

Summary of AJP Review Committee Final Report for AAPT members

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As the preeminent journal for physics educators, the *American Journal of Physics (AJP)* maintains high standards of writing and scholarship through a critical yet supportive peer review process, intense engagement by the editors, and strong support from a committed community of readers, referees and authors. Every five years, AJP undergoes an external review to evaluate the current state of the journal.

The 2019 AJP Review Committee gathered information, perspective, and data by interviewing the current Editor, the past Editor, and the current Associate Editor; soliciting input from a broad sampling of users utilizing a brief survey designed to sample the experiences of readers, authors, and referees; and by considering the online presence of AJP. A detailed report was presented to the AAPT Board at the 2020 Winter Meeting. Here, we summarize our survey results and provide an overview of our recommendations.

Survey Results

Our survey addressed three overlapping sectors of the AJP community -- readers (1059 responses), submitting authors (259 responses), and recent referees (434 responses). Because of the high response rate of authors and referees, who are more heavily drawn from four-year colleges and MS and PhD granting universities, high school teachers are relatively underrepresented (21% of respondents) compared to the general AAPT membership (35.6% HS teachers).

Reader comments repeatedly express appreciation of the journal's pedagogy focus and unique content at the upper level undergraduate/early graduate level. Overall, readers seem satisfied with the relative coverage of various topical areas. Comments also highlighted readers' ongoing engagement with physics education research (PER) and, in some cases, their concerns about changes that might limit AJP's reporting and dissemination of PER outcomes.

Another critical theme from the comments was the need to uniformly enforce standards of general interest and readability. However, with a diverse readership, there is a range of expectations about the level of content. As an example, 20% of readers teaching at the High School Level rate the level of AJP papers as "Often too high," which is more than twice the occurrence of this rating in the next closest group, Retired Educators.

A large majority (71%) of the survey respondents teach undergraduates and find the journal to be an invaluable pedagogical resource at the upper undergraduate/beginning graduate levels. 76% of this group have their undergraduate students interact with the journal as readings in a seminar, as part of a literature search in a course, or through undergraduate research based on experiments/studies outlined in articles. Survey comments underline that AJP is highly valued as a readable resource for advanced undergraduate students and as both a model for and a source of ideas for undergraduate research projects.

With more readers accessing AJP online, we asked readers about the importance of new online features, including video abstracts, online supplemental materials, blogs or online forums to discuss articles, and easy-to-find links to share materials on social media. By far, readers felt the most important benefit of technology was the ability to include online supplemental materials (e.g. videos, animations, etc.) with articles. Readers' desire for online supplemental materials is striking when compared to the question for authors about whether they have contributed materials to the Electronic Physics Auxiliary Publication Service (EPAPS), an electronic depository for supplemental material to papers appearing in journals published through the American Institute of Physics. Only 14.9% of authors deposited supplemental materials with EPAPS, and of those authors who had not contributed materials to EPAPS,

42% said that they were unaware of EPAPS. Raising awareness of EPAPS and encouraging authors to contribute should be a priority.

A key conclusion from our survey is that both authors and referees continue to value their experience of being part of the AJP community. As an example, 79% of the referees felt that their experience was wholly positive and 98% would recommend being a referee to others. Finding ways to provide opportunities for more members of the AAPT community to referee for AJP should be a priority. This is critical since being an author and/or a referee is part of our professional expectations as scientists and as physics educators. And with education, study, and practice we can become more accomplished in our roles.

A surprising finding from the survey was that many AAPT members seemed unaware that online access to AJP was a member benefit. There have been strong efforts to inform members that the journal does not increase general membership costs. Members should know that AJP library subscription agreements generate significant revenue to support AAPT programs.

Overview of Recommendations

In our recommendations, the Review Committee seeks to encourage better partnerships between AJP and AAPT; to encourage professional development for the AJP editors, referees, and authors; to highlight opportunities of engagement with existing and new audiences; and to fully include the diverse community of physics educators as authors, referees, and Editorial Advisory Board members. Specific recommendations include:

- Deliberate efforts should be made to diversify the Editorial Advisory Board, pool of referees and author community of AJP with respect to gender, undergraduate teaching levels, and racial and ethnic self-identification to complement the current outreach with respect to representation across sub-disciplines of physics.
- The AJP Editor should find ways to better integrate the Editorial Advisory Board in both the regular operation of AJP and its long-term strategic planning.
- Structures of support for the AJP Editors should be developed. The AJP Editor is a significant community leader in multiple roles but experiences a heavy workload. More structured opportunities for communication/mentoring by the Publications Committee and the AAPT Board and other professional development would be valuable. The management structure and operation of AJP should be fully articulated and regularly updated.
- The AJP Editors, Authors and Referees webpages should be reviewed for consistency and quality of presentation. Clearer organization and improved navigation would increase the overall utility for editors, authors, and referees.
- AAPT should explore and implement additional ways to promote and celebrate the excellence of AJP. AJP is a valuable and unique resource for the AAPT membership and the broader physics community.
- A central repository of previous reports and studies is vital for journal continuity and long term planning. Past reports and studies of AJP and documentation of strategic initiatives should be incorporated in an active archive available to the Editor, Editorial Advisory Board and Publication Committee members. In addition, more information should be publicly shared.

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