

Abstract Title:

PhD Students Meet the Realities of "visiting scientists" in Middle Schools: Learning to Teach, Teaching to Learn

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Abstract:

The Indiana Interdisciplinary GK-12 program matches PhD students with middle school teachers in a year-long collaborative program designed to enhance the communication and teaching skills of graduate fellows, and to bring new perspectives, role models and content knowledge to science classrooms. Here we report on a highly informative example of the types of transformations experienced by fellows. The fellows had been working closely with particular teachers and classrooms for nine weeks when they experienced a "visiting scientist" outreach program put on by a university. Through summer inquiry workshops and in-depth interactions with teachers and students, the fellows had developed a strong sense of appropriate ways to engage with what they had come to think of as "their" middle school students. Email sent to the visiting scientists and a focus group discussion revealed that fellows were distressed by the ways in which the visiting scientists failed to relate to the level and learning styles of the students, presented material in confusing and highly abstract ways using unfamiliar jargon, and made no attempt to work with teachers on pre- and post- visit activities to place their visit in context for the students. The visiting scientist program provided the fellows with a very immediate experience that reinforced and made real what they had been learning about pedagogy, and that demonstrated the responsibility they felt for the learning environments of "their" students. Through these sorts of experiences, graduate fellows are developing a unique and rich foundation for future success in teaching and learning.

Keywords:

teaching, learning, graduate education