

ZMATH 2010f.01041

Everett, Susan A.; Otto, Charlotte A.; Luera, Gail R.

Preservice elementary teachers' growth in knowledge of models in a Science Capstone course.

Int. J. Sci. Math. Educ. 7, No. 6, 1201-1225 (2009).

Summary: We used four different methods to determine the best means of assessing over 200 preservice elementary teachers' growth in knowledge of models and their use in K-8 classrooms while participating in the Science Capstone course that focused on the unifying themes of models in science. Each assessment method probed a different aspect of models (from growth in scientific use to need for greater emphasis on the role and use of models) and each used a different method of gathering student responses (Likert-type responses to concept maps). We determined that growth in student knowledge was demonstrated by all instruments, but some instruments were more useful than others for determining preservice elementary teachers' prior knowledge as well as growth in knowledge of models necessary for K-8 teachers.

Classification: M59 B53 C39

Keywords: knowledge of models; nature of models; preservice elementary teachers; scientific models; types of models

doi:10.1007/s10763-009-9158-y