

Teachers' Views of the Nature of Science: A Study on Pre-Service Science Teachers in Sabah, Malaysia

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Science education in Malaysia nurtures a science and technology culture by focusing on the development of individuals who are competitive, dynamic, robust, resilient and able to master scientific knowledge and technological competency. To this end, the science curriculum in Malaysia gives conscious emphasis to the acquisition of scientific skills and thinking skills, the inculcation of scientific attitudes and noble values besides the acquisition of scientific and technological knowledge and its application to the natural phenomena and students' daily experiences. However, the nature of science (NOS) is a topic that is not intentionally mentioned in the science syllabuses, even at the initial teacher preparation level. The purpose of this study was to gauge the views of NOS among pre-service science teachers in Sabah, Malaysia. This study also aimed to ascertain whether there is any significant difference in pre-service science teachers' views of NOS based on their gender and the types of schools in which they teach. This was a non-experimental quantitative research study and a sample survey method was used to collect data. Teachers' views of NOS were measured by the 'Students Understanding of Scientific Inquiry' (SUSI) instrument. This instrument aimed to elucidate teachers' views about the seven aspects of NOS and scientific inquiry which comprise 'Tentativeness', 'Observations and Inferences', 'Subjectivity and Objectivity', 'Creativity and Rationality', 'Social and Cultural Embeddedness', 'Scientific Theories and Laws', and 'Multiple Methods of Scientific Investigations'. Research samples were selected by using a two-stage cluster random sampling technique. The

independent sample t-test was used to test the stated null hypotheses at a specified significance level, alpha = .05. It was found that pre-service science teachers' views of NOS, according to SUSI subscales in descending order, were: 'Tentativeness', 'Observations and Inferences', 'Creativity and Rationality', 'Subjectivity and Objectivity', 'Multiple Methods of Scientific Investigations', 'Social and Cultural Embeddedness', and 'Scientific Theories and Laws'. This study also found a significant difference in the views of NOS among pre-service science teachers based on gender and the types of schools in which they taught.

Key words: Views of the Nature of Science; Pre-Service Science Teachers