



technology, children, schools and families

Creativity in the school

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Introduction

Creativity in the school: from drought to tsunami

Metaphors are often used to describe creativity, and water is often a theme. For example, work by Csikszentmihalyi (1996) on the 'flow' experienced by artists during their productive work, sits alongside the notion of 'navigating the unknown' (Bannerman et al, 2006) as again experienced by artists. Creativity has been described as a voyage of discovery (Craft, 2008a). Alexander Graham Bell, inventor of the telephone, was said to have thought of creativity as involving a 'dive' into an unfamiliar place, and Jung spoke of water representing the depths of the unconscious which provide a stimulus to creative impulse.

When it comes to creativity in schools in particular, the second half of the 20th century can be seen as having experienced first a drought (following the introduction of a National Curriculum in 1989, subsequently re-framed in 1999, which rejected child-centred pedagogical and curriculum practices) and then the beginnings of a tsunami of opportunities for creativity in terms of pedagogy, curriculum and learning. The choice of tsunami rather than flood is deliberate. Tsunamis have vast power, caused by seismic underpinning shifts in the earth's crust, and their potential for destruction is significant. A tsunami will affect deeply, and perhaps fundamentally, human civilisations that it washes over. In a similar way it is suggested here that the beginnings of a tsunami are caused by underpinning shifts in the values-plates which underpin educational provision, and the changes that might be wrought by the powerful waves of creativity in education which may result, could ultimately, like a real tsunami, alter the landscape of the classroom and education fundamentally.

Keywords: creativity, school, university, curriculum, practice, education

Unleashing creativity

During the last part of the 20th century and early part of the 21st, creativity has been seen to be increasingly significant in education, within cultural policy discussions, starting with the landmark advice of the National Advisory Committee on Creative and Cultural Education (NACCCE, 1999). Convened by Sir Ken Robinson, NACCCE synthesised empirical evidence from researchers such as Woods and Jeffrey (1996), Craft (1997), and Harland et al (1998) who, during the 1990s, had distinguished between creative teaching (ie creativity in pedagogy) and teaching for creativity (with a focus on the development of creativity in the learner). The key findings from this work were that 'creative learning' involves children experiencing innovation in the classroom, control over activities and their evolution, together with a sense of relevance and ownership in their learning - and that these four features are also characteristics of creative teaching (Jeffrey and Woods, 2003).

NACCCE recommended the development of guidance on creative teaching and learning. This led to a number of years of work by the Qualifications and Curriculum Authority to develop such non-statutory guidance, based on a four year development and research process across the curriculum, across the 4-16 span, and in a large number of schools (QCA, 2005, 2008a, 2008b). From this non-statutory guidance has flowed multiple innovations in curriculum, learning and pedagogy within, and beyond schools, all of which are informed to differing degrees by the definition of creativity given in the NACCCE Report, and the way that it was framed in relation to culture and as a democratic concept. NACCCE saw creativity as 'imaginative activity, fashioned so as to produce outcomes that are original and of value' (NACCCE, 1999, p29). The democratic approach adopted, together with the linking of creativity with culture, represented significant shifts away from a view of creativity as only attainable by the gifted, and toward a view of learning as empowerment in and beyond the classroom (for example, Jeffrey and Craft, 2001; Sefton-Green, 2008).

From 2002, the notion of 'creative learning' was given added momentum by the establishment of Creative Partnerships – another of NACCCE's recommendations. Creative Partnerships has promoted creative learning as an agenda, seeking to foster imaginative, inventive thinking and engagement through active, meaningful learning, across the curriculum; often involving, but not always restricted to, the arts. As will be discussed later, whilst the term 'creative learning' has proved to be problematic (Craft, 2005; Cochrane et al, 2008), it nevertheless remains in currency, seeking to highlight strategies and approaches to engage children and young people in stimulating, meaningful learning, developing generative and transformative dispositions and behaviours (Sefton-Green, 2008). Such strategies and approaches are harnessed so as to address a concern with student disengagement as one of the challenges for education identified as Europe-wide (Kendall and Kinder, 2005).

Creativity as a means of navigation?

In response to the backdrop of rapid social, economic, technological, spiritual and environmental change, creativity is frequently framed as having an ameliorating role to play in the classroom, through which to weather the multiple storms and in which to ride the waves of policy affordances for creativity.

A feature of the way in which creativity has been interpreted and adopted with and in schools is the expansive 'use-map' of approaches and values that it in practice encompasses, which as Banaji, Burn and Buckingham (2006) note, results in at least nine distinctive discourses being in currency at the present time in respect of creativity in education. Banaji et al (ibid) characterise these as:

Creative genius rhetoric – rooted in the European Enlightenment, this post-Romantic perspective emphasizes extraordinary creativity in a range of domains
Democratic and political rhetoric – rooted in the Romantic era this perspective sees creativity as offering empowerment

The notion of creativity as ubiquitous - which sees creativity as pervasive
Creativity as a social good – emphasizing inclusion, multiculturalism, and creativity seen as necessary to 'a good life'
Rhetoric which emphasizes the economic imperative – drawing on neo-liberal discourse around the economic programme
Approaches emphasizing play – with roots again in Romantic thought, this perspective sees childhood play as the origin of adult creative thought
Approaches focusing on creativity and cognition – stemming from 20th century Piagetian and Vygotskian work, emphasizes cognitive processing
A discourse around creativity and new technologies - which emphasise the affordances of these in relation to creativity
The creative classroom – this discourse in particular draws connections between individual and collective creativity in the classroom, relating knowledge, skills and pedagogy to what it is to be creatively human.

What is notable is the breadth of these discourses, which span on the one hand those emphasising exclusivity and competition, and the capacity to thrive in and contribute to a capitalist market economy, and at the other end of the spectrum, inclusion, democratisation and empowerment. The discourses reflect public policies and teaching and learning practices, as well as commentary on the role of creativity in education. The potential tensions in evidence across the spectrum of discourses can be seen as mirroring a key tension between discourses of, on the one hand, standards and on the other, creativity (Craft and Jeffrey, 2008) evident in education more generally. The powerful drive to raise standards and to make performative judgements about individuals and about schools, can be seen as being in tension with an almost equally powerful commitment to nurturing ingenuity, flexibility, capability in generative engagement (ie in creative behaviours). Researchers have demonstrated this in relation to younger learners (Troman, 2008), secondary aged learners (Nicholl and McLellan, 2008), those in post-compulsory education (Simmons and Thompson, 2008), and in higher education (Clouder et al, 2008; McWilliam and Haukka, 2008).

Creativity as enabling a personalised journey or voyage

Concentrating on the aspect of the policy climate which focuses on creativity, the two most recent curriculum policy manifestations of creativity implemented from September 2008 in early years settings and Key Stage 3 (DCSF, 2008), are the Early Years Foundation Stage (DfES, 2007; DCSF, 2008) which continues to emphasise the significance and reach of creativity, and the Key Stage 3 curriculum which includes a framework of personal, learning and thinking skills (PLTS) that it encompasses. Each in turn offer teachers a means of personalising learning and thus to encourage student engagement, or 'deep learning' (Hargreaves, 2008).

Creativity, in these two most recent curriculum frameworks, is positioned as 'ubiquitous', and as 'universalized' in terms of who is capable of developing it and in terms of its location in relation to domains of knowledge. The message seems to be that creativity is for everyone and is everywhere, and that creativity enables engagement in personal trajectories, and (consequently) 'effective learning' – itself a problematic concept in relation to creativity (Craft, 2005).

The wash of the tide and the pull of currents

As the tide has washed creativity back into focus, commentators have suggested (Craft and Jeffrey, 2008) that there are three 'drivers' of this shift in emphasis, through which the currents of movement and development can perhaps be detected.

Firstly, the 'democratic' view which emerged toward the end of the 20th century saw creativity as inherent in human behaviour as an everyday capability (NACCCE, 1999), life-wide and also domain-wide, and necessary (Craft, 2005). This discourse contrasted

with the earlier interest in 'high c' creativity (Craft, 2001) in valuing 'everyday', or 'little c' creativity, and separating this from a specific domain context.

Secondly, explicit connections were made by Government between creativity in the classroom and the economy, for example in an initial positioning document (DCMS, 2001) and then a creative economy strategy document (DCMS et al, 2008) reflecting a view of labour as involving creativity (Buckingham and Jones, 2001).

Thirdly, following the NACCCE elision of creative and cultural development and prompted by a second paper, *Culture and Creativity: The Next Ten Years* (DCMS, 2001), Government funded a large-scale programme of curriculum development, Creative Partnerships, which invested in education projects involving community artists of all types to both generate creative learners and cultural cohesion. This has been extended in England to a five-hour a week 'Cultural Offer' (DCSF, 2008) which is to encourage young people's participation as producers of, participants in and spectators of culture to be overseen by a Youth Culture Trust (Creative Partnerships, 2008) enabling young people, through partnership, to 'find their talent'. This policy presaged the re-framing of the Creative Partnerships programme as one focusing on 'cultural learning' (McMaster, 2008). The conflation of creativity with culture in education is exemplified by a recent government report: *Nurturing Creativity in Young People* (DCMS, 2006a) and the Government's response to this (DCMS, 2006b). The mixed creative and cultural programme recommended by Roberts was also reflected in the findings of a subsequent Parliamentary Select Committee (2007) and taken forward by Government (House of Commons Children, Schools and Families Committee, 2008).

These three drivers bring with them currents that have the potential to erode and reshape the performative, standards-orientated landscape to one which offers a more significant place to a concern with how, where and what is learned (Gardner et al, 2008).

Investigating creativity: deep underpinning currents

Whilst the currents of empowerment and of powerful connections between creativity and culture are awash, there are significant challenges inherent in the tumult of possibilities for framing and developing creativity in schools and beyond. These arise from what are sometimes irreconcilable underpinning discourses (the deep currents) that influence the way in which creativity is constructed in practice in the classroom. Research and development in creativity reflects a range of perspectives drawn from:

- **specific epistemological and ontological positions** informing enquiry (there is a huge diversity in approaches from those exploring creativity from a positivist perspective using quantitative methodological approaches, to those rooted in the interpretive tradition adopting qualitative approaches to enquiry – the two positions are irreconcilable in that one sees knowledge as 'objective' and the other as 'interpreted' or 'situated')
- **the discipline of the field of enquiry** (for example, psychology, sociology, economics, the arts, philosophy, cultural studies; whilst psychology has dominated much of the work on creativity in the past, the ascendance of social psychological, sociological and cultural studies-informed approaches is notable – and each discipline brings with it not only dominant epistemological and ontological norms which affect the culture of the discipline and of enquiry in it, but also differing foci and interests)
- **the focus** of the enquiry (for example, a focus on the economy, on employment, on inclusion, on 'development', on 'sustainability'; as Banaji et al illustrate in their analysis discussed above, there are multiple foci evident in the focus of discourses of creativity – some of which may be mutually exclusive)
- **the cultural context** in which the research occurs (much of the most influential work on creativity has been undertaken in a Western context and yet there is some inter-cultural work which demonstrates distinctive differences between cultural approaches to creativity).

The powerful reach of creativity research by North American (mainly) quantitative psychologists, during the mid 20th century in particular, now co-exists alongside an

increasingly interdisciplinary, qualitative/mixed-methods approach to studying creativity, in broader cultural contexts in Europe, South America, the Far East and Middle East. The influences of social anthropology and social psychology are apparent in research questions and sites and methodologies. Enquiry foci in part reflect the disciplinary context of the work, but also broader cultural values around what creativity 'is for', spanning, for example, 'personal development/expression' to 'personal survival' to 'economic development' or 'global survival'.

These background influences on, or deep currents in, creativity in education frame pragmatic initiatives. Examples of such initiatives in England include the framing of 'Creativity and Critical Thinking' as an aspect of learning and development, and Creative Development as an area of learning within the Early Years Foundation Stage (for children from 0-5) and of 'Creative Thinkers' within Personal, Learning and Thinking Skills in the KS3 curriculum (for 11-14 year olds), both implemented from September 2008. Other initiatives, again in England, would include national large scale projects which tend to focus on creative partnership, discussed below. Each pragmatic initiative reflects a unique set of perspectives on epistemology/ontology, discipline, focus and culture, affecting, for example, the extent to which creativity is understood as an individualised or a collective process, the extent to which creativity is seen as a domain-specific or as a generalised process, the emphasis laid on process and product, the extent to which the arts and culture are seen as core to it, the extent to which assessment of creativity is seen as desirable or possible.

Emergent from the interpretivist perspective on knowledge, a powerful draw on the arts and cultural studies, an engagement/empowerment focus and the Western cultural context, in England we have seen, during the early years of the 21st century, the identification of a significant role for creative partnership, documented by a number of researchers (eg Griffiths and Woolf, 2008; Jeffery, 2005; Hall et al, 2007; Galton, 2008; Pringle, 2008). A feature of the work on partnership is the emphasis on adults with different disciplinary backgrounds working together – and also adults other than teachers working with children and young people to nurture their creativity.

Journeying in partnership?

Working with those who have expertise from beyond the school to nurture the creativity of children and young people has been a feature of much creativity work in schools, especially (although not exclusively) that developed through Creative Partnerships as an initiative.

Whilst there is a long history of adults other than teachers working in schools, the nature of this engagement seems to be distinctive with a focus on an apprenticeship-based pedagogy (Griffiths and Woolf, 2008). Those working to understand how partnership works in practice often draw on socio-cultural ideas around the development of a community of practice (Wenger, 2005) and the notion of apprenticeship developed by Lave and Wenger (1991), in which the novice is introduced by the expert to the practices of the domain in ways that encourage control and ownership by the child; a scaffolded approach which results in the novice gaining expertise in know-how as well as the propositional knowledge needed to become more proficient in the task in question (eg Dillon et al, 2007).

The distinctiveness of pedagogies adopted by teachers and creative partners is increasingly evident (eg Hall et al, 2007; Galton, 2008; Pringle, 2008). Each of these studies highlights the tendency for creative partners to adopt a co-constructive, co-participative pedagogy, working alongside students to support the realisation of their ideas, acting as coach and facilitator compared with teachers' practices being more oriented toward the acquisition of propositional knowledge, the maintenance of discipline and driven by assessment-orientated outcomes. There is some evidence that students'

perceptions of teachers' pedagogy is more negative than their perception of the pedagogy of creative partners (Galton, 2008). From his small-scale mixed-method study into eleven partnerships in six schools (three secondary and three primary, in three Creative Partnerships regions), Galton (ibid) notes that the approach of the creative partner tended more toward 'guided discovery' than 'cued elicitation' (Galton, 2008, page x).

Whilst it is argued by others that this polarization is not conceptually necessary (eg Jeffery, 2005; Chappell et al, 2008), the distinction remains live in classrooms and raises challenging questions regarding future educational provision in relation to the models of learning and pedagogy which underpin them. Especially evident in creative partnership is the construction of meaning by the less experienced alongside the expert practitioner; a model of what Bruner (1986) called 'scaffolded' learning through modelling, cueing and challenging. Bruner emphasised that these processes can be developed in peer-to-peer learning where one student is more able than the other in a particular area, and is sufficiently skilled socially to support the learning of a less skilled peer.

The extent to which such constructivist creative partnership is also evident in other inter-generational learning, both within and beyond schools, may also need further investigation. This is particularly important as learning 'outside of the classroom' increases in significance. Evaluation, for example, of the NESTA-funded programme, Ignite! which worked with highly creative students aged 10-15 outside of the classroom using such inter-generational engagement through partnership within immersive laboratory-style exploration, found the programme to be particularly effective at nurturing generative thinking and, with it, self-esteem (Craft et al, 2004). In particular, the study noted that "The interactions between adults and the young people were of a high quality. They often gave young people decision making authority so that the control was theirs" (Craft et al, 2004, p10). This study, however, which also researched the impact of the Ignite! programme for 16-21 year olds, also documented some of the challenges faced by young people in negotiating the boundaries of school/college and out-of-school activity, highlighting the need for much greater permeability between the two. This is one of the foci of the recently published 'Even Better Children's Plan' by the Common Threads Alliance (2008), and whilst there has been a great deal of policy and practice development in terms of creativity in education, at policy level this is less visible outside of the classroom; an area which, in the context of considering greater flexibility in educational processes, needs re-visiting. The work of organisations such as Antidote, the Bristol Education Initiative, Eastfeast, 5x5x5, Humanscale Education, Ignite!, Performing Arts Lab (PAL), Personalised Education Now (PEN), The Potential Trust, Red Balloon Learner Centres, Schome and the Steiner Waldorf Schools Fellowship all contribute to alternative visions for education which emphasise intergenerational and peer-to-peer learning through pedagogies which enable adults to act as 'lead learners' (Common Threads Alliance, 2008). The considerable contributions made to the fostering of creativity in learning outside the classroom by cultural and arts venues as well as field sites for residential and day experiences need closer interrogation with a particular focus on pedagogic practices and the student experience.

Tensions and dilemmas en voyage

A number of tensions and dilemmas arise from the incommensurate mix of underpinning perspectives that inform on creativity in education, of which six dilemmas, are discussed briefly here. Each has practical implications for teaching and learning, and for exploring beyond current horizons.

Recognising sites of creativity: Whilst some argue creativity can be understood as a 'transferable skill' across domains (Woods and Jeffrey, 1996; Mardell et al, 2008), others argue that creativity cannot be understood without reference to the specific disciplinary area in which it occurs whether this be within or beyond schools (Amabile, 1990;

Chappell, 2006, 2007; Csizsentmihalyi, 1999; Gardner, 1993; Miell and Littleton, 2008; Vass, 2004; Wallace and Gruber, 1989). Still others argue that the creative impulse is identical across domains, in that it ultimately involves Possibility Thinking (Craft, 2000, 2001, 2002) – the transformation from ‘what is’ to ‘what might be’ through asking ‘what if?’ in appropriate ways (Craft, 2001; Burnard et al, 2006; Chappell et al, 2008; Cremin et al, 2006). Possibility Thinking, it is argued (Craft, in press) is at the heart of all creative engagement and the contention is that whilst the manifestation of creativity is diverse according to the domain of application (Clack, 2008; Craft, Cremin, Burnard, Chappell, 2007; Craft, Chappell, Cremin, Burnard and Dragovic, 2008; Jeffrey and Craft, 2006) the at-heart impulse is the same. The studies undertaken by this team in educational contexts from the early years through to secondary, suggest that the concept of Possibility Thinking has traction in creative engagement across contexts; it also demonstrates that in specific domains (those studied so far are mathematics and dance), Possibility Thinking manifests distinctively. The tension made visible on this continuum, between the disciplinary-root and the generalizable view, is therefore a complex one. It is important, as far as nurturing creativity within and beyond the classroom is concerned, to be clear about how sites of creativity are viewed. For some, the tension between disciplinary focus and creativity as generalized, is incommensurable.

Defining creative learning: the emergence of the term ‘creative learning’ from a meld of discourses, and in particular the harnessing of this term to creativity in the context of ‘partnership’ and more recently the context of ‘cultural development’, has produced serious challenges. These include trying to understand in practice what creative learning is, and how it differs from ‘effective learning’ (Cochrane et al, 2008; Craft, 2005; Craft et al, 2006; Craft, Cremin and Burnard, 2008; Jeffrey and Craft, 2004; Sefton-Green, 2008; Moran, 2008). This ongoing debate has resulted in agreement that creative learning is not a distinctive process in itself, being so close to meaning-making as defined in a constructivist view of learning and being seemingly confused in recent policy initiatives such as the recent consultation undertaken by Tate and Creative Partnerships (2008) resulting in a children’s Manifesto for a Creative Britain. The continued use of the term ‘creative learning’ as far as schools and other sites of learning, may be unhelpful, although the distinction between creative teaching and teaching for creativity appears to remain a useful one (Jeffrey and Craft, 2004).

Implications of adopting a ubiquitous, marketized view of creativity: the view of creativity which accepts without question economic development as a driver, is at the least questionable, in the assumption that more and new is better than re-use, mend and adapt, and in the ‘throw away’ culture that contributes to environmental degradation and the over-use of resource, together with a social, spiritual and cultural cost (Craft, 2005, 2008b). For a marketized view of creativity with its emphasis on individuality, consumption, acquisition, competitiveness and success in a global marketplace forces the disappearance from view of alternative approaches which emphasise sustainability, spirituality, co-operation and understanding. Such blindness could be seen as foolhardy at a critical point in the environmental and social trajectory of the earth in terms of its resources and the exponential demand on those through population growth, and in the development of fundamentalist opposition to this model. The global financial collapse experienced in the Autumn of 2008 could be seen as a trigger for a re-evaluation of such highly market-orientated values and yet, this marketized view of creativity and its functions, remains one of the most powerful underpinning discourses as far as creativity in schools and beyond is concerned. The implications for education are far-reaching, when the dominant rationale is one which does not encourage students to question this direction of travel and implies a view of education as serving the status quo rather than encouraging independence of judgement to pro-social ends at this scale. The need for wise creativity (Claxton et al, 2008), ie creativity that pays attention to the ends as well as the means, and for education to nurture students who feel some stewardship of wise creativity, is lost in a ubiquitous, marketized discourse.

The challenge of relating creativity to wisdom and trusteeship (Craft, Claxton and Gardner, 2008). As indicated above, considering the purposes to which creativity is put, and where responsibility might lie both within and beyond the classroom, for the wise exercise of creativity, brings a moral and ethical dimension to an otherwise amoral hallmark of human endeavour, and recognises that creativity is not necessarily all positive. In a world of rapid change in scientific, technological, social, spiritual, economic and environmental terms, and in which futures are therefore plural and uncertain, it seems particularly important to bring an ethical lens to creative endeavour, and for this to be part of what education addresses. Clearly to include consideration of ends in the process of creativity places possible constraints on an otherwise open and unbounded process, in raising questions about what is valued and what is rejected. And yet, as Claxton (2008), Gardner (2008), Craft (2008c) and co-authors argue, without wisdom (which seeks to recognise complex and competing values driving creativity) and without a collective perspective (in which is the development of shared goals), the value of creativity in education may be questionable.

The role of the collective, and the significance of personal engagement: increasing recognition of the role of the social context to learning and the extent to which creativity can never be seen as anything other than collective and collaborative, sheds a new light on creativity in schools and beyond. Recent studies of creativity in education have attempted to explore creativity in relationship (eg Chappell et al, 2008) recognising that whether it simultaneous or not creators rely on what has gone before, to build on, to reject or to adapt, and thus creativity is developed in relationship with others (John-Steiner, 2000). Such studies call for increasingly means of exploring and developing creativity which encompass cognitive, social, emotional and, to a degree spiritual, dimensions of creativity, acknowledging 'co-construction' as new consciousness (eg Rojas-Drummond et al, in press). These studies contrast with the 20th-century North American tendency toward individualisation and measurement. Such themes are developed in a multi-disciplinary collection of papers (Littleton et al, in press) united by a view of creativity as situated in social and cultural context and as manifest in relationships, interactions, culture and cultural artefacts. As a collection they offer analysis and reflection on collaborative creativity in educational settings.

The challenge of documenting and supporting progression in creativity The documentation and assessment of creativity in education depends on the extent to which each or both of process and product are valued (Cochrane and Cockett, 2007), as well as the extent to which creativity is understood as context-free or domain-situated, individualised or a collective endeavour (Craft, 2008c). The formal curriculum appears to value creativity as both a context-free and domain-situated phenomenon which leaves practitioners with the challenge of what to focus on and how to represent 'progression', and the focus on individual creative achievement eclipses to a degree how collective and collaborative creativity may be valued. In addition, the continued dominance in practice of subjects (as opposed to the personal, learning and thinking skills) in the curriculum for key stage 3 (reference needed), together with current proposals for the Primary Curriculum (Rose, 2008 reference needed) means that teachers are unlikely to find it easy to document and support progression in creativity. The influence of teacher stance on how progression is supported has been emphasised (Craft et al, 2007). The same team also identified other influences on approaches to progression in creativity including student stance, the nature of tasks set and the expectations of outcomes produced (Craft et al, 2006). Implicit in exploration of the assessment of creativity in education are also beliefs about what models of assessment may be assumed. In relation to creativity these may range from psychometric, test-based, product-focused approaches (reflecting an epistemological and ontological position that sees knowledge as objectifiable), to componential approaches which value a performance-in-context approach, encompass both creative process and any outcomes (which reflect an epistemological and ontological position that views knowledge as situated). Given the

commitment made by Government to developing some kind of creativity portfolio (DCMS, 2006a, 2006b) albeit one which allows each student to compile evidence that can support transition into the creative industries specifically, together with the opportunity that the Rose Review of Primary Education (Rose, 2008) is offering at the time of writing, there is some urgency in navigating clear routes through the tensions in how creativity and assessment are themselves understood and located in curriculum and learning, so that possible educational futures represent conceptually coherent approaches to the question of how creativity is documented and how progression is supported (rather than a purely pragmatic approach).

The challenge of tensions between adult and youth perceptions of realities in childhood and youth given digital and real world contexts. How are the increasingly digital creative and agentive experiences of young people beyond schools perceived by adults and how does this relate to how children and young people experience their lives? The gaps between Generation X (those born before the 'net revolution') and 'Generations Y (those born through the 1980s and 1990s) and Z (those born after around 2002) are increasingly widening. Children and young people may be seen by Generation X commentators as either empowered and effectively moving beyond adult control (Buckingham, 2007; Newburn, 1996) or in contrast, as being at risk (Frechette, 2006) where adults' roles are to protect. How do such perceptions of digital experience outside school impact on what education might do in relation to nurturing creativity? The interim report of the Rose Review of the Primary Curriculum (Rose, 2008) recommends that primary schools may need to teach the ICT curriculum currently aimed at 11-14 year olds in KS3, and to 7-11 year olds, in KS2, but this does not address the question of what sorts of experiences from beyond the classroom may be valued and legitimated.

For the kinds of new digital, increasingly hand-held technologies that play an increasing role in the lives of children and young people, involve gaming, social networking and content generation in a range of communal and geographically wide-ranging digital contexts (often spanning age and generation). A recently published national study in the USA for example (Lenhart et al, 2008), based on data collected in late 2007 and early 2008, shows that 97% of teenagers aged 12-17 (99% boys, 94% girls) play computer, web, console or portable games in a range of genres (86% playing on a console such as a PlayStation, Xbox or Wii, 73% playing on a desktop or laptop computer, 60% playing on portable gaming device such as Nintendo DS, Game Boy, Sony PlayStation Portable, 48% use handheld organizer or mobile phone to play games). This situation is echoed by a study undertaken in England (Withers with Sheldon, 2008) which indicated that four out of five 5-15-year olds have access to the internet at home (and also highlighted a lack of concern for safety, privacy and security among users, any more than children and young people might have concerns in visiting a local playground).

A further study (Ito et al, 2008), again mainly US-focused, indicates that online spaces facilitate young people in connecting with peers in new ways and in constant engagement, through instant messaging, texting and social networking sites. Whilst the majority of youth use the new media to extend existing, usually face-to-face relationships, a smaller number of young people explore beyond their school and community to explore interests and find information which may be more specialised. These may include, for example, creative writing and online gaming which allow them to extend their friendships beyond the local community, and afford opportunities for making their work visible in online audiences offering opportunities for recognition. Ito et al also note that in friendship-orientated and interest-driven activity online, young people extend their technical and media literacy in an environment which is both broad and immediate, through exploration both independently and in relationship with others, offering and seeking feedback on their ideas. Some young people in this way become specialists or 'geek out' in an area of interest where expert feedback is sought from peers who share the passion for this talent, and who have proven expertise. Offering

powerful and often international communities of interest, whilst adults may participate, they are not necessarily the most expert. The research team thus recognises that in social networking and 'geeking out', digital media offer significant opportunities for high motivation, autonomy, self-directed and peer-prompted learning and creative freedom in youth much less apparent in a traditional classroom setting. Perhaps most significantly, goals of learning emerge through iterative exploration and experiment rather than being pre-defined as they are in schools.

Such digital activities are for many young people as natural as engaging face-to-face with peers, and afford exciting and imaginative collaborative and co-participative approaches to creative engagement. How does education respond? A clear view of and aspiration for childhood and youth is clearly fundamental to looking beyond current horizons toward learning, curriculum, pedagogy and frameworks that could nurture creativity in both learners and teachers, given the agency which digital realities offer. Ito et al (2008) note that the peer-based learning which characterise online social networking, gaming and content-generation, not only turns traditional approaches to authority and expertise 'on their heads' but are also seen negatively by some adults. There is no doubt that the digital spaces and affordances in the lives of children and young people offer opportunities and challenges for education both in nurturing creativity and in engaging creatively in terms of provision.

Shared journeys, multiple destinations

The ways in which each of these tensions and dilemmas is resolved in principle as well as in practice, will result in distinctive manifestations of creativity in schools and beyond. The palpable need to develop educational futures which address futures-orientation, futures-capability, appropriate integration of technologies, and systemic approaches which enable creative education and education which nurtures creativity, is evident in the work of policy makers (eg the BCH Programme itself, co-ordinated by Futurelab, 2008) commentators (eg Brighouse, 2008; Fielding, 2006, 2007; Rix and Twining, 2007; Sandford and Facer, 2008; Twining, 2003; Twining et al, 2006; Craft, Twining and Chappell, 2008) and some practitioners (RSA Future Schools Network, 2008). But the challenges in looking beyond current horizons demand both commitment and openness, independence of mind and co-participation (Craft et al, 2007) and pose significant demands to visionaries as well as to practitioners.

The challenges which face the educational and wider community demand collective Possibility Thinking in exploring educational futures both in terms of imaginative ways of providing educational opportunities and in terms of multiplicity of possible outcomes. There is high potential for collective envisionment – and in particular for involving children and young people in generating educational futures. Wise collective Possibility Thinking implies in its nature, attention to impact of ideas, and thus nurtures 'trusteeship', the stewardship of emergent possibilities (Craft, in press). Yet, the assumptions of complexity and responsibility as conditions of wise creativity (Claxton, 2008) imply the sharing of leadership and vision and the potential for emergent and multiple futures. To this extent, wise collective Possibility Thinking may sit in tension with performative policy making which in many ways can be seen as unchanged in character over the last 30 years or so.

The need both for shared journeys in terms of devising educational futures that include many voices, and for multiple destinations from micro to macro level in predicting and manifesting the goals of educational futures seems undisputed. However, special challenges posed by a focus on creativity, are firstly, the tensions in finding appropriate balance points between structure and freedom in learning, curriculum, pedagogy and systems, and secondly, tensions between 'managed' approaches perhaps more typical of Generation X and 'evolutionary' ones more typical of the social networking engaged in by Generations Y and Z.

Over the horizon: Creative Educational Futures?

Given the pace of change and the degrees of uncertainty facing us in social, economic, technological, scientific and environmental terms in the early 21st century, it seems incontrovertible that educational futures need both to be inherently creative and also to enhance the creativity of children and young people – and of the adults who work with them. Educational futures however both reflect and construct the wider societal context and to this degree, the multiple futures that may be constructed or emerge, may reflect a variety of wider scenarios from environmental, health, conflict-based or economic collapse to more positive possibilities.

Whichever suite of possibilities turns out to manifest in practice, there are perhaps four themes that may guide those grappling with educational futures. Reflecting the nature of young people's lives, and a stance on futuring that acknowledges multiple realities and perspectives, in looking ahead to the next thirty years, learners, teachers, parents and others might seek to explore the following:

- **Pluralities:** How can educational futures reflect the breadth of places, activities, literacies, ethics and opportunities for play, learning and socialising that currently exist and which seem likely to expand? How can educational futures encompass plurality of belief given the rise of fundamentalism of differing kinds, without producing a new form of fundamentalism (of plurality)?
- **Possibilities:** how can educational futures reflect multiple possibilities at the level of the classroom and the organisation, in terms of student and teacher choice, access, ways of learning, community and involvement? How can such multiple possibilities co-exist alongside the paradoxes involved in the tensions between originality and the uniformity produced by globalisation?
- **Playfulness:** How can educational futures support the exploratory drive of children and young people in both actual and virtual spaces, and acknowledge evolutionary change in play-oriented identity associated with non-linear, empowerment-oriented digital space opportunities?
- **Participation:** How can educational futures acknowledge and engage with the increased participation of children and young people in social and economic spaces as agents as well as objects of change? How can potential educational provision harness, recognise and reward cultural mores that characterise the engagement of children and young people in online spaces which feature democratic playful, dialogic engagement? What responsibilities might education hold for the ways in which children and young people broker paradoxes of reality (real compared with virtual life), and the possible differing views on responsibility, risk, participation and social pressure that may accompany these?

The exploration of educational futures might also pay attention to what extensions to literacies and media do to views of and practices in learning, pedagogy, curriculum and assessment, together with potential tensions between creative and performative views of curriculum, learning and assessment. Educational futures which both manifest and foster creativity are likely to involve systemic transformation, being designed for flexibility, to foster creativity and collaboration, to encourage interaction between varied age groups and to meet learners' preferences about how, where, when, they learn (Facer, 2007). To what extent those currently engaged in teaching and learning are able, willing and resourced to address wise, creative educational futures, will need careful consideration.

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