

Abstract Preview of 'Professional Development for TAs' (CRZCTK)

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Preview of your abstract

Teaching Assistant Role and Perceptions: Assessment of Professional Development to Support Project-Based, Guided Inquiry Approach in General Chemistry Labs **L.B. Wheeler**^s <lsb4u@virginia.edu>, **J.L. Maeng** <jlc7d@virginia.edu> and **B.A. Whitworth** <baw3tj@virginia.edu>, University of Virginia

Teaching Assistants (TAs) play an important role in quality undergraduate education (e.g. Kendall & Shussler, 2013); however, many TAs have little teaching experience (e.g. Sharpe, 2000) and should be supported in their teaching. Little research exists on professional development (PD) to support TAs in reforms-based instruction (Roehrig, Luft, Kurdziel, & Turner, 2003), which this study addresses. This study assesses a PD for TAs implementing a project-based guided inquiry approach to general chemistry labs. The PD was developed based upon characteristics of effective K-12 PD (e.g. Desimone, 2009) and characteristics of TA training (e.g. Addy & Blanchard, 2010). Participants included 5 undergraduate TAs and 8 graduate TAs. Participants completed a week-long PD (29 hours) prior to the fall 2013 semester and weekly meetings (35 hours) during the semester. In lab, the TAs facilitated student groups' planning, experimenting, and presenting of each real-world problem. Data collection included pre/post/delayed-post surveys and interviews to assess changes in participants' content understanding, beliefs about teaching, and perceptions of the PD. The pre-survey contained additional questions on demographics and prior experience. Multiple choice content questions were analyzed using t-tests. Open-ended survey questions and interviews were analyzed using systematic data analysis (Miles & Huberman, 1994). Results indicated participants' content knowledge significantly improved following PD and was maintained over the semester. Participants' beliefs about teaching shifted from didactic to facilitator after the PD and most maintained this belief after the semester. Further, there may be a relationship between participants' content and beliefs. Participants' views on their role aligned with their expected role; however, some participants also viewed their role as affective. Helpful PD components included modeling, performing experiments, and logistics. Less helpful PD components included educational theory and content-based discussions. Future research will focus on examining TA practice, student outcomes, and transferability of this PD model to other reforms-based curricula.

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