

The CAE/CATS Guest Moderator Program: Fostering Better Astronomy Education Through Professional Discussions

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The Center for Astronomy Education (CAE; <http://astronomy101.jpl.nasa.gov/>) sponsors many professional development opportunities intended to aid astronomers in improving astronomy education. One of these activities is the Astrolrner@CAE listserv (astronomy101.jpl.nasa.gov/discussion), which is intended for everyone who is interested in improving college-level astronomy teaching and learning. Astrolrner@CAE is now over a decade old, with over 2700 posts from astronomy educators at numerous institutions. In order to ensure high-quality discussions, the listserv is moderated, and in 2007, CAE, through the Collaboration of Astronomy Teaching Scholars (CATS) program, created the Guest Moderator program. Guest Moderators are chosen from members of the greater CAE community. The program was created to elevate members of the CAE community who had shown themselves to be advanced in their pedagogical content knowledge through their own postings to Astrolrner@CAE. An additional goal was to create particular conversations about issues related to instruction by having Guest Moderators offer a monthly posting of instructional issues they, themselves, have been considering. We detail the insights gained from the first three years of the guest moderator program, and provide evidence of increased discussion due to this interaction.

Subscribe to Astrolrner@CAE at <http://astronomy101.jpl.nasa.gov/astrolrner/>

Introduction – Ten years of Discussion

Astrolrner@CAE began in August 1999 as a small email discussion list between astronomy education researchers. Over the last decade, the list has grown dramatically, and has undergone many changes in interests and goals (for a brief history, see Slater, 2010). The current focus of Astrolrner@CAE is generally on astronomy instruction for non-scientists, or “ASTRO 101” style courses, though a wide range of topics related to astronomy education in the college setting are discussed.

In order to keep the email list from being overrun with unproductive message, the email list has been moderated. Three years ago, in order to promote higher quality discussion, the CAE decided to create the position of *Guest Moderators*. These moderators would be astronomy educators from different institutions, who were familiar with the astronomy techniques being taught by the Center for Astronomy, but were also continuing to innovate in their own classes. The expectations for the guest moderators was for them to moderate the incoming email messages and to share about their own efforts in their classes.

Such interactions can be considered a form of *situated apprenticeship* (Prather & Brissenden 2009), where astronomy educators learn about active learning techniques by reflecting on the performance of other instructors.

Posting on Instructional Issues

All of the *Guest Moderators* post on a regular basis (monthly or bi-monthly) on instructional issues that they want insight on, or they feel are important. Besides giving a topic for discussion, these posts often include questions or suggestions for ASTRO 101 instructors. These specific suggestions give an opportunity for all readers of the list to improve their teaching practice, a key element of professional development (Loucks-Horsley et al. 2003).

Some example questions for the last three years include:

- What are good books on astronomy education?
- Bringing Think-Pair-Share questions to the classroom
- Should we create and maintain a repository of Think-Pair-Share questions and what are all of the practical issues in doing so?
- Reading educational materials again for additional inspiration.
- What is your favorite web resource for ASTRO 101 students?
- What are you doing for the International Year of Astronomy?
- What experiences do you include on your first day of class to encourage a learner-centered classroom?
- How do you get feedback about your teaching? What suggestions have you adopted from your student's comments?
- How do you construct your class grading to promote learner-centered instruction? How is your assessment strategy tied to the rest of the course?

The Result: More Subscribers and More Posts

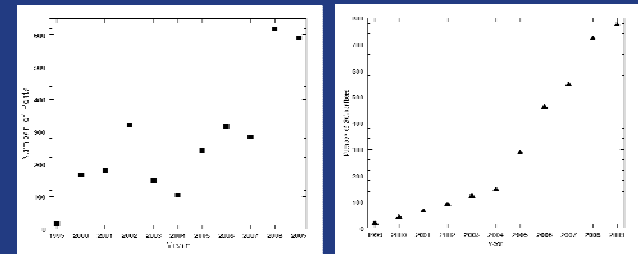


Figure 1 – Number of posts (left) and the total number of subscribers to (right) Astrolrner@CAE as a function of time. There is a noticeable increase in subscribers after the CAE workshops began in 2005, and a large increase in posts after the *Guest Moderators* program began in Spring 2007.

References

- Loucks-Horsley, S., Love, N., Stiles, K. E., Mundry, S., & Hewson, P. W. 2003, *Designing Professional Development for Teachers of Science & Mathematics*, 2nd ed., Thousand Oaks, CA: Corwin Press.
- Prather, E. & Brissenden, G., 2009, *Astronomy Education Review*, 7, 1
- Slater, T.F. 2010, *Astronomy Education Review*, in press

The Role of Moderation

There is widespread agreement about the benefits of moderation in an email list, but exactly where to draw the line is extremely difficult. There are hazards if moderation is too intrusive, or too modest. Too intrusive moderation limits the scope of discussions, and creates the perception of favoritism, and too modest moderation can lead to personal attacks, and discussions that wander far away from the goals of the list. Both actions can cause users to unsubscribe from the list, and to lose the sense of community that is a fundamental goal. Interestingly, all three moderators thus far have independently created moderation criteria that are remarkably similar to each other. The current criteria are:

1. Is the message relevant to discussions of improving ASTRO 101-style classes?
2. Is the message commercial in nature?
3. Does the message personally attack another member, or was abusive in some way?
4. Was the message actually intended for a single person, rather than the entire list?
5. Does the message include a large amount of text from another source?

Most of the messages moderated fall within category #4, as would be expected.



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