The assessment of creativity and innovation in Design and Technology

Jessica Munro, Vikas Dhawan
Cambridge Assessment, Cambridge, UK

Background
There is extensive debate as to what creativity and innovation mean in the education context. Although both terms are commonly referred to in curricula and assessment documents across the European Union, they are rarely defined. Consequently, it is debatable whether either concept can be validly or reliably assessed, particularly within the constraints of high-stakes examinations such as the General Certificate of Secondary Education (GCSE) in the UK. This has implications for the assessment of traditionally 'creative' subjects such as Design and Technology. Although some research, notably the Goldsmiths' e-scape project, has attempted to create a new form of assessment for Design and Technology that encourages creative and innovative design, it is unclear whether a suitable form of assessment can incorporate these concepts whilst also fulfilling the subject criteria and assessment objectives as defined by the regulator (Ofqual). Furthermore, GCSE Design and Technology is currently being redeveloped as part of ongoing qualification reform, providing an opportunity for awarding bodies to create new models of assessment. This study investigated existing definitions of creativity and innovation and compared the different models of assessment currently used in Design and Technology related qualifications in the UK and internationally.

Research Methods
The study had three strands of analysis:
(1) A literature review of existing definitions of creativity and innovation.
(2) An investigation of models of assessment in Design and Technology in Singapore, Victoria (Australia), New South Wales (Australia), New Zealand and Finland.
(3) A comparison of existing models of assessment in UK GCSE Design and Technology specifications across the four main awarding bodies (OCR, Edexcel, AQA and WJEC).

Findings
The study identified five attributes of creativity and innovation definitions that can be applied within assessment. Additionally, all of the international qualifications investigated refer to creativity or innovation but these concepts are rarely directly assessed. A broad range of assessment types are used but the use of internal, teacher-designed assessment is common. In the GCSE specifications investigated, awarding bodies were given some flexibility over the weighting of assessment objectives, leading to some overall variability in assessment models. Furthermore, there is notably more external assessment than in the international qualifications. These findings have implications for the assessment of Design and Technology as if creativity and innovation are to be directly assessed, it is essential that there is a common understanding of these concepts in order to ensure both reliability and validity.