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The Learning Assistant Model for Science Teacher Recruitment and Preparation¹

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There is a shortage of high quality physical science teachers in the United States. In 2001, less than 50% of teachers who taught physics held a major or minor in physics or physics education (Neuschatz & McFarling, 2003). Studies point to *content knowledge* as one of the two factors that is positively correlated with teacher quality. However, those directly responsible for the science content preparation of teachers, specifically science research faculty, are rarely involved in focused efforts to improve teacher quality or to create alternative paths for becoming a teacher. What role should science research faculty play in the recruitment and preparation of science teachers? How might teacher recruitment and preparation be conceived so that science research faculty members' participation in these efforts is not at odds with the traditional scientific research foci of science research departments? To address this issue, we have coupled our teacher recruitment and preparation efforts with our efforts for transforming our large-enrollment, undergraduate science courses. This is achieved through the *undergraduate Learning Assistant* (LA) program, where talented mathematics and science majors are hired to assist in transforming large enrollment courses to student-centered, collaborative environments. These LAs are the target of our teacher recruitment efforts. Science research faculty, in collaboration with faculty from the school of education have established a community that supports LAs in making decisions to explore K12 teaching as a career option. Fifteen percent of the LAs who have participated in this program have entered teaching credential programs and now plan to become K12 teachers. An added effect of this program is that research faculty have developed skills and knowledge regarding inquiry-based and student-centered pedagogy and theories of student learning. The Learning Assistant program has led to increased subject matter knowledge among learning assistants, increased interest in K-12 teaching as a career, and increased appreciation and understanding of student-centered and inquiry-based learning. Data to support these claims will be presented. Neuschatz, M. & McFarling, M. (2003). Broadning the Base: High School Physics Education at the Turn of a New Century, AIP Report No. R-439.

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