

MAR17-2016-001132

Abstract for an Invited Paper
for the MAR17 Meeting of
the American Physical Society

Physics and Astronomy New Faculty Workshops: 20 Years of Workshops and 2000 Faculty¹

ROBERT HILBORN, American Association of Physics Teachers

Most college and university new faculty members start their teaching careers with almost no formal training in pedagogy. To address this issue, the American Association of Physics Teachers, the American Astronomical Society, and the American Physical Society have been offering since 1996 workshops for physics and astronomy new faculty members (and in recent years for experienced faculty members as well). The workshops introduce faculty members to a variety of interactive engagement teaching (IET) methods and the evidence for their effectiveness, embedded in a framework of general professional development. Currently the workshops engage about 50% of the new tenure-track hires in physics and astronomy. The workshops are quite successful in making the participants aware of IET methods and motivating them to implement them in their classes. However, about 1/3 of the participants stop using IET methods within a year or two. The faculty members cite (a) lack of time and energy to change, (b) content coverage concerns, and (c) difficulty getting students engaged as reasons for their discontinuance. To help overcome these barriers, we have introduced faculty online learning communities (FOLCs). The FOLCs provide peer support and advice through webinars and coaching from more experienced faculty members. Recommendations based on the workshops and the experiences of the participants can enhance the teaching effectiveness of future physics and astronomy faculty members.

¹This work was supported in part by NSF grant 1431638