Advice from experts
Understanding the ingredients of creative teaching and learning, knowing how to teach for creativity, inspiring deep learning, developing learners’ creative skills and dispositions

Practical management tools
Principles for crafting a creative curriculum, shaping stimulating learning spaces, designing lessons for creativity, activities that hook learners, building teachers’ confidence to be creative

Case studies from schools
Developing creative minds, inspiring student-led learning, stimulating curiosity, awe and wonder, overcoming blocks to creativity, assessing creativity
To secure deep learning in all classrooms you need teaching staff who are creative in their approach to teaching and learning (T&L), and students who are skilled and confident to take risks and be innovative when tackling the varied creative learning tasks presented to them. So how as curriculum manager can you inspire greater creativity in T&L across the school? First, you need a clear understanding of what creativity looks like in practice, one that is shared by all staff so you can work together in achieving this in your T&L. This issue of *Curriculum Briefing* begins by exploring what creativity is all about and how it translates across different subject areas, before exploring what it means to teach for creativity to inspire innovation in learning. To help ensure all staff teach for creativity, you need in place a challenging and inspirational curriculum that provides every opportunity for injecting the right level of creativity in lessons to excite and engage all learners – understand the ingredients of creativity and discover the core principles to use to craft a stimulating curriculum that promotes innovation in lessons. Teaching for creativity can be a scary prospect for teachers – learn how to build in them the confidence to let go and design creative learning activities that encourage risk-taking, build enquiry-based learning and provoke pupils to reflect so that the ‘wow’ factor of learning is present throughout.

Creativity in T&L is about catalysing and expanding pupils’ learning capacities. It is about shocking learners with the new, building surprise and unexpected juxtapositions into learning activities. Part of this is about creating the right spaces for learning – discover how to build learning environments where the creativity of both teachers and staff can soar, and explore how to experiment with the timings of learning so that innovation has the space it needs to flourish. Find out how to design innovative lesson designs that allow creativity to flow, inspire awe and wonder in learners, and encourage them to delve deeper in their explorations. Variety is said to be the spice of life – and this is true in teaching for creativity too. The thrill of the unknown, the chance to meet the unfamiliar and be pushed to your limits, if handled well can be exhilarating, exciting and inspiring.

Discover how to ensure teachers provide activities at each stage of the lesson that hook learners’ curiosity and stimulate their creativity. Creative ‘aha’ moments invariably come from sharing and bouncing off ideas with others – learn how to build in students the vocabulary of thinking so that they can develop new meanings and understandings with others to think through learning challenges to create new possibilities. Sometimes creativity needs space to breath, so it is important for teachers to know when students are on task but at a reflection stage, and when they have hit what can feel like an insurmountable blockage in learning. Discover strategies to use for when both students and teachers need help in overcoming obstacles to creativity. As well as case studies throughout showcasing how teaching for creativity translates into practice, learn from the more detailed study of a network of teachers who explored how to embed more creativity in T&L across the curriculum. Creativity is not a bolt-on – it is an attitude towards learning that needs to be developed in all lessons. Doing so will help students build the learning skills they will need to thrive in life – from improving their social and emotional skills, to building their resilience and resourcefulness, from increasing their capacity to show initiative, to growing their ability to think divergently and overcome problems. Overall, the advice and tools in this issue of *Curriculum Briefing* aim to show you how to embed greater creativity across your curriculum so that T&L is more powerful and empowering for pupils and staff alike.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AFL</td>
<td>assessment for learning</td>
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<tr>
<td>AST</td>
<td>advanced skills teacher</td>
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<td>BLP</td>
<td>Building Learning Power</td>
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<td>BSF</td>
<td>Building Schools for the Future</td>
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<td>BTEC</td>
<td>Business and Technology Education Council</td>
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<td>CA</td>
<td>cognitive acceleration</td>
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<tr>
<td>CASE</td>
<td>cognitive acceleration through science education</td>
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<td>CPD</td>
<td>continuing professional development</td>
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<tr>
<td>CUREE</td>
<td>Centre for the Use of Research and Evidence in Education</td>
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<tr>
<td>D&amp;T</td>
<td>design and technology</td>
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<tr>
<td>ECM</td>
<td>Every Child Matters</td>
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<td>FSM</td>
<td>free school meals</td>
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<td>GAS</td>
<td>go and see</td>
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<td>G&amp;T</td>
<td>gifted and talented</td>
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<td>ICT</td>
<td>information and communications technology</td>
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<td>ITE</td>
<td>initial teacher education</td>
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<td>IWB</td>
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<tr>
<td>KWL</td>
<td>know/want to know/learned</td>
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<td>LA</td>
<td>local authority</td>
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<td>NACCE</td>
<td>National Advisory Committee on Creative and Cultural Education</td>
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<td>NC</td>
<td>national curriculum</td>
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<td>NCSL</td>
<td>National College for School Leadership</td>
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<td>NLP</td>
<td>neuro-linguistic programming</td>
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<td>OECD</td>
<td>Organisation for Economic Cooperation and Development</td>
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<td>P4C</td>
<td>Philosophy for Children</td>
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<td>PFI</td>
<td>Private Finance Initiative</td>
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<td>PIES</td>
<td>positive interdependence, individual accountability, equal participation and simultaneous interaction</td>
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<tr>
<td>PLTS</td>
<td>personal, learning and thinking skills</td>
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<tr>
<td>PSHE</td>
<td>personal, social and health education</td>
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<td>QCDA</td>
<td>Qualifications and Curriculum Development Agency</td>
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<td>RE</td>
<td>religious education</td>
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<td>RPG</td>
<td>roleplay game</td>
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<td>SATT</td>
<td>sitting and thinking/talking</td>
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<td>SEN</td>
<td>special educational needs</td>
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<td>SLT</td>
<td>senior leadership team</td>
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<td>SMSC</td>
<td>social, moral, spiritual and cultural</td>
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<td>SMT</td>
<td>senior management team</td>
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<tr>
<td>T&amp;L</td>
<td>teaching and learning</td>
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<tr>
<td>TA</td>
<td>teaching assistant</td>
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<td>TASC</td>
<td>thinking actively in a social context</td>
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<td>TDA</td>
<td>Training and Development Agency for Schools</td>
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<td>TLC</td>
<td>teacher learning community</td>
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<td>TPM</td>
<td>teacher performance management</td>
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<td>WWW</td>
<td>we were wondering</td>
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<td>ZPD</td>
<td>zone of proximal development</td>
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Being creative about nurturing creativity

More than ever before we have to nurture young people’s creativity, argues Pat Cochrane as she explores what creativity in schools looks like, giving an overview of the core issues to address to shape teaching and learning to nourish this, and provide the right approach to assessment to enable you to recognise and value young people’s developing creativity, with case examples throughout to show how schools are achieving this in practice

It is hardly possible to pick up a paper or listen to the news without hearing about yet another aspect of life that is rapidly changing or posing enormous challenges to our future. Human beings have always needed to be imaginative, resourceful, resilient and innovative. But in the face of challenges of globalisation, inequalities in society and globally, climate and demographic change and economic crisis, these capacities are arguably more important than ever before.

_Creativity is imaginative behaviour fashioned so as to produce outcomes that are both original and of value._ (NACCE, 1999)

This simple definition has become a common starting point for exploring creativity in schools. It comes originally from _All our futures_, a highly influential report published by the National Advisory Committee on Creative and Cultural Education (NACCE) in 1999. The report argued that creativity should be encouraged across the curriculum and that it is not solely about the arts but is equally relevant to subjects such as geography, history and the sciences.

Over the last decade many governments have been reflecting on the purpose of education, reshaping their curriculum and developing descriptions of the skills and capabilities they want young people to develop (Claxton and Lucas, 2009). In England, there have been a number of significant programmes to explore how best to support creativity in schools. These include QCA research programme _Creativity: find it, promote it_, the national Creative Partnerships programme (www.creative-partnerships.com), the work of CapeUK (www.capec.uk) and much associated research and the Learning Futures programme (www.learningfutures.org). So schools wishing to introduce a creative curriculum have a wealth of experience to draw on (Sefton-Green et al, 2011). The article on pages 9–13 outlines u lum leaders at local level and to develop inspiring teaching and learning experience, which is certainly welcome that the separation of subject knowledge from creative and cultural education (nACCCE) in 1999.

Whatever the outcome of the review, we know that the Coalition Government’s aim is to have a slimmer core national curriculum with greater autonomy for schools to determine and shape the broader curriculum at local level and to develop inspiring teaching and learning (T&L). So it is an excellent time for curriculum leaders to be reflecting on what is really important in terms of teaching, learning and curriculum design, and grasping the opportunity to create compelling and inspiring learning experiences that engage young people as active and creative agents in their own learning.

Evidence of impact of creativity

Teaching and learning that nurtures young people’s creative capacities has been shown to have a positive impact on motivation, attendance, behaviour and attainment. Ofsted’s recent review of creative

**Useful things to know: Creative Partnerships programme**

Creative Partnerships was a national programme designed to support creative learning through the development of long-term partnerships between schools and creative professionals. It developed a number of ways in which school staff can work in partnership with outside professionals to develop creative approaches to learning. See: www.creative-partnerships.com
Case study: nurturing 21st-century learning qualities

A successful school wished to further develop its existing learning charter to identify key 21st-century learning qualities. The school also wished to develop greater ownership and understanding of ‘personal, learning and thinking skills’ among pupils. In a staff conference, senior management invited staff to revisit their ‘learning charter’ and identify the most significant independent learning qualities that successful learners of all abilities might display. They reached a consensus that they would like their pupils to be committed; open-minded; motivated; cooperative; resourceful and flexible. The staff then made a plan to ensure these qualities became as recognisable to pupils as the school badge.

These six inclusive learning qualities were introduced to pupils on an ‘independent learning day’ when the normal timetable was suspended. Their weekly cycle of assemblies were used to ‘top-up’ pupils’ understanding, and a competition was set up to establish a visual identity for these qualities that could then feature on the front cover of school planners. These events and processes launched the initiative. The school is continuing to reinforce the importance of these learning qualities, which are well understood by pupils. Senior management is now wrestling with processes for assessing and recording pupils’ progress. They have explored the use of peer-to-peer reflection and feedback, followed by self-assessment using questionnaires where pupils consider their strengths and identify where their areas for development are. They have also connected their merit system to the development of these qualities and are exploring ways of tracking progress by considering merits gained. Although they have not explicitly mentioned the word ‘creativity’ in their ‘21st-century learning qualities’, the attributes they endorse make a strong contribution to creative learning.

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features associated with creativity

<table>
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<tr>
<th>Creative features</th>
<th>Range of behaviours</th>
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| Questioning and challenging | ■ Asking why, how, what if?  
 ■ Responding to ideas, questions, tasks or problems in an unusual way |
| Making connections and seeing relationships | ■ Recognising the significance of knowledge or previous experience  
 ■ Generalising from information and experience, searching for trends and patterns |
| Envisaging what might be | ■ Imagining and seeing things in the mind’s eye  
 ■ Asking ‘what if?’  
 ■ Visualising alternatives |
| Exploring ideas, keeping options open | ■ Playing with ideas and experimenting  
 ■ Responding intuitively and trusting intuition  
 ■ Keeping an open mind, adapting and modifying ideas to achieve creative results |
| Reflecting critically on ideas, actions and outcomes | ■ Reviewing progress  
 ■ Inviting and incorporating feedback  
 ■ Making perceptive observations about originality & value |
| | ■ Asking unusual questions  
 ■ Challenging conventions and assumptions  
 ■ Thinking independently |
| | ■ Using analogies and metaphor  
 ■ Reinterpreting and applying learning in new contexts  
 ■ Communicating ideas in novel or unexpected ways |
| | ■ Seeing possibilities, problems and challenges  
 ■ Looking at and thinking about things differently and from different points of view |
| | ■ Trying alternatives and fresh approaches  
 ■ Anticipating and overcoming difficulties, following through ideas |
| | ■ Asking ‘is this good, is it what’s needed?’  
 ■ Putting forward constructive comments, ideas, explanations and ways of doing things |

So the positive impact of creative learning is significant and provides much of the evidence to address key elements of the new Ofsted inspection framework. Although by its very essence it is not possible to define a formula for creativity, there is now a generally recognised set of behaviours, capabilities and aptitudes that can be nurtured and which, together, form the ingredients of creativity. Curiosity and imagination are at the heart of a creative process (for adults as much as for young people). When we are being creative we exhibit the capabilities and aptitudes set out in the box middle right on page 3.

The kind of behaviours a teacher might observe when pupils are being creative are outlined in more detail in the box below.

The challenge for the curriculum leader is to make creativity part of the warp and weft of the learning experience, successfully combining subject learning with creative process.

Supporting development of creativity

Skills and aptitudes are learned and acquired through practical application, linked with reflection and in relation to knowledge and subject learning. It is not appropriate to separate out the skills and aptitudes that contribute to creativity and teach them as separate topics – a lesson presenting the factors in teamwork will be far less effective than integrating reflection on what makes for good teamwork into an activity that demands collaboration to succeed.
Case example: pitfalls to avoid when incorporating creativity in curriculum redesign

A school decided to move to an integrated curriculum for humanities subjects, so that for half of the school week pupils would be learning through a skills-based curriculum. Eight teachers were timetabled to work on the programme but given little time to adapt to the approach or to prepare or plan. The teaching areas were transformed into open-plan spaces. Towards the end of the first year, the pupils were asked to review their response to this change. They unanimously pleaded for the teachers to go back to subject teaching. They said that it was clear that the teachers were not confident and didn’t really know what they were doing. The school returned to a subject-based approach using this experience as evidence of a problem with a skills-based curriculum. However, what it showed more clearly was the need for planning and preparation in any process of curriculum change.

Developing ‘compelling learning experiences’ (QCCA, 2009) will enable students to engage with a creative process over the long term, to apply this in the context of subject knowledge and to develop resilience in working towards an outcome. Schools that have introduced creative learning most effectively have achieved this through a sustained process of organisational culture change, supported by rigorous planning and ongoing, purposeful professional development focused on developing creative learning. But it can be difficult to know where to begin. Reflecting on three fundamental questions in curriculum design gives a useful structure to think this through and applies as much to introducing creativity as to any other area of the curriculum. These are:

- What are we trying to achieve?
- How do we organise learning to meet these aspirations?
- How well are we achieving our aims?

Although the PLTS framework is a useful starting point, developing your own set of descriptors can be far more powerful. This enables a team or the wider school community to develop a shared understanding of what is meant by creativity – not as an abstract concept, but in terms of what behaviours, aptitudes and attitudes you want to nurture. Many schools that are successfully implementing a creative curriculum involve all staff in an indepth exploratory process. As the case study in the box top left on page 4 shows, this type of exploration enables teachers to own these concepts and integrate them into their practice.

Once the school or team has formulated clear objectives in terms of capacities, the next step is to develop these capacities by organising and designing the curriculum and approaches to teaching and learning to develop these capacities. The case example in the box above left illustrates how not to go about this!

Case example: designing creative problem-solving challenges

Pupils were set the challenge of developing a science discovery centre for younger primary age children. They had to consider how to redesign a classroom space to create an imaginative, awe-inspiring environment. They researched how local museums and galleries managed their space. They generated multiple ideas about what scientific idea they could focus on and then selected possibilities from these options. Pupils imagined ways of sharing scientific concepts that would inspire younger children; they then collaborated in small teams to create their installations and plan how to manage the visits of the younger children. They had to deal with setbacks such as when their ideas or their model did not work out.

Curriculum approaches

Creativity within subjects

It is possible to start looking at creativity within subject learning and for each curriculum area to consider how creative processes can be generated in their subject. Teachers can map the subject learning to be covered alongside the activity pupils will be engaged in and the creative process you are hoping to stimulate. However,

Creative thinking skills develop alongside and overlap with other types of learning

There is now a generally recognised set of behaviours, capabilities and aptitudes that can be nurtured and which, together, form the ingredients of creativity

Stepping stones to introducing creativity

1 Analyse where your school is most successful in terms of creative process. See www.capeuk.org for an outline self-assessment framework. Build on what is working well and seek to learn from this.
2 Actively involve students in the process of designing the learning process. The Harris Federation student commission on learning is a good example – see: www.harrisfederation.org.uk/124/about-the-commission CapeUK’s ‘Voice in the middle’ project has case studies of how students can be genuinely involved in collaborative exploration about the curriculum – see: www.capeuk.org/capeuk-news/exploring-young-people’s-voice-influence-can-you-hear-me-are-you-listening-can-i-make-an-impact.html
3 Enable colleagues from different subject areas to collaborate on teaching a specific aspect of the curriculum.
4 Be clear what you want to achieve through this collaboration, and frame an enquiry question to shape your developments. So, for example, a science and art and design teacher working together could explore, ‘Does modelling a scientific concept on a large scale aid understanding’ or ‘Does observational drawing aid the development of scientific concepts’. Learning to enquire offers practical tips about how to do this – see: www.capeuk.org/capeuk-resources/learning-to-enquire.html Building creative futures (CapeUK, 2005), available to download from www.capeuk.org, describes how schools carried out small-scale action research activities in the Creativity Action Research Awards programme.
5 Think about how to organise time and space in the school: creative processes need more than the 55-minute session to develop. Try blocking the timetable to allow for longer periods of exploration.
6 Design the learning around big questions or provocations that will excite students’ imagination and act as a ‘lure into learning’.
7 Collaborate with external partners wherever possible.
8 Explore how people and places in the local community can be used as learning partners or resources.
9 Invest time to reflect on the impact of each of the steps you take and refine your plans accordingly.
10 Give permission to try out new ways of working.
this approach may not encourage connection between different areas of knowledge, juxtaposing and linking ideas in an unusual way that is an element of creativity.

Collapsing the timetable to allow for cross-curricular days or weeks
Schools often combine this subject approach with a number of integrated days where an issue or theme is explored in an immersive way. One school has designed each half-term around one of the PLTS, starting with a full immersion day in which teachers work together to design activities that introduce the skills and aptitudes relating to that skillset and then apply them in an imaginative context on that day. During the rest of the half-term teachers can refer back to the experience to relate their subject knowledge to the skills and capacities explored on the day. The danger of this approach is that the interconnectedness between the different skillsets can be lost.

Cross-curricular approach
A more radical approach is where the curriculum is designed to draw on a range of subject knowledge and skills. Designing the curriculum around a series of challenges, or provocations, can provide a compelling context for subject learning and skills development. Having a practical outcome and purpose for the learning is also highly motivating and generates creative problem-solving, as the example in the box top right on page 5 illustrates. It shows how creative thinking skills develop alongside and overlap with other types of learning and thinking skills, from persevering in the face of difficulty (when acting as a self-manager) to collaborating with others to work towards a common goal (when acting as a teamworker) to inviting feedback and dealing positively with praise, setbacks and criticism (when being reflective learners). For more on developing thinking skills to help learners become creative thinkers, see the articles on pages 31–37 and pages 41–46.

The box at the bottom of page 5 outlines key steps to follow to help you successfully incorporate creativity in teaching and learning at a whole-school level. The case example in the box below shows how one school has gone about this via the radical approach it developed to reshaping its curriculum.

Case study: creating a compelling humanising curriculum
An 11–16 secondary school in an industrial town in the North of England adopted a radical approach to curriculum change. Students at the school come from a wide range of socio-economic backgrounds with 18% on free school meals (FSM) and 20% with special educational needs (SEN). The school prides itself on being a community school, with an onsite nursery, and close links to its local special and primary schools; it was a national School of Creativity as part of Creative Partnerships.

In 2005, the head introduced a vision of a programme of curriculum change, beginning with Year 7, with an overarching aim of developing a ‘humanising’ educational experience for students that would raise aspirations and confidence as well as achievement. He outlined a vision in which the curriculum would be driven by dramatic enquiry, in which students explore ideas and issues through drama – a powerful pedagogy for change – and then he handed over to a team of teachers and a trusted external mentor. The model of change was one of voluntary engagement and ‘bottom up’. The core team of volunteer teachers, working alongside the mentor, were trusted to write and explore the new curriculum without a ‘top-down’ rubric being in place.

Members of the departments of history, English, geography, religious education (RE), personal, social and health education (PSHE), drama, and ICT were the first to volunteer. Together, this group of teachers and their mentor, an experienced drama teacher, developed a course called ‘cultural studies’. As tutors became confident in teaching this to Year 7, a ‘curriculum for confidence’ was developed for Year 8. In 2008, a new curriculum for Year 9, which integrated maths, science and design technology, and enticingly entitled ‘rockets’, was introduced.

Staff training began with the national curriculum. They explored and, for some teachers, discovered the freedom afforded by the NC to build contexts for learning while remaining mindful of the skills, knowledge and attributes that young people need to develop. The subject specialists were surprised to realise how much common ground there was between them and became more open to the idea of developing meaningful and connected contexts. Once this confidence was built, they were able to look at the ‘what’ and ‘how’ of the curriculum. They began by agreeing overarching half-terminally ‘themes’ – carefully avoiding the fragmented thematic approaches sometimes associated with topic work. The lessons flowed regardless of ‘subject’, as they were driven by an enquiry question and a ‘story’. They then identified the skills they felt were crucial and ‘core’ to the learner, namely the capacity and confidence to:

- question
- solve and anticipate problems
- manage and manipulate data
- have empathy with others
- have the resilience and stamina to persist in the pursuit of a goal
- be independent researchers and social learners

be able to see the value in their work and identify the areas that needed to be improved or redone
have belief in self and others that they could make a positive difference in future.

After this, as the mentor explains:

We began to create ‘lures into learning’. We began with a little boy called Ashique. We ended by contributing to the building of a school in Uganda. We didn’t explicitly plan the units so that children would remember better and perform more effectively in exams, though achievement was high and attendance much improved, but what became interesting was the impact on teaching other classes. The staff working on cultural studies began teaching their GCSE classes in different ways with more activity and more drama. They shared their ideas with colleagues so that it began to influence practice across the school.

Within three years, 22% more pupils had gained A*-C grades at GCSE – an improvement that the school believes was closely aligned to improving pedagogy, and the impact that this had on strengthening students’ self-belief that they could achieve. A desire to ‘humanise’ the curriculum drove the model at the school and it is humanity and pedagogy working so closely in partnership that makes this model so successful. For a more detailed description see Fautley et al (2011).
Teaching for creativity
It is somewhat artificial to separate out the concepts of creative teaching from teaching and learning for creativity—in practice they are closely intertwined. But a focus on teaching for creativity can be helpful in generating clarity about teaching processes that nurture the creative capacities of young people themselves. Whereas creative teaching tends to focus on imaginative methods to engage and enthuse the learners and can lead to thinking of teaching as performance, teaching for creativity focuses on enabling the students themselves to develop their creative capacities. This often involves teachers ‘standing back’, enabling solutions to emerge through questioning and exploration. It also often involves teachers modelling their own learning and acknowledging the contribution of pupils. This approach is not an easy option and requires ‘careful planning to allow enquiry, debate, speculation, experimentation, review and presentation to be productive’ (Ofsted, 2010).

Key features of teaching for creativity

Generating imagination, a spirit of enquiry and dialogue
Teachers can encourage a spirit of enquiry, the generation of ideas and the use of imagination by asking enabling questions that encourage dialogue and exploration such as: what if?; why?; what would happen if?

Imagination can be encouraged by extended roleplay, exploring issues from a particular perspective and experimenting with thoughts and options. The teacher is then modelling ‘possibility thinking’ (Craft et al, 2008), which is a critical element of creativity.

Starting a lesson or series of lessons with a provocation, a big question or a series of questions is more likely to generate creativity than a predetermined statement of what is to be learned in the lesson. The article on pages 24–30 explores how to achieve innovative lesson design to boost creativity in learning while the article on pages 31–37 zooms in more closely to consider how to develop inspiring lesson starts, core activities and plenaries that achieve the learning objectives in creative and engaging ways.

Modelling possibility thinking
If the teacher presents herself as the source of all knowledge young people will not see and understand the complexity of the creative process. By the teacher genuinely asking exploratory questions and sharing how she works through blocks or moments of uncertainty, young people will develop a clearer sense of what creativity involves. This creative process could be shared through, for example, writing and editing a letter or article, learning how to use a new piece of software or technology imaginatively or experimenting with making a product or simply by asking questions with the students such as, ‘I’m not sure what will happen if we try it this way, shall we see?’

Seeing students as partners in ‘co-constructing’ learning
Students have to be involved in decision-making. They need to reflect critically on their own progress and on their personal and creative development. Teachers who teach for creativity offer time, space, encouragement and, where required, sensitive, supportive, but critical feedback. They know when to intervene and when to stand back and let students explore an idea, concept or process. Making space for creativity in this way can sometimes be experienced as ‘giving up control’, but as teachers become more confident and familiar with the process they see that the students’ learning develops rapidly within the context of supportive questioning and nurturing. The article on pages 14–19 looks into how to give students more control over their learning and involve them in co-constructing creative learning activities.

Supporting calculated risk-taking
The creative process involves the chance to be immersed in a task and allow solutions to emerge, combined with a willingness to take risks, imagine problems afresh and create new solutions. It might involve going up blind alleys, so requires a culture that allows students to make mistakes, and to reflect on and learn from these mistakes.

Working towards an outcome with value in the outside world
The creative process often involves making or creating a product – for instance a work of art or presentation – to communicate an idea. Working towards an outcome gives students the chance to experience and work through creative ‘blockages’, challenges, disappointments and setbacks and to develop the resilience that is a critical element of creativity. Sharing strategies that creative people use to overcome creative blocks can be helpful: using playful, slow imaginative thinking rather than logical thinking; looking at an issue from a number of completely different perspectives; visualisation, and meditation; drafting, redrafting, editing and creating many prototypes are all examples of processes creative people adopt in all sorts of contexts. Enabling the students to reflect on these processes is a helpful element of developing creative capacities. For more advice on how to overcome blockages in creativity, see the article on pages 38–40.

Supporting rigour and effort
Working towards such an external production, presentation or performance also creates a context in which young people strive for the best and work towards personally challenging outcomes. Instead of seeing difficulties as insurmountable barriers they grow to see them as challenges to be overcome (de Moss and Morris, 2002).

Harnessing the imaginative use of ICT
Imaginative use of ICT can provide a context for independent and creative learning to flourish. Making and editing films or animations, producing and publishing music, building characters and narratives in interactive games, sharing ideas through blogs or participating in virtual learning environments provide rich contexts for learning to be creative.

Using alternative environments
Shifting the location of learning can stimulate creativity: using outdoor spaces, museums, galleries or other venues within the community can prompt new thinking. Simply changing the layout of a classroom space can generate different responses – a row of individual desks facing the teacher’s desk and whiteboard symbolise a particular approach to T&L. If the purpose of a task is to work collaboratively then the learning environment needs to be shifted to enable this. Teaching for creativity is not an easy option. It is rooted in rigour, planning, structure and attention to detail. For more on how to use learning spaces to boost creativity in T&L, see the article on pages 20–23.
Purposeful talk is increasingly emerging as a critical factor in research into effective teaching and learning in general, and in particular in relation to teaching for creativity. Key processes that characterise such ‘dialogic’ teaching are set out in the box right.

Distinctive features of T&L for creativity include those elements outlined in the box on page 7.

Assessing development of creativity

The third dimension of effective curriculum change is to know whether the process is achieving its aims. Assessment is an integral element of learning. For students to develop confidence in their own creativity, meaningful feedback needs to be integral to the learning process. Teachers need to capture whether the approach they are adopting is genuinely developing the creative capacities of pupils. Many schools are developing and trying out a range of assessment tools. These often relate the development of creativity to metaphors or visual images, such as journeys and signposts, and use diagrams or online tools to record change. Most include reflection on development of creativity within a wider range of personal, learning and thinking skills or within aspects of personal development. All involve documenting transitions from novice to expert.

The trajectory from novice to expert in creativity reflects change in what students can do in terms of:

- depth and complexity – in the context in which they are applying their creativity and to the outcome
- ability to generate ideas and questions for themselves
- whether innovative or adaptive
- has impact – on the individual and on others (for example, see EdSteps work on creativity: www.edsteps.org/CCSSO/SampleWorks/CreativityGraph1.pdf)

Visual representation, such as photos, drawings and paintings or diagrams, can provide a vehicle for young people to reflect on their personal growth and journey, when word-based descriptors of some of these developments can be difficult for many students.

A reflective creative portfolio can be a valuable resource for the assessment of creativity. It has the potential to incorporate formal and informal learning, with the learner at the centre. It can be used to identify incremental progress and provide a record of creative achievements and personal development; and it can help to smooth the transition from primary to secondary education. It can be in the form of a notebook, journal or sketchbook, or physical or digital portfolio.

Computer-based assessment of creative and critical thinking skills may also be helpful. Creative outcomes can be documented within such a portfolio. But such documentation has to be accompanied by reflection and review rather than simply a record of experience.

Students need to be involved in the process of assessing their own creativity (Facer and Pyckett, 2007). The case example in the box left illustrates how a team of secondary schools developed a successful approach to assessing PLTS, including creativity.

Fulfilling journey

Working towards a creative curriculum is an exciting and fulfilling journey. It involves everyone – teachers, school leaders, learning mentors and assistants – adopting the creative capacities outlined in this article. Above all, school leaders need to create a climate of trust in which staff and young people are encouraged to be creative and innovative continuously seeking out approaches and opportunities that enhance students’ learning.

Debbie Kidd and Sally Manser. The views represented here are independent. CapeUK while acting as creativity advisor to DCSF between 2008 to 2010. The team was led by Pat Cochrane, Chief Executive, CapeUK while acting as creativity advisor to DCSF between 2008 to 2010. The team was led by Pat Cochrane, Chief Executive, CapeUK.

This article draws on consultation carried out by CapeUK while acting as creativity advisor to DCSF between 2008 to 2010. The team was led by Pat Cochrane and included Professor Anna Craft, Jane Creasy, Dick Downing and also contributions from Debbie Kidd and Sally Manser. The views represented in this report are independent. CapeUK offers a range of services and support to schools wishing to introduce a creative approach to the curriculum and T&L. Many resources and articles can be downloaded from the website free of charge, including approaches to staff development: www.capeuk.org
Finding the golden thread – accommodating creativity and innovation in the curriculum

Designing and implementing an effective and engaging creative curriculum that stimulates innovation across your school is no mean feat. Philippa Cordingley offers six core principles for crafting a creative curriculum to provide an agenda for action you can take to embed creativity in all subject areas in your own school, using case examples throughout to show how schools have used this as a framework for innovation.

For many teachers, being creative is central to their love of learning and supporting learning in others. The box right outlines just some of the skills they enjoy using and look to inculcate in learners.

Learning is a creative process, expanding possibilities and experiences. Teaching and learning is an art. Ensuring this is purposeful and that it speaks to the concerns of young people, to the demands of the national and school curriculum, are part of the commission. So, too, is the requirement to secure progress towards effective performance in tests that impose closed and precise goals on to dynamic and artistic endeavours. Effective curriculum design and implementation involves ensuring these are achieved as an organic outcome of meaningful processes and experiences. This cannot be achieved by attempting to turn learning into a logical algorithm (demonstrating specific techniques + regular practice of tests that ask pupils to demonstrate them = success in tests). It involves creating the conditions and frameworks for informed innovation within the constraints imposed by working with significant numbers of different people with different starting points, in rigid, physical and time spaces and with finite resources. There are important craft skills in the mix too, such as the crafts of timetabling, creating schemes of work and developing effective curriculum resources.

This article considers six core principles developed at Centre for the Use of Research and Evidence in Education (CUREE) to inform the art and craft of curriculum development and implementation that have been shown to be important all around the world for enhancing learning and increasing innovation, whether the curriculum contour is organised by subject or by theme. It also illustrates those principles through examples of highly effective practices in schools that have been shown to be effective curriculum innovators in England between 2007–10 (summarised in Cordingley and Crisp, 2011). This evidence and its use to support innovation in teaching, learning and the curriculum is particularly important right now because of the factors set out in the box on page 10.

**Skills of creative teachers**
- The teachers’ (and learners’) ability to connect sometimes wildly different ideas and phenomena
- The capacity to whip up exciting learning experiences from even quite constrained circumstances and resources
- The ability to envisage that whole that is bigger than the sum of its parts, to maintain a focus on big learning journeys while focusing forensically on small steps on the way

It involves creating the conditions and frameworks for informed innovation within the constraints imposed by working with significant numbers of different people with different starting points, in rigid, physical and time spaces and with finite resources.

**Principles for implementing a creative curriculum**
- Principle 1: contextualise curriculum and T&L experiences and link learning in school with learning at home and in the community
- Principle 2: create curriculum experiences that involve learners actively in identifying and building on their existing knowledge, understandings and skills
- Principle 3: structure groupwork for interdependence by teaching effective group talk skills and planning tasks that use and reinforce such skills
- Principle 4: foster a less compartmentalised approach to the curriculum to promote conceptual development
- Principle 5: plan for challenging all pupils from the start
- Principle 6: align curriculum and professional development to build capacity and secure excellence in subject knowledge

**What makes a difference?**

The evidence offered in the rest of this article comes from a large-scale, three-year study of curriculum development and implementation commissioned by the Qualifications and Curriculum Development Agency (QCDA) from 2007–2010. It involved 15,060 learners and 570 teachers in 334 schools and combined with evidence from three large-scale systematic reviews of the international evidence base (Bell et al, 2008a; Bell et al, 2008b; CUREE, 2009). It highlights a range of benefits that flow from effective curriculum development and realisation ranging from improvements in reasoning, collaborative and creative problem-solving and achievement across a range of subjects. Benefits for cognition and skills were complemented by a range of emotional and behavioural benefits linked to creativity, including improvements in motivation, confidence and the self-esteem to persist through challenges and frustrations, and be independent in learning. Benefits also extended to improvements in pupils’ abilities to make good choices within learning situations and in their leadership skills. These are the very skills employers want and are also key among those on which innovation and creativity depend.

How, then, can teachers and schools, working with new freedoms and the opportunity to focus on creativity and innovation alongside the responsibility for securing progress against national standards, secure such benefits for their own pupils? This research highlights six abiding principles for managing such complexity in designing and implementing an effective, engaging and creative curriculum, and teaching and learning experiences. These principles are listed in the box below and are now discussed in turn.

Principle 1: contextualise curriculum and teaching and learning experiences and link learning in school with learning at home and in the community

The international evidence (Bell et al, 2008a and 2008b) emphatically highlights the importance of contextualising learning, of ensuring young people encounter ideas and phenomena in a range of practical contexts.
contexts that are meaningful to them. Learning activities that enable pupils to explore their identities and treat them as whole people—such as roleplay or drama and exploring big society issues such as sustainability or the moral implications of scientific and technological breakthroughs—seem to offer effective vehicles for contextualising learning in ways that help to unleash and engender creativity.

There were four key approaches to ensuring that the curriculum enables pupils to experience phenomena and ideas in context:

■ designing real and meaningful tasks
■ planning out-of-classroom experiences
■ using similarities of real tools
■ activating learners’ recent experiences.

Examples of what this looks like in practice are given in the box top left on page 11.

A key element of contextualisation is linking learning in school with learners’ home and community life. Particularly important here is the effect of activities that increase discussion between learners and their parents about learning. The box bottom right on page 11 gives some examples.

Principle 2: create curriculum experiences that involve learners actively in identifying and building on their existing knowledge, understandings and skills

The international evidence base (Bell et al, 2008a and 2008b) highlights the importance of designing curriculum experiences that identify and build on learners’ starting points iteratively and also highlights the importance of engaging with pupils’ beliefs and understandings as well as their knowledge and skills.

Learners often start with conceptual understandings that are partial or even incorrect, and these are an important ingredient in learning. Recognised and worked through, they help all members of a class explore an issue in depth; they bring to the surface partial explanations and different perspectives and illustrate the way that learning is about how we reach answers rather than just about the answers themselves.

Teaching approaches that elicit and build on what learners believe, know and can do already can result in significant learning gains. When teachers set out to establish where their learners were starting from, learners also:

■ Teachers and schools now have the freedom to innovate in developing curriculum content. Even when the new national curriculum is introduced following the curriculum review, we are told that, at most, 50% of pupil learning hours will be specified centrally. At present, some schools are enthusiastically using the last wave of curriculum reforms as an impetus for innovation, working, for example towards Year 7 and 8 provision that more closely mirrors approaches in Key Stage 2, or developing a creative or connected curriculum across the primary phase. Others are assimilating the approaches offered by, for example, new academy chains. Some are waiting to see what the national curriculum reviews will bring before considering how to make that engaging and innovative to promote the creativity of the young people in their community. But this evidence (summarised in Cordingley and Crisp, 2011) suggests that waiting is a mistake; that capacity to manage curriculum reforms, make them meaningful to young people and to promote creativity can and should be developed by all staff and school leaders as a natural part of their ongoing professional development. Importantly, it suggests that starting this right now offers schools the best possible chance of ensuring that reforms genuinely work for their pupils and context.

■ Even though one powerful driver for creativity and innovation is the pace of change and innovation in society more generally, there are some abiding human challenges for all communities that the curriculum must address if it is to prepare our young people for citizenship. It is not only innovation in society that creates demands for innovation and creativity in learning. Take these telling words from a head that I interviewed for some research in 1992 (Cordingley and Harrington, 1996) when Mrs Thatcher famously asserted ‘that there is no such thing as society’. He said: ‘I used to be required to help young people become wise and good. Now all I’m supposed to do is make them clever.’ I think this concern would be felt just as keenly by many teachers and school leaders today. ‘Making students clever’ does not even begin to serve the needs of society or young people and works against the promotion of innovation and creativity. But intelligent and informed curriculum development and implementation can give teachers and schools the space to fashion something better than this. Last summer’s riots and the involvement of some very young people in them suggest a pressing need for broader learning experiences more connected to the communities in which schools are nested. Evidence about how effective curriculum innovators (Bell et al, 2008a) from around the world are doing this, can help us to learn from what works well and at scale.

■ Much of the confusion that flowed from the overly detailed support offered to schools by government agencies since the early 1990s arose because of the number of government agencies involved, each charged with responsibility for just one specific element of the teaching and learning enterprise. QCDA was responsible for content; the ‘strategies’ for teaching and learning processes; Training and Development Agency for Schools (TDA) for continuing professional development (CPD) and initial teacher education (ITE); the National College for School Leadership (NCSL); and Ofsted for standards. Try as they might to work together, their remit and accountability systems drove them into cul-de-sacs which then meant they had to create advice about a narrow subset of schools’, teachers’ and learners’ experiences and wrap around them materials to take account of important issues beyond their remit. In the real world, one teaching or learning activity serves many different purposes. Curriculum plans mean nothing until they are enacted through effective teaching and learning strategies and relationships. Teaching and learning strategies make little contribution unless they are nested within effective learning relationships and clarity about what is to be learned, why it is important and how it contributes to a bigger learning journey. Most of this is neither good nor bad until matched to particular needs, talents and skills that young people bring to learning. In the context of new freedoms, teachers and schools have the power—the responsibility—to create a whole that is bigger than the sum of its parts—and have the job of doing so with very little support or guidance or free resources or materials.
Examples of contextualised curriculums working in practice

- Arranging for pupils to take on the role of scientists, and to explore the moral issues relating to genetic mapping at the same time as learning about its scientific content. This significantly helped pupils remember key biological facts and concepts and to understand them deeply enough to construct scientific as well as moral arguments.

- Similarly, for pupils to explore links between the holocaust and issues live in society right now significantly expanded the range of historical evidence that learners engaged with and retained, and the ways in which they were able to use that understanding in other contexts.

Benefits also extended to improvements in pupils’ abilities to make good choices within learning situations and in their leadership skills

- developed increased motivation and enjoyment of the curriculum
- built up their confidence
- avoided misconceptions that can make it difficult to absorb and make sense of subsequent ideas.

However, our school-based research (CUREE, 2010) shows that this is easier said than do. Obstacles identified by teachers in England in 2008 ranged from practicalities, such as the demands of doing this well for significant numbers of learners, through teachers’ difficulties in spotting the moments when it is important to move from central guidance to handing over increasing responsibility to learners. They also included concerns among teachers about the learners’ lack of skills in articulating their own thinking and starting points.

Notwithstanding these benefits, there is a shared belief among many primary and secondary teachers that identifying what learners know and can do already was difficult because they lacked time to listen to learners’ explanations in depth and to observe learners carrying out activities. Schools that are effective innovators manage such challenges by, for example, encouraging the development of skills in articulating thinking and existing understanding from an early stage. They also encourage use of questioning:

*Sometimes I ask students to explain their thinking ... I will ask them how they came up with that answer. That helps me learn their thinking.*

(CUREE, 2010)

Use of ‘working boards’ is another strategy for communicating learners’ thinking, and involves them setting out their initial thoughts on a topic, their early ideas about what to do, and their propositions about the current topic. In this way, the working board creates a springboard for dialogue between learners and teachers and can provide an assessment technique that gives insights into the dynamic development of learners’ ideas, existing knowledge and learning perceptions. This helps teachers to direct and inform their ongoing work. The development and use of the workboard was viewed by the teachers in these schools as an important formative assessment strategy.

The box at the bottom of page 12 provides a case study showcasing such approaches focused on creativity –

While based on work in a primary school, it is a strategy that would work equally well in secondary schools.

In-depth research (CUREE and University of Wolverhampton, 2008) in schools that are effective innovators suggested that active engagement of learners in their own assessment, may be effectively counteracting the risks of limiting learning through teaching to tests identified in the earlier research.

Principle 3: structure groupwork for interdependence by teaching effective group talk skills and planning tasks that use and reinforce such skills

There is emphatic international evidence (Bell et al, 2008a and 2008b) about the benefits of careful planning for structuring groupwork. Evidence from England between 2007 and 2010 (CUREE, 2010) shows how teachers in schools that are effective curriculum innovators all value and make use of carefully planned and structured groupwork and collaboration as a way of achieving the benefits set out in the box top left on page 12. The effectiveness of collaborative learning depended on teachers fulfilling the tasks set out in the box top right on page 13.

Interestingly, learners from across the country as a whole reported, via large-scale annual surveys from 2007–08 (Cordingley and Crisp, 2011), a substantial increase in the use of groupwork for problem-solving. Secondary school pupils reported a 33% increase from 2007–10. We do not know whether or not this was structured in ways that encourage creativity and innovation. But we do know that learners saw this as a welcome innovation in its own right.

Principle 4: foster a less compartmentalised approach to the curriculum to promote conceptual development

Evidence from international research (Bell et al, 2008a and 2008b) and from schools who are effective curriculum innovators highlight the contribution that planning learning across the curriculum makes to promoting depth in young people’s conceptual development.

Examples of linking learning with home and community

- Engaging parents in learning that is set by the school by giving them key roles, for example, providing case studies or histories of their own experiences
- Creating conditions for learners to draw on their experiences outside of school to support learning in lessons, for example by asking pupils to explore and bring into school artefacts (such as food packaging to explore air miles) from home, using these to explore an aspect of the curriculum and then asking pupils and parents to comment together on issues arising; or comparing different family traditions and games, encouraging pupils to discuss interesting similarities and differences between them with their parents and using the results to explore the learning embedded within them
- Asking pupils and parents about community events and activities and designing opportunities for contributing to them through work in class
Creativity and innovation are derived in part from the shock of the new, from surprising juxtapositions. What seems to be key to making learning meaningful and contributing to creativity is that teachers with different subject specialisms have a chance to work together.

Benefits of effective groupwork

- Secures access to the curriculum
- Enhances reasoning and creative problem-solving skills
- Promotes young people’s in-depth engagement with many (though not necessarily all) subjects, and the curriculum as a whole
- Enhances achievement and emotional development
- Improves confidence and self-esteem
- Supports increasingly independent learning through good decision-making
- Increases learners’ leadership skills

Such depth embedded within curriculum experiences that made connections between subjects was also important for overcoming the difficulty learners sometimes had in transferring thinking and learning from one subject to another. This evidence does not definitively settle the argument about whether a theme or subject-based approach works best—because cross-curriculum and cross-subject planning by teachers, while frequently set within theme-based approaches, also sometimes occurred within subject-based approaches.

What seems to be key to making learning meaningful and contributing to developing students’ creativity is that teachers with different subject specialisms have a chance to work together. They have the opportunity to explore their subjects and the curriculum in the context of other subjects by, for example, working out where big ideas and concepts can be reinforced or are tested in other contexts and learning about the different ways their pupils will have encountered them.

These are all steps that are helpful in revealing and building on existing thinking and ideas and making them available for building new connections and opening up new possibilities.

Principle 5: plan for challenging all pupils from the start

Between 2007 and 2010, surveys of large numbers of pupils from Y4 to Y10 reveal that a significant proportion of learners in England (20–25%) felt themselves to be underchallenged. International research (Cordingley and Crisp, 2001) highlights the importance of planning for challenging all pupils from the start through both content and process. It also highlights three broad approaches to doing this—see the box in the middle of page 13.

Focus groups with teachers for different subjects revealed that teachers of science and maths expressed particular concerns about planning for challenge because of worries about embedding misconceptions in subjects where knowledge is intensely cumulative. The focus groups also highlighted how difficult teachers find it to hold back from intervening directly to accelerate pupils’ learning in order to enable learners to make significant leaps on their own. Teachers emphasised too the problems they experience in focusing on challenge for every student in large classes. Schools that are effective innovators reinforce the usefulness of the three strategies in the box in the middle of page 13 for managing challenge. They also suggest two other useful approaches to embedding challenge in learning experiences for all:

- actively involve pupils in choosing between a range of levels of challenge and exploring the patterns of choices they make
- encourage learners to take responsibility for their learning by planning in advance activities that would reveal the points at which it is possible to step back.

Principle 6: align curriculum and professional development to build capacity and secure excellence in subject knowledge

The international evidence base (Bell et al., 2008a and 2008b) highlights the importance of effective subject knowledge and curriculum and professional development for all aspects of...
teaching, learning and curriculum development, whatever pedagogies or curriculum approaches are used. The more creative or thematic the approach, the greater the need for excellence in curriculum and professional development and in subject knowledge. It is confidence in content that enables teachers to let go of control, to listen more accurately to learners and to design genuinely meaningful, engaging, creative and challenging learning activities.

Benefits for learners include improvements in attainment and achievement and more positive attitudes towards learning processes and content. The benefits for teachers include greater confidence in deploying a wider range of strategies matched to the needs of their learners and confidence in and enthusiasm for continuing to learn and to designing new curriculum materials.

Curriculum and professional development that promoted such learning included specialist support focused on encouraging, extending and structuring professional learning and experiments with new approaches. These were combined with planned opportunities for collaboration between peers and discussion, focused on teachers’ aspirations for their learners. They also involved processes for sustaining the curriculum and professional development over time to enable teachers to embed the practices in their own classroom settings.

Schools that are effective curriculum innovators aligned curriculum development and curriculum and professional development through collaborative design or refinement of curriculum materials and resources. The curriculum and professional development process involved a combination of ‘big picture’ inputs from leaders and specialists, and hands-on workshops delivered through multiple curriculum and professional development events. These were sustained via coaching by leaders and specialists and collaborative ongoing development work by teachers. Monitoring was persistent but informal and embedded in curriculum and professional development support. Effective leaders were actively involved; they modelled both the new approaches and the learning behaviours and outcomes they sought for young people and for their colleagues.

Curriculum development was embedded, with curriculum and professional development support provided at scale through tools and resources adapted by teachers for their own contexts once they had developed their understanding of key issues and underpinning principles.

**Putting the principles to work**

These six principles point to a number of strategies and a potentially big agenda for action. Perhaps the first step is to use them as a checklist for auditing your existing curriculum and identifying priorities that work well with your school improvement plan. Once you have focused on one or two areas for development, you might like to look at more examples of successful practices, tools and resources in our various reports or through CUREE workshops. You will find lots of material to get you started on our website at: http://www.curee.org.uk/

Creativity and innovation are derived in part from the shock of the new, from surprising juxtapositions. However, it is important to remember that these also feed deep learning and establish the conditions that create pressure for learners to move out of their comfort zones and to work together to achieve something more than could be fashioned independently. Creativity and innovation can and should be easily woven into more traditional school approaches if the work of curriculum design and realisation is approached holistically and if content, process and purpose are addressed together — which is what happens when schools put these six principles into action.

In more specifically identified creativity projects, the pressure of performance or of creating exhibitions or events where there is an audience, a timescale and a purpose, those externalities combine to support teachers and learners through the challenges of open-ended, innovative learning and creativity. This evidence suggests that communities of teachers working in partnership with each other and the young people they serve, can use the design and realisation of a meaningful curriculum in a similar way. It is a demanding enterprise, but the evidence from around the world and from some innovative and creative schools in this country shows us that this is possible.

**Factors for successful collaborative learning**

- Provide clear guidance for groupworking, including identifying key roles for all group members and agreeing groundrules
- Explicitly teach and model groupworking skills
- Plan a sequence of progressively challenging tasks so pupils have the chance to practise and develop the skills required for working collaboratively incrementally
- Design interdependent tasks and activities
- Ensure tasks involve learners working with other people’s ideas and contributions, widening their sense of what is possible
- Design collaborative tasks that involve challenges requiring open-ended, exploratory talk and help learners work productively to develop indepth knowledge and understanding while solving problems and/or creating new artefacts, events or performances

**Learning activities that enable pupils to explore their identities and treat them as whole people ... seem to offer effective vehicles for contextualising learning in ways that help to unleash and engender creativity**

**Approaches to challenging all pupils**

- Collaborative inquiry and problem-solving where there are no fixed or right answers — developing thinking skills — with guided interaction between learners
- Developing a more facilitative and probing role among teachers that encourages learners to take increasing responsibility for their learning
- Using diagnostic tasks and activities, including pupil enquiry, to provide a springboard for planning projects, lessons and progressive schemes of work

**Philippa Cordingley, Founder and Chief Executive of CUREE**

Philippa has led CUREE colleagues in a number of large-scale, national research, development and CPD projects, including the creation of a national framework for mentoring and coaching and large-scale research to build the evidence base for a curriculum for the 21st century. Her extensive work in leading and championing teacher engagement in and with research has been recognised by the Organisation for Economic Co-operation and Development (OECD) and through the award of an Honorary Fellowship of the College of Teachers.
Creative teaching for creative learning: why, how and wow!

How do we teach for creative learning? From modelling and stimulating creativity, and encouraging risk-taking, to building enquiry-based learning, and promoting reflection among students – Jo Trowsdale explores how, using case studies throughout to reveal how this translates in practice.

Creativity in schools – why bother?
Some schools may believe that creativity ‘can override the perceived negative attributes of regular school learning’ (Sefton-Green, 2008, p23) and that creative teaching for creative learning is a defence against disengagement. However, it can be far more than that. Rather than a sticking plaster on an outdated and irrelevant educational model, creative learning at the core of schooling can transform the experience of learning, bringing relevance, confidence and achievement.

The argument for developing creative capacities might be grounded in economics, global change, social equity or human psychology or a mix of these. Whether the purpose is employment skills for the 21st century; the need to ensure active citizenship in a time of rapid political, economic and technological change worldwide; the need to ensure good learning and life opportunities worldwide; or to harness and mobilise innate, intrinsic human interest and energy, we have potential to adapt, create and effect positive impact. Through education, we have the chance to coach and enhance such capacities in young people for their benefit and for the benefit of the world around them.

The question is not really, ‘Why creativity?’ but ‘Why not?’

Rather than a sticking plaster on an outdated and irrelevant educational model, creative learning at the core of schooling can transform the experience of learning, bringing relevance, confidence and achievement.

Role of creative professionals: example activity in fostering creative T&L
To gather insight into and recognition of the range of creative skills in your staff, teachers might be asked to identify the activities, hobbies and interests they undertake beyond school (parent, cook, social organiser, cyclist and so on) visually representing each on large paper using offered collage materials. Then they identify the skills they use in each one that relate to your agreed aspects of creativity and note these through the use of their own invented icons or through words. These are shared, celebrated and mapped in working teams to show the wealth of personal and peer resources they have. Creative agents working with Cre8us have facilitated such work to empower staff. If you wish to take this further, creative agents can work with staff to map these against areas for development in their subject domain and agree actions to address needs.

Using initiatives: sources of inspiration
A number of skills-based and student-led education projects have been piloted and developed nationally and internationally with the aim of better preparing young people for such learning, citizenship, family life, change and work in the 21st century. Despite the varied semantics, most, if not all, might be characterised as employing creative learning methodologies that develop greater proactivity, resourcefulness, innovation and adaptability in learners. For example, many of the schools that have engaged Creative Partnerships (www.creative-partnerships.com) have constructed their own curriculum, introduced new assessment frameworks that promote and require creative learning. They have achieved this by working with external creative partners, positioning young people more as leading their learning and enabling staff to develop their capacities as creative enablers.

While this is my experience, and the dominant one I shall draw on in this article, many schools use other programmes and initiatives to inspire and guide their creative change. Often they combine and always they adapt and develop for their own context. Sources of inspiration for creative change include those set out in the box below.

There are common characteristics in principles, elements and practices across many of these projects, programmes and initiatives. While taken from one project (Cisco, 2008, piii), the description below could be true of all current education innovations:

- Students complete project-based, cross-disciplinary tasks that encourage innovation and cross-cultural collaboration (and) apply their knowledge and creativity to solving real-world problems.

Useful things to know: sources of inspiration for creative changes
- Former QCDA’s personal, learning and thinking skills programme
- Building Learning Power (BLP) – see: www.buildinglearningpower.co.uk
- RSA’s Opening Minds and area-based curriculum projects – see: www.thersa.org/projects/education
- Futurelab’s Enquiring Minds – see: www.enquiringminds.org.uk
- Innovation Unit’s work with Paul Hamlyn on Learning Futures – see: www.learningfutures.org
Typically, such projects use enquiry-based learning, draw on external and local partners, operate offsite as well as onsite, require collaborations between learners that demand leadership and position teachers as co-learners and facilitators. All regard the growth and transferability of skills as fundamental to learning.

In effect, they all recognise that our education system, unlike any other system in public life, such as health or communications, has not innovated at the rate required for 21st-century needs. A recent example of this might be that of a south London school, where pupils using mobile phones to design smartphone apps made BBC news (www.bbc.co.uk/news/education-16186705). This was because the school is exceptional in not banning mobile phones and because of a recent Ofsted (2011) report (www.ofsted.gov.uk/news/young-people-are-not-being-sufficiently-challenged-ict-lessons-o) that has described ICT teaching as dull and lacking creativity.

The question is not really, "Why creativity?" but "Why not?" If being creative is our exceptional animal capacity, that which makes us human, why would we not capitalise on our assets in educating and growing our young?

**What does creative learning mean to you?**

Being a creative teacher means different things to different people. One view of creative teaching, communicated through the Plowden Report (1967, see: www.educationengland.org.uk/documents/plowden) suggested arts-based learning was needed to foster pupil-centred learning and independent expression. This might present an obstacle to many teachers who do not consider themselves ‘arts-minded’. Another view might focus on creative learning as the opportunity to develop skills that promote self-management. In recent decades, the focus has been on a more economically driven model in which creativity equates to creative thinking; developing skills, knowledge and rigorous critical thinking to generate independent, flexible, resourceful learners. This may dominate the views of currently practising teachers, but they may well be overlaid with earlier histories and views.

Any school may have teachers who explicitly or implicitly hold these different beliefs. In a school where what is understood by creativity is not discussed, debated and developed together, these differences may confound clarity, conviction and action about what to do to develop creativity and why teachers should even do so. Yet, if they are debated, shared and brought together, such differences have the potential to enrich a school’s creative teaching and build a culture of varied and owned practices operating to agreed principles. Research supports the view (Runco, 2007) that creativity is learnable: that there are processes we can all engage in to become more creative; there are conditions (environments, climates, practices) that we can develop to foster creativity.

**How to teach for creative learning**

Creative teaching for creative learning is about catalysing and expanding possibilities that excite learners to connect with learning, discover, extend and challenge their current learning capacities. It happens emphatically through facilitating, but it also involves modelling, coaching and directing learners to become skilled operators in the dimensions of creative-learning processes. It involves listening, questioning, motivating and guiding. How schools enable teachers to operate in these ways must be informed by a mix of reputed practices, adapted by their particular context, alongside the local innovation, expertise and character of the staff in any particular school.

The role of a ‘creative agent’ partnering schools has characterised our work at Cre8us – see the ‘Useful things to know’ box below.

**Creative teacher: growing the capacity and disposition**

While few teachers will recognise themselves as operating a traditional master/pupil, ‘transmission’ model of learning, many still struggle with a fully pupil-centred ‘acquisition’-based creative learning model. The weight of tradition and pressures of external exams still

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**Useful things to know: role of creative agents**

Grown from the Creative Partnerships programme, we have offered a partnership with creative professionals, particularly creative agents who act as a critical friend and a catalyst of creative change. Typically, they are artists with skills in theatre, art, music, dance, but also with extensive interpersonal, facilitation and education experience. They work with senior leadership teams (SLTs) to listen and reflect back, challenge and support, offer alternative ways of seeing to provoke new thinking and connect together within and beyond the school. They help school leaders to realise their vision of how creative learning processes can change and develop a school. Often they and other practising artists work directly with teachers to lead and facilitate professional development within and beyond curriculum time. They might coach, model and facilitate learning reflection and sharing of practice. Working with teams or whole staff, they might develop a professional learning network focused on developing creative capacities, as the case example in the box top right illustrates. For further information on the role please see www.cre8us.org.uk/creative-agents and www.cre8us.org.uk/index.php/news/entry/being-a-cre8us-creative-agent
Promoting reflection on creative learning

To grow the habit of personal reflection, staff review creative learning in a recent project/class. They identify between three and nine key moments in their development as creative learning enablers. A stick or paper might be offered and the teacher is requested to mark the milestones in their journey in 10-15 minutes. The focus of time and structure combined with resources that cannot be literal forces teachers to operate more symbolically and discover their own insights. Sharing with another or others might launch a buddy/journaling habit. This might enable a teacher to see what has mattered most and what it is within that, from which they might wish to generate their own professional enquiry or focus.

renders teachers feeling they must visibly be the expert ‘one who knows’. Possibly, also, they are inhibited by the Plowden view of creativity that suggests art-making processes expertise is required from them. Possibly pupil-led practice generates fear of being out of control. While these are understandable feelings to have, they work against the disposition and approaches needed for creative teacher for creative teaching.

With such pressures on teachers, we at Cre8us recognise how vitally important it is that creative learning innovations begin with and focus on investment in the teachers themselves. Like the students they teach, teachers must be given and give themselves permission and encouragement to discover their own creative meanings and capacities, develop a broader and deeper understanding of how creativity can feed learning in their discipline and build their confidence as ambassadors of creative learning methodologies.

Through the Creative Partnerships programmes led by Cre8us, we have seen some schools work with ‘early innovators’ (those teachers who see the potential of creative learning early on) to excite learning and bring peers on with them. Often this has been very successful, but sustained success and growth depends on who they are, how they are positioned with senior leaders, viewed by the wider staff and enabled to work with peers. The position of a ‘champion’ who is not respected, networked, or connected with middle and senior leaders and staff can be counterproductive; it shows a creative practice that is not being adopted, grown and valued, and signals that creativity is an individual choice that does not matter. Other approaches taken by schools include inviting a range of interested staff, such as teaching assistants (TAs), to be creative activists, coaching them to investigate and coach ideas development at grass roots levels and report back. Learning triads have often worked in generating whole-staff engagement at the outset but are reliant on the commitment of all, including senior leaders, to galvanise.

Whatever the means, it is important for individuals and then collectives to build and articulate a shared understanding of what creativity in learning means to them.

Through Creative Partnerships work, we have used creative professionals to model accessible active and

If being creative is our exceptional animal capacity, that which makes us human, why would we not capitalise on our assets in educating and growing our young?

Creative teaching for creative learning is about catalysing and expanding possibilities that excite learners to connect with learning, discover, extend and challenge their current learning capacities

Staff recognised students’ ability to peer teach and persist with the lines of enquiry, to use staff as resources rather than sole guides

Inspiring staff research

Staff arrived at the entrance to the hall at the beginning of an Inset day and were given a piece of paper cut out like a suitcase and were asked to list on it all the things that got in the way of them being the best creative teacher they could be. They left their bag-gage outside the hall and then entered to seats laid out as if on a plane. The ‘in-flight entertainment’ from the leadership creative ambassadors offered inspiration about the elements of creative learning staff might focus on. Staff were then invited to take their own ‘flights’, searching the locality for immediate resources or for ideas about possible partnerships they might pursue to develop learning opportunities.

practical strategies to foster creative T&L – the box top right on page 14 gives just one example. Aspects of creativity that, through Creative Partnerships, we have focused on developing and evaluating include those set out in the box in the middle of page 15. An activity we have used to promote staff reflection on creative learning is given in the box above left.

Spreading creativity

We began the practice of using recycled materials following a major early years project we began in 2005 (www.cre8us.org.uk/resources/entry/second_skin), inspired by the Reggio Emilia REMIDA model (http://zerosei) and taken forward locally by WEAVE (www.weaverecycle.co.uk). We discovered how working with found or recycled materials led people to work symbolically and personally to create their own meanings.

Drawing on this practice, one secondary school has developed its own creative recycling store that staff draw on in developing unusual and inspiring resources for learning projects with students.

Some schools have engaged staff collectively in focusing systematically on different aspects of creativity and for an agreed period, for example a fortnight, seeking to observe, foster and document its manifestation in their teaching.

Inset sessions run by creative practitioners have offered opportunity for creative reflection processes to be experienced using creative strategies to demonstrate how accessible and revealing they can be. For example:
■ target-board position where bullseye is best, position on a line where extremes are named, before and after...
Case example: shaping enquiry around students’ interests

In one school, a project to develop an outdoor learning space designed by pupils might have stopped at that. Instead, the lead teacher saw her students’ interest in how it would be used and extended the project, opening it up as an opportunity for staff to work with their students to find out what possibilities they wanted from learning experiences outdoors. The result was a much richer insight that has fed teachers’ intuition into how to interest students in learning indoors and out, and shaped the types of professional development staff then requested. Modelled by the artist and lead teacher, teachers were able to see how real-world connections in the natural world, plus the way the physical freedoms fostered mental openness, excited learners. Based on this, staff became more interested in pupils’ ideas and in their skills as collaborators, investigators, analysts and reporters. It enthused them to act more as models, connectors and facilitators of learning. The initial view of outdoor learning as ideal for science expanded to ideal for learning, whether scientific, communicative, or maths.

With such pressures on teachers, we at Cre8us recognise how vitally important it is that creative learning innovations begin with and focus on investment in the teachers themselves.

Modelling and stimulating curiosity

Modelling as well as stimulating curiosity is also important. This might be done through a wonder wall that invites questions that the students are then given time to pursue (peer-to-peer as well as teacher-to-student). Teachers need to allow themselves to become excited by students’ ideas, following up questions with more questions so that students experience learning being owned and driven by their passions and interests. A humanities project in a Coventry school invited Year 8 students to review their history, geography, RE and sociology curriculum in Year 7 and redesign it. Students proposed questions such as ‘Do you think everyone is entitled to a luxury item?’ ‘How did the Romans start their empire?’ ‘What is God?’ and, collectively, these questions led them to see that investigating and proposing answers to such questions is essentially about exploring the ‘ultimate questions’ about how we live our lives. Staff recognised students’ ability to peer teach and persist with the lines of enquiry, to use staff as resources rather than sole guides. Shaping and constructing the enquiry based on the responses and interests of individuals is vital to keep the learning shared and owned by students, as the case example in the box above left illustrates.

With Post-It notes to explain position or live questioning to show changes and progress in learning
- numbers of shiny beads (or other object to suit the group) in small cake tins up to a maximum of five to show level of understanding at key points.

Examples such as these offer staff new strategies to use with students. Some schools have invited staff to go out in teams into the local area to research for possible connections to skills and subject material to be addressed in the coming term, returning and collaborating across disciplines (triads or small teams) to plan collaboratively. The case example in the box top right on page 16 shows how one school used this strategy in practice.

The development of teachers is long-term work and is reliant on a trusting relationship to win hearts and minds and on modelling and growing a can-do attitude. This is essential to generating resilient and confident creative enablers who will, in turn, shine those very skills and capacities on the students they work with.

Doing it: creative T&L in action

Enquiry-based learning

Enquiry-based learning is at the heart of creative practice. It is fuelled by curiosity and focusing the open-ended questions, generated by students’ curiosity, towards a purpose. All our work with teachers begins with hooking learners’ curiosity and, as a special and secondary school teacher jointly suggested put it:

Providing lots and lots of experiences for them to go and investigate, to notice different things ... giving snippets of information that makes them ask ‘what is this?’ so that eventually they discover what it is they are looking at and why they are looking at it ... and then learning really begins.

Using intriguing and recycled materials and lines from the text, the installation fed a much more investigative and enquiry-based approach to learning

Use of creativity wheel for skills development

The creativity wheel uses the three elements of creativity as defined by the NACCCE (1999) All our futures report: imagination with purpose, value, and originality. It subdivides these into 17 skills that can be taught and then cumulatively mapped against all learning. One week a teacher might have identified a need to focus on explicitly demonstrating, coaching and finding opportunities for students to ‘see more than one way of looking at things’ so that they might personally, or directed by a teacher, seek to apply this skill simultaneously in specific subjects, such as in a maths lesson. More details of the creativity wheel are available via: www.creative-partnerships.com
Case example: impact of student-led learning

In this school, a vertical group of varied student types worked with a carnival artist to plan and lead a Year 8 maths day. Three years later, pupil-led learning has been recognised and is being mobilised as the most significant tool for improvement. The students developed and delivered imaginative and novel problem-based activities and were able to explain their process to governors, teachers and peers. This was the catalyst for a change in maths teaching that has radically improved results and more widely changed how staff viewed young people and their role in shaping learning. The school now has a variety of fora, which are advised by pupil groups. They are part of new technologies, student leadership and in running the radio station the school now hosts. Students peer train and advise staff about topics of interest for programme makers. Through this, pupils have enabled the school to generate a common language of learning and assessment that is understood by students and parents and prioritises the dimensions of a creative learner. Students have translated language from a locally combined Building Learning Power (see: www.buildinglearningpower.co.uk) and PLTS palette so that it has become the owned language of learning for the whole school community.

Students have translated language from a locally combined BLP and PLTS palette so that it has become the owned language of learning for the whole school community.

Students may also be resistant to being more active in the classroom as it is a more visible and exposed place to live. Whether it is the pupil who tends to stay silent and instead moves around the class with a ‘focus on skills and assisting students into recognising where their weaknesses are and what they need to focus on’. He always has a set of questions in his pocket so there is always one ready ‘when I see lack of progress or a group of students who need a question to inspire them … to foster that awe and wonder’. Another talks of her role as ‘devil’s advocate’ obstinately resisting answers and ‘returning questions with higher order questions … to make them explain, justify and really question’. The more a teacher facilitates, the more time they have to develop learning than what I’m going to teach’. He ‘limits the amount of teacher talking’ and instead moves around the class with a ‘focus on skills and assisting students into recognising where their weaknesses are and what they need to focus on’. He always has a set of questions in his pocket so there is always one ready ‘when I see lack of progress or a group of students who need a question to inspire them … to foster that awe and wonder’. Another talks of her role as ‘devil’s advocate’ obstinately resisting answers and ‘returning questions with higher order questions … to make them explain, justify and really question’. The more a teacher facilitates, the more time they have to develop learning than what I’m going to teach’. He ‘limits the amount of teacher talking’ and instead moves around the class with a ‘focus on skills and assisting students into recognising where their weaknesses are and what they need to focus on’. He always has a set of questions in his pocket so there is always one ready ‘when I see lack of progress or a group of students who need a question to inspire them … to foster that awe and wonder’.

Fostering risk-taking

The words ‘support’ and ‘partner’ have appeared a lot – they have been fundamental to our practice and, as our school evaluations and case studies bear testament, they underpin the necessary risk-taking behaviour that teachers must model, invite and celebrate. For many teachers this must be overcome in them before it can be modelled. Change in ownership of learning can feel like a risk. One teacher spoke of the discomfort of: ‘having to sit on your hands … not “help” because your “help” is getting in the way of their learning.’

Another celebrated this risk:

I don’t feel that I’ve lost control. In fact, I feel more in control because I can deal with anything that comes my way and respond to whatever the children come up with.

Students have translated language from a locally combined BLP and PLTS palette so that it has become the owned language of learning for the whole school community.

Teachers need to talk openly about live moments when a lesson plan or approach does not go as expected and to invite students to report back on learning from mistakes to signal that risk-taking is to be applauded, is expected and necessary to learning.
instrumental in developing their practice and thinking. This habit of peer reflection on learning is essential for meta-learning and is equally necessary for students to recognise their own strengths, capacities and potential as learners. As one teacher says:

The emphasis of questioning both by myself and the students is helping me and them understand far better what they’ve learned.

Another teacher noted that having developed reflection within the creative learning process: children are far less preoccupied about levels or grades; they are more aware of progress ... the progress they have made ... it’s so much more personal and individual.

Ongoing reflection shapes the development and growth of the enquiry, task and learning. Assessment complements reflection and feeds individual self-esteem, replacing a former sense of externally and comparatively judged assessment that a student has no role in shaping. How reflection happens has been a matter of local or personal taste. Many teachers have used journals, some extending the practice into a collective reflection, for example, using a Facebook status-updates idea. Here students are invited to reflect on their progress towards a learning focus on a long roll of paper so that subsequent entries can add new ideas or talk back to previous entries.

Developing student-led learning
A core tenet of our practice in Creative Partnerships has been to support schools to develop student-led learning. While it may be commonplace to begin projects with finding out what students know and are interested in and developing learning from such knowledge and interests, it is less common for schools to genuinely position young people as the co-planners and constructors of their learning.

In some schools, staff have piloted this practice, sharing the syllabus requirements and content areas required with students. With the support of a creative partner, over three lessons together with the students they have planned the approach and resources. Staff have been surprised by the maturity and creativity of the students they have worked with. In one school, having started in religious education the creative agent and other artists have now worked with four other departments to model how co-construction can be facilitated and the practice is growing. The case example in the box top left on page 18 shows the benefits such an approach can bring. For further Cre8us teachers’ tips on how to teach for creativity see flimclips on: www.creative-teachers.org

Growing creativity: action for success

■ Develop vision and plans with all stakeholders: students, teachers, teaching assistants, parents, ground staff, community.
■ Communicate what is intended and happening.
■ Involve staff and parents in recognising and praising desired learning behaviour.
■ Use existing planning, delivery and review systems to grow and embed practice.
■ Ensure your existing assessment and evaluation tools allow you to capture changes in student learning behaviour as well as in achievement. If they do not, adapt them. Are there particular dimensions you need to make explicit and monitor, such as self-esteem, problem-setting, co-constructing?
■ Use known and some special communication methods to celebrate and make creative learning visible. This might involve, for example, the known newsletter emailed home and the text messaging system, but may also involve special events, such as an open-learning day where parents are invited to witness and take part in learning experiences to see how learning happens and what skills are being developed. At this event, young people can introduce and explain what and how they now learn so that parents experience how this is different to their own education, gain an overview of skills and some taste of how this happens in particular lessons.
■ Share and celebrate tangible changes, however big or small, to build confidence.
■ Use the creative advocates at all levels, across students, teachers, teaching assistants, parents, governors, to talk in informal and formal contexts about the impact and value of the creative learning approaches they use. Some new events or communication methods might be needed, but consult the students to be sure about what will work best. Let them lead and manage events.

Strategically positioning creativity to succeed
For creative teaching and learning to really grow and reap benefits in a school, it has to be at the heart of school development and change. If senior leaders are behind this, they can model the same practices as the wider staff and mobilise school systems to achieve the actions set out in the box below.

Where a whole school is motivated by and engaged in creative learning, students develop skills and confidence in their abilities and value as meaning-makers and meta-learners. Creative learning processes, genuinely positioning students at the heart of challenges, enable teachers and students to question and propose whose knowledge, what connections and what purposes are relevant and needed for the context. In a time of extreme economic, social and educational change and uncertainty, and especially with the prospect of a more traditional curriculum being proposed, growing the skills of divergent thinking, risk-taking, collaboration, resilient problem-solving, connection-making, reflection and refinement in our young people seems more important and necessary than ever.

Jo Trowsdale, Director, Cre8us

Cre8us is a creative learning organisation, which has managed the Creative Partnerships programme and worked with more than 100 schools to develop creative solutions to their challenges through enquiry-based practice. Jo is also Associate Professor at the Institute of Education, University of Warwick, where she has trained primary and secondary teachers for more than 10 years. A former drama practitioner and arts education officer, her research has explored the relationship of professional arts practices and processes to educational contexts and learning processes. She has worked with artists, cultural organisations, teachers, schools and local authorities. You can contact her at: jo.trowsdale@cre8us.org.uk or jo.trowsdale@warwick.ac.uk

The teacher needs to allow themself to get excited by students’ ideas, following up questions with more questions so that students experience learning being owned and driven by their passions and interests
Room for innovation: creating creative learning spaces

Where learning takes place can have a huge impact on creativity. Steve Illingworth looks at what a creative learning space might look like, exploring the learning skills students need to develop, and the level and progression of teacher input required so that learners’ creativity can soar

Increasingly, schools are beginning to capitalise on the potential for learning in moving away from the traditional design and character of the classroom learning space that has changed very little since Victorian times.

This design is predicated on the basic idea that the teacher is the central character in the classroom – dispensing knowledge, deciding on the tasks undertaken, imposing the discipline and determining the pace of learning. Nearly all learning takes place in a classroom, with a teacher’s desk in a fixed place and with students seated at tables or desks in a set pattern. This room will usually be totally enclosed with a door that can be, and usually is, closed. In these learning spaces, the natural style of learning is a large proportion of teacher talk and an idea that the whole class will generally move forward at the same pace while engaging with the same tasks.

Some may argue that the traditional learning space has not changed much because it has generally been successful. Most experiments with different models, such as ‘open-plan’ classrooms in the 1960s and 1970s, were not generally regarded as successful and designers reverted quickly to the enclosed classroom. Even when many schools were rebuilt in the first decade of the 21st century, under schemes such as the Private Finance Initiative (PFI) and Building Schools for the Future (BSF), their new technologies may have been very modern but the basic design of the corridors and classrooms was usually very traditional.

The main drive for schools starting to experiment with more creative learning spaces, both in the design of new buildings and in the creation of larger, more open spaces within existing schools, has been to create an environment where young learners can engage in a wider variety of activities and become better independent lifelong learners.

In recent years, several employers have appreciated that more young people are now emerging from formal education with better qualifications, but they say they have not seen any real improvement in the ability of school-leavers to take initiative, be responsible for their own development or to work effectively in teams. It is these vital qualities for lifelong independent learning that creative spaces can enhance. As the new spaces will make their learning more engaging and more appealing to each individual’s most favoured learning style, they have the potential to make even more learners succeed in gaining more qualifications and developing a wider range of skills.

### Purposeful movement around the learning space is much easier, giving pupils more choice of how to learn and more experience of managing their own motivation and conduct

- Wider variety of learning styles
- Movement of pupils makes it easier to allow kinaesthetic learning
- Lessons are less dominated by teacher talk
- More opportunities for independent learning
- Teachers learn from each other through regular collaboration

### Benefits of creative learning spaces

- As the new spaces will make their learning more engaging and more appealing to each individual’s most favoured learning style, they have the potential to make even more learners succeed in gaining more qualifications and developing a wider range of skills

### What might a creative learning space look like?

A creative learning space is likely to be larger than a conventional classroom, perhaps large enough to accommodate 50–60 pupils rather than 30. There may be an area where a large group of pupils can sit for a teacher explanation, with a mixture of tiered seating, beanbags and conventional chairs. Pupils would only stay in this area for a small part of the lesson, possibly at the start, the end and maybe for a mini-plenary part way through. For the rest of the lesson, they would be working at a variety of workstations around the learning space, often moving from one to another. At these workstations they might be doing some reading and writing around some resources left on the table; they could be using computers to create a presentation or do some research; they might use a more open space to create a roleplay around the topic; portable recording equipment could be used to make an audio or visual record of the work done or pupils could be engaged in any other suitable task. Some pupils would be working individually; others would be working in small groups. The teacher, or teachers, would move around supporting each activity where appropriate but, at the same time, aiming to ensure that pupils can pursue their learning with as much independence as possible.

These creative spaces would not just be seen in new school buildings that have been specially designed for modern learning. Within older school buildings, there has been some redesigning, typically removing some walls so that two or three separate classrooms become one, or large hall spaces have been transformed into learning areas. In all of these cases, a larger creative classroom, with more flexible furniture and probably the latest mobile technology, has been the outcome.

Schools starting to work in this way have often looked at the idea of experimenting with time as well as with space. These creative spaces can be used most effectively with longer lessons, lasting for 100 or 120 minutes rather than 50 or 60. With so much variety within the lesson and with so much teacher time being invested in setting up a range of activities, it makes sense to have a longer learning time to explore all of these possibilities. Too many lesson changes in a day would make the creativity more difficult to manage. Also, with longer lessons there is more incentive for teachers to be more creative, as it is more difficult to keep the same task going for 100 minutes.

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**Steve Illingworth**
than it is in a shorter lesson time. So, a variety of tasks and of types of learning experience is essential to keep pupils engaged and challenged in the longer lesson.

**Benefits of creative learning spaces**

Creative spaces allow for a much wider variety of teaching and learning styles. Although teachers in recent years have developed much greater awareness of different learning styles, such as visual, auditory and kinaesthetic, their ability to integrate all these styles into most lessons has been constrained by the spaces within the traditional classroom area. These constraints make it difficult to have several activities happening at the same time and the more static arrangement of the furniture can inhibit different pupil groupings. The larger creative spaces mean that pupils can work on different activities, with a wide range of learning styles, at the same time. Purposeful movement around the learning space is much easier, giving pupils more choice of how to learn and more experience of managing their own motivation and conduct.

In creative spaces, there is likely to be less teacher talk to the whole class. With more pupils than a normal class size being in the same learning space, and especially where the spaces have been designed in a more open-plan way, the background noise can limit the ability of teachers and pupils to listen intently for a sustained period. So, teacher talk tends to be limited to shorter explanations and giving instructions. For learning this can be beneficial, as some teachers have a tendency to spend too much time in their classroom lessons on whole-class discussions, where many pupils play only a passive part in the lesson. In a well-organised flexible space, more pupils will be more actively involved in learning activities.

There are more opportunities for pupils to develop independent learning in creative learning spaces, as they will spend more time working on tasks by themselves or in small groups. They will not have as close teacher supervision as in the classroom and will have to develop self-discipline and be prepared to work out more things for themselves. How these skills need to be taught quite explicitly is discussed later.

Teachers’ professional development is enhanced by creative spaces, as teachers will often plan and deliver lessons in collaboration. In doing so, they share useful ideas, approaches and resources. While teaching the lessons together, they learn a lot from observing each other’s style and picking up ideas from the strengths of their colleagues. In a school with more conventional classrooms, opportunities to watch another teacher’s practice and learn from them are rare. When they do take place, these observations usually involve a hierarchical and judgemental format, where the main purpose is to assess the quality of teaching rather than provide an opportunity to learn from each other. Through the teamwork inherent in teaching in creative spaces, this mutual support and collaborative reflection on pedagogical issues is happening regularly, naturally and perhaps even sub-consciously.

**Teachers’ professional development is enhanced by creative spaces, as teachers will often plan and deliver lessons in collaboration**

Schools starting to work in this way have often looked at the idea of experimenting with time as well as with space.

**Too many lesson changes in a day would make the creativity more difficult to manage; also, with longer lessons there is more incentive for teachers to be more creative**

The larger creative learning spaces lend themselves well to a carousel of activities, where pupils have the chance to move round the room and do different activities at each area.

**The larger creative learning spaces lend themselves well to a carousel of activities, where pupils have the chance to move round the room and do different activities at each area**

Learning outside the classroom has always been an effective way to provide a more creative learning environment. Visits to museums, art galleries, theatres, outdoor areas of geographical importance or even just using the school grounds creatively have been part of school life for several decades. However, the fact that such experiences are usually enjoyable and memorable does not necessarily mean they are always effective ways to learn. Learning outside the classroom is most productive when the visit has clear objectives – which could be both academic and social – and where the ‘outside’ learning links coherently to the work done ‘inside’ the classroom, with pre-visit and post-visit learning to reinforce the subject matter and skills to be developed. When these factors are in place, learning outside the classroom can provide the space and inspiration for some real creative learning, as well as developing the vital social skills of appropriate conduct in special public spaces and interaction with members of the public.

The box on page 20 sums up the benefits of creative learning spaces.

**What works well**

The larger creative learning spaces lend themselves well to a carousel of activities, where pupils have the chance to move round the room and do different activities at each area. Although this type of activity is possible in a conventional classroom, the greater flexibility of size and layout in a creative learning space makes movement safer and means that each group is less likely to interfere with each other. The carousel works best when each area has clear instructions for the pupils as they arrive and where there are suitable extension tasks so that pupils are not kept waiting idly before they can move on to the next activity. Also, it is important that the type of activities are varied, including, if possible, reading, writing, discussion, roleplay, and ICT for research and for presentations.

Guided teaching with a focus on a selected group of pupils can be a very effective way of providing a deeper learning experience for students. As one teacher stands back and keeps a general check on behaviour and pupils staying on task, the other one or two teachers sit with a certain group and develop their thinking indepth, through questioning, dialogue and personalised explanation. After a while, the teacher doing the guided work could move on to another group or they could stay with the same group all lesson to provide even greater depth, doing the same for other groups in subsequent lessons. This approach helps to develop more intimate teacher-pupil relationships in the creative spaces, as there is a danger that some well-behaved pupils who do not usually draw attention to themselves could remain relatively unknown in a larger group. This type of intensive support for small groups can work better than in a classroom where just one teacher has to keep a constant eye on all pupils.

Groupwork with small numbers in each group is an effective way to develop learning in the creative spaces. The crucial point to stress here is the ‘small
CREATIVE LEARNING SPACES

What works well in creative learning spaces
- A carousel of different activities
- Guided teaching with a group of pupils within the larger class
- Groupwork with small numbers in each group
- A variety of ways of using technology to assist learning

It is easy to make the early mistake of allowing pupils too much choice

As time goes by, the intention would be to gradually remove some of this teacher-imposed scaffolding and allow pupils to develop their own choices

numbers'. Where there are large numbers of pupils trying to work on the same task together, the groupwork is much less effective and can have a negative impact on learning. Three or four is the optimum size. This is large enough to gain a range of ideas and small enough to keep everyone involved and to ensure that all pupils have something positive to do. In the larger spaces, there can be a temptation to make the group sizes quite big, with six to eight pupils involved in a group task. Some classes may be able to build up to this size eventually, but it is better initially for pupils to develop their collaborative skills with fewer people and then perhaps build up later. Constantly reviewing the skills and attitudes needed for successful groupwork – such as listening, contributing, compromising and delegating – when working in both creative spaces and conventional classrooms helps to develop good practice here.

ICT can be used effectively in these spaces, as there are more opportunities for pupils to break away in small numbers and use a laptop or other mobile device for a specific purpose for a short amount of time. They can find a space to watch a videoclip or to film a roleplay without disturbing or being disturbed by other pupils. An effective school learning platform can be well used in this context, where pupils can interact with the resources and tasks provided on the virtual platform without needing too much direct intervention by the teacher taking the lesson. The box above sums up what works well in creative learning spaces.

Level of teacher control
Paradoxically, it often takes substantial teacher direction to develop effective independent learning in these learning spaces. It is easy to make the early mistake of allowing pupils too much choice. Particularly in the early stages, the teacher needs to show clear direction in how pupils are grouped and how they move around the creative learning area. Hopefully, in the long run, they can then allow the pupils to take more responsibility for their own behaviour and for how and with whom they should work.

An insistence that pupils begin the lesson in a set place helps to reinforce the perception of the creative space as a purposeful work area. These seating plans can be altered for certain activities, both between lessons and within a lesson. As time goes by, the intention would be to gradually remove some of this teacher-imposed scaffolding and allow pupils to develop their own choices. So, true independent learning is enhanced and encouraged in the long run – but only after an initial stage of clear teacher guidance and control.

Related to this is the importance of a whole-school focus on effective behaviour for learning in these spaces. The impact of creative spaces on pupil behaviour can be mixed. On the one hand, there is more chance for well-motivated pupils to progress with their learning without interruption. As there is less whole-class teaching, the time of these well-motivated pupils is not being wasted by the teacher waiting for full attention from those pupils who are less well engaged. While the class is doing an activity, there is more chance to isolate disruptive pupils away from those who are concentrating in a larger space compared to a conventional classroom. On the other hand, the greater freedom allowed to pupils by the open spaces can provide opportunities for misbehaviour and lack of focus on the task in hand. In these circumstances it can be more difficult for the teacher to check on the progress of all individuals and some pupils may feel that they can succeed in doing very little and go unnoticed. It needs to be clear to all students that they will be held accountable for their work at the end of the lesson, with sanctions if they have not produced what they should. Support from school senior leaders can be helpful here too, especially in the early days of using the open spaces, where they can reinforce positive behaviour by having a presence in these areas during lessons, praising pupils where they are working well and dealing with those who are not.

Some skills for managing your own learning – self-/peer assessment
Observe four different people working on their task. Use the guidance below to give each person a mark out of five for each skill (flexibility and perseverance). Do not put any names on the sheet. You can do this to assess yourself as well, by making yourself one of the people you are observing.

<table>
<thead>
<tr>
<th>Task</th>
<th>Date</th>
<th>Class</th>
</tr>
</thead>
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<thead>
<tr>
<th>Person</th>
<th>Mark for flexibility</th>
<th>Mark for perseverance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
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</tr>
</tbody>
</table>

Guidance for marks

Showing flexibility
- 0 – keeps doing something even if they know it is wrong
- 1 – is aware of a different way but does not do it
- 2 – makes one small change when the situation changes
- 3 – makes several changes
- 4 – makes several changes and explains why these changes are being made
- 5 – as well as achieving the points in 4 (above), also persuades others to make changes and explains how these changes will help

Perseverance
- 0 – gives up completely
- 1 – gives up for a while then tries again
- 2 – keeps trying but loses some enthusiasm
- 3 – keeps trying enthusiastically most of the time
- 4 – works on the task enthusiastically all the time and completes it
- 5 – as well as achieving the points in 4 (above), also helps others to keep going and complete their tasks
Developing learning skills
It is essential that the skills needed for independent learning and groupwork are taught explicitly. This can be done while working in creative spaces or while working in enclosed classrooms as practice for the creative spaces. It would be wrong to assume that pupils will improve these skills on their own—they need clear guidance on the features of good independent learning and on effective groupwork. Such skills development needs to be reinforced across the whole school. Where this is done successfully, teachers find that, after a few lessons, they can allow pupils to organise themselves more and the teachers can adopt a less controlling role.

The most effective way to develop these skills is to create a regular dialogue with the students on the attributes of a good independent learner and a successful teamworker. This dialogue should take place before, during and at the completion of the task they are doing. Before they do the task, there can be a discussion about the features of effective independent learning or groupwork. Some points from this discussion can be noted and can then form the success criteria for this aspect of the activity. During the task, there can be a reflection point where pupils consider which of the criteria they have done well and set themselves a target based on one of the criteria that could be improved. At the end of the activity there could be a wider discussion about which skills for groupwork or independent learning have been most in evidence and why they are important.

At all these points for reflection, there could be a mixture of self-assessment and peer assessment. To help pupils with this type of reflection, on others and themselves, use the resource given in the box at the bottom of page 22. This assessment sheet has a focus on just two aspects of independent learning—flexibility and perseverance—but it provides a template that could be adapted by teachers for other facets of independent or group learning. Some teachers may have reservations about the five-point scale but the main point is to develop a dialogue around the whole idea of what we understand by progression in independent learning, which is why it is carried out anonymously. When pupils are more aware of some success criteria, like the ones suggested here, they will be better able to motivate and guide themselves as they work independently in the creative spaces.

Impact of classroom resources
In addition to the spaces for creative learning, the learning resources used can be vital to achieving an effective creative learning environment. Perhaps the biggest change to the appearance of many classrooms in the last 10 years has been the installation of interactive whiteboards (IWBs). Ironically, the immediate impact of these boards was often to make lessons less interactive. The IWBs would be used by the teacher to create highly polished presentations, using slideshows and videoclips, with most pupils watching fairly passively as the teacher dazzled the class with the new technology. IWBs have begun to be used more effectively where pupils have been able to come to the front of the room and interact with the board themselves or, even better, where they have an individual electronic tablet that can be linked to the main board. The best technological resources are those that allow for active learning by individual pupils, rather than promoting impressive teacher presentations.

Virtual learning has developed in the last few years, where each school has a ‘learning platform’ that allows for electronic interaction between teachers, pupils and parents. At first, for many schools, this was simply an area for storing resources and lesson plans with easy access for all teachers. Increasingly, and importantly, there is a developing emphasis on pupils’ use of the learning platform, enabling them to interact with the resources and tasks independently from the teacher. They can access tasks that have been set in advance by their teachers, use pre-selected resources, or devise a piece of work on their computer that can then be uploaded to the learning platform. In many cases, this resource has been used solely for homework but the learning platform could be used more as part of routine lessons within the school, allowing for wider choice and greater independence for pupils and opening the way for more creative learning.

21st-century schools
The first few years of the 21st century have witnessed significant improvements in exam results in English schools. What may have been considered an average performance by a school at the start of the century could be struggling now to reach minimum threshold targets. More young people are now leaving school with more qualifications at higher grades. However, there is still a general perception that, while qualifications have increased, there has not been a comparable improvement in the learning skills demonstrated by school-leavers.

This is the next challenge and it is unlikely to be met if the range of learning styles and environments remain limited. By providing more creative learning spaces and more opportunities for independent pupil-led learning, schools are better able to equip young people with social skills, emotional attributes, resilience and a greater capacity to show initiative. The box above left offers tips for using creative learning spaces effectively.

By providing more creative learning spaces, schools are better able to equip young people with social skills, emotional attributes, resilience and a greater capacity to show initiative.

It would be wrong to assume that pupils will improve these skills on their own—they need clear guidance on the features of good independent learning and on effective groupwork.

Tips for using creative learning spaces
- Initially, provide lots of structure and direction—aim for pupils to become more independent gradually and progressively
- Focus on high expectations of behaviour, especially on making pupils accountable for the amount and quality of work they have produced
- Teach independent learning and groupwork skills explicitly

Steve Illingworth, Independent Education Consultant
Formerly a history teacher and educational consultant for Salford City Council, with a particular interest in assessment for learning (AfL) and developing independent learning skills in pupils, Steve now works as an independent consultant with schools, universities and museums. For further details see: www.illingwortheducation.co.uk
Achieving creative lesson design and delivery

Learning that is fluid helps inspire more creativity in both students and teachers. Ian Cant offers approaches to building creative lesson designs that will allow the learning that follows to inspire awe and wonder in students, helping them to connect their learning to the real world and encouraging them to go deeper, showing how teachers can be more flexible in their T&L approaches and more creative in how they apply their expertise.

Making sense of what to teach and how to teach it should be one of the main preoccupations of teachers, curriculum managers and senior leaders alike. But if a pre-packaged approach to lesson planning takes hold, especially with a new national curriculum looming, the levels of engagement for the teacher and the learner are at risk. Enabling teachers to design and deliver creative lessons in a culture of prescription or even having well-meaning policies that leave little room for innovation needs careful thought, both in terms of encouraging creativity and how a range of pedagogical approaches can be developed.

Creative lesson design has real benefits in the classroom; planning a learning experience that is fluid and responsive to the needs of the student leads to progress through the delivery of deep-learning tasks and a realistic level of personalisation. Rather than being a nebulous term, creativity should be seen as a professional attribute that can be used to fire students’ imaginations, to motivate learners to develop their own creative responses, and to encourage students to work with others to create their own understanding. Much can be achieved by activating a learner’s curiosity and connecting learning to the real world in interesting ways, but achieving this in practice needs some exploration.

Why do creative lessons matter?
In times when functionality and performance seem to be dominating education, when ‘objectives’ can narrowly define meaningful learning and when ‘best practice’ solutions never seem that great in your classroom, returning to the fundamentals of learning is crucial. Learning is a creative process. Whether you view learning as being created from a Piagetian perspective or from a Vygotskian standpoint (Light et al, 1991), understanding is created within the learner. It is this centrality of the learner and the responsiveness of the teacher to the needs of the learner as these needs unfold that is important in developing a classroom that is both creative and reflexive.

The creation of ‘possibilities’ for learning is at the heart of creative teaching. So, it might be assumed that creativity in lessons is centred on creative solutions to problem solving. However, this does not mean that learning goes out of the window with the lesson plan. Alternatively, learning is enhanced by responding with flexibility and drawing on a teacher’s repertoire to create a new path towards the co-creation of understanding.

The teacher plays a key role in using their expertise in pedagogy and knowledge of how students develop within their particular subject. Being flexible in what you want pupils to do, how lessons are structured and how they learn is crucial. Learning is an intellectual process which systematically analyses information in the classroom as it presents itself. The teacher plays a key role in using their expertise in pedagogy and knowledge of how students develop within their particular subject. Being flexible in what you want pupils to do, how lessons are structured and how they learn is crucial. Learning is an intellectual process which systematically analyses information in the classroom as it presents itself. The teacher plays a key role in using their expertise in pedagogy and knowledge of how students develop within their particular subject. Being flexible in what you want pupils to do, how lessons are structured and how they learn is crucial.

Play the ball as it lies
The golfing metaphor ‘play the ball as it lies’ means adapting your shot according to the conditions and expresses the ideas behind reflexive and creative teaching. Some of the most effective teachers are those who do not stick rigidly to a lesson plan that is not working. This does not mean that learning goes out of the window with the lesson plan. Alternatively, learning is enhanced by responding with flexibility and drawing on a teacher’s repertoire to create a new path towards meeting the learning objective in response to the new information in the classroom as it presents itself.

Keeping learning on track

<table>
<thead>
<tr>
<th>Person</th>
<th>Establish where you want the learner to go in the lesson</th>
<th>Find out where the learner is in their learning</th>
<th>Use strategies to get them there</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher</td>
<td>Clarify and share learning intentions</td>
<td>Engineer effective discussions, tasks and activities that elicit evidence of learning</td>
<td>Provide feedback that moves learners forward</td>
</tr>
<tr>
<td>Peer</td>
<td>Understand and share learning intentions</td>
<td>Activate students as learning resources for one another</td>
<td></td>
</tr>
<tr>
<td>Learner</td>
<td>Understand learning intentions</td>
<td>Activate students as owners of their own learning</td>
<td></td>
</tr>
</tbody>
</table>

Adapted from William and Thompson (2007)
learning, regardless of where it comes from. How the learning objectives are framed in the first place can also have an impact on injecting creativity into the lesson. The box in the middle of page 24 lists verbs to use in your objectives to help encourage creativity and creative thinking in lessons.

In some lessons, it may be the creative nature of the task that drives the objective, rather than the objective leading to the task. If you have a great task up your sleeve, it is probably great because it causes students to think or engage with the learning in some way that the verbs in the box in the middle of page 24 describe. However, while lessons might aim to promote a wide variety of learner attributes, the effectiveness of a lesson often depends on the design and delivery of creative tasks. Hence, flexibility and a willingness to experiment, for example, by devoting an extra lesson here or there to a topic to accommodate more creative approaches, is key.

Many carefully planned lessons focus too much on the transmission of knowledge rather than on the development of understanding and it is here that a teacher’s creative expertise matters most. Developing a range of pedagogical approaches that could include thinking skills, problem-based learning, roleplay, ICT, and collaborative learning, to name but a few approaches, gives students the opportunity to develop the understanding of a subject in creative ways that leads to deeper learning.

**Afl: keeping learning on track**

The implementation of assessment-for-learning (AFL) strategies provides a useful starting point for gathering the information necessary for making lessons more reflexive and creative. Essentially, AFL provides the teacher with feedback from the students from which decisions about what to do next can be made. Dylan Wiliam, whose work on Afl gives many practical strategies for its effective implementation, places the understanding of where a learner is as one of the five key strategies of AFL. Through ‘engineering effective discussions, tasks and activities that elicit evidence of learning’ (Wiliam and Thompson, 2007) teachers can make informed decisions about what to do next. The process outlined by Wiliam (Wiliam and Thompson, 2007) is set out in the box at the bottom of page 24.

Diagnostic questioning and using all-class response systems for judging students’ understanding and where they are in their learning are key in understanding what to do next. The strategies in the box above give an insight into ways to gauge the understanding of a class, from which you can make judgements about who should be doing what next.

**Hinge questions – turning a lesson around**

At an Inset course I attended, Dylan Wiliam described a hinge question as being based on an important concept that is critical for students to understand before you move on in the lesson. Some of the techniques in the box above could be used to pose a hinge question but the students need to respond within two minutes and what this all means needs to be interpreted within 30 seconds. He advises that a hinge question be asked midway through a lesson, but it could equally be posed before moving on to the next phase of learning. The important thing is what is done in response to what students tell the teacher. As the term ‘hinge’ suggests, there are points in the lesson where the direction can be changed to meet the needs of the learners.

This is where using creative solutions can help empower students in their learning through providing a choice of tasks. Differentiation can be planned for as a response to a hinge question in the ways set out in the box below.

### Strategies for gauging understanding

- **Mini-whiteboards:** students write and then hold up their answers to questions to show a general survey of student understanding of key ideas.
- **A, B, C, D, E cards:** students hold up a letter to answer a multiple-choice question. This can be used with multiple-answer questions to reveal correct, nearly correct and incorrect answers. More importantly, it tells the teacher something about the students’ thinking, too.
- **Interactive whiteboards and handheld electronic response systems:** these gather student responses from handheld electronic devices that enable them to enter their answers to multiple-choice questions. Percentages and bar graphs can be displayed on the whiteboard showing how questions have been answered.
- **Four corners:** students go to different places in the classroom according to their answers, beliefs, opinions. You can create as many potential answers as you wish.
- **Opinion lines:** pupils choose where to stand on an imaginary line that represents where their view is on a continuum, such as, agree strongly to disagree strongly on a certain issue, or understand confidently to need help and lack confidence.
- **Use the all-class response strategies above to then form students into groups for different activities, according to the feedback given in response to questioning.**
- **Expert questions:** develop a bank of questions with colleagues that probe and test students’ understanding either to promote higher-level thinking, provide diagnostic information or challenge misconceptions about topics.

### Creativity in lessons is centred on creative solutions to the co-creation of understanding

#### Reactions to hinge-question responses: differentiating understanding

<table>
<thead>
<tr>
<th>Response to hinge question</th>
<th>Possible strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student does not have the skills or understanding necessary to complete the task</td>
<td>Reinforcement or revision activity to embed key learning needed before progressing to the next task</td>
</tr>
<tr>
<td>Pupil misconception of key concepts</td>
<td>Prepare a list of key concepts required to complete the task and plan an activity/explanation so the student can move on</td>
</tr>
<tr>
<td>Student understands concepts and is ready to continue</td>
<td>Provide a choice of tasks to engage the student through expressing a preference in their learning</td>
</tr>
<tr>
<td>Pupil understands concepts, is ready to continue but is risk-averse or lacking in confidence when undertaking challenges</td>
<td>Plan for one of the optional tasks to be carefully scaffolded</td>
</tr>
<tr>
<td>Pupil understands concepts, is ready to continue and is willing to take risks and enjoys new challenges</td>
<td>Plan for one of the optional tasks to extend learning further by incorporating higher level material or a more complex type of challenge</td>
</tr>
</tbody>
</table>
### FORMATS FOR CREATIVE LEARNING

#### 5Es approach

<table>
<thead>
<tr>
<th>Stage of lesson</th>
<th>Characterised by</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage (five mins)</td>
<td>Teacher showing something of interest</td>
<td>To stimulate curiosity, prompt enthusiasm</td>
</tr>
<tr>
<td>Explore (10 mins)</td>
<td>Giving pupils something to try out</td>
<td>Maintains interest, provides first-hand experience for subsequent discussion</td>
</tr>
<tr>
<td>Explain (10 mins)</td>
<td>Asking for feedback, introducing new concepts</td>
<td>Feedback elicits students’ prior knowledge — explanations go beyond current pupil knowledge and propose new understanding</td>
</tr>
<tr>
<td>Extend (20 mins)</td>
<td>Investigation, problem-solving, decision-making by pupils</td>
<td>Students use new information from the explain phase to re-engage with the concepts and make new meaning</td>
</tr>
<tr>
<td>Evaluate (10 mins)</td>
<td>Teacher and students reflect on learning</td>
<td>Learning is made explicit as pupils reflect on how ideas have changed</td>
</tr>
</tbody>
</table>

#### Cognitive acceleration (CA) sequence

- **Concrete preparation:** explanation of topic and what pupils need to know
- **Social construction:** discussion with others to establish understanding
- **Cognitive conflict:** challenge to resolve a problem requiring new way of thinking; understanding of topic altered to accommodate conflict
- **Metacognitive stage:** review of the thinking that has taken place
- **Bridging:** using the same type of thinking in other contexts

However, there are times when ‘planned’ learning has to give way to the unexpected and spontaneous nature of how students react in the classroom. If this can be integrated into an overarching objective that does not detract too much from the lesson, then adapting even for only one student can be worthwhile. For example, a student’s constant ‘Yeah, but…’ interjections could be recorded as a possible different critical interpretation. A teacher may wish to explore an unexpected related issue with the whole class, small group or individual, or even by letting a student follow an idea by searching the internet. This will generally result, not in chaos but in learning, despite the lesson not having a tidy feel. Creating different pathways for student progression is important for creative classrooms as it enables a level of personalisation while keeping learning on track.

Involving pupils in lesson design through feedback via plenaries, end-of-unit reviews or learning conversations gives teachers ideas of what engages and inspires learners so they can respond creatively to promote the enthusiasm for learning that leads to deeper learning. Imagining what lessons might look like if these were to be designed by learners is useful. First, create an informed clientele who are able to discuss important objectives, prioritise their learning, explore the metacognitive processes of learning and who have some level of ownership and responsibility for their learning. Failing that, in the short term, you may have to deal with feedback that involves the words ‘fun’ and ‘not boring’. These may not be bad places to start. The next step might be to enable students to design and deliver tasks in the classroom, for example, starters or teaching others in specialist groups.

#### Creating connections

Sometimes, despite your best efforts to create an outstanding learning experience based on well-thought-out pedagogical approaches, there will drift across the classroom a voice that asks, ‘What’s the point?’ Have they not been engaging with your objectives, outcomes and success criteria? Not yet, probably. The voice of the student is always a useful one to keep in mind when planning creative lessons, as the questions asked can be prompts that lead to more creative solutions to the problems of engagement. Attempting to connect the student with the learning in interesting ways is something that can be planned for. The 5Es lesson planning format (see the box above left) does this overtly in the opening ‘engage’ phase through a starter, providing an interesting insight into the topic or learning.

However, overtly planning to counter the ‘What’s the point?’ question can be achieved by adding a prompt into the opening of any particular lesson planning format you might be using. For example, inserting a line into a lesson plan such as ‘Contextualise learning: why? What’s in it for them? social, moral, spiritual and cultural (SMSC)/bigger picture’ provides a reminder when planning the need for you as a teacher to connect the students with what you are about to deliver. This can be done creatively in many different ways.

#### Choosing approaches to lesson planning

<table>
<thead>
<tr>
<th>Pedagogic approach</th>
<th>Key features</th>
<th>Good for</th>
<th>Less effective for</th>
</tr>
</thead>
</table>
| Direct interactive | Talk or demonstration is followed by active tasks that help pupils remember and fit the new knowledge into their existing ideas. | ▪ Learning new knowledge or practical skill  
▪ Learning new processes  
▪ Learning new communication or mathematical skill | ▪ Exploring feelings  
▪ Generating new perspectives about complex issues  
▪ Forming a concept  
▪ Generating creative thinking |
| Inductive | Pupils collect and sift information, then examine the data. They construct categories for the information. They generate and test rules and hypotheses and consolidate and transfer skills. | ▪ Forming a concept  
▪ Building on or shaping previously learned concepts  
▪ Exploring feelings | ▪ Learning new skills  
▪ Learning new knowledge  
▪ Generating creative thinking |
| Setting up an enquiry | Pupils test a prediction or hypothesis based on the understanding or application of a concept. Pupils decide what information to collect, obtain the data, analyse it and form conclusions. | ▪ Forming a concept  
▪ Building on or shaping previously learned concepts  
▪ Stimulating conditions for learning new knowledge  
▪ Generating creative thinking  
▪ Embedding understanding of processes  
▪ Practising skills | ▪ Learning new processes and skills |
Creating curiosity: approaches to consider

- Change the emphasis of existing resources to enable a discovery and enquiry-based approach to learning.
- Create a mystery: build scenarios for investigation so there is not an immediate explanation – ideas need to be tested, multiple viewpoints explored, hypotheses need to be created and thinking takes place individually and collaboratively.
- Use a question as the lesson objective.
- Use WWW (we were wondering). Ask pupils to write down any points on Post-It notes after introducing a lesson to generate questions that students would like to find out more about during the lesson, much like KWL (know/want to know/learned) grids. Students create lines of enquiry they might like to follow throughout the lesson – these could then be reviewed as a plenary, which might then produce more questions in response that could be explored in the plenary or the following lesson.
- Create a ‘wonderwall’ for students and teachers to place thought-provoking questions about what encapsulates the spirit of that subject or something problematic about what is being studied at the moment.

through exploring links to citizenship, the outgoing Every Child Matters (ECM) outcomes (be healthy, stay safe, enjoy and achieve, make a positive contribution, achieve economic wellbeing) or any important or interesting issue that arises from the lesson content. If the lesson deals with abstractions or esoteric content, then locate the thinking within a culture of intellectual endeavour, self-expression or some fundamental aspect of being human, like the need to connect and interact with others.

If you struggle to find a connection using the above, it is time to start questioning the type of content and challenge that you present students with. This has been recognised by Ofsted with a subtle change in the evidence form they use for observing lessons. The heading ‘Evidence of SMSC’ now appears in the main body of the evidence collection box, with room beneath for comments to be added. Having a whole-school approach that prioritises or divides key objectives in some lessons can mitigate against this if a lesson’s objectives reveal everything at the beginning and then proceed only to reinforce the objective. While there is a place for this directive approach, it might not develop the independent learning attributes needed for students to find things out for themselves and, ultimately, create their own learning. Towards the end of Stairway to heaven, Robert Plant sings, ‘And it’s whispered that soon, if we all call the tune/Then the piper will lead us to reason’. I initially thought that this ‘piper’ metaphor would act nicely to represent the teacher as a facilitator of learning, but, equally, the dark Hamelin qualities of the ‘piper’ suggests the tendency of lessons to herd learners towards predefined and narrow outcomes so that reason subsurmes creativity, imagination and wonder.

As a teacher planning creative lessons you need to design your own stairway to learning that draws on the ‘wow’ of your subject and the students’ own curiosity. The box at the bottom of page 26 outlines overarching approaches that a lesson might take and highlights the benefits of different approaches to lesson planning and the learning attributes that can be developed.

5Es approach to creative lesson design

Four years ago, working with the University of Hertfordshire, the science faculty at our school introduced the 5Es lesson format (described in the box top left on page 26) as a strategy to improve T&L. It was trialled in science lessons before being adopted across the school after a whole-school Inset session. It was seen as being

Examples of ways to promote awe and wonder in learning

General

- Use the power of moving image: the internet can be an incredible resource for finding and exploring resources that can be powerful in the classroom.
- What’s amazing about…? Let pupils share with you their sense of wonderment.
- What would it be like if that happened here today? Encouraging students to relate significant events from past and present to their lives helps give some perspective on the enormity of their impact.
- Display questions that prompt wonder: make classroom displays, corridors, screensavers and other areas of the school opportunities to create, prompt or even provoke thought.
- Isn’t it amazing that you can now… possibly the most straightforward way of creating awe and wonderment is by emphasising what has been learned and what the student has achieved.

Subject specific

- How does maths help a mobile phone to work? Why are there binary symbols on the on/off button? Exploring the binary system, algorithms and fluid dynamics gives an incredible insight into technology.
- How could this reaction change the world? Acid rain, erosion, nuclear power, photosynthesis, melting, freezing, fire – the possibilities are vast for using science to explore amazing phenomena in the natural world.
- How does spring work? Explore how the angle of the Earth’s axis affects the ‘wow’ of your subject and the students’ own curiosity.
- Whispered that soon, if we all call the tune/Then the piper will lead us to reason’. I initially thought that this ‘piper’ metaphor would act nicely to represent the teacher as a facilitator of learning, but, equally, the dark Hamelin qualities of the ‘piper’ suggests the tendency of lessons to herd learners towards predefined and narrow outcomes so that reason subsurmes creativity, imagination and wonder.

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- How does spring work? Explore how the angle of the Earth’s axis affects the planet so radically.
- How many elephants does a cloud weigh? Clouds can be weighed in elephants by comparing their equivalent tonnage. The answer depends on the type of cloud but a cumulus can weigh upwards of 100,000 elephants and a hurricane millions. So, what happens when these elephants fall?

Useful things to know: developing cognitive acceleration

Delivering cognitive acceleration in practice, to achieve the desired outcomes, requires careful thought – so it is important to give teachers Inset on this to help them apply this important teaching approach in their own classrooms. I attended a training session at King’s College, where CA originated, and being guided through CA sessions in English gave me a real insight into its use. See: www.kcl.ac.uk/schools/sssp/education/research/projects/cognitive.html, www.cognitiveacceleration.co.uk for more detail and www.teachersmedia.co.uk/videos/cognitive-acceleration for an interesting introductory video.
**TASC model**

<table>
<thead>
<tr>
<th>Process</th>
<th>Key prompts</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gather/organise</td>
<td>What do I know about this?</td>
<td>Activate prior learning</td>
</tr>
<tr>
<td>Identify</td>
<td>What is the task?</td>
<td>Consider outcomes and success</td>
</tr>
<tr>
<td>Generate</td>
<td>How many ideas can I think of?</td>
<td>Encourage flexible thinking</td>
</tr>
<tr>
<td>Decide</td>
<td>Which is the best idea?</td>
<td>Prioritise</td>
</tr>
<tr>
<td>Implement</td>
<td>Let’s do it</td>
<td>Extend and process learning</td>
</tr>
<tr>
<td>Evaluate</td>
<td>How well did I do?</td>
<td>Reflect and review</td>
</tr>
<tr>
<td>Communicate</td>
<td>Let’s tell someone</td>
<td>Present learning in an</td>
</tr>
<tr>
<td></td>
<td></td>
<td>appropriate form</td>
</tr>
<tr>
<td>Learn from experience</td>
<td>What have I learned?</td>
<td>Explore metacognitive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>processes and new learning</td>
</tr>
</tbody>
</table>

**Use of PIES approach for collaborative learning**

- **Positive interdependence**: is a gain for one a gain for all in the group. Where could the support necessary to complete the task come from? Is success catching?
- **Individual accountability**: how can individual contribution be shown and evaluated alongside a group outcome? Is equal participation: how equal is each member of the group’s participation? How well were roles and activities shared and carried out? Is simultaneous interaction: what percentage of the group is overtly active at one time?

**Creating awe and wonder**

One of the learning attributes outlined in *Discovering and explaining habits of mind* (Costa and Kallick, 2000) describes the notion of ‘responding with wonderment and awe’ as a quality that can derive from teachers through their appreciation of the particular delight and amazement that their subject has for them. Teachers should also use this to engage students in their learning to enable them to appreciate some of the complexities of the world themselves. Thinking creatively about what happens in lessons may require collaboration with colleagues, Inset or a change of focus in T&L across a school. But the rewards make it worthwhile as it provides pupils with the chance to engage with both the big issues and the small details while feeling ‘compelled, enthusiastic and passionate about learning [and] inquiring’ (Costa and Kallick, 2000). Examples of ways of achieving this in practice are given in the box right on page 27.

**Creating social interaction**

Creating opportunities for learning through social interaction is achievable through many different strategies, from small-scale discussion to more elaborately structured activities. Judging when to let go of the reins with a class to enable the students to move towards working independently can create anxiety, but well-structured and well-managed collaborative learning enables students to create their own understanding.

Paired and groupwork activities can be managed more creatively by considering how the process and not just the outcomes are managed, as having individuals working on the same table and on the same task does not always create a climate of interaction, sharing and cooperation.

Approaches to collaborative learning, such as jigsaw groupwork, assigning roles and think-pair-share, work because these structure the interaction for learners in interesting and creative ways that foster cooperation and learning together. Similarly, Kagan structures, such as rally robin, rally coach, numbered heads, together, pairs check, find the fib, rally robin, round table, find someone who, quiz-quiz trade, roving reporter and team stand and share (see: www. kaganonline.com), build cooperation into the task.

Another interesting aspect of Kagan’s ideas on cooperative learning is how positive interdependence, individual accountability, equal participation and simultaneous interaction (PIES) can help a teacher to coach, monitor and improve collaborative learning through their awareness and intervention in the areas set out in the box above left.
Thinking actively in a social context (TASC)

A more creative approach to group interaction can also be developed by structuring independent learning and thinking tasks using the TASC model, which is useful for solving problems, investigations and many other group activities (see: www.tascwheel.com). Use the stepping stones listed in the box top left on page 28 to create real opportunities for learners to feel involved, empowered and motivated when tackling more creative challenges.

In many ways, thinking actively in a social context is at the heart of creative teaching. It is important to engage learners in the act of thinking as a human activity in which they feel that they can constantly develop, make learners feel active in making decisions about their own learning as well as being active in facing new challenges, develop their independence and interdependence through social interaction that builds self-esteem, confidence and responsibility. By doing this, classrooms have that feeling of wonderment that makes you realise why teaching creatively is so worthwhile (Wallace et al, 2005).

New technologies – new contexts

While the classroom provides a specific context for learning to take place, the learners within will be more than familiar with the different contexts for communication provided by new technologies. Using new technologies creatively may take some learning for the teacher first, but the opportunity to, for example, use a home-learning question on Facebook, to which students respond, creates a new social context for learning. All interaction should be governed by an e-safety policy that protects students and teachers. Schools also have differing views on how new technologies can be used in the classroom as issues such as mobile phones in schools, equality of access and what is appropriate for the classroom vary greatly.

Creating a Facebook page as a public figure, not having any friends or a contacts list and using a school email account and address are some of the ways that teachers can avoid the potentially difficult situations that might arise from using Facebook. Then, for those pupils aged 13-plus, let the dialogue begin! More about Facebook and its uses in education can be found at: www.facebook.com Creating a hashtag group on Twitter where students can read comments and ideas about an issue, or even for an activity such as thought tracking a character at a certain point in a novel, also gives students the opportunity to view ideas as they develop. Online interaction and collaboration can also be used through Prezi, a cloud-based presentation tool that can have more than one editor, enabling small groups to work on the same presentation. Unlike PowerPoint, a Prezi is non-linear in its organisation and information is displayed by zooming in on sections of a presentation (see: www.prezi.com). Similarly, collaboration with, for example, students in other countries can be facilitated through use of Skype or other videoconferencing software for face-to-face interaction and cooperation (see: education.skype.com).

Factors that promote intrinsic motivation

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
<th>Related guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenge</td>
<td>People are best motivated when working towards personally meaningful goals whose attainment requires activity at a continuously optimal (intermediate) level of difficulty</td>
<td>■ Set personally meaningful goals</td>
</tr>
<tr>
<td>Curiosity</td>
<td>Something in the physical environment attracts the learner’s attention or there is an optimal level of discrepancy between present knowledge or skills and what these could be if the learner engaged in some activity</td>
<td>■ Stimulate sensory curiosity by making abrupt changes that will be perceived by the senses ■ Stimulate cognitive curiosity by making a person wonder about something – stimulate the learner’s interest</td>
</tr>
<tr>
<td>Control</td>
<td>People have a basic tendency to want to control what happens to them</td>
<td>■ Make clear the cause-and-effect relationships between what students are doing and things that happen in real life</td>
</tr>
<tr>
<td>Fantasy</td>
<td>Learners use mental images of things and situations that are not actually present to stimulate their behaviour</td>
<td>■ Enable learners to believe that their work will lead to powerful effects ■ Allow learners to choose what to learn and how they will learn it ■ Make the fantasies intrinsic rather than extrinsic</td>
</tr>
<tr>
<td>Competition</td>
<td>Learners feel satisfaction by comparing their performance favourably to that of others</td>
<td>■ Competition occurs naturally as well as artificially ■ Competition is more important for some people than for others ■ Those who lose at competition often suffer more than winners profit ■ Competition can reduce the urge to be helpful to other learners</td>
</tr>
<tr>
<td>Cooperation</td>
<td>Learners feel satisfaction by helping others achieve their goals</td>
<td>■ Cooperation occurs naturally as well as artificially ■ Cooperation is more important for some people than for others ■ Cooperation is a useful real-life skill ■ Cooperation requires and develops interpersonal skills</td>
</tr>
<tr>
<td>Recognition</td>
<td>Learners feel satisfaction when others recognise and appreciate their accomplishments</td>
<td>■ Recognition requires that the process or product or some other result of the learning activity be visible ■ Recognition differs from competition in that it does not involve a comparison with the performance of someone else</td>
</tr>
</tbody>
</table>

Adapted from Educational psychology: a practical approach (Vockell, 2008)
for ideas on different projects). A vast array of apps can be used for anything from astronomy to spelling, with some companies providing suites of apps in the classroom (try a Google search on educational apps or see: www.birchfield.co.uk, or other companies, who are generally willing to offer a trial).

More familiar technology, such as video and voice recorders, can be used to create multimedia presentations using a straightforward editing programme, such as Windows Movie Maker, to provide creative contexts for students to learn in. Collecting evidence for assessment, as with some BTEC courses, using video may also provide other ways of evaluating learning. For example, assessing a discussion can be made easier by use of a video recorder as it can be easily accessed. There is also a lot of fun to be had with animation programmes such as CrazyTalk, which can animate the mouth of a picture to match a recording of a voice (see: www.reallusion.com/crazytalk). Students could record opinions, explanations or commentaries on events for figures such as Dickens or Churchill to speak.

Creating expertise
The role of the teacher in modelling the process of learning is central to the creative classroom. This does not mean you have to be the next Shakespeare, Hawking or Mozart but you do need to be attuned to how, through modelling, students can develop and begin to attribute the understanding and skills required for your subject to themselves. The Vygotskian (Light et al, 1991) concept of the zone of proximal development (ZPD) puts forward the idea that student learning can go beyond what has previously been shown to a higher stage of cognitive development through collaboration with a more knowledgeable person, such as a teacher. The box bottom left on page 28 highlights just a few of the possibilities where creative teachers can use their expertise to develop students’ learning by placing learners within a ZPD.

By establishing subject-specific ways of questioning, thinking and using different skills, teachers include learners within a ZPD and begin to model the expertise they would like learners to develop. They might not tell you, but students are often impressed with what they see their teachers creating in classrooms, workshops, laboratories and playing fields. So, following the creative lead of the teacher can be the first step for students in learning to become a geographer, mathematician or linguist. Developing directories where resources and good practice can be found, such as websites or publications, can help with this.

Creating motivation
Teachers are generally conscious of using extrinsic motivation, for example, relating external factors such as what is needed to achieve a certain grade or what will happen if work is not completed. While this works to some extent, its impact can be short lived. Developing intrinsic motivation – where students will act without external prompting – can have longer lasting impact. The box on page 29 describes the type of activities and classroom environment that promote intrinsic motivation.

Having learners who are intrinsically motivated to learn helps to create an environment where ‘serious play’ or ‘hard fun’ (Rieber et al, 1998) captivates learners in what they are doing. Lessons have pace and what has been described as ‘flow’, where learners are absorbed in what they are doing. Lessons have pace and what has been described as ‘flow’, where learners are absorbed in what they are doing. The optimal experience in the classroom, with the right level of challenge matched to their skill level, a feeling of control and the chance to learn creatively along with some of the other features mentioned above (Csikszentmihalyi, 1990). In such an environment, the benefits of creative lesson design are tangible for students and teachers alike but such lessons are rarely the products of chance.

Recreate and innovate
Capturing and replicating the conditions that produce creative learning is central to creative lesson design.

There is also a great deal of creative and innovative practice in classrooms already that can be built on – tips on how to develop your creative practice further are given in the box left. As with most new practices and strategies, there is a period of sifting, trying and reflection before what is new becomes embedded.

Ian Cant, Assistant Headteacher, The John Warner School, Hertfordshire
I've started so I'll finish: thinking through lessons

Variety and change in lessons are crucial for pupil engagement, from choosing the best lesson beginning to hook learners’ interest, to the right core activity to develop new creative skills, and then bringing it all to a successful close. Steve Bowkett shows how to achieve this in practice, offering activities you can use at each stage of the lesson to promote deep learning and develop your students into creative thinkers.

Some time ago, at a conference, I was in conversation with a geography teacher who mentioned that the week before he had been teaching a module in social geography to a Year 10 class. At one point he asked the group, ‘So, what do you think?’ to which, without any trace of irony, a boy replied, ‘I don’t know sir. What do I think?’

For that teacher this incident hammered home the importance of pursuing what might be called a creativity-and-thinking skills agenda, not just in his subject area but across the whole curriculum. To espouse a creative ethos within a school, and a creative attitude among learners, is rarely seen as being controversial. Several decades of neuroscientific research on how the brain learns, and the vast range of implications and insights that this has generated in terms of learning theory, provide more than ample justification for the educational benefits of developing thinking and encouraging creativity in teaching and learning. However, some schools seem to hold back from taking that route for a number of reasons. This article will attempt to address these, while pointing out the eminently practical value of embedding thinking and creativity skills in the learning process, so that that Year 10 boy’s question can be answered.

Before exploring generic strategies for developing a creative approach to T&L, we will consider what makes for a creative classroom. In such a setting it then becomes more possible to provide lesson introductions that motivate ‘the creative attitude’, strategies that support creativity in the core content of the lesson, and to finish off with a creative plenary. We will then look at strategies for embedding creativity at each stage of the lesson.

Understanding creativity

While there seems to be no single definition of the word ‘creativity’, two key elements are forging fresh connections that allow you to take a multiple perspective on the ideas and experiences you encounter. These elements are not so much skills as an intention to ‘go beyond the given’, to actively explore, examine and apply knowledge with the basic aim of generating new ideas, insights and applications. The creative process turns knowledge into usable information, that is ‘in-formation’, the deliberate formation of new meanings, understandings and solutions that may be arrived at individually or collaboratively.

In considering this notion, we see that creativity amounts to very much more than thinking of lots of new ways of engaging a learner’s interest (it is not about mere entertainment through diversity). It also argues against the naïve assumption that creativity follows a ‘do-what-thou-wilt’ philosophy; that any new ideas students come up with are somehow creative. Creative lessons embody flexibility within a structure, and such a structure demands increasing challenge, intellectual rigour and sophistication of thought while remaining engaging and enjoyable. The whole intention of any creative lesson is to develop the generative potential of learners’ minds, that they may have their best ideas by having lots of ideas.

A central feature in developing creativity is the varied and increasingly powerful use of the imagination. This might be regarded as the capacity we all have of creating mental scenarios that go beyond the here-and-now; scenarios that need have nothing to do with our immediate circumstances. Obviously, the use of the imagination draws on memory and the thinker’s previous experiences, but it is also dependent on the input of new ideas, knowledge and so on, which will include the lesson ‘content’ in its widest sense. While most of the fresh connections and varied perspectives occur consciously (in so-called ‘cognitive space’), their range and vitality depend on a huge amount of subconscious pre-processing.

To have your ‘best’ ideas – the most instructive and useful insights – after the moment of illumination must come from some kind of verification and evaluation. This terminology comes from the physicist...
and philosopher of science Henri Poincaré, whose four stages of the creative process (see: www.think-differently.org/2007/06/four-phases-of-intuition) are preparation, assimilation (subconscious processing), illumination (the ‘Aha!’ moment) and verification (of the usefulness of the idea).

As you grow in experience over time, assessing ideas becomes as much a matter of hunch-and-gut reaction as of conscious deliberation. This is a function of the subconscious aspect of the mind, where the logical appraisal of ideas is supported by a fuzzier, but no less reliable, sense of intuition. So, in my own area of interest, which is writing, I somehow know that a story idea will work (or not) before I have planned it out consciously. By the same token, if a piece of work runs into problems, ideas on how to fix them usually pop up out of the blue, together with a feeling of certainty as to which is the best course of action to take.

Arguing the above implies that ‘creative’ and ‘critical’ thinking must go hand in hand. These two broad categories are often separated out in the literature, where you sometimes find the suggestion that critical (logical/analytical) types of thought are somehow more superior to the fuzzy processes we might describe as being creative – fuzzier in the sense of being less consciously obvious and linear-sequential in nature.

The whole intention of any creative lesson is to develop the generative potential of learners’ minds, that they may have their best ideas by having lots of ideas

Establishing a creative ethos

Use pupils as primary resource of questions, opinions, ideas
Supply information as necessary (and a ‘coverage of content curriculum’ will demand lots of this), but encourage the learners to actively engage with it. The teacher’s role will be to guide pupils towards deeper understanding, although a component of this has a certain ‘scaffolded’ quality as students are progressively directed towards becoming more self-reliant and independent creators of their own understanding. This will be more readily achieved by progressively raising the creative and thinking challenges for the students: many of the techniques and activities described in this article can be structured at various levels of sophistication, not least by being applied to specific topics within various subject areas.

Make thinking explicit
When pupils display various ways of thinking, point these out so that everyone in the group benefits from the experience. Together with modelling the creative attitude itself, this is perhaps the most important type of feedback you can give. Also, build the ‘vocabulary of thinking’ into the lessons. This will involve identifying various ways of thinking – speculating, inferring, reasoning, predicting and so on. However, it also means incorporating strategies such as allowing students adequate thinking time to come up with responses, as well as encouraging an open forum, where appropriate, by asking, for instance, ‘Does anyone have any different or further thoughts about this?’ Other ways of making the thinking explicit include using thinking skills-posters, playing ‘skills bingo’ and using specially designed marking symbols.

Value all thinking
Valuing all thinking is especially important in the early stages of developing pupils’ thinking. They may be used to a competitive and judgemental environment where success and esteem are predicated on knowing ‘the right answer’. Older students (those beyond KS2) often feel inhibited to speak their thoughts in the absence of a right answer. However, as students become more effective thinkers, build in a ‘positive pressure’ by providing activities with increasing creative challenge to encourage all students to take part, question each other, support opinions with reasons and evidence, appreciate different viewpoints and so on.

Capitalise on differentiation
As an adjunct to the point above, and another reason why a creative approach is logistically attractive, ‘differentiation’ usually occurs with each student’s own response. While creative activities may require differentiation at the preparation stage, more often any activity can be run across a wide age and ability range. Students will respond according to their own level of competence and confidence, as these qualities are further developed.

Encourage a tolerance of ambiguity
Encouraging a tolerance of ambiguity is important in the early stages of exploring concepts, problems, new areas of knowledge and experience and so on. But it is also sometimes necessary at the end-stage of a lesson or learning process, where the outcome may be the generation of more questions and/or the realisation that the whole issue is either more complex than originally thought, or inherently inconclusive in that no consensus can be reached or definitive final solution discovered.

Model creative attitude you want students to adopt
Modelling the creative attitude you want pupils to adopt paraphrases Gandhi’s ‘be the change you wish to see in the world’. This is sometimes difficult for teachers to accept, given that traditionally they have been regarded (and often regard themselves) as repositories of right answers. As the teacher displays a creative approach to ideas that is incisive, sceptical, exploratory and playful, pupils will quickly come to understand that it is OK for them to be like that too.
occurs. It represents an ethos that shifts the emphasis of thinking towards the students, who are encouraged to become more active in their engagement with ideas. Logistically, a creative classroom is easy to establish, while the types of thinking that students are taught in one subject are valuably practised throughout the curriculum. Inevitably, creative thinking then spreads across all subjects (unless it is actively resisted by individuals), although its progress is accelerated and its effectiveness increased if it is embodied in whole-school policy. The creative ethos is demonstrated by the aspects set out in the box on page 32.

**Strategies for creative T&L**

One of the facets of making fresh connections between ideas (to generate new and more complex thoughts) is that the process is as much physical as it is mental: it feels good to have new insights. The moment of illumination (or even remembering a ‘right answer’) brings pleasure. This might be simply a sense of certainty or a deeper and longer lasting feeling of a new direction of enquiry opening up.

The increasing confidence of students as they explore ideas through discussion and questioning further establishes a positive emotional ambience in the classroom. Increasingly, young learners come to enjoy the process when they know more surely how to do it. A number of effective techniques can be used to promote student-centred questioning in the classroom are given in the box on page 31.

These ideas can serve as the core activity of a lesson in any subject area, as well as providing useful continuity for the students across the curriculum. Questioning strategies can also be used as intros and warm-ups for lessons or form the basis of a plenary, where a list of pertinent questions is drawn up to give direction to out-of-classroom research, or to form the basis of the next lesson.

Other effective questioning techniques are set out in the box below left – all of these techniques are creative as they challenge students to forge new and further understandings out of the material presented to them. Some other broad-based ways of helping students to think more effectively are set out in the box at the top of page 35.

**Questioning techniques to stimulate creativity**

**Pretend we do not know anything**

While at first glance pretending we do not know anything might seem like a juvenile game, it certainly takes the pressure off students trying to remember what has previously been covered and makes a virtue of an attitude that is not dissimilar to Socrates’ trick of ‘informed ignorance’ – one of the hallmarks of the Socratic method of philosophical dialogue (see SAPERE Level 2 handbook, pp25–26 at: www.sapere.org.uk) is the early recognition of the extent of your own ignorance. Socrates would feign ignorance on a matter under discussion as a tactic for enabling his interlocutor to realise that ignorance is the platform on which wisdom can be built. At any point during the teaching of a topic area, run the ‘pretend -we-don’t-know-anything’ technique to generate a list of questions. These will create new insights, clarify confusions, inform areas of ignorance, direct further research and highlight previous assumptions. Also, it creates a little ‘zone of safety’ for students who really have been struggling with the subject matter. The technique works most effectively when even the most basic or naive questions are allowed (although not inappropriate or frivolous ones).

**A cloud of questions**

Present the class with an object or idea and encourage them to ask as many questions as possible about it, however trite, obvious, oblique or wacky. Once the cloud has been created, sort the questions according to relevance, interest (which may not be the same thing), popularity and so on. Seeking answers can form a research project, discussion lesson, opportunity to practise study skills and so on. The activity itself offers a good warm up to a lesson and highlights the active questioning that is desired from the students.

**Three-step technique**

Again, the three-step technique can be used at any time in a range of contexts. Having been presented with some information, the three steps of questioning are:

1. What do I know?
2. What do I think I know?
3. What do I need to ask to find out/to be sure?

Step 1 reviews facts and consolidates evidence. Step 2 throws up assumptions and weak inferences. Step 3 gives direction to further exploration and analysis. See how they work by looking at the detective game (see the box on page 34) and the mysteries technique (outlined in the box at the bottom of page 36).
Metacognitive reading is the technique of noticing what you are thinking during the reading process. It will include awareness of visualisations, memories, links with other ideas and understandings, points of confusion and so on. As a result, the technique creates insight into how a student processes information. It may be linked with the ‘question the author’ technique detailed in the box below and reinforces the ‘creatively healthy’ realisation that confusion and a lack of understanding is acceptable, especially if it prompts the desire to find out more.

I first came across the mysteries technique in a book published by the Geographical Association (Leat and Nichols, 1999). The technique involves putting pieces of information on scraps of paper, presenting these to a group together with a puzzle or question. Students arrange the ‘infoscraps’ in various ways to lead them towards a solution (or other outcome, including further questions – see the section on ‘plenaries’ that follows this). Although creating a set of infoscraps takes time, it is a resource that can be used repeatedly. The mysteries technique can also be used in most subject areas and is an ideal way of linking content with thinking. A further bonus is that, as with some of the other ideas we have looked at, students can create their own resources once you have run the activity with them a few times.

The box at the bottom of page 36 gives an example of the mysteries technique (the infoscraps given are

### Activities to develop students’ questioning skills

#### Detective game
The basic detective game is to present the class with a list of clues and ask what might have happened:

- the back door leading to the kitchen is open
- a teacloth is lying on the kitchen floor
- a plate on the worktop has no food on it
- there are grease marks on the plate and on the worktop around it
- the family dog does not appear when called.

From the outset ask students to sequence their thoughts, explaining what they think might have happened as though watching a movie. Ask each pupil or group to write another short clue on a scrap of paper. Put the scraps in a bag, pull them out one at a time and discuss how the new evidence influences people’s ideas about what happened. The new clues need not be based on any previous scenario. One way of ensuring this is to offer ‘prompt words’ that influence their thinking. These too can be written on scraps of paper. Examples are: murder, kidnap, sleepover, Halloween, birthday, salesman, removal van. For instance, one class, when given the prompt ‘kidnap’ came up with these extra clues:

- a note in a stranger’s handwriting is pinned to the corkboard in the kitchen
- there are four missed calls on the answer machine in the hall
- the family dog has a rare pedigree
- the older brother has fallen in with a criminal gang
- a small table in the lounge is on its side
- the lock on the back door has been forced.

The underlying thinking going on in this apparently simple game – hypothesising, sequencing, prioritising and justifying reasons and so on – is immediately applicable in other subject areas.

#### Meta-model questioning
This is a technique derived from neuro-linguistic programming (NLP) where questions seek to elicit more of the ‘deep structure’ of a communication, or at least to clarify the meanings of words and concepts used. Meta-model questions will contain words and phrases such as: precisely, exactly, further details, more information and so on. Combined with the open-question words of where, what, why and so on, this is a powerful tool for consolidating ideas, and can also be used effectively in debates and reasoned argument.

**Useful questions to ask include:**

- What is the author trying to tell me?
- Why is the author saying it in this way?
- What is the nature of what they are saying – fact, opinion, hidden biases and so on?
- Can I find any examples where the particular way in which the author has framed an idea is especially significant?

As pupils become more experienced in this and other questioning techniques they will be able to think of further ‘meta-model questions for themselves. For more on this technique, see: [www.readingquest.org](http://www.readingquest.org)

#### Computer in the box
The ‘computer in the box’ process helps pupils to frame questions clearly and sift them for relevance:

- Suggest that inside a box (which the teacher shows the class as a prop) is an artificially intelligent supercomputer that can answer any questions the class wants to ask. Invite students to list some examples.
- Next, explain that the computer will only answer questions that pupils do not know the answers to and ask students to strike out any that do not meet that criterion.
- Now reveal that the computer will only answer questions that are unambiguous. Ask students to check for clarity and precision in what they have written. This is an opportunity to discuss ‘fuzzy’ concepts such as wealth, happiness, beauty and so on – and can lead to philosophical discussion if you have built Philosophy for Children (P4C) into the curriculum (for advice on this, see: [www.sapere.org.uk](http://www.sapere.org.uk)).
- Make a whole-class list of the questions that remain. Now explain that, because the computer is low on battery power, it can answer only three of these. ‘How do we decide which three questions to ask?’

Because (one supposes) the teacher does not really have a supercomputer of this kind handy, further value can be gained from the activity by inviting the pupils to work towards answers/conclusions/resolutions. Bear in mind the broad division between ‘go and see’ (GAS) strategy questions and ‘sitting and thinking/talking’ (SATT) strategy questions. GAS questions and presuppose that the answers to such questions exist and can be discovered. SATT ones are more scientifically orientated and presuppose that the answers to such questions exist and can be discovered. SATT ones are more scientifically orientated and presuppose that the answers to such questions exist and can be discovered.
Strategies for encouraging more effective thinking

Splitscreen technique
The technique links content with a skill, or to put another way highlights the relationship between what was learned and an aspect of how it was learned.

The content may be a theme, concept, selection of facts or a learning behaviour (such as ‘it’s OK to admit I don’t know’). It can be combined with a skills checklist, which could be in the form of a wall display of useful learning skills/behaviours that pupils refer to during lessons, or a sheet given out to members of the class. Students can earmark one or more skills that they intend to practise during a lesson, noting how many times they displayed that behaviour, what the outcomes/reactions/results were and so on.

Skills buddies
Skills buddies is a variation on splitscreen, where working in pairs, two students observe each other through a lesson and note the learning and enquiry skills they each displayed. For example:
- I listened carefully to others
- I explained an idea clearly
- I asked about something that puzzled me
- I agreed/disagreed with someone (and gave a reason for this)

While learning is ideally an endless journey, it is vital to the students that topics are rounded off, understandings consolidated and conclusions reached for a lesson, it encourages both teachers and students away from any rigid or formulaic application. One of the (perhaps more subversive) tenets of a creative ethos is that ‘the process is the purpose’. Any degree of acceptance of this leads to an understanding that, ultimately, the students’ own learning needs will often determine the direction and structure a lesson takes.

Having said that, while learning is ideally an endless journey, it is vital to the students that topics are rounded off, understandings consolidated and conclusions reached. In fostering a creative ethos in the classroom,

Examples of ‘creative kickstarters’

- **Physical movement** – for instance, visualising an object and moulding it in the air with the hands develops metacognitive skills.
- **Calming breath** – combined with body awareness and simple relaxation techniques (some useful advice is given at: www.pickthebrain.com/blog/relaxation-technique).
- **A quick puzzle to solve** – perhaps linking the subsequent lesson content with a chosen thinking skill. For example, a girl who was just learning to drive went down a one-way street in the wrong direction, but did not break the law. How can this be? (The answer is ‘she was walking’.) Find more examples at: http://school.discoveryeducation.com/brainboosters
- **A quote for reflection** – or a proverb for a five-minute discussion.
- **A ‘what could it be?’ brainstorm** – for example, the object shown right is a drawing of a 2000-year-old bronze artefact found in the Alps (possibly of Roman origin). What could it be? After gathering some ideas, suggest that the object is as big as a room. What could it be now? Then, suggest it is the size of a coin. What could it be?
- **A fact to be questioned** – for example, ‘light travels in straight lines’. Encourage students to ask open questions about this.
- **A statement to be analysed** – for instance, how many ‘manipulators’ can you spot in the following sentence: ‘Now the Government makes it even harder to sell your home!!’?
- **Linking game** – for example, how many connections can you make between an apple and a motorway? Once students have tried this activity a few times, invite them to create their own pairs (or larger sets) of objects/ideas to link.
- **Odd-one-out games** – offer the class a list, such as: rose, daffodil, tulip, cauliflower, crocus, Altona, then challenge their thinking:
- find a reason for each item being the odd-one-out
- pick any item (roll a dice for randomness) and try and find six reasons why it is the odd-one-out
- find as many reasons as possible why they are all connected
- double the number of items in the list and run the activity again
- find a reason for each item being the odd-one-out

While learning is ideally an endless journey, it is vital to the students that topics are rounded off, understandings consolidated and conclusions reached. In fostering a creative ethos in the classroom,
Outcomes for linked plenaries

- Creation of a subject/topic dictionary
- Development of an inhouse Wikipedia (which, in the wiki spirit, will evolve via the democratic acceptance of entries/edits from across the school population)
- Creation of a presentation (PowerPoint works well) that teaches the topic to another audience – parents, younger pupils and so on
- Creation of a ‘creative thinker’s charter’ that embodies the educational ethos advocated throughout this article plus examples of specific thinking skills that the students have found helpful

the likelihood increases that a plenary will more truly live up to its name of being ‘full, entire, complete in all its aspects’ in that it encourages contributions from all students across the entire field of their learning experience throughout the course of the lesson or given topic or theme.

In terms of ‘evidential outcomes’ above and beyond student behaviours, which demonstrate their greater understanding, specific plenary activities can include:
- a list of questions still to be asked
- discussion of any areas of confusion that remain
- a round robin of what individuals or groups feel

Using board games for a mysteries activity

- Variations on Monopoly©: students enjoy creating ‘bespoke’ versions based on a film, comic, band and so on. I came across one geography teacher who was using the activity to stimulate discussion on ecological issues, the managed use of natural resources and global capitalism (see: www.hasbro.com/monopoly/en_GB).
- Roleplay games (RPGs): still hugely popular, usually within fantasy or science-fiction war scenarios. However, in one school, basic RPG rules were being used by a history teacher to create campaigns based on real historical battles. I noticed a certain pride among the students in being as accurate as possible with the facts.
- Top Trumps card games: a Year 7 class I visited had previously created sets of Top Trumps cards based on the Harry Potter books, and were now making further sets using Shakespearean characters.

Example of using the mysteries technique

Car parking charges debate

Arrange the Infoscraps into ‘for’ and ‘against’ as to whether the council should bring in car parking charges. Further arrange each pile into facts and opinions, and sort these into strength of opinion coupled with any facts or reasoning that support the view. Use the arranged material to write a balanced argument and/or argue the case from the opposite viewpoint to the one you actually hold (see the box below).

Infoscraps for car parking charges debate

<table>
<thead>
<tr>
<th>Car parking charges encourage people to use public transport.</th>
<th>Philippa Stephens prefers using her car for reasons of personal safety.</th>
<th>Len Beech is on a low income and cannot afford the extra burden of car parking costs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic flow through Kenniston has increased by 50% over the past six years.</td>
<td>Government capping of council tax rises puts pressure on Kenniston council to seek alternative sources of revenue.</td>
<td>Local Small Businesses Association warns that shops in Kenniston will lose trade as people find free parking in other towns.</td>
</tr>
<tr>
<td>Rail commuters and workers in Kenniston will find free parking in side streets rather than pay hundreds of pounds a year to park ‘officially’.</td>
<td>Some supermarkets and local shops are offering to reimburse customers up to two hours’ parking charge if they spend over £5 at the store.</td>
<td>Cars are dangerous and polluting anyway, so why shouldn’t they be kept out of town?</td>
</tr>
<tr>
<td>Kenniston council has decided that people with disabilities and those on benefits are exempt from car parking charges.</td>
<td>The Government is determined to cut pollution by traffic substantially over the coming years.</td>
<td>Bus services through villages outlying Kenniston have been greatly reduced in recent years. Some villages have no bus service at all.</td>
</tr>
<tr>
<td>Injuries to pedestrians have declined since the introduction of traffic-calming measures in the town.</td>
<td>Over the past decade motoring costs in ‘real terms’ have gone down, while travelling by public transport has become more expensive.</td>
<td>Car parking charges will make people think about whether their journey is necessary.</td>
</tr>
</tbody>
</table>

Steve Bowkett, writer, author-visitor to schools and educational consultant

Steve taught secondary English for 20 years. He has now published 37 books including fiction for all ages and educational books on literacy, thinking skills, creativity and emotional resourcefulness. Some of his recent titles include: Jumpstart! Creativity (Routledge, 2007); 100+ ideas for teaching thinking skills (Continuum, 2007); 100+ ideas for teaching creativity (Continuum, 2007); and Coaching emotional intelligence in the classroom, co-authored with Simon Percival (David Fulton, 2011). You can email him at: steve@sbowkett.freeserve.co.uk

Many strategies

Bear in mind that the formulaic starter-core-plenary may not always be the preferred structure for the lesson. The case example on page 37, from Gareth Jones, Vice Principal of Ormiston Sir Stanley Matthews Academy, shares another model for achieving whole-school creative T&L.

A powerful benefit of establishing a creative ethos in school is that it boosts strategic thinking in pupils and staff. Strategic thinking is pluralistic in the sense that it generates many strategies, not just one. So, the process of developing a creative thinking agenda will lead to further ways of structuring lessons and programmes of study appropriate to your core aims and purposes.

Variations on Monopoly©: students enjoy creating ‘bespoke’ versions based on a film, comic, band and so on. I came across one geography teacher who was using the activity to stimulate discussion on ecological issues, the managed use of natural resources and global capitalism (see: www.hasbro.com/monopoly/en_GB).
### Model for creative T&L

<table>
<thead>
<tr>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
</table>
| Ensure an upbeat, enthusiastic welcome. Recap using an active learning technique and involve all. The purpose here is to activate prior knowledge that: | ■ engages students cognitively  
■ identifies current knowledge  
■ empowers the learner: ‘I already know something...’  
■ allows adaptation of lesson plan |
| Set clear learning points based on Bloom’s taxonomy. Let pupils know verbally: | ■ What they will be learning using Bloom’s taxonomy language/verbs:  
■ Why they are learning it  
■ How they will learn it  
■ How they will know they know it  
■ How you will know they know it |
| Introduce the topic with a short exposition | |
| Aim to challenge and inspire and to build rapport | |
| Use up-to-date information, latest research findings or current commercial activity | |
| Presenting smaller amounts of material at any time, create lots of starts and stops, using the learning sequence: | ■ I do (teacher models)  
■ We do (whole class practice with teacher)  
■ You all do (small group or partner practice while teacher monitors)  
■ You do (independent practice) |
| Check for learning and ensure key points are recorded: | |

### Checking the understanding of all students

<table>
<thead>
<tr>
<th>What it isn’t…</th>
<th>What it is</th>
</tr>
</thead>
</table>
| Are there any questions? | Think-pair-share  
Slate/whiteboards  
Learning partners  
Pair-share-squared  
Quick-writes |
| Are you all with me? | Tickets to leave — speech bubbles  
Game/activity key language |
| Am I going too fast? | |
| This is an adverb, isn’t it? | |
| Who can tell me? | |

Identify and plan for common misconceptions

Identify and plan for the use of key language

Set an individual, paired or group activity to build key skills/skills for life and to help all consolidate learning

Use planned questions to ensure differentiation and seek answers from all

Offer positives and praise to each learner

Summarise learning with an appropriate transition activity (such as visual memory aids)

Repeat learning cycle or end with an overall lesson summation

Conduct a final check on learning against expressed outcomes

Always end your lesson with a final processing activity that:■ cements the day’s lesson for the students  
■ provides immediate assessment to inform next day’s instruction  
■ engages and enthuses – they will want to return on time next lesson.
Hurdle jumping: overcoming creative blocks

Perhaps despite appearances, the most creative lessons are meticulously planned and structured. Mark Brundrett shows when teaching for creativity, how to tell whether your students are on task and what to do when they are not or get blocked, using case studies from teachers on tackling their own and their students’ difficulties around creative learning to show how such problems can be overcome in practice.

It has been suggested that creativity is a quality that most people prize, but which many of us struggle to prioritise. This has certainly been the case in schools in recent years during a period where most institutions have struggled to integrate multiple initiatives and a dominant nationally imposed agenda for change. However, there has been a resurgent interest in ‘creativity’ in schools in recent years, probably mostly because many teachers are creative people who see the importance of encouraging creativity in their students.

But there can be blockages to creativity that affect both staff and pupils. Some of these are ‘structural’ in nature and relate to the facilities and resources available, while others are connected with the ways in which some schools are led and managed. There is also a set of issues that are simply about the challenges of ‘being creative’ in terms of having the right ideas and classroom approaches that help the ideas to flow. If these issues are allowed to continue, creative T&L will become more and more of a problem as classrooms become stuck in a cycle of doing the same old thing, term on term and year on year. While this may sometimes feel comfortable, it is rarely fulfilling and is not likely to lead to the type of deep learning that teachers aspire to for their pupils.

**Blocks to creativity**

Different potential types of blockage to creativity can occur. The issues can be as simple as when a teacher cannot come up with an idea for a lesson when trying to do something in a new and different way, or when a student is equally stumped in trying to think of what to write, do or say when presented with an opportunity to be creative in the classroom.

All teachers are familiar with feeling that they have prepared a really good lesson that will give students the chance to think for themselves and do something really interesting, only to find that one or more of the class members spend much of their time staring into space or being disruptive because they cannot think of how to respond to the task.

The problem may not occur at the start of the lesson but may well come when it is time to move on from one element of the set of activities to another. This happens either because the change of activity is difficult to manage or because the students find it difficult to move from one concept to another unless they have fully explored or fully mastered the initial concepts.

However, there are strategies teachers can use to help overcome these blockages.

**Strategies for overcoming blockages**

The first thing that teachers need to do if they are to encourage creativity during a lesson is to plan well and make sure they have the resources that they need to hand. There is a danger that being creative may be seen as something spontaneous and unplanned, the idea of the wild creative artist or thinker simply responding to what comes into their mind. While this type of activity can be included in an approach to creative teaching and learning, it is not something that should be attempted too often and especially not when presented with a new group of students or when a teacher is still early in their career or new to a school. Such an approach tends to work when the teacher and students trust one another, when boundaries have been set up and general expectations are clear. When introducing this type of free-thinking approach, it is best to start small and limit the amount of unplanned time to a small portion of a lesson where students are allowed to extend their learning by exploring concepts and ideas at their own pace without too much management for a clear and fixed period, knowing that they will be refocused on clear tasks at an agreed time. If this approach works then, when there is confidence and clarity of expectations on all sides, the time can gradually be extended.

It can be worrying, and even intimidating, if students appear to be ‘off task’ by looking out of the window or apparently focusing on the wall or the ceiling, but there is evidence that this is sometimes a physiological necessity when we are trying to be creative. Gazing with no specific focus may well be the way that the brain operates when it is trying to access that part of the mind

**There is a danger that being creative may be seen as something spontaneous and unplanned**

**Thinking time is essential and pupils should be given enough space to overcome the blockage that they may be experiencing**

**Strategies for sharing ideas**

- Allow pupils to talk among themselves by picking peers to discuss things with for an indefinite period of time – a strategy to use sparingly.
- Allocate students into pairs, groups of three or four and give them a clear topic to discuss in a given timeframe.
- Put students into pairs, sometimes of similar ability sometimes deliberately of differing abilities, so that experiences and ideas can be shared and stronger students can help those who may find the activity more challenging.
- Plan a series of activities rather than just one that can be carried out in groups, one after the other, and ‘passed around the room’ or can be carried out in consecutive lessons by different groups. This may be facilitated by having activities outlined on laminated cards or accessed electronically on the school’s ICT system.
- Develop lesson ideas that encourage focused discussion.
- Encourage individuals and small groups of students to develop their own learning by doing activities that are differentiated from the work of the rest of the class such as carrying out library or ICT-based research.
that is best able to envisage and develop new ideas. This cannot be allowed to go on indefinitely but it is something that should not be discouraged immediately or seen as a cause for immediate concern. Thinking time is essential and pupils should be given enough space to overcome the blockage that they may be experiencing, if possible. If the teacher is always the first recourse whenever there is a problem in coming up with a new idea, a dependency may build up that militates against creativity rather than encouraging it.

The idea of students engaging in wide-ranging and free discussion can also be worrying, since we are educated to think that the first and primary task is to manage the students successfully. However, speaking with peers to develop ideas and test solutions is one of the best ways to seek solutions to any block to learning and being creative; it is also an excellent way of generating ideas. It is not copying or plagiarising the ideas of others but is a way of bouncing ideas off one another. There is ample evidence that many creative artists, writers, mathematicians and scientists make their greatest advances when they work intensively with colleagues. There are a variety of strategies that can be used, within which allowing students to ‘talk among themselves’ is only one; it may actually be the least successful approach. This does not mean that ‘talking among themselves’ should be avoided completely but, as a strategy for stimulating ideas, it should be used only sparingly. Better strategies include ones such as those shown in the box on page 38. The case study in the box below right shares one teacher’s approach to overcoming blockages to creative T&L at different levels.

Managing creative activities

We all know that students go off-task if they are not directed in their work and this is equally true when trying to channel creativity. For this reason, it is important to plan activities carefully to minimise the chance of a lesson ‘spinning out of control’. Creative lessons can still follow the classical and tried-and-tested structure of an introduction from the teacher, followed by a period of extended discussion or student interaction prior to a written activity based on the discussion and a final summary of ideas. This situation is focused on the teacher but they elicit responses from students about what they have discussed and written (see the article on pages 31–37 for ideas on how to plan creativity via this tripartite approach to lesson structure). This approach emphasises the importance of teachers setting out the territories to be explored and ensuring learning objectives are kept clearly in view to help keep pupils on task. While a long list of instructions at the start of a lesson may be counterproductive, a clear statement of expectations is needed. Students should be in no doubt about what outcomes are expected, even if such outcomes are simply to come up with a given number of ideas. In this way, students cannot be justified in going off at a tangent or arguing that they do not know what is expected of them. It is something of an irony that anyone who spends a lot of time observing lessons will tell you that many very creative lessons are highly structured, and successful creative teachers are usually the best managers of the classroom. The box right gives tips for planning for creativity, while the case study in the box top left on page 40 shows how one teacher manages to overcome externally-imposed blockages to plan for different types of creativity in her T&L.

If any of the factors outlined in the box right are not in place or if activities are too challenging, then pupils can sometimes disengage from their learning. This is more likely during more creative approaches to learning because the nature of the activities means the teacher has given over control of the learning to the students, even if only temporarily. The teacher needs to develop strategies to show that some control has been ‘lent’ to the pupils for a time rather than being given over permanently with no fear of further sanction or control. This is best accomplished right at the start of lessons and even better right at the start of engagement with a class. Expectations should be made clear, the volume of noise allowed should be emphasised and types of behaviour that are acceptable should be set out and revisited whenever necessary. The longer that pupils wait to engage in taking some control of their own learning, the more difficult it is to introduce such an approach. For this reason, it is best to have agreed approaches across the department and across the school.

If things do get out of control, teachers should never be fearful about getting them back to what is acceptable. Intervening with specific pupils for a ‘quiet word’ to get them on task is often all that is required. However, if the overall level of behaviour deteriorates then the whole class needs to be brought back to focus on to the teacher and then back on to the task. Such things are best avoided if possible and this can be accomplished by making sure the work in hand is understood and that timescales are clear so that there is pressure to accomplish what is desired. Never be caught in the trap of thinking that only open-ended activities are creative. Many writers and creative artists did their best work when a deadline was approaching. The attributes of inspiring teaching are really just

Planning for creativity

■ During overall curriculum-planning sessions identify parts of the curriculum where creative approaches are especially relevant to learning.

■ When planning individual lessons, always consider whether there are parts that can be given over to discussion and student interaction.

■ Consult students on what they are learning to see if there are certain types of activities they find challenging and what creative ideas they may have about their own learning.

■ Plan for resources being available when needed so creativity is not halted by having the right materials.

■ Arrange the layout of the classroom to encourage creativity – many teachers use a system of seating that allows for both teacher-centred and student-centred activities by having desks in groups or tables in a ‘boardroom’ style.

Case study 1: setting the tone

Mary is an art teacher who has been working in a school in the north-west for some years. She is considered by the staff of the school to be central to the creative life of the school. She said:

I love what I do but I can only do it because our head is very good at delegating. He allows you to get on with it. I think that, in any school, if they are successful it is usually because teachers are incredibly committed but it’s also down to the enthusiasm of other staff and especially the senior management team, (SMT) since they have to encourage certain ways of working. I think it’s just accepted that, in art lessons, students will be ‘creative’ but, in some other areas of the curriculum, there’s a pressure to get things across because of the pressure of exams, so I’m lucky in some ways. That’s why I sometimes try to get staff out of their comfort zone by planning whole-school or whole-year activities that take over the curriculum for a day or more. When the kids get blocked in what they are doing, you have to be careful about intervening too soon. I always say that it’s OK to get stuck and you have to work your way through it. When they’re working with others it usually means that someone will have an idea and they bounce things off another. That’s the benefit of not always just working with your head down in the classroom.
Case study 2: planning for creativity

Jo is an experienced teacher of English and drama who has been working in a school in the north-west for about eight years. She sees creativity as being part of what she does but has been concerned that this has been pushed to one side by the demands of the national curriculum. She also expressed fears that, when blocks to creativity come up, there is a temptation to give up too easily.

I’ve always seen myself as a creative person. Explaining ideas to students that will make them engage in creative writing is what I see as the best bit of my job. ... Sometimes the national curriculum and the exam system really put a lot of emphasis on ‘correctness’ at the expense of being creative. So I try to make sure that what we are doing is really rigorous and challenging and the students know that being creative isn’t an easy option but it is enjoyable too. I plan lessons so that some whole lessons are really creative and make them think. I have scenarios for them to consider, such as being on a sinking ship or being a detective or stranded in the wild or something. Then they have to build up the scenario and work out what they would do and how they would cope and what they would say. That way I can get loads of really good discussion and then story writing and drama out of the same thing.

Case study 3: freedom and space to innovate

Jim is head of maths in a school in the midlands who has been teaching for about 15 years. He admits to finding creative approaches to teaching to be challenging but has deliberately worked with colleagues in his department to make T&L more creative and to overcome blockages to such approaches:

I don’t think of myself as being a ‘creative’ person. It’s funny but I suppose I don’t necessarily think of maths as being a creative subject, probably because it involves a lot of incremental learning with one concept building on another. But, when you think about it, maths at the highest level is very creative because I remember reading about theories of people like Einstein and Paul Dirac where they were extremely creative people in their own sort of way. That’s why over the years I’ve tried to make my own lessons more creative and tried to make the children’s learning more creative. I try to make sure there are different kinds of activities in each lesson and that there’s often a time when the students are not just focusing on their own work but have a chance to discuss things. This does take planning though because I have to make sure that the activities are suitable for that kind of approach. When I first started teaching I found the ‘creative stuff’ a bit worrying because I thought ‘they’re all going to be off task’ and it will get out of control but I’ve got more confident over the years. That’s why I try to work with the rest of the department to encourage them to work in that way too.

Many very creative lessons are highly structured, and successful creative teachers are usually the best managers of the classroom.

Overcoming prejudices

Creative teaching is simply good teaching. Those who are committed to encouraging students to take some control of their own learning, and who want to encourage deep and real understanding, always want their students to have a variety of experiences that include working things out for themselves and engaging with others collaboratively. Unfortunately, we are often at the mercy of a set of prejudices about creativity that it is a solitary activity or, obversely, that it involves unfocused discussion with no particular timeframe, that it means that teachers somehow give up control of the class and so classroom management techniques go out of the window.

The truth is that successful creative teaching and learning usually involves extremely well-planned learning activities and materials and teachers need to be confident in their ability to work with and control a classroom of active learners. The box below offers tips for helping ensure that innovative T&L thrives in classrooms across your school. As blockages to creativity do occur – the key thing is having strategies to overcome these.

Top tips: allowing creativity to thrive and to overcome any blockages

- Start simply, build progressively by having a manageable focus, such as an event involving all staff and students that celebrates creative learning
- Make sure that resources are readily available and that the classroom environment allows both teacher-centred and student-centred learning
- Build an environment for creative learning by celebrating pupil voice in displays in areas of the school
- Find space for creativity by allocating curriculum time for adventurous learning both during overall planning and during individual lessons
- Encourage students to share ideas through cooperative learning by discussing problems
- Take up opportunities for professional development, and to work collaboratively with colleagues you trust
- Seek partnerships across and between schools so that creative T&L becomes an expectation that is understood by all staff and pupils
Developing creative minds – networking to explore T&L tools that allow creativity to flourish

When a group of teachers formed a professional learning network to explore creativity in T&L, they made some insightful and inspiring discoveries. Anne de A’Echevarria shares their key findings, and some of the strategies they developed for embedding more creativity in T&L across the curriculum.

**Case in Point: Learning about Creativity**

Six nails and a piece of wood: How could you use these creatively in your subject?

This was the question posed at the first meeting of a professional learning network of middle and high school teachers in the North East who came together to explore creativity in teaching and learning. When asked to reflect afterwards on how they had responded to that challenge, they reported that they had felt a whole range of emotions; some felt threatened, scared and baffled, while others felt intrigued and inspired.

And when the first ideas came? Please, relieved, secure but stuck with a ‘boring’ idea.

And then? More talk, some collaboration, laughter, enjoyment mixed with frustration, excitement at a novel idea, a feeling of being ‘on a roll’, of being ‘innovative’ and ‘powerful’.

And finally? Surprise, pleasure and a sense of achievement.

The teachers represented schools from across the region and had already enjoyed some success in teaching thinking using social-constructivist methods and thinking skills strategies that are infused into the curriculum (Jones, 2008). Carol McGuinness in her paper to the DfEE, From thinking skills to thinking classrooms describes the approach as:

- teaching thinking through a form of coaching; taking a metacognitive perspective; collaborative learning; creating dispositions and habits of good thinking ... infused across the curriculum by systematically identifying opportunities within the normal curriculum for thinking skills development.

(McGuinness, 1999)

This particular professional enquiry was launched to focus on creativity across the curriculum, exploring the extent to which creative thinking can be learned, and fostered by teachers, with a particular emphasis on the use of metacognitive learning conversations. The enquiry group of teachers, each specialising in different areas of the curriculum, was supported in action in both their work.

**Towards a concept of creativity**

Our aim was that the teachers and pupils involved in the project would develop their own pragmatic concept of creativity that was informed both by theoretical models, and by their own practical experience.

Many commentators have tried to define creativity in a large number of ideas

- Deeply engrossed, fearless and free

- In which you work with determination on your best ideas

- Strategic, un hurried and free thinking

**To develop creativity we need to focus on the development of personal qualities, moral sensibility and inspiring environments**

We wanted to use the word ‘creativity’ to explore a way of teaching and learning we believed might encourage freedom and responsibility, challenge and support, individuality and community, reflection and action in both teachers and pupils.

An effort to identify its parts and guide their development. Arthur J. Cropley identifies three core elements in creativity: novelty, effectiveness and ethicality (2001, p6). He speaks of creativity as a ‘cause’ and as an ‘effect’. As a cause it is ‘a cluster of psychological factors’, themselves caused by inherited genes in combination with experiential and environmental factors, that has the potential to have the ‘effect’ of making things with the properties of creativity, novelty, effectiveness, and ethicality. So, to develop creativity, we need to focus on the development of personal qualities, moral sensibility and inspiring environments.

Robert Sternberg defines creativity as ‘the ability to produce work that is novel, high in quality, and appropriate ... at a variety of levels’ (2002, p1). Ascribing the role of defining what is ‘appropriate’ and ‘of quality’ in any ‘domain’ of learning and action to a ‘field’ of experts, he suggests his ‘propulsion model’ for creativity. He distinguishes between eight distinct types of creativity that propels culture forwards by either accepting and extending current paradigms, rejecting and replacing them, or synthesising paradigms from different domains. Seen from this perspective, teaching for creativity in school might entail a focus on encouraging the pupils’ immersion in areas of individual interest, involving interdisciplinary enquiry and the production of novel ideas in and between subject areas.

**EPIC ID model of creativity drawn up with staff and pupils (see page 42)**

**Inspiration**

In which you research and generate a large number of ideas

Deeply engrossed, fearless and free

**Incubation**

In which you leave the work alone, although you still ponder about it

Unhurried, trusting and ‘forgetful’

**Distillation**

In which you look through the ideas you have generated and try to determine which ones to work on

Positive, strategic and intrepid

**Evaluation**

In which you look back over your work in progress and try to see how to improve it

Critical, positive and willing to learn

**Clarification**

In which you focus on your goals or brief. What am I trying to do?

Strategic, unhurried and free thinking

**Perspiration**

In which you work with determination on your best ideas

Uncritical, enthusiastic, and responsive to your evaluations

Source: www.geoffpetty.com

(see page 42)
CASE IN POINT: LEARNING ABOUT CREATIVITY

Each stage also has its own radically different, even opposite, ‘mindsets’, or dispositions ... the creative person needs to switch continually between these radically different, and difficult mindsets.

Robert Fisher suggests that the processes of creativity are those of evolution: ‘generation’ (of ideas and products), ‘variation’ (from the norm) and ‘uniqueness’ (originality at the level of the individual, society or the universal). He contrasts creative thinking with critical thinking and sets up a polarisation between analytical, critical thinking and synthetic, creative thinking. Imagination – reproducing and adapting existing ideas in innovative and productive ways – is the key to a creative process fuelled by inquisitiveness and the motivation to change, fired by insight, and controlled by intellectual and emotional intelligence with aesthetic taste (see: http://www.teachingthinking.net/thinking/web_resources/robert_fisher_creativeminds.htm). Fisher’s lead is to encourage the spirit of wonder and enquiry and an extravagant synthesis of new ideas in opposition to the stultifying forces of over-analysis and heavy judgement.

Guy Claxton, on the other hand, is keen to reject a polarised view and stresses creativity’s holistic nature. For Claxton, creativity is ‘a form of advanced learning or problem-solving that is engaged when normal learning won’t do the trick’ (Claxton, 2004). His four Rs – ‘Resilience’, ‘Resourcefulness’ (including research skills, imagination, intuition, reason and logic), ‘Reflection’ (standing for the self-conscious use of the ‘plan-do-review’ cycle of learning), and ‘Relationships’ of a meaningful and collaborative sort – define the common ground shared by learning and creativity. So if we want to encourage creativity, we encourage learning in general and learning-to-learn in particular.

There is some commonality between these efforts to define creativity: novelty, synthesis and thoughtful action. But there are differences relating to the level and quality of creativity accepted. In the light of these conceptions, we can see how the NACCE, in its 1999 All our futures report, needed to acknowledge, what it terms, the ‘elite’ conception of creativity that focuses on ‘creative achievements which are of historic originality’. It also wanted to spotlight the ‘sectoral’ conception that limits creativity to the ‘imaginative disciplines’ of music, drama, art, dance and literature, before it embraced its own ‘democratic’ definition of creativity. This plainly states that ‘creativity is imaginative activity fashioned so as to produce outcomes that are both original and of value’, while risking the conception that sees all people as ‘capable of creative achievement in some area of activity, provided the conditions are right and they have acquired the relevant knowledge and skills’ (NACCE, pp28–30).

But Wittgenstein suggests that it is wiser to ask what we are trying to do with the word rather then look for some entity in reality (Wittgenstein, 1953). Within the professional learning network, we used the word to signal and signpost a change in school. We wanted to use the word to explore a way of teaching and learning we believed might encourage freedom and responsibility, challenge and support, individuality and community, reflection and action in both teachers and pupils. We believed that creativity, with its roots deep in the beginnings of all things, was a good word – Vygotsky would say a good ‘tool’ (Vygotsky, 1987) – to dig deep into the T&L at the network schools and to fashion changes we believed were for the better. It was precisely the enormous scope of the word that invited teachers and pupils of different interests and persuasions to reflect on their own beliefs, actions, and contexts and to imagine a state of affairs with a higher potential for meaning and satisfaction … and to take steps to realise it.

Exploring the creative process

The group considered one particular model for teaching creativity that the students themselves termed: ‘EPIC ID!’ – see the box on page 41.

Based on the work of Geoff Petty (see: www.geoffpetty.com), this model outlines six key stages or aspects of creativity: ‘inspiration’, ‘clarification’, ‘evaluation’, ‘distillation’, ‘incubation’, and ‘perspiration’. These stages can be visited in any order and may be visited for hours or for just a few seconds depending on an individual’s approach and the nature and stage of the work. The key thing is to adopt...
the right phase at the right time. For example, no amount of distillation can help you if you need clarification. Many creative blocks are due to the determined adoption of an inappropriate phase.

Each stage also has its own radically different, even opposite, ‘mindsets’, or dispositions – for example, inspiration requires us to be spontaneous, uncritical, risk-taking or ‘slap-happy’ as the students termed it, whereas in the clarification phase you need to be critical, careful, and objective. The creative person needs to switch continually between these radically different, and difficult mindsets. This requires enormous flexibility – if you use an inappropriate mindset you will be in trouble: you will not get many original ideas if you are critical, careful and strategic, and you will not clarify your purpose effectively if you are slap-happy and uncritical. The model suggests that creativity can be increased by making sure we use the most appropriate mindset at a given time. In recognising the importance of thinking dispositions in the creative process, the model points to a relationship between developing creativity and developing emotional intelligence.

If we are to engage students in assessing their own creative development, an important precursor is to help them explore their own understanding of what it means to ‘be creative’ and uncover for themselves what the creative process involves. The network teachers were familiar with the concept of metacognitive ‘learning conversations’ where, through skilled teacher facilitation, learners are encouraged to reflect on the learning process; the thinking and learning strategies and mindsets that made learning possible, or difficult. So rather than serve up the ‘EPIC ID’ model of the creative process ‘ready-made’ to students, the teachers were encouraged to help their students to produce, critique ‘ready-made’ to students, the teachers were encouraged to help their students to produce, critique and refine their own model over time. An example of this approach is set out in the box on page 44.

The value of making time for learning conversations that explore the learning process in this way was highlighted by M.C. Wang et al (1993). Wang and colleagues examined the impact on pupil attainment of a range of school reform and development initiatives including curriculum development, exam reform, accountability and inspection programmes, teacher development programmes and particular T&L strategies. They were able to draw up a league table of effectiveness at this programmatic level. The top driver of attainment proved to be learning experiences that made high cognitive, and particularly metacognitive, demands on students. As Wang points out:

*The effect on attainment was even more enhanced to the degree that pupils were required to reflect on their thinking – to think about thinking in order to learn more general lessons about managing their own intellectual processes.* (Wang et al, 1993)

It was in order to help their students uncover these ‘more general lessons’ about creativity and creative learning that the network teachers began to add to the traditional curriculum content learning cycle, a similar, complementary cycle that helped students focus on the process of learning – see the box on page 42.

An exploration of the learning process tends to stem from the ‘do’ stage in the curriculum content learning cycle, as in the practical example described in the box on page 44 in which students were first immersed in a creative challenge to provide the stimulus for the subsequent learning conversation. The initial discussion helps students to identify and describe their thinking strategy, group process or learning mindset. This done, they may return to the action or go on to explore and evaluate the usefulness of a particular strategy, process or mindset. Then, they may return to the action or go further in their enquiry into learning – aiming to discover general principles about learning and themselves as learners that will help them to manage their learning in other times and places.

Interestingly, the second most effective factor in promoting attainment in Wang’s league table was identified as the ‘flow of challenging work’. In this context, ‘challenging’ refers to work that requires the engagement of pupils’ cognitive and metacognitive processes. The notion of ‘flow’ refers to the requirement that cognition and metacognition should not be timetabled in occasional slots. It should be continuously demanded.

A model of creativity may be more applicable, in its entirety, in subject areas such as the creative arts, but it was agreed by the network teachers that all subjects could contribute to particular aspects of the creative process it described. Teachers of subjects initially seen to have less scope for developing students’ creativity recognised they could contribute by explicitly teaching for the development of the necessary dispositions. For example, teachers of maths saw a link between the development of strategic thinking in maths, and the need for strategic thinking in the creative process. Their encouragement of strategic thinking could, for example, support students at the planning stage of a design and technology (D&T) project, particularly if this was made explicit to the students in both subjects.

Creating a climate for creativity
The concept of climate for creativity became increasingly important as the project progressed. The ‘creativity in context’ diagram in the box below was one attempt to help the group clarify their ideas about the:

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**Creativity in context diagram**

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**Teachers of subjects initially seem to have less scope for developing students’ creativity.** Recognised that they could contribute by explicitly teaching for the development of the necessary dispositions.
We have found that the infusion of thinking ‘tools’ into the curriculum can itself contribute to a change in classroom climate, particularly when also used as a stimulus for dialogue about the learning involved.

- knowledge, skills and dispositions necessary for creativity
- language and thinking tools of a culture in which creativity can flourish
- type of climate (emotional, economic and physical) without which a creative culture cannot exist.

Change requires a conducive climate, both economic and emotional. There has to be economic resources available to grant teachers the space to share, reflect and plan for growth. There is also a need for an emotional climate that encourages the genesis and development of both the students’ and the teachers’ ideas and actions. Remembering the importance of thinking ‘mindsets’ or dispositions to the EPIC ID model, to be ‘spontaneous and risk-taking’ requires a favourable climate. The teachers recognised, for example, that it was the playful, supportive climate surrounding and supporting the ‘six-nails-and-a-piece-of-wood’ challenge that had helped them to overcome their initial anxieties and generate ideas, and it was a climate of encouragement, challenge and commitment that maintained the spirit of enquiry and accountability in their working group. They soon realised that the encouragement of creativity had to involve climate change not merely within their own classrooms but across the entire school community: it is difficult to create and sustain over time the conditions that will encourage creativity in pupils, if they are not also in place for teachers.

All our futures lists some of the key climatic elements necessary for fostering the degree of autonomy, authenticity and fulfilment associated with creativity:

- openness to new and unusual ideas, and to a variety of methods and approaches
- respect for each other and for the ideas that emerge
- and above all there has to be a relationship of trust. (NACCCE, 1999, p107)

These qualities were present in most of the network meetings, but occasionally ‘open-minds’ would close and ‘rich possibilities’ looked like ‘hard work’.

When the shutters came down we would explore the reasons and invariably, pressure from above was the cause. Pressure to do the marking, cramming and reporting that resulted in these same teachers forgetting their ideals and instead putting pressure on their students to cram, do and achieve set targets. At such times, creativity seemed like a luxury that would be nice ...if only things had been different. At such times, it was clear that the harsh climate that inhibited the teachers’ creativity was also being transferred to the classroom where it had the same effect on the pupils.

**Tools for creative thinking**

Mihaly Csikszentmihalyi’s proposition, ‘it is easier to enhance creativity by changing conditions in the environment than by trying to make people think more creatively’ (1996, p1), has some truth, but we have found that the infusion of thinking ‘tools’ into the curriculum can itself contribute to a change in classroom climate, particularly when also used as a stimulus for dialogue about the learning involved.

**Case example: students produce their own model for creative learning**

- Students are engaged in a small-scale creative challenge that will act as the stimulus for the learning conversation. Whether the challenge is highly structured or more open, will depend on the age and experience of your students.
- Students work in small, mixed-ability groups to complete the challenge.
- Following the activity, the students are debriefed on the stages that they went through to complete the challenge. They could capture their ideas in diagrammatic.

<table>
<thead>
<tr>
<th>Questions to guide this process might include:</th>
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<tbody>
<tr>
<td>What part did you spend the longest on ... or keep returning to?</td>
</tr>
<tr>
<td>What were the steps that you went through to complete the challenge?</td>
</tr>
<tr>
<td>What qualities or mindsets did you need to overcome the problem?</td>
</tr>
<tr>
<td>How did you overcome the problem?</td>
</tr>
<tr>
<td>What part did you spend the longest on ... or keep returning to?</td>
</tr>
<tr>
<td>What would you do differently next time if you had to do a similar task?</td>
</tr>
<tr>
<td>What steps would you advise other students to take?</td>
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</table>

Students who would benefit from a more scaffolded approach, can also be provided with a set of cards showing different possible stages of the creative process based on the EPIC ID model (see the box on page 41). These can be sorted and sequenced by the students as a way of helping them to reflect on and demonstrate the stages that they went through. They should also be encouraged to be critical of the cards – would they change any? Or add any new ones? It is also a good idea to leave out an important step or include some blank cards to give students the chance to introduce ideas of their own.

In helping students to talk about and record the process that they went through, including the qualities they displayed or recognised in others, the network teachers were beginning to make the skills and dispositions involved in creative activity explicit. Some kept visual records of their students’ thinking on the classroom wall, referring back to them regularly and encouraging students to use and refine their models over time as they engaged in future episodes of creativity. Some eventually shared with their classes the EPIC ID model, or another model of their own choosing as a point of comparison, but only once their students had had the opportunity to devise, work with and refine a model of their own.
stimulus for dialogue about the learning involved. This idea of ‘thinking tool’ stems from the Russian psychologist Lev Vygotsky who drew attention to the need for young people to be initiated into their culture’s use of ‘symbolic tools’, language in particular, that gives rise to ‘a great number of new psychological functions’ that radically transforms perception, memory, concentration and action and leads to the synthesis of emotions and intellect so that:

longings and thinking become combined in a complicated new way, in the activity connected with the creative imagination. (from Van der Veer and Valsiner, 1994, p286)

Like ‘creativity’, the term ‘thinking tools’ has been extended over the years, in this case to include systems of counting, mnemonic strategies, diagrams, maps, writing and, more recently, the sort of strategies advocated by ourselves at Thinkwell (www.thinkingforlearning.com). One benefit of these tools is that they make tricky concepts such as evaluation, analysis, synthesis or cause and effect, highly concrete and visual. Students involved in the project found that they made thinking challenges more accessible and memorable partly due to their visual nature, and partly due to the amount of group and class dialogue they inspired.

The ‘creative thinking tools’ that we introduced included some familiar strategies for generating, developing and evaluating ideas such as de Bono’s ‘Random input’ (de Bono, 1993) and Osborn’s ‘SCAMPER’ – a mnemonic developed by Bob Eberle to help organise Alex Osborn’s brainstorming checklist of questions (see: Eberle, 1997) – along with some of our own such as the ‘Hour glass’ and the ‘Evaluation target’. For example, kick cards, based on de Bono’s ‘Random input’ contain random words and/or pictures used to trigger fresh ideas or new perspectives during problem-solving, providing a powerful lateral-thinking technique that serves to ‘kick’ you out of existing unproductive patterns of thinking and on to a new track.

We modelled how these tools could be used to ‘externally scaffold’ the learners’ thinking until such time as they become ‘internalised’ so as to appear to be ‘natural’ processes of thought that had always been there. We showed how the tools could be used to their maximum potential as stimuli for metacognitive learning conversations. By co-developing interesting, challenging situations and by modelling the role of the ‘mediator’ who provides encouragement and support, we showed how the teachers could help their students to collaborate in the use of these tools to construct or create their understanding of the world.

Student enquiry into creativity
As well as being informed by theoretical models, the teachers also wanted to put the views of their students at the heart of their development work.

Soon after our initial training day, we worked in the different schools with a representative cross-section of Year 7 and 8 students who took part in creativity workshops, then responded to questionnaires and participated in semi-structured interviews in which they explored their ideas about creativity.

Their thoughts illuminated the way forward:

It's something that has that little ... spark. You have to put in your own little ... your own little ... spark, otherwise it's not being creative it's just doing what you're told to do.

And about how being creative made students feel:

I just feel like I'm free ... like I'm free, you know? It's relaxing. I do like ... abstract things and I can do what I feel - it makes me feel better ... it clears my mind. You don't just have to do what you're told ... there's a choice.

The students also provided advice for their teachers that might help them to be more effective in teaching for creativity. Their suggestions resonated with the teachers’ own experiences and were similar to the advice they would give their managers in relation to fostering professional creativity – see the box above for examples of their comments.

We were constantly impressed by the wisdom and practical value of the students’ observations. The analogy of creativity as personal spark helped to inform the teachers’ understanding of creativity. It also became part of how the teachers’ talked about creativity with their students to help them to a better understanding; a productive feedback loop. Howard Gardner used exactly the same metaphor in a passage relating to the duties of educators:

Each child has a spark in him/her. It is the responsibility of the people and institutions around each child to find what would ignite that spark. (from NACCCE, 1999)

As their enquiry progressed, teachers and students felt positive about the value and effectiveness of the project although the scale of the problem also became clearer! On the one hand, teachers reported that the creative thinking ‘tools’ in combination with a more constructivist pedagogy, resulted in students becoming
more motivated to learn and more confident – the creative thinking ‘tools’ seem to be particularly motivating for the usually unmotivated boys. On the other hand, students, used to being told exactly what they should do to achieve the ‘right’ answer, struggled to make creative decisions. They were capable of generating original ideas, but often chose to develop safe ones and they expected teachers to save them from difficulties. In the crammed curriculum, the teachers often found it quicker and easier to ‘give the answer’ or provide a set process to follow, rather than support learners in their struggle, engaging in the ‘skilful neglect’ required for learners to uncover their own creative processes. Also, teachers reported feeling anxiety when their students weren’t doing what they expected or wanted and irritated when they carelessly jumped from an early stage in the development of an idea to the final product, so missing the chance to develop it more fully.

Our enquiry group meetings became workshops in which we would try to find solutions to the problems that came to light in classroom trials – see the box above for just a few examples of these.

As a result of their success, members of the group chose to ‘spread the word’. Several ran workshops for colleagues in their schools and one co-presented the project at a national conference.

Reflections

Our last meetings with both student and teacher groups provided occasions for reflection on the project to date. The teachers felt they had gained by being introduced to new ideas and methods, by reflecting on their pedagogy and making changes, by having time together to plan across the curriculum with a common purpose, by feeling more effective since the pupils had responded so well, and by being granted the working space to explore and develop their own creativity.

And the students? The two sets of questionnaires and interviews indicated that they had enjoyed more interesting lessons in which everyone had been involved. They had been praised for higher quality of work, and some had gained in confidence, particularly in respect of making creative decisions.

The teachers also identified the obstacles that other schools might face in trying to foster creativity – the box left lists these along with their recommendations for senior managers on how to overcome these.

The teachers and pupils involved in our enquiry came to view that creativity can be fostered by the cross-curricular infusion of ‘thinking tools’ supported by a shared language of creativity used as part of a constructivist approach to teaching.

The group claimed that the enquiry had brought them to a better understanding of creativity. They came to see it as a complex process, requiring all the high order thinking skills together with the many dispositions that enabled their effective application. They recognised its products as being new as well as being enriched by the individualism of the maker.

The value of creativity was immediately and constantly obvious to both teachers and students alike. It felt good – for both students and teachers – to produce things that were intimately linked to themselves and that were regarded highly by others. Because it felt good, creativity had been motivating and generative of higher aspirations, engagement, and self-esteem.

The enquiry showed that teachers can provide opportunities for learners to immerse themselves in a subject, to become ‘experts’ in the field, to develop the skilful use of ‘creativity tools’ and to produce ideas and objects that contain ‘their own spark’. This small-scale study encouraged all participants in the belief that creativity, on a personal level, can, in this way, be fostered in teachers and pupils alike and that learning creativity is a matter of learning to learn in combination with learning to be oneself.

Anne de A’Echevarria, Education Consultant

Previously a teacher, PGCE tutor and head of a research and development team, Anne now works as a freelance education consultant and writer for Thinkwell, set up to support schools in developing a culture of enquiry and creative learning. You can contact Anne on: 01760 783482 or by email: anne@thinkwell.org.uk

Examples of solutions to problems teachers found with teaching for creativity

<table>
<thead>
<tr>
<th>Examples of problems</th>
<th>Possible solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom environments</td>
<td>Making interactive displays related to creativity</td>
</tr>
<tr>
<td>Lack of thinking time for students</td>
<td>Giving periods of quiet reflection in lessons</td>
</tr>
<tr>
<td>Pupils’ lack of necessary dispositions (flexibility, tenacity and so on)</td>
<td>Making dispositions the focus of metacognition</td>
</tr>
<tr>
<td>Inability of pupils to ‘imagine’</td>
<td>Giving practice in visualisation techniques</td>
</tr>
<tr>
<td>Students’ limited conception of ‘creativity’</td>
<td>Teachers making a point of talking with pupils</td>
</tr>
</tbody>
</table>

This small-scale study encouraged all participants in the belief that creativity, on a personal level, can, in this way, be fostered in teachers and pupils alike and that learning creativity is a matter of learning to learn in combination with learning to be oneself.

Overcoming obstacles to fostering creativity: solutions for curriculum managers

<table>
<thead>
<tr>
<th>Obstacle</th>
<th>Recommendation for senior managers</th>
</tr>
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<tbody>
<tr>
<td>Lack of time and money to meet, learn and make plans</td>
<td>Value creativity for what it can bring to a school</td>
</tr>
<tr>
<td>Inflexibility of an unsuitable timetable</td>
<td>Value teachers who are fostering creativity by supporting what they are doing</td>
</tr>
<tr>
<td>Pressures of the many non-creative tasks heaped on them</td>
<td>Change timetables and schemes of work to allow space for creativity to happen across the curriculum, particularly through immersion in interdisciplinary enquiry</td>
</tr>
<tr>
<td>Difficulties in changing minds of teachers, students, parents, governors, senior managers and politicians so that current systems and structures that work against a favourable climate for creativity can be changed</td>
<td>Provide staff with the time and space to conduct professional, collaborative enquiry, as this process, in itself, is creative of the culture and climate that fosters creativity in students</td>
</tr>
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</table>
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NEXT ISSUE: Cross-curricular literacy and numeracy: achieving outstanding practice

Literacy and numeracy (L&N) skills are the building blocks for learning – these invaluable skills must be promoted and used in all curriculum areas so students are able to not only build on these at every opportunity but can see for themselves their value and application to all areas of learning. Developing L&N across the curriculum is also a key area of focus in the new Ofsted framework and you will need to ensure inspectors can evidence this. So it is vital that as curriculum manager you have in place a watertight approach to securing effective cross-curricular L&N delivery in all classrooms. The next issue of Curriculum Briefing will show you how to go about this in practice. Learn how to build an effective whole-school policy, plan progressional development of L&N skills across departments, plan and then evaluate whole-school implementation. Discover how to ensure all staff understand how to develop L&N skills within their subject area, know how to develop literate- and numerate-rich lessons, and provide for the L&N needs of particular student groups. Then there is access to an arsenal of tools and strategies to help staff enhance the use of L&N, and case studies showcasing good practice. Overall, the issue will help you improve how literacy and numeracy skills are being developed in all classrooms, so you can be confident that your students can capitalise on the power of these skills to enhance and develop their learning at all levels.