Editorial

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We have embarked on a risky journey: tackling 'creativity' in technology-enhanced learning. We say 'risky', since there are uncertainties surrounding this concept of 'creativity'. How do we define it? What activities does it refer to? How do people develop it? Many authors have tackled such questions and done so from a variety of vantage points. Perhaps the most comprehensive research review is provided by Sawyer (2006), who synthesises individualist and sociocultural views on creativity. He argues in favour of approaching the topic from an interdisciplinary perspective. Hence, 'creativity' is not a singular term or manifestation and it is relevant not only to the arts but to all disciplines and, indeed, all aspects of human life. The notion of creativity in education must similarly be viewed from a more holistic perspective: that is, as interrelatedness between 'teaching creativity' and 'teaching creatively', rather than a polarisation of the two concepts (Jeffrey and Craft, 2004).

In compiling this special issue on 'Creativity in TEL', we acknowledge this need for more holistic and interdisciplinary research around creativity. In relation to creativity in TEL, we view this idea as about 'a novel design in TEL' and about 'a technology-enhanced design to support students' creativity'. Our working definition for the concept of 'creativity' here combines the approach of "creativity is combination" (Sawyer, 2006, p.7) and the socio-cultural approach that claims: "creativity is the generation of a product that is judged to be novel and also to be appropriate, useful, or valuable by a suitably knowledgeable social group" (Sawyer, 2006, p.8).

First, "creativity is combination." This refers to the idea that nothing is entirely new per se and that all thoughts and concepts exist in relation to others – any novelty is in how those thoughts and concepts are combined, blended or re-contextualised and expressed. Human imagination has the power to combine, change and create anything, everywhere (Vygotsky, quoted in Thompson, 2012 p.4). Moreover, creativity is not some mystical state of mind but is very close to having an 'exploratory', 'flexible' mind: to see things from multiple perspectives and establish new connections towards an innovative and thus creative unity (Tan, 2002; Lackovic, 2013). In relation to this "combination" view, combining theoretical and practical perspectives towards learning with technology resources in a novel way is seen as a creative endeavour for TEL. Equally, learning frameworks combining theory, practice and technology resources to support learners' creativity are also a part of the 'Creativity in TEL' paradigm, just the other side of the same coin, and much less researched.

Second, creativity is not confined just to individuals. It applies to professional and learner groups (such as researchers in TEL or students) and organisations: individuals build on each other's knowledge and work to generate creative blends. Cook et al. (2006) report a study in which they put students into the very "centre of educational design activities" and describe how this created a notion of "team enhanced creativity", where a feeling of discovery created a positive learning experience. Being creative is therefore very much a social phenomenon. It is embedded in society and culture, resonant with a sociocultural approach to learning. In sociocultural environments where there are users and an exchange of information, what is at one moment considered creative can soon become common practice. In a similar vein, Gardner (1993, p.35) sees creativity as forming "…new questions in a domain in a way that is initially considered novel": these, in time, get infiltrated into the culture as a common way of doing things. Hence, individual creative acts are a part of - and influenced by - their complex socio-cultural surroundings. This is similar to De Haan's (2009) definition of creativity in general as: "the ability of individuals to generate new ideas that contribute substantially to an intellectual domain." (p.173). We also acknowledge that the term in relation to learning focuses on realising learners' potential and developing initiatives to make learning more creative (Sefton-Green et al., 2011). In addition, Cremin et al. (2006) suggest the notion of creativity as "possibility thinking", in particular in relation to young children, encouraging "what if" and "as if" thinking.

This special issue provides an opportunity for both early career and established researchers to publish their work as it relates to the theme of "Creativity in TEL". So, Ihamäki (this issue) gives an account of creative geography and history outdoors learning supported by GPS devices and a geocaching app, focusing on primary school learners' reported emotions. Positive emotions relate to stronger learner satisfaction and hence to an increased possibility for learners to be more motivated to learn local history and geography. Another study looking at primary school children is that by Crook and

Harrison (this issue). The authors report on how a wide range of TEL resources can be orchestrated to stimulate, mediate and sustain young learners' sense of creative identity (as 'inventors') both on and off screen. Rashid and Rahman (this issue) present how they leverage social networks for creativity in online mentoring for teacher-trainees. Mattera, Baena, Ureña and de Fátima Moreno (this issue) present a study in Higher Education on the use of Videocast to support learners' self-regulated experiential learning. They point at learners' self-evaluation of the expected and real improvement in eight traits, "creativity and innovation" considered as one of those traits. In another Higher Education paper, Almeida, Pedro and Santos (this issue) provide a descriptive account on how creativity is brought to the learning experience in Portugal's biggest online learning platform SAPO. Finally, Ninaus et al. (this issue) explain in detail what is happening neurophysiologically when using creative learning environments like serious games.

Although creativity is indisputably important for living in a world ruled by 'innovative solutions' and the excesses of 'information overload' (Dede, 2007), TEL research has not tackled the issue of creativity to the extent that might be expected. Hence, there is an urgent need for more creative technology-supported educational designs and communication at all levels, especially in Higher Education (Lackovic, 2010). It is clear that the educational theme of 'creativity' is very real, but also that the practices of 'technology enhanced learning' are very real; yet we still have little research that brings them together. Research on 'creativity in TEL' is in its very early days and, therefore, extra effort is needed to define the focus and scope of such a field. The present special issue is a humble contribution to that effort: one which we hope will help the field grow and become more fertile. Indeed, we urge further research to help understand better the relationships between creativity, technology and learning; considering in particular the processes and affordances of those digital tools and learning designs which support learners' creativity.

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