CREATIVITY IN SCIENCE EDUCATION

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The rapidly changing nature of the global society and the increasing levels of uncertainty of future developments has increased recognition of a world that is increasingly 'in the making' (Haraway, 1991). The problems that confront the Planet require different approaches to "traditional" science. New thinking in relation to complex, high stakes socio-environmental problems have resulted in suggestions for new ways in which the scientific community at large deals with such problems, for example by enhancing interdisciplinary dialogue (Max-Neef, 2005). However it has also been argued that problems arising at the interface between science and policy, with high levels of uncertainty and high stakes require the involvement of an extended peer-community (Funtowicz and Ravetz, 1993). A multiplicity of legitimate voices is brought to bear upon the consideration of techno-scientific issues, an approach which is seeking to promote creative solutions to problems which would escape a purely scientific approach (Pereira and Funtowicz, 2013). In this scenario, creativity as the ability to respond to changing and often conflicting conditions has been recognised as an important ability for the future. Creativity is recognised as a higher order skill and is at the apex of Bloom’s revised taxonomy, so educational establishments need to consider ways in which creativity can be incorporated into practice to stimulate and develop creativity in students as well as a means to engage, motivate and build the conditions for building civic dialogue in the face of complex socio-environmental conditions. This conceptual paper provides a foundation and rational for the British Academy Funded project examining creativity in science education, of which details and preliminary findings will be presented in paper four.


