowing the background of the person reviewing your paper makes you think more about what you are putting in the paper and makes you try to write it more clearly so anyone can understand.
• Knowing that the person who is going to read what I am writing really changes my writing style. I add details that I normally wouldn’t.
• I needed to make sure that my ideas were conveyed clearly enough so that the reader knew what it was that I was doing. This forced me to think about other ways of thinking about the experiment.

• 2011-2012 survey data (N=35)
The paper I reviewed was over my head and difficult to understand due to the physics involved.

Student comments:
- They were to my understanding, plus there is nothing google can't fix in this day and age. the basics in physics remain the same in my opinion.
- The physics, even if I didn't know it very well, I understood the main point. It was how the author(s) communicated about the experiment that need the most revision.

• 2011-2012 survey data (N=35)
The paper I reviewed was difficult to understand due to poor writing.

My scientific writing skills improved due to my participation in JAUPLI.

2011-2012 survey data (N=35)
By reviewing another student’s paper, I realized I might be making similar mistakes.

Student comments:
• I learned that as I write and review my own paper I need to make more of an effort to write it as if the audience has little to no knowledge of the concepts or procedures used in the paper.
• When I was reading through the paper I reviewed I noticed that certain ways that they wrote their journal was a little confusing or lacking information about important topics that I noticed I did the same thing.
• I felt like a complete hypocrite while writing the review.
• I saw how professional thiers looked compared to mine.

• 2011-2012 survey data (N=35)
Writing and reviewing for JAUPLI took far more time than just writing a lab report for my instructor.

Student comments:
- I was surprised how long I took to review articles, but did not feel like that was a negative to this experience.
- As far as formal lab reports go there was no more time involved in writing the report than normal, but the reviewing process did involve more time because that is normally not done.
- After I wrote my first paper for JAUPLI I have tried to submit the same quality to my professor.

• 2011-2012 survey data (N=35)
Participation in JAUPLI was a valuable educational experience

2011-2012 survey data (N=35)

Student comments:
- I think this is a great program that will eventually open many doors for advanced undergraduate students.
- I learned some interesting things from reading the paper I reviewed, plus I learned how to write formal journals a whole lot better.
JAUPLI hits a number of the AAPT Recommendations for the Undergraduate Laboratory Curriculum.

Students should *learn to present reasoned arguments supported by experimental evidence*. Those arguments should include elements such as plots, tables, numerical results with uncertainties, and diagrams. Further, *the overall format and style of presentation should use forms authentic to the discipline such as technical reports, journal-style articles, and conference-style poster and oral presentations.*

*Excerpt from Communicating Physics*

- Between the paper preparation, submission, and revision and participation as a peer reviewer, the JAUPLI experience addresses most of the specific Advanced Level Recommendations.
A Users Guide to JAUPLI for BFY Lab Instructors
JAUPLI url: opus.ipfw.edu/jaupli

Log in or
Set up account
Log in or create a new account
Setting up a class

- Set up your own account through the log in screen (first time only!)
- Send your class list to Mark Masters (masters@ipfw.edu)
  - You will be the editor for students in your class
- Your students will have to set up their accounts on the JAUPLI website
- You and your students should be familiar with the JAUPLI Policies
  - Submission guidelines included here
- Students can then submit papers through the Submit Article tab
Submission Policies

• Author must hold the copyright and paper may not have been previously published and cannot be under review for another journal

• No specific formatting requirements for initial submission
  • Follow directions carefully to ensure there are no personal identifiers on the paper for the double-blind review process
    • Articles must be submitted without a title page, abstract, or page numbers. These will be provided by the system.
  • Following the style guidelines for publication is recommended from the beginning so that re-formatting doesn’t become a barrier to publication later

• Acceptable formats: PDF, Microsoft Word, or RTF
  • If submitting a PDF, check the PDF FAQ page to ensure the PDFs are created in a way compatible with the submission system (e.g. all fonts must be embedded)
Your role as editor → Yes, you are the editor for your students papers!!

- Ensure your students’ papers open correctly
  - There have been occasional issues opening files

- Assign two (or three) reviewers from other institutions
  - JAUPLI has a standard e-mail that will be sent to reviewers
  - Try to select students who have not reviewed or have reviewed only one paper in order to distribute the work
  - JAUPLI will send reminders to the student reviewers, but you may have to select another reviewer if a student does not accept the review or complete the review in a reasonable timeframe (and e-mail that student’s instructor!)

- When the reviews are back, look them over and make a decision on the paper
  - JAUPLI has a standard template that you can edit and send to the student
  - It is also recommended that you send the decision to the reviewers so that they can see if their reviews were on target and so that they know their input was valued

- Encourage your students to revise and resubmit so that their paper can get published!
  - This is the often missed final step
You can always get back to this page by clicking here.

This is where you access the papers.
Manage Submissions page

- Search for individual student’s papers or find all papers assigned to you
- See reviewer statistics and status of reviews
- If there’s a red dot, you need to move things to the next step of the review process
- Access editor tools by clicking on paper title
Reviewer List
Useful for seeing a summary of your students’ progress on their reviews

What they reviewed and How long it took

Reviewer info
Editor Tools (accessed by clicking on paper title on Manage Submissions page)

When your students submit, assign yourself as an editor for their papers
Assign Reviewers
As editor, you must assign reviewers for your students’ papers (2 reviewers per paper is typical)

Select reviewers

- Suggest Reviewers:
  - enter name in search
  - from Master List of Reviewers
  - from Faculty List

Check status

- View reviewer’s recommendation and report

- Reviewers
  - Status (key)
  - History
  - Options

Submitted Reviews
All reviews will be shown to the author(s) after a decision has been made unless the “Hide” box next to the review is checked.

- Reviewer
- Recommendation
- Option
- Hide
- Save Changes

Reviewer Status Code
- suggested
- requested
- committed
- reviewed
- requested
- no longer expected
- declined
- abrogated

Potential reviewer has been suggested. No request has been sent to the potential reviewer.
An email request has been sent asking the potential reviewer to review the submission. The reviewer has not yet responded.
The reviewer has made a commitment to do a review.
The reviewer has been uploaded by the reviewer.
The request did not result in response.
The reviewer did not respond to the request to review before the due date.
The reviewer did not manage to complete the review in time and the editor eventually gave up on getting a review from the reviewer.
The reviewer has declined to do a review.
The reviewer has resigned on their commitment to review.
Assign Reviewers

Select new reviewers

Click after selecting reviewers

Current reviewer(s) for paper
Assign Reviewers (after clicking Suggest Reviewers)

- set review timeline (edit text of e-mail, optional)
- then send

Click “request” to make request for review (or “delete” to remove the Suggested reviewer)
A couple of common issues

• As editor, you must read the reviews and ensure they are appropriate
  • Inappropriate or incomplete reviews should be brought to the attention of the reviewer’s instructor
    • You can ask for a re-review

• JAUPLI sends reminder e-mails to reviewers, but you must also look at how long the reviewers are taking
  • Notify a reviewer’s instructor if the reviewer is being unresponsive
  • Re-assign the review to another reviewer if the original reviewer has not done the review within ~10 days

• Once reviews are in, you have to keep the process moving along by sending a decision to the author
Register a Decision

Select a decision. Boilerplate for that decision will appear in “Body” field.

Copying the reviewers is a good thing to do, but be sure to preserve anonymity by not using the author’s name in the “Body” field.

Providing feedback is highly recommended.
Publication!!

• Once the paper is accepted, you must get the author’s approval for publication
  • Usually requires at least one iteration of revision and resubmission
Calibrating Peer Reviewer Responses

• No formal process developed yet, but this is being worked on
  • Baseline data-taking and possibly beta-testing this year??

• What has been done in the past
  • Students and instructor review at least two papers using the peer review rubric before students do actual peer reviews so that instructor can get a feel for how the students’ reviews compare to each other and to an expert
    • Unfortunately, this does not tell you anything about the relative “quality” of the reviews coming from reviewers at other institutions
      • Cannot rely solely on raw review scores for registering a decision → need to look at the comments.
  • Good to do some discussion of the practice reviews as a whole class and/or in small groups
Some Tips

• Participation in JAUPI should constitute a significant enough part of the grade that the students take it seriously
  • Can help to grade not just the paper but other parts of the process as well
• Set submission date at least 3-4 weeks before the end of the semester
• Set a requirement for peer review turn-around time, with point deduction for late/incomplete reviews
• Have students do practice peer reviews for calibration purposes
• Publication tends to be rare → Bonus for getting a paper published??