

**Student Understanding of Science and Scientific Inquiry (SUSI):
Revision and Further Validation of an Assessment Instrument**

This paper presents the revision and validation of the *Student Understanding of Science and Scientific Inquiry* (SUSI) instrument based on the data collected from pre-service teachers in the USA, China, and Turkey. Built on the current national and international science education standards documents and existing literature in science education, SUSI blends Likert-type items and related open-ended questions to assess students' understanding about how scientific knowledge develops. It is suggested that SUSI can be used as either a summative or a formative assessment tool in small or large-scale studies. SUSI will also be most suitable for conducting cross-cultural comparison studies. The combined quantitative and qualitative methods enhance the sensitivity of the instrument for detecting cultural influences.