6 - Nature of Science: History, Philosophy and Sociology of Science | Empirical

SP - (15961) - PRESERVICE TEACHERS' VIEWS OF THE NATURE OF SCIENCE: EXPLORING THE 'SOCIAL EMBEDDEDNESS' TENET

Helen Georgiou (Australia)¹

1 - University of Wollongong

Short Abstract

The 'Nature of Science' (NOS) movement has powerfully advocated for a focus on describing science knowledge and the way science works, as part of students' science education. Whilst the field has been extensively theorised, and there exist validated assessments for capturing students' NOS views, analytical processes remain underdeveloped (Rudge & Howe, 2013). In this paper, pre- and post-tests for assessing preservice teachers' view of the nature of science using VNOS-C were analysed. The results from standard analytical approaches revealed that preservice teachers' ideas were overwhelmingly Naïve or Mixed, and that these did not change over the course of the semester. To better capture nuances in these results, a new conceptualisation is introduced. 'Specialisation' from a framework known as Legitimation Code Theory (Maton, 2014), was used to conceptualise one element of the Nature of Science, its degree of 'social embeddedness'. The analysis revealed that students acknowledged at least some degree of social embeddedness but that this varied across students and contexts. The social embeddedness tenet has been shown to be amongst the more difficult notions to develop in students and preservice teachers. Providing a more detailed analysis will help make these ideas more explicit, thus helping to develop more 'sophisticated' views for pre-service teachers and their future students.