Emerging Good Practice in Promoting Creativity

A report by HMIE   **March 2006**

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1. Introduction

The National Priorities, published in 2001, highlight important outcomes of education in Scotland. National Priority 5 sets a clear expectation that teachers will 'encourage creativity and ambition' in their pupils. '*A Curriculum for Excellence*' 1 also stresses that pupils need to be able to 'think creatively and independently' to become 'successful learners'.

In implementing the National Priorities, many schools have responded enthusiastically to the idea of promoting creativity. They have engaged in imaginative and wide-ranging practices to promote and develop creativity in learners and teachers. However, at the same time many teachers have been concerned by a lack of clarity about what creativity means and remain uncertain about the best ways to promote it. Schools and education authorities have also struggled to know how to evaluate their success in promoting creativity and have been unsure about what might be considered as evidence of that success.

In response to a request from the Scottish Executive Education Department, HMIE has gathered evidence

- to identify and analyse emerging good practice in promoting creativity, and
- to provide advice on a range of issues related to creativity including learning and teaching, assessment, and current practice in evaluating success in promoting creativity.

This report is based on evidence from inspections of pre-school centres, primary and secondary schools and community learning and development (CLD). HM inspectors visited establishments to observe good practice. They gathered views from student teachers, teachers, headteachers, educational psychologists, subject advisers and HMIE colleagues. They attended staff development events organised by education authorities and Tapestry[2] and met professional staff involved with Chartered Teacher accreditation and the Scottish Qualification for Headship (SQH). In addition, they collected evidence of some specific projects identified by teachers as contributing to the development of pupils' creative skills.

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[1] '*A Curriculum for Excellence*' was published by the Scottish Executive in 2004. It was prepared by the Curriculum Review Group, charged with supporting an improved curriculum 3 – 18 following the National Debate on education.

[2] Tapestry works in partnership with a number of universities and organisations to make leading edge thinking and research accessible to the education community in Scotland. More details of their work can be found in section 7 – Support for creativity. Their conferences, seminars and workshops have been very well attended.

2. Understanding Creativity

Teachers' understanding of creativity

Teachers have differing, and sometimes conflicting understandings of the term 'creativity'. Some identified it with particular subjects or areas of the curriculum. Others argued that there were opportunities for pupils to be creative in all curriculum areas. Some regarded it as an enduring characteristic or talent in certain pupils while others saw all pupils as creative. Some thought that creativity was promoted through environments, and responsiveness; others emphasised the importance of particular learning and teaching approaches in promoting creativity.

There was widespread discussion about how creativity linked with other aspects of cognitive development. One widely supported view was that creativity was synonymous with 'problem-solving', 'thinking skills', 'enterprise', or 'imagination'; or was linked very closely with collaborative groupwork. Many teachers linked particular types of thinking, labelled 'lateral' or 'divergent' or 'intuitive', with creativity and considered that 'convergent' or 'deductive' or 'logical' activities provided less fertile ground for creativity.

Some teachers argued that very young children were particularly creative because they saw the world in fresh and unconstrained ways. Others argued that creativity flourished once a discipline was mastered, promoting examples of the most creative artists or scientists, who had mastered their discipline as a prerequisite for their creativity.

This section therefore seeks to clarify the meaning of creativity in educational contexts and to comment on some of these views which influence teachers' practices in promoting creativity. Greater clarity about the concept of creativity is important to establish a firm basis for a discussion of ways that creativity is best promoted.

Towards a shared understanding of creativity: what is creativity?

Creative thinking and behaviour have some closely inter-related characteristics.

- Creative people often have lots of ideas. The ability to generate *a large number of ideas* on a topic is one aspect of creative thinking. Although a large number of ideas is not necessarily valuable in itself, the ability to produce or brainstorm a large number of ideas is a helpful stage before further sifting or considering a range of options. Associated with producing a large number of ideas is the notion of creative flow or stream of consciousness, where the creative thinker pours out ideas easily and smoothly.

- Creative thinking often produces *a wide range of ideas*. This involves thinking beyond the obvious ideas in any situation to explore a wide variety of options or possibilities. Prior learning and experience are very helpful as sources of ideas; so is the ability to imagine widely and vividly. Thinking about a wide range of ideas or possibilities enriches exploration and discussion, as well as the forms of expression of thoughts and feelings that we use.

- A distinctive feature of creative thinking is ***thinking or doing or seeing things differently,*** sometimes referred to as 'thinking out of the box'. The processes of intuition and insight sometimes help learners to see things differently. Insight and intuition are often thought of as magical though they are often founded on experience, hard work and expertise. The creative learner's ideas, perceptions, behaviour or the connections that they make may sometimes seem unhelpful or even odd. In other contexts, they will be extremely valuable and may lead to a discussion about new and better approaches, breakthroughs in thinking, or new perceptions. Originality[3] in thinking, seeing things differently, is very useful in solving difficult problems, introducing new approaches and strategies and catching attention and interest.

Some key questions about creativity

The remainder of this section addresses some of the key questions about creativity which were inherent in the views expressed by teachers, and which influence their practices in promoting creativity.

Is creativity another area of the curriculum?

Many schools promote creative thinking and behaviour very effectively through existing curriculum activities. Some schools put a specific focus on creativity. It is too restrictive to see creativity as a separate programme.

Is creativity promoted only in some subjects or curriculum areas?

Creativity is possible in all subjects and areas of the curriculum. This does not mean that the scope for creativity is identical in each area.

Inspection visits found creative activity in all subjects. The nature of different subjects and their patterns of delivery meant that some offered more opportunities for creativity than others. Some subjects dealt more frequently with open-ended issues or encouraged personal interpretation and expression, or choice and selection of ideas. For these reasons, creativity in schools has been traditionally identified with aspects such as the expressive arts or writing. Other types of subject learning which placed emphasis on a fixed response, memorisation of facts, calculation, or understanding of a process had less scope in those aspects for creativity. However, it was often the dominant learning and teaching approach[4] used in a subject which determined the scope for creativity more than the nature of the subject itself.

Is everyone creative?

All pupils have creative abilities and their creativity takes a wide variety of forms. Each individual has a wide range of ideas, perceives things in a personal way and, at times, shows insight and inventiveness. Some pupils demonstrate high levels of creativity in particular areas such as music, fashion, science or problem solving, or in maintaining positive relationships. Others may be creative in the range and quality of ideas and words that they

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[3] In terms of pupils, it is important to think of 'originality' as fresh or different perceptions rather than to expect pupils to have ideas or make inventions that no one else has ever considered.

[4] See section 4: Learning, Teaching and Creativity, page 13

use in language, their flair for designing and making or their ability to manipulate numbers. Some pupils may not be creative in one particular area but show creativity in a range of contexts across the curriculum. Where staff organised opportunities for creativity across the curriculum, pupils were more likely to find and develop their creative talents in particular areas.

Are younger children more creative?

Young children see the world in a fresh and vivid way. Adults respond warmly to the comments of young children, their role play, models and art work, the sounds that they produce from musical instruments, their imaginative solutions to problems and the questions that they ask which show their perceptions. Young children often have considerable opportunities to choose how to express their ideas, and staff encourage their responses whether conventional or unusual. This creates a positive climate for young children to show their creativity. As pupils acquire experience, develop skills and broaden their knowledge and understanding, they are able to use their increased control of materials, movements, media and ideas to demonstrate a more mature level of creativity. Ironically, in contrast with the view that a climate of 'anything goes' is conducive to creativity, the opposite is the case. Higher levels of creativity usually result from an interaction of considerable knowledge and skill with a willingness to innovate and experiment.

How does creativity relate to thinking skills and to enterprise?

Not all thinking is creative thinking. Creative thinking is one area of thinking which will have some of the features identified above, and may sometimes be labelled as 'lateral' or 'divergent' or 'intuitive' thinking; but it is not a discrete area. For example, a creative solution to a problem may involve careful analysis or recall of information alongside thinking 'outside the box'. Or a fresh perception or insight. Key areas of thinking interact helpfully and strengthen each other.

Creativity has much in common with enterprise. Creative skills and thinking play a major part in enterprise activities. It is the specific social or economic context of an enterprise activity which may distinguish it from creative activities which are more focused on individual expression.

3. Emerging good practice and issues

Pre-school centres

Many very good examples of promoting creativity were found in pre-school centres. Where practice was good, staff organised a range of opportunities that promoted children's creativity in a flexible and uninhibited way and used their interactions and responses to encourage spontaneity and excitement. Creativity was at its best where children asked questions, or made observations or reached a problem naturally in their play: such as how to get toy cars across a river or to help a 'patient' in the hospital corner. They found ways to solve their own problems and to test solutions. They sometimes used trial and error to reach solutions but often drew on their previous experience or on their imagination to solve problems.

In one nursery class, children selected and gathered a variety of natural materials to decorate clay cakes they had made. They visited a local pond and designed and built boats to sail there. Staff encouraged the children to be open-minded and inquisitive in designing different types of boat. The children carried out investigations to test their ideas, often collaborating and providing mutual support.

Staff introduced the learning contexts but maintained sufficient flexibility to allow children to experiment and explore their own ideas. The children were beginning to lead their own learning by planning their activities.

There were strong links with the P1 class. The work on the river was part of a bridging project. The children were surrounded by colourful displays of their activities, captured on camera and video, to help them build on their experiences and remind them of their work together.

Pre-school staff regularly used role play, music making, expressive painting, model making and expressive and imaginative movement to promote children's creativity. Children designed and decorated freely using paints, dough and clay. Sometimes the children made their own instruments to make music, or 'made music' on a piano or explored sound through percussion instruments. Specially designed indoor and/or outdoor activity areas encouraged imaginative and exploratory play.

Many nurseries used sound or sensory gardens to develop children's knowledge and understanding of the world. In one garden, imaginatively shaped peepholes encouraged children to observe the changing views from unusual angles. The children explored the garden using touch and smell, made bird feeders to hang in the garden and told each other stories about the garden. They climbed on frames made by a local woodcarver who explained the materials and carving to them.

Some pre-school centres had not achieved a good balance between creativity and other learning approaches. In some centres, planning needed to be more flexible to provide scope for children to explore and experiment by themselves without teacher direction. Some centres overemphasised familiarisation with materials and techniques at the expense of opportunities for children to express their thoughts and feelings in pictures, paintings and models: both are important. Similarly, opportunities for children to explore and express musical sounds, to express themselves in movement and role play were not always sufficiently emphasised.

Primary schools

Primary teachers often expressed concerns that an overcrowded curriculum had reduced their scope for creative work. They looked forward to the opportunities which would be provided by implementing *A Curriculum for Excellence*, arguing that greater flexibility in national advice would 'give them permission' to spark pupils' imaginations and curiosity for learning in more effective ways, by focusing more on teaching and learning approaches.

Many schools where creativity was valued had taken account of the guidance from the case studies linked to the Learning and Teaching Scotland *Creativity Counts* Project[5]. Others had become involved in the Future Learning and Teaching (FlaT) project to promote learning for life. Increasingly, school development plans and CPD plans included arrangements for teaching creatively and teaching for creativity.

In one school, staff and pupils worked to ensure that creativity was part of the ethos of all classrooms and was a key feature of enterprise projects. Teachers provided well-structured lessons but also encouraged pupils to be divergent thinkers and to risk sometimes being unconventional. A rich breadth of experience provided opportunities for creativity in aspects such as interpersonal relationships and challenging situations, such as service to the community, maintaining the school garden and caring for birds there, and residential excursions. Staff recorded evidence of creative activities on DVD and PowerPoint for future reference and discussion.

A range of activities which fostered their creativity included pupils:
- composing their own music and exploring free-form dance
- contributing to a UNICEF programme on global citizenship
- using research-based role play to explore the functions of local, national and European government
- developing higher-order thinking skills through 'philosophical' discussions.

In another school, a new approach to homework required pupils to carry out research on a given topic and be ready to present their findings to the class in imaginative ways. The school encouraged parents to be involved in this work. The outcomes were innovative and diverse. One pupil, helped by his parent, constructed a model of the Olympic stadium in Athens and inscribed the researched facts on parts of the model: the back of the flag, the running track, the seats, the advertising hoardings, the medal podium. This feature proved very engaging and helpful to classmates, who could look at the facts again, once the presentation had finished. Another pupil prepared an attractively presented illustrated reference book for the class library. Several pupils created and used PowerPoints to share their homework with the class. As a result of this approach, pupils were able to exercise choice, work in a new way with their parents and develop new skills in presentation. Pupils appreciated the degree of control (and responsibility) this gave them.

Primary teachers most commonly provided opportunities for creativity in the expressive arts, aspects of language such as writing, enterprise projects and designing and making within technology. Scope to develop creativity beyond these areas often depended on the learning and teaching approaches adopted. For example in mathematics, some teachers asked open ended questions and set tasks which encouraged pupils to struggle with challenging ideas and to spark off ideas with each other. Sometimes this led - and sometimes it misled - pupils to experiment with trial and error, and with systematic approaches. They could experience both the reward of painstaking effort and the delight of a sudden insight. In one school, pupils

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[5] See www.ltscotland.org.uk/creativity

used a range of problem-solving strategies and their mathematical knowledge to help them design creative playground games. The successful designs were then painted across the playground area. In contrast, too many teachers relied on pupils solving mathematical problems from textbooks or taught very specific problem-solving skills but did not provide opportunities for pupils to apply these skills in challenging contexts.

Secondary schools

Within secondary schools too, much work to promote creativity was focused in the areas traditionally considered to be the heartland of creative activity. Inspection reports record pupils' creative achievements in a wide variety of art work using a broad range of media. In many art departments, pupils' coursework, sometimes with support from local artists-in-residence, demonstrated both their art and craft skills and their creative application in personalised and innovative sculpture, glasswork, jewellery and paintings. In English classrooms, pupils commonly expressed their thoughts, feelings and imaginative ideas by writing poetry, prose and drama in ways that demonstrated their creativity with language and ideas.

The interdependence of skills and their creative application was also evident in music where pupils had acquired sufficient expertise to improvise, compose and interpret music in coursework and in preparing for and performing in choirs, ensembles, bands and orchestras. Events such as the *Battle of the Bands* and *Rock School* involved increasing numbers of pupils, notably boys, in stimulating performances of rock and pop music. School shows allowed pupils to demonstrate a whole range of talents in the performing arts and helped to develop resourcefulness, tenacity and other creative traits.

As in primary schools, designing and making in many home economics and technical education departments provided rich contexts for creativity; although, in contrast, in some departments teaching the same subjects work was dull and routine. In home economics, pupils often responded positively where there were genuine opportunities to make choices, take chances and be innovative in working with food and textiles. Pupils participating in *Junior Master Chef* and similar competitions were able to use their knowledge to try out ideas confidently and present their meals to a high standard.

In one school as part of their work on healthy eating, S1 pupils researched, designed and prepared their own low-fat, creative ice cream and designed their own recipes for unusual soups. Teachers expected each small group to be 'self-starting' and willing to try out different ideas and stressed that there would be no right answers. The ideas of some group members sparked off ideas in others. In the testing phase, some of the fruit combinations for the ice cream proved less than palatable, but pupils spoke enthusiastically of how much that had been part of the learning, and the fun!

In another school, staff in the home economics and art departments worked with a group of senior pupils in designing and making a range of fashions. Pupils used their own highly creative designs and materials from a variety of sources, including local mills. They modelled the clothes for a photographic shoot and held a fashion show in the town hall.

In a third school, senior pupils made their own formal gowns for their Prom, as well as using digital sewing machines to create a variety of individual embroidered designs for a range of fabric items.

A fourth school regarded creativity as a key component of enterprise projects, for example emphasising the creative elements in pupils' designs, packaging and ideas for marketing biscuits they had baked.

Creative work in technical education is expressed in a variety of ways.

In one school, staff created an environment which would stimulate creative work. Pupils were surrounded by diverse examples of high quality design and technology. Displays illustrated a range of architectural and engineering features, with exhibits illustrating varying styles and designs from the commercial world.

In a second school, pupils in craft and design worked individually on their own designs for clocks. Each had been asked to work to a given theme (Hebridean life), to research their options, choose and prepare their own design brief. Each of the artefacts they produced presented a personal interpretation of that theme: a standing stone, a tractor, a chessboard with Celtic pieces, a black house….

Teachers in a third school stimulated creativity by encouraging pupils to present and discuss their work with the class. They developed pupils' confidence to take risks with their creative work by encouraging them to value and praise personal and different ideas and artefacts.

Partnerships with local companies, competitions and award schemes, such as the Engineering Education Scheme and the Arkwright Scholarships[6], encouraged young engineers to work individually and collaboratively in real life contexts where creative solutions were valued. Good examples included a design for a hydraulics system of the kind used on the Falkirk Wheel and a casting design which, when executed, became an impressive roadside sculpture.

Although examples of promoting creativity were found across the curriculum, as illustrated in the LT Scotland case studies[7], they were not widespread in other subject areas. For example, there were few examples of teachers presenting mathematics activities in a challenging way to promote creative responses. Good practice included developing pupils' understanding and appreciation of the importance of mathematics in real life contexts, cultures and heritage. Teachers showed pupils how Pythagorean principles were used by rope stretchers in Egypt to ensure right angles when building the pyramids, for example. They engaged pupils in 'real' financial planning, including calculations of whether or not they could afford to make a dream project come true. They helped them see the mathematics of natural patterns and road designs and to illustrate the use of 'The Golden Ratio' in nature and in art.

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[6] These scholarships are awarded by competition to fund successful design proposals
[7] The LT Scotland case studies in all areas of the curriculum and school life illustrate ways in which teachers are fostering higher-order skills that underpin creative thinking and work. www.ltscotland.org.uk/creativity

In one learning community, teachers had introduced a 'Problems of the Month' initiative for pupils in P7 and S1. At Christmas time, crackers containing different maths problems were made up by secondary pupils for groups of primary pupils. They pulled the crackers and worked in pairs to solve the problems. In addition, secondary pupils worked collaboratively to solve problems as part of some maths topics – for example, multiplying out two sets of brackets. Each pair of pupils presented a possible solution for class discussion after which the agreed 'right' or 'best' answer was named after the pupil who worked it out. Rewards for success in such activities included 'Mathemagician' pencils.

There was some emerging evidence of effective practice in dance for boys and girls within S1/S2 physical education programmes and extra-curricular provision. In one school, pupils could take an optional course in dance which included devising, choreographing and performing their own routines. At another, large numbers of pupils attended a dance club at the end of the day where they explored dance forms and expressed themselves creatively through dance.

The HMIE report on learning and teaching in science, *Improving Achievement In Science In Primary and Secondary Schools*[8] reported that effective science courses included 'relevant and challenging content, including practical work, that captured pupils' interests and developed the full range of investigative skills.' The 'full range of investigative skills' was best demonstrated in open-ended investigations where pupils combined critical and analytical skills with the use of their knowledge and experience to inform intuition and hypothesising, and tried out and tested different solutions when their first solution proved fruitless. However, such examples were not common.

Community learning and development

In community learning and development, many providers support the delivery of initiatives to develop the creativity of children and young people. For example, *Dynamic Youth* is an annual event which is funded by BP and organised through Youth Scotland. It provides teams from youth organisations with the opportunity to design an innovative idea which will have a sustained impact on improving their local community. Young people develop skills in thinking, problem-solving, design and working together as a result of their participation. In addition, young people have opportunities to work for a range of achievement awards, including *The John Muir Trust*, junior challenges, *The Duke of Edinburgh Award*, *Young Quality Scot* and *Youth Achievement Awards*. These offer participants opportunities to develop the full range of creative skills. The impact of these activities can be measured, by the recipients and the wider community, in the number and nature of awards presented.

Local authorities are developing opportunities for young people to play a more active role in decision making and in building the capacity of their local community. In one council, young people now assess applications from their peers for projects funded through a Challenge Grant Fund. Local authorities and partners are also creating and supporting structures which enable young people to contribute to community planning. Consultation exercises planned

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[8] HMIE publication, March 2005

and run by young people, with support from CLD staff, have helped young people to make an impact on the provision of youth services.

Staff supported young people in one town to participate in local community planning. They did this in innovative ways by recruiting and training six local young people as 'Youth Future Agents'. The Youth Future Agents organised a local community-planning event for over one hundred young people. This event allowed young people to identify and prioritise key local issues. The results contributed to the development of the local community plan. Building on this, the young people worked with community planning partners to secure resources to develop significant youth services in the area.

 The impact that this work had on the Youth Future Agents was considerable. Those involved had generated lots of ideas, had been responsible for implementing the resulting action plan, developed their core skills and gained in self-confidence. The learning experience gained through Youth Futures enabled them to move into further education, training and employment.

CLD providers often use the arts, including drama and music, to engage with young people in youth and children's work settings. They generally use a community development approach which involves empowering young people to make decisions as a team. This may include agreeing the content and design of programmes and making decisions about budget allocations.

 In one community, young people were involved in a project to set up their own record company. They took part in training workshops facilitated by record industry professionals. Not only did they learn about musicianship, stage techniques and how to work in groups but it also taught them about how to promote events and about legal issues in the recording industry. The project team developed a website and produced a CD featuring local bands and artists.

CLD workers also offer young people residential experiences and outdoor education activities as part of youth work programmes. These typically engage young people in teams on challenges which utilise problem-solving and thinking skills. Young people are often involved in the planning of such events, including raising funds, the organisation of programmes, task allocations and planning meals.

Effective CLD projects have increasingly involved young people in using media resources.

Staff in one centre enabled youth and community groups to access high quality multi-media resources such as digital based music, web design, photography and video. Through workshops, tutorials and group discussion, participants with little or no experience learned a range of new skills from each other and from highly trained staff. They took part in

workshops and experiential learning sessions in ICT and digital music. They clearly identified the personal benefits of being involved in this project in terms of learning how to manage and plan events, prepare marketing strategies and develop technical recording skills.

CLD providers often work with some of the most disadvantaged young people and use a wide range of methods to develop the full range of personal and social skills. As part of The Prince's Trust, a community project in north Glasgow brought young people from the asylum seeker, refugee and indigenous communities together to identify hidden talents and develop them through special interest focus groups. This has engaged young people in work on film, music, drama and dance, art and design, sports and outdoor education.

4. Learning, teaching and creativity

The creative learner

All pupils learn in a wide variety of ways, through:
- listening to an explanation, answering a set of factual questions, reasoning logically, following a set of instructions, practising a skill, analysing and testing ideas

  as well as
- brainstorming and exploring ideas, designing and making, solving problems, seeing links and connections, imagining and expressing perceptions.

The latter group of approaches is more closely linked with creative thinking. It is important for the creative learner's development, therefore, that the learning experience includes these types of opportunities.

Evidence from inspection visits found that the dominant learning and teaching approach used in a subject or curriculum area determined the scope for creativity. Where teachers emphasised didactive teaching, closed questions, recall and much practice and consolidation, there was limited scope to demonstrate creativity. Where classroom relationships encouraged pupils to ask questions and to regard mistakes as part of learning, and teachers emphasised exploration of ideas, open-ended questions, expression of individual ideas and open-ended tasks, pupils' creative responses were much more frequent.

However, different types of activity and different types of thinking are very closely interrelated. There are clear synergies between creative thinking and other types of thinking. For example, in an activity such as problem solving, the learner may play about with ideas or drawings or language or numbers; tease things out; 'mind map'; imagine, as well as follow instructions; read and record evidence carefully; make deductions or take measurements. Throughout, the thinking processes will connect and the learning process will be enhanced by previous experience (of solving other problems, of the particular context), knowledge and skills. The best environment for the development of the creative learner is a rich environment for learning which challenges the learner to think in wide variety of ways.

Teaching to promote creativity

Some teaching approaches and environments fostered creativity; others inhibited its development. Where teachers designed activities and contexts to promote creativity and expected and trusted pupils to be creative, take risks, speculate, perceive and respond in

different ways, express themselves openly, self-evaluate and persevere after initial attempts, pupils generally lived up to these expectations.

Some teachers placed great stress on particular techniques such as brainstorming, mind mapping or listening to music during activities, or extended discussions to think through issues. These proved very useful in particular situations but were best regarded as specific tools from the broad possible range of activities which promote creativity, rather than the main methods to be used.

Some teachers were uncertain about whether to provide input, stimulus or support for creative activity, concerned that they would impose their own ideas on the pupils. The quality of response was improved where teachers providing stimuli to thinking or feeling, allowed ideas to trigger other ideas, asked challenging questions but, when appropriate, detached themselves from the activity and consciously avoided providing a teacher's answer to a task.

Finally, providing opportunities to enhance teachers' own creativity through continuing professional development is an important way of making them more aware of the importance of creativity in their teaching and also helps them to become more creative teachers.

Assessment

Teachers were often uncertain about the place of assessment of creative work in a context where new and different responses are valued and many outcomes or responses are possible. Yet teachers were readily able to point to examples of creative work that they regarded as of good quality. Many commented on the range or quality of ideas or aspects of originality or imagination embodied in the pupil's response, demonstrating a framework against which they made judgments about achievement. They also involved learners in self- and peer-assessment for example, through discussions of the qualities of their artwork or models, or improvisations in drama, or the ways that they had solved mathematical problems, or delivered a presentation to the class using multimedia.

Assessment in this area is primarily assessment of learning to be creative. Therefore, it is often based on observation and focused on providing positive and constructive feedback to the learner. It involves learners in forming their own views of quality and valuing different views held by others. It is designed to improve the quality of the creative process and response as well as the outcome. On the basis of professional judgement about these aspects, teachers will conclude that some pupils demonstrate creativity in some areas or subjects.

5. The role of ICT

At its best, ICT taps into young people's interests and expertise, exploits their curiosity to explore, and provides a stimulating set of tools to produce creative outcomes. In some areas of the curriculum, ICT was making a significant contribution to the creative process. For example, the use of computer software in art and design allowed for creative manipulation of images. It enabled learners to compose and arrange music, as in a recording studio. It facilitated the creation of two- and three-dimensional drawings in graphic communication.

The potential for ICT to be used creatively across the curriculum was often underdeveloped. ICT offers learners the opportunity to:

- make connections with information and people;
- think and behave imaginatively and creatively;
- question and challenge, using other ways of looking at subjects;
- develop greater autonomy and responsibility for their own learning;
- interact with scenarios which would not be available in the classroom situation;
- explore different styles of communication and expression; and
- produce something which is original to the individual or group and of high quality.

ICT also widens the choice of media and tools used in creative activities, including the use of digital still and video cameras and digital editing, animation video techniques, multi-media software, video-conferencing and website creation. Used well, these facilitate active involvement, a sense of individual responsibility and a personalised approach to learning. Many pupils are now involved in designing their own websites, using Think.com and Grid Club, for example. Many contribute to, or even design their school websites.

In one secondary school, pupils in geography worked in pairs using a range of online resources of texts, maps and photographs and provided their own version of their research in PowerPoint presentations.

In another school, groups of pupils in English used a digital video camera to make short films presenting their interpretations of poems. The task was designed to emphasise personal and imaginative responses based on textual analysis, cooperation and enterprise.

In one primary school, pupils exchanged teddy bears with an American school. Using digital photographs, they regularly emailed progress reports of the American bear's 'experiences' of Scottish cultural life to their partner school. In return, they received updates of the 'adventures' the Scottish bear had in the USA.

6. Evaluating creativity

'The National Priorities are barely three years old; it takes time to change attitudes and practices.'

'Current measurement tools don't fit the bill.'

Just as teachers found it difficult to assess creativity, education authorities, schools and teachers found it difficult to evaluate their success in promoting creativity. When questioned, teachers pointed to evidence of the outcomes of creative thinking and activity: for example, colourful and stimulating wall displays; imaginatively created and presented storybooks; effective PowerPoint presentations; accomplished performances in concerts and shows and notes on pupils' successes in creative activities. These are all valid sources of evidence of success.

For headteachers and senior managers, the evaluation of the success of a school or department in promoting creativity should be informed by this kind of evidence across classes based on lesson observations, their own professional judgements, the discussions of

their management teams and discussions with teachers about creativity. Some quality improvement officers expressed the view that an important indicator of success was teachers' levels of creative energy and enthusiasm, their open-mindedness, their readiness to learn along with their pupils. "If teachers are fired up, the learning is more likely to be fired up."

Some headteachers used an agenda to focus their discussions about creativity. Discussing and gathering evidence related to a set of questions such as the following helps ensure that there is a qualitative evaluation of creativity in a school.

- How well has the theme of creativity within National Priority 5 been promoted in the school, for example in school or departmental plans?
- Is creativity promoted across the curriculum and in whole school activities?
- How does the establishment encourage and recognise creative people, ideas, projects and achievements?
- Is there a climate of experiment (exploring and trying out ideas, being allowed to learn from mistakes)?
- How well do teachers respond to children's questions and ideas about their own learning?
- Is there clear evidence of teachers promoting creative work in classes and of high quality responses by pupils?
- What staff development opportunities are provided to promote creativity?

7. Support for creativity

The Scottish Executive Education Department will make available before the summer a brief overview of some key national policy documents across the U.K. and other support material for developing creativity in education. A helpful bibliography compiled as part of that work can be found in Appendix 1: Useful Links.

Creative Projects

In the course of visits to schools and centres, a number of projects were identified by teachers as having made a notable contribution to creative activities for pupils. A few are illustrated below.

Challenge Glasgow is a popular cross-curricular competition for pupils at P6 to S2. It aims to involve young people in problem solving, collaboration, creativity and initiative using ICT resources. "The only other requirements are imagination and a desire to succeed." The Challenge can be carried out as part of the curriculum, as a supported study or as an extra-curricular activity. Teams set off in a virtual hot air balloon. Their task is to solve all the clues for one leg of a round the world trip, thereby identifying a country and touchdown point. They can use the Internet, email 'experts', use reference materials from the school library or any other imaginative ways of solving the clues. Having found out what they need to know, teams must then prepare a brief PowerPoint or similar presentation of their travelogue.

The Angus Digital Media Project is part of the FLaT project based in Brechin involving pupils in six cluster primary schools at the P6 to S2 stages. The aim of the project is to

improve literacy through working with moving image texts. The work is based upon group collaboration, prediction and hypotheses. Pupils create short films which build upon group ideas. Each P6 class has received an emac, microphones, digital video, tripods, a TV and a DVD. Children are learning about the hardware and moving image language. Pupils work together in small groups of up to four. They each take roles, such as writers, thinkers and doodlers. The films currently being created will culminate in a mini Oscars event to be held in Brechin Town Hall. An evaluation team from Glasgow University has been commissioned to monitor improvements and impact. Team members will undertake lesson observations and involve pupils and staff in the evaluation process. An interim report is scheduled for 2006.

Itchy Coo offers new ways of learning a language that is an integral part of Scottish life. Matthew Fitt, the Schools Officer uses storytelling to engage pupils in creating stories in Scots. In one secondary school, pupils worked with Fitt to write their own play version of *Tam o' Shanter,* which they performed at the Royal Scottish Academy of Music and Drama. Over 500 schools have been visited to date and during these visits, boys have been notably enthusiastic in their responses to the activities and about reading the Scots texts used. In addition to working with pupils, *Itchy Coo* also runs training workshops for teachers and provides classroom materials and by summer 2006, the company will have published 24 books in Scots. In their submission to the Cultural Commission, James Robertson (General Editor) and Fitt wrote:

'The scope for releasing and realising the creative potential, especially of our young people, in drama and literature through their increased familiarity with and competence in Scots, is unlimited… The interaction between Scots and English, which is something many of us live with on a daily basis, can be a source of energy, renewal and versatility.'[9]

Staff development

Student teachers, and class teacher mentors, report a variable awareness of the role of creativity in learning through Initial Teacher Education. In the time available for professional studies in a busy postgraduate certificate of education course, creativity may be the focus of one lecture and/or workshop session. When a group of students who had recently completed placements were asked about the guidance they had been given in reaching a definition of creativity within learning and teaching, their replies included, '*I don't believe I have had any.*' and '*Not very much.*' More encouragingly, when asked about the contexts in which they would expect to see pupils working creatively, their answers ranged across the curriculum. '*Motivating contexts which reflect the learners' interest or are relevant to their lives, stimulated by paired and group work……. Contexts to promote creative thinking and independent learning, with appropriate and adequate support*.'

229 teachers now hold Chartered Teacher status, with around 2,900 currently engaged in modules for accreditation. There are roughly equal proportions from primary and secondary schools, including special schools. The GTC reported growing evidence of thinking and planning for creative activities in the submissions they are receiving. They cited projects in art and design, drama and religious and moral education in particular as strong examples within submissions of work designed to develop creative thinking skills. Teachers have presented evidence from poetry workshops, storytelling sessions and creative writing

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[9] *The Scots Language in a Future Scotland*: A Submission to the Cultural Commission, December 2004

activities. Project reports include, for example, an enterprising class of pupils who directed an art exhibition. They arranged all the sponsorship, prepared the publicity, set up the exhibition of their art work, prepared and gave speeches and made a video of the whole process. Some of the project reports contain references to work done by Matthew Fitt. [10] The GTC is looking at ways of sharing exemplars and case studies to further encourage and promote Chartered Teacher status and good practice. At least two of the registered CPD providers are presenting new courses linked to creativity: Creativity in the Classroom Context and Creativity for Learning.

Within the Scottish Qualification for Headship, emotional intelligence is addressed as a creative aspect of leadership. Leaders from business and industry are also invited to share their expertise and offer a broader view of leadership. This particular strand of the leadership course is designed to suit the needs of each individual and the context of his/her school.

Education authorities are providing support through varied programmes of in-service training. One authority has made a major commitment to train all of its teachers in cooperative learning techniques. Elsewhere, authorities are presenting programmes on wide-ranging themes, such as: thinking through philosophy; searching for meaning; self-empowered learning; teaching for creative learning and raising attainment: self-esteem and emotional intelligence; creative learning. Training events are also being used to promote and share good practice.

Tapestry provides a network of support arising from its commitment to build on its major conferences by involving leading international figures in continuing work for and with teachers and schools. They have secured the agreement of, for example, Tony Buzan, Leslie Kenton, Eric Jensen, Reuven Feuerstein, Carla Hannaford and Paul Robertson to work alongside Tapestry to
- create modules accredited through universities to be part of the collaborative personal development framework;
- participate in follow-up activities including locally delivered one-day courses, local twilight sessions, in-school and in-cluster staff development; management seminars; support for education authorities in mounting their own events
- prepare supportive booklists to be published by LT Scotland
- maintain a skill base of qualified leading edge trainers.

Teachers who attended Tapestry events commented on the powerful impact of high quality presentations and identified the follow-up activities as the major feature which distinguished Tapestry's work from other inspiring, but 'one-off' training experiences.

8. Conclusions

This report focuses on emerging strengths and seeks to identify the positive features of emerging practices in developing learners' creativity. The overall picture remains variable. While some teachers have spoken confidently about there being sufficient training, confidence and networking to sustain and disseminate good practice ('a critical mass in the system'), others feel isolated and uncertain. Although education authorities are providing an increasing range of training, some of the programmes are at an early stage.

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[10] See reference on page 17

Nevertheless, teachers' and headteachers' professional development is crucial for success. A significant number of teachers have now heard first hand about ways to nurture creativity from internationally renowned academics and researchers at workshops, masterclasses and conferences run by Tapestry. Some have been able to work with these leading figures in their own classrooms, as part of follow-up programmes. Many are finding new ideas, energy and inspiration from their involvement in the Chartered Teacher and SQH programmes and in new and empowering approaches to CPD following the Teachers' Agreement.

Collaboration is necessary to ensure the successful dissemination of good practice in creativity, and to support further teachers' confidence in teaching for creativity. LT Scotland has a key unifying role to play, both in coordinating and supporting the next stage of development. The SEED publication on aspects of policy and support materials will provide further assistance.

Tapestry's experience and vision bring valuable insights and its extensive network of practitioners provides ready access to groups of committed and creative teachers, able to share real classroom experiences and advice with colleagues.

With *A Curriculum for Excellence* will come further innovation. It would be timely if, as part of this important initiative, teachers could come together to spark ideas, share practice and continue to shape the vision for the future. In fact, be creative.

APPENDIX 1

Useful Links

All Our Futures: Creativity, Culture and Education. National Advisory Committee on Creative and Cultural Education (1999)
http://www.dfes.gov.uk/naccce/index1.shtml

Unlocking Creativity: A Strategy for Development. (DCAL, DE, DETI, DHFETE, 2000)
http://www.dcalni.gov.uk/Contman/includes/upload/file.asp?ContentID=88&file=c_24

Unlocking Creativity : Making It Happen. (DCAL, DE, DETI, DHFETE, 2001)
http://www.dcalni.gov.uk/ContMan/includes/upload/file.asp?ContentID=88&file=c_23

Unlocking Creativity : A Creative Region. (DCAL, DE, DETI, DHFETE, 2004)
http://www.dcalni.gov.uk/ContMan/includes/upload/file.asp?ContentID=697&file=c_23

An Evaluation Survey of Creativity Seed Fund Projects. (Education and Training Inspectorate, 2005)
http://www.dcalni.gov.uk/ContMan/includes/upload/file.asp?ContentID=846&file=c_23

Appreciating Creativity: Quality Indicators (Education and Training Inspectorate, 2005)
http://www.dcalni.gov.uk/allpages/allpages.asp?pname=creativity

Creativity in Education. Learning and Teaching Scotland/IDES Network (2001)
(Not available online)

Creativity in Education − Case Studies. Learning and Teaching Scotland/IDES Network (2001)
http://www.ltscotland.org.uk/creativity/case_studies.asp

Creativity Counts – A Report of Findings from Schools. Learning and Teaching Scotland/IDES Network (2004)
http://www.ltscotland.org.uk/creativity/files/creativitycountslts2004.pdf

Creativity Counts – Portraits of Practice. Learning and Teaching Scotland/IDES Network (2004)
http://www.ltscotland.org.uk/creativity/files/portraitsofpracticelts2004.pdf

Delivering the Arts in Scottish Schools. Glasgow Caledonian University/University of Strathclyde (2005)
http://www.scotland.gov.uk/Publications/2005/09/2783815/38157

Arts Education in Secondary Schools: Effects and Effectiveness. National Foundation for Educational Research (2000)
http://www.nfer.ac.uk/research-areas/pims-data/summaries/eaj-effectiveness-of-arts-education-iii.cfm (Summary only)

"Our Next Major Enterprise…" The Final Report of the Cultural Commission (2005)

http://www.culturalcommission.org.uk/cultural/files/Final%20Report%20June%2005.pdf

From Consultation to Design – Design for Learning: 21st Century Schools   The Lighthouse (2004)
(Not available online)

Creativity in Education website
http://www.ltscotland.org.uk/creativity/index.asp

Creativity website (Department of Cuture, Arts and Leisure, Northern Ireland)
http://www.dcalni.gov.uk/allpages/allpages.asp?pname=creativity

Future Learning and Teaching (FLaT) Programme website
http://www.flatprojects.org.uk/

3-18 Curriculum Review website
http://www.acurriculumforexcellencescotland.gov.uk/

National Priorities in School Education website
http://www.nationalpriorities.org.uk/intro/introduction.html

Assessment is for Learning Programme website
http://www.ltscotland.org.uk/assess/