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Professional development of graduate TAs: The role of physics education research¹

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For approximately 15 years, the Physics Education Group at the University of Washington has been offering an academic-year teaching seminar that is required for all new graduate TAs in physics. The seminar, conducted in the context of *Tutorials in Introductory Physics*,² is designed to help prepare graduate students and junior faculty to teach introductory physics more effectively. In the seminar, TAs have an opportunity to learn (or relearn) basic concepts that they have likely not studied for many years, to reflect on student understanding of these concepts, and to gain experience with instructional strategies that have proved effective in helping students learn. The seminar represents an important step in developing a comprehensive, research-based TA preparation program that deepens content understanding and fosters effective instructional practices. Examples from ongoing investigations will be used to illustrate the role of physics education research in informing the design and implementation of professional development programs for future faculty.

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²*Tutorials in Introductory Physics*, L.C. McDermott, P.S. Shaffer, and the Physics Education Group at the University of Washington, Prentice Hall (2002).