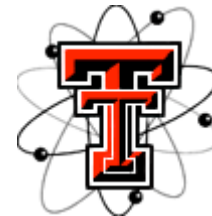




Physics Colloquium



Thursday, March 2nd at 3:30 pm in SC 234

Dr. Lin Ding

*Department of Teaching and Learning
The Ohio State University*

Epistemological Progression Trend from Preservice to In-service Physics Teachers

In this study I used a cross-sequential method, combining both longitudinal and cross-sectional designs, to investigate an epistemological progression trend from preservice to in-service physics teachers. Six cohorts of participants, who either were attending or had completed an undergraduate teacher education program at a major Chinese university, were studied. These cohorts ranged from incoming freshmen to 2nd-year in-service teachers. Drawing on the mixed-methods approach, I first conducted pre-post measurements using Colorado Learning Attitudes about Science Survey to gauge the participants' epistemological changes over an academic year. Semi-structured interviews immediately followed to explore underlying mechanisms behind such changes. Results showed that the epistemological trend did not increase monotonically. Instead, there was a noticeable decrease among the incoming freshmen in their 1st-year undergraduate studies and a burst of increase for the outgoing seniors during their 1st-year teaching. Interviews revealed that competitive learning environment, increased content difficulty, and fast-paced instruction were major factors that negatively influenced incoming freshmen's views about physics. Conversely, a role change from student to teacher and decreased content difficulty in high school positively impacted outgoing seniors' views about physics and learning.

Refreshments at 3:00 pm in SC 103