
The purpose of this study was to investigate changes in preservice teachers’ understanding of the nature of science (NOS) as a result of four activity-based interventions that represent three instructional approaches used in a middle grades science methods course. Ten participants’ understanding of NOS and their perceptions about the activity-based interventions were investigated. Data were collected using open-ended questionnaires and in-depth interviews before and after the interventions. Written artifacts and recorded group discussions were collected during the interventions. The results of this study showed that inclusion of various approaches to teaching NOS can contribute to developing preservice teachers’ understanding of NOS. The activities complemented each other in the teaching of the NOS components. In addition, the preservice teachers perceived that the four interventions were helpful in improving their understanding of NOS and in preparing them for future teaching.