

## Creativity in practice... What not to do...

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### Abstract

*This paper describes research carried out in two UK primary training providers as part of the 'Creative Teachers for Creative Learners' project, funded by a Research and Development Award from the Teacher Training Agency. Over the past two years a study of trainees has been undertaken at Manchester Metropolitan University and Goldsmiths College, University of London, as part of a larger collaboration with Bath Spa University College. During the first year this looked at undergraduates who were training to teach in primary schools. They expressed their own notion of the 'creative person' using cartoons and further data was collected using a questionnaire. This year, a task that had originally been piloted by Bath Spa to gain an insight into where postgraduate trainees located creativity within their practice, was used to further explore the undergraduates' understanding of creativity while they were on school experience placements.*

*This paper draws on data collected from two cohorts of undergraduate trainees in each institution. Comparisons will be drawn between the two sets of data collected to establish how one varies from the other and possible reasons for this will be mooted. Initial findings indicate that the Goldsmiths and MMU trainees expect to find opportunities for creativity in most areas of the curriculum with assumptions that certain subjects offer more opportunities than others. However, as the Goldsmiths and MMU trainees reflected on the reality of teaching on their school experience placements the data gathered offered some interesting insights, which are particularly pertinent in this time of further curriculum change in primary education, including inhibitors of creativity.*

**Keywords:** *creativity, primary, trainees*

### Introduction

As teacher educators, rather than reflecting on the optimum conditions for creativity (NACCCE 1999, Howe, Davies and Ritchie 2001, Kimbell 2002, OfSTED 2003), perhaps we should be reflecting on those conditions in the classroom that prevent creativity (Goleman et al, 1992). They list a number of elements, which inhibit or 'stifle' creativity: surveillance, rewards, competition, over control, restricting choice and pressure. These inhibitors to creativity occur in all areas of the curriculum. Howe (2004:15) asks,

'What would 'un-creative' science look like? It would be without purpose (what is the point in this?) without room for imagination (follow this worksheet), without time for play (stop messing with those things) and without clear goals in mind (learn all these facts; never mind how or why). In other words, 'boring science'.

If 'un-creative Design and Technology (D&T)' was substituted for 'un-creative' science in the above, we would have a description of a 'boring D&T lesson', with over-controlled tasks, restricted choice and pressure. For those of us who spend time in primary classrooms, this may sound familiar.

Looking beyond classroom practice to the external constraints imposed upon teaching as a profession, Craft (2003) identifies four inhibitors which impinge upon teachers' creativity: limitations stemming from centrally controlled pedagogy, from curriculum organisation, lack of understanding of terminology and conflicts in policy and practice. The effects of conflicts in policy and practice, in effect the mismatch between what we say, as educators, and what happens in classrooms, is illustrated by the findings of the Bath Spa Directed Task (Davies et al, 2004). Howe (2004a:9) comments, 'At least some of these blocks might be addressed by teacher education and training, although in practice it might seem to the trainee that their training encourages conformity and highlights the consequences of failure'. Creativity inhibitors appear to be as much of a problem for teachers teaching, as for children learning.



Could it be that too much emphasis is being laid upon provision of the optimum conditions for creative learning and not enough upon the simple notion of 'What not to do'? When the findings of the Bath Spa Task (see below) were discussed with the trainees who carried it out, it became apparent that the presence of inhibitors was preventing creative teaching and learning. Bowen (1999) stresses that pressure on schools and individual pupils to produce measurable outcomes, together with the barrage of new educational initiatives, places undue pressure on teachers and learners. It is possible that simply making trainee teachers aware of what not to do, rather than trying to grasp the elusive notion of creative teaching and make it a concrete reality, could be one way forward.

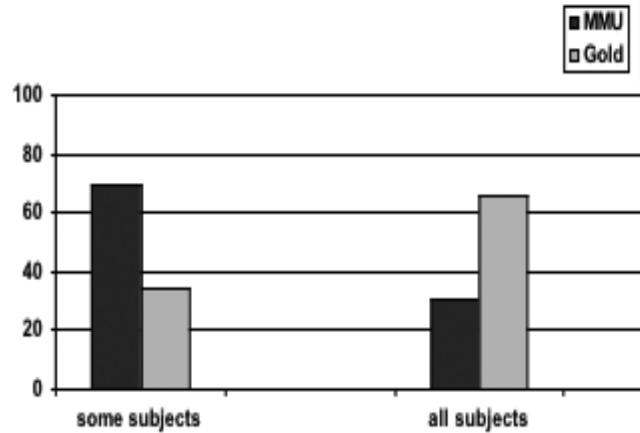
**Methodology**

At Manchester Metropolitan University (MMU) and Goldsmiths College, two cohorts of undergraduate trainee teachers in successive years (2003/4 and 2004/5) were given a questionnaire designed to elicit a series of responses which would lead them from exploring their own ideas about creativity, through recognising their own creativity and finally on to a consideration of the place of creativity in the primary school. The questionnaire included the question, 'Can you be creative when teaching each of the following subjects?', followed by a list of twelve curriculum subjects. They were asked to place a tick next to each subject that they thought they could teach creatively. In 2004/5, a sample of the 2003/4 respondents was also given the Bath Spa University Directed Task. The theoretical framework for this was adapted from Harrington's Creative Ecosystem (1990) (see Appendix 1). The task required trainees to observe two lessons, one where they thought they would find little creativity and the other where creative teaching and learning would be very apparent. By doing this, it was hoped that undergraduate primary trainees' preconceptions of creativity would be challenged. This paper compares the results of the two methods of measuring attitudes towards creative teaching of subjects in the Primary Curriculum and seeks to draw conclusions from the trainees' findings.

**Questionnaire findings**

In 2003/4, of a sample of 86 MMU trainees, 31% thought that all subjects would give them the opportunity to be creative in their teaching, according to their own definition of creative teaching, which had been shaped by discussion during foundation subject sessions in the previous year. This left a 'mixed opinion' sub- group of 69%

who thought that some subjects could, and others could not, offer them this opportunity. Of 33 Goldsmiths trainees, 66% thought that when teaching in school, all subjects would give them the opportunity to teach creatively, leaving a 'mixed opinion' sub group of 34%.



**Figure 1: 2003/4 Which subjects can be taught creatively?**

It is interesting to note the discrepancy in the size of the two 'mixed opinion' groups between the two institutions. While over two thirds of MMU trainees thought that some subjects could and others could offer them the opportunity to be creative in their teaching, only one third of Goldsmiths trainees believed this to be the case. Could this be the result of the foundation subject teaching that they had received in school as learners, in their school placements as observers of teachers or the result of their own experiences as learners in university subject sessions?

In 2004/5 at MMU, from a sample of 128 responses, 83% thought that all subjects could offer them the opportunity to be creative in their teaching, compared to 78% of the Goldsmiths trainees. This is clearly a more even result between the two institutions. What might have happened in the intervening year? The first thought is that creativity has had a much higher profile in each institution, with specialist option courses for several subjects which included 'Creativity' in the title being offered at MMU and at Goldsmiths a stronger focus on creativity has been achieved during the first year design and technology introductory course, as well in other areas. Nationally, the publishing of Excellence and Enjoyment (DfES 2003), although only making explicit reference to the creative arts and creative writing, has at least brought creativity back onto the agenda for primary schools.



Looking at the breakdown of the 'mixed opinion' groups in 2003/4, (Figure 2) it is noticeable that only 75% of the trainees at Goldsmiths thought that D&T could offer them the opportunity to be creative in their teaching, although 100% at MMU thought it could. The results for the 'mixed opinion' sub group in each institution for the two years of the research are shown below in Figure 2 (2003/4) and Figure 3 (2004/5):

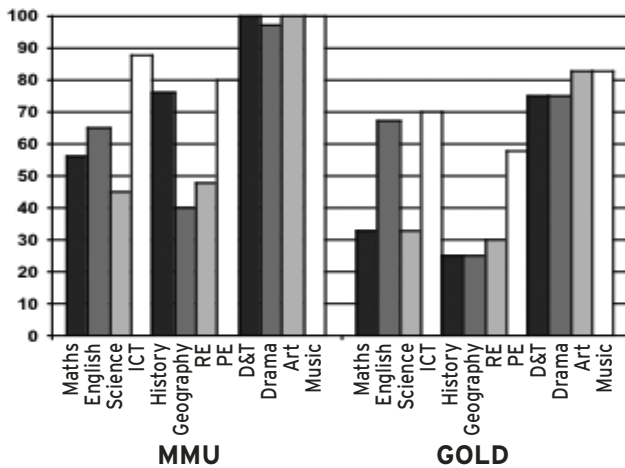


Fig. 2: 2003/4: Subjects that can be taught creatively: results shown as a percentage

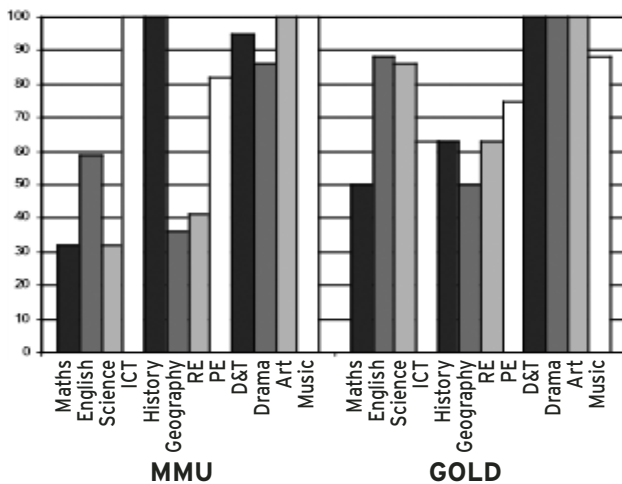


Fig. 3: 2004/5 Subjects that can be taught creatively: results shown as a percentage

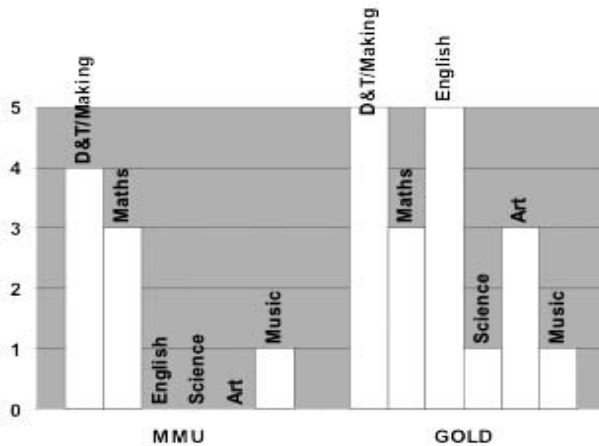
Over the intervening year there has been little change in the 'mixed opinion' groups' perceptions of the subjects which are traditionally thought of as offering opportunities for creative teaching, the so called creative arts. In spite of the curriculum being 'squeezed' by the increase in hours devoted to literacy and numeracy, trainees

continue to regard these subjects as the natural home of creativity and the opportunity for teachers to teach creatively. Art in both institutions continues to score 100% and music 100% at MMU and 88% at Goldsmiths. At MMU, scores for mathematics (maths) and science have dropped from 56% and 45% to 32% for both subjects, while at Goldsmiths, scores have risen from 33% for both subjects to 50% and 86%. It is heartening that perceptions of D&T have remained high or in the case of Goldsmiths, increased. It is significant that all but two of the trainees at Goldsmiths were able to observe or to teach D&T while on their placement, while at MMU all trainees had this opportunity. This indicates a shift in curriculum balance over the last five years towards the teaching of foundation subjects in school. In the National Curriculum for England, these are design and technology, art, music, geography, history, religious studies, physical education and drama. This may well explain the rise in score for the subject in 2004/5 as in previous years it was evident from student feedback to tutors on their return from school experience placements, that much less D&T teaching had been experienced by trainees during school placements. According to these findings, trainees continue to perceive the core subjects (in the English National Curriculum these subjects are maths, science and English) as offering little scope for creative teaching.

**The Bath Spa Directed Task: Subjects that showed characteristics of Harrington's Creative Eco-system**

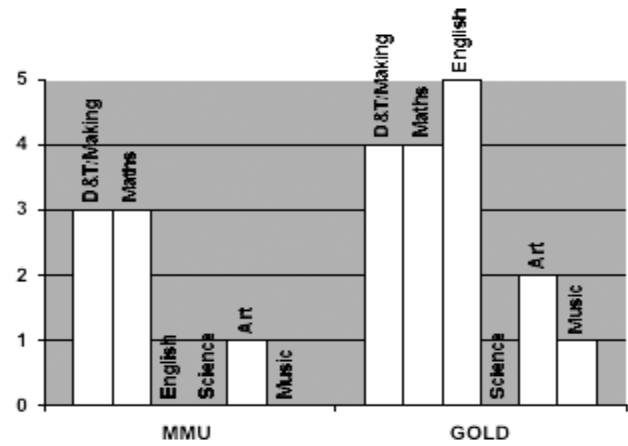
In 2004/5, at both institutions, a sample of the trainees who had completed the questionnaire the previous year was given the Bath Spa Directed Task. At MMU, the trainees were given the task to complete during their school placement. The trainees were asked to observe their chosen lessons and identify where there was evidence of each of the elements of Harrington's Creative Ecosystem (see Appendix 1). On their return, the trainees shared their observations with each other and the tutor. The Goldsmiths trainees were asked to carry out the task retrospectively, reflecting on their experiences in school during a feedback session when they discussed their experiences in pairs and audited these against Harrington's Creative Ecosystem. Between them, the two groups of trainees focussed on the same six subjects for observation: design and technology/ making (referred to collectively as D&T), maths, English, science, art and music. The graphs show how many times each element was assigned to each subject for both institutions.





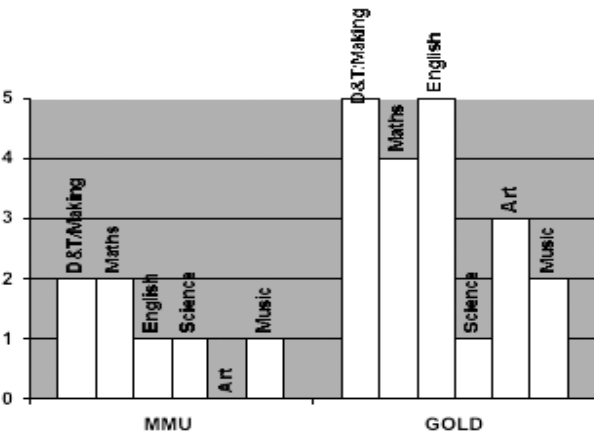
**Figure 4: Comparison between D&T and all subjects: opportunity for play and experimentation/exploration**

Looking at Figure 4, *opportunities for play and experimentation/exploration*, D&T fares well, with four citations of this element at MMU and five at Goldsmiths, where English equals the score for D&T. Maths fares almost as well with three citations in each institution.



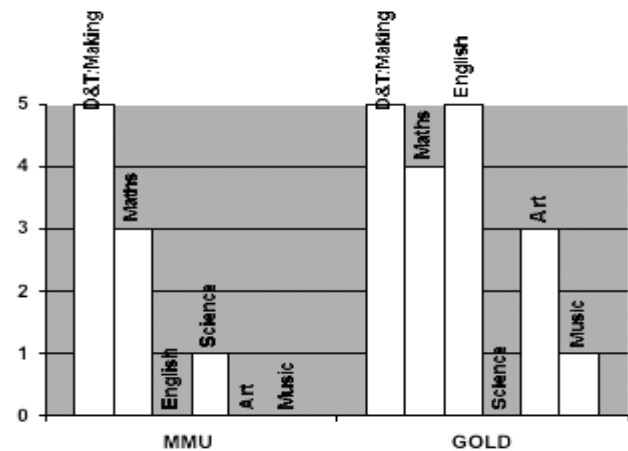
**Figure 6: Comparison between D&T and all subjects: activities presented in exciting or unusual contexts**

From Figure 6, D&T appears to be a subject where trainees were able to identify *activities presented in exciting or unusual contexts*. MMU and Goldsmiths trainees' observations led to maths and D&T having equal numbers of citations. However, those for English exceed the number of citations from the Goldsmiths trainees for D&T and maths.



**Figure 5: Comparison between D&T and all subjects: a non-threatening atmosphere in which children are secure enough to take risks and make mistakes**

D&T was not identified by the MMU trainees as being particularly strong at providing a *non-threatening atmosphere*, Figure 5, as it only scored the same as maths, with two citations. The Goldsmiths trainees attributed this element five times to D&T and English and four times to maths. Overall, there was more evidence of this element found by Goldsmiths trainees than by MMU trainees in all subjects.



**Figure 7: Comparison between D&T and all subjects: opportunity for generative thought, where ideas are greeted openly**

In the element shown in Figure 7, *opportunity for generative thought*, D&T is mentioned five times in each institution. This is matched by five mentions of English by the Goldsmiths trainees and indeed, Goldsmiths trainees identified this element more often than MMU trainees in all of the lessons that they observed, apart from science.



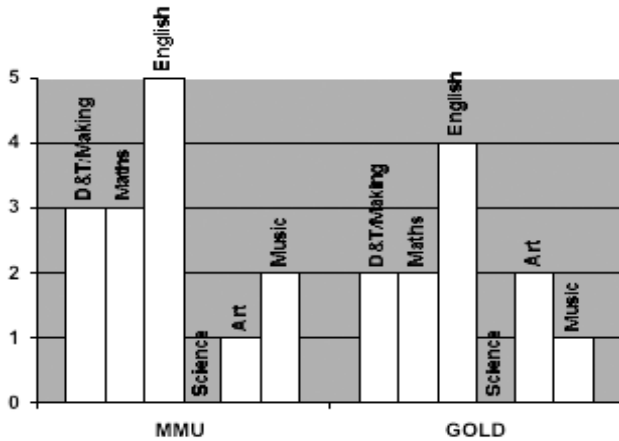


Figure 8: Comparison between D&T and all subjects: choices given to children in terms of resources and methods

Figure 8 indicates that at both institutions, English offered the greatest *choice of resources and methods* in the lessons observed, with D&T and art having equal numbers of citations, placing them in joint second place.

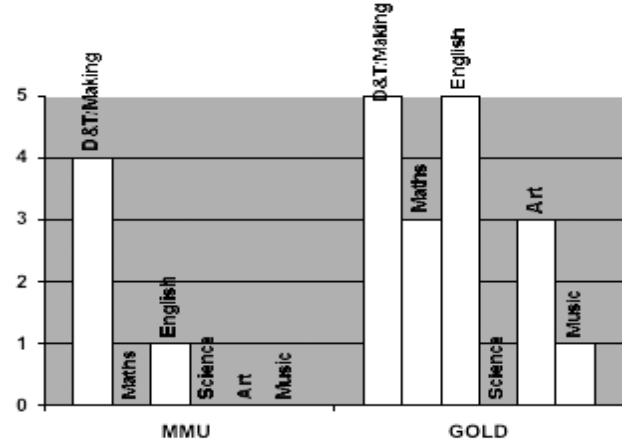


Figure 10: Comparison between D&T and all subjects: children given a sense of engagement and ownership of ideas and tasks

From the scores in Figure 10, at both MMU and Goldsmiths, D&T was observed as being a subject where children are engaged, motivated and feel that they have ownership of their ideas. At Goldsmiths D&T was on a par with English, sharing the highest overall score.

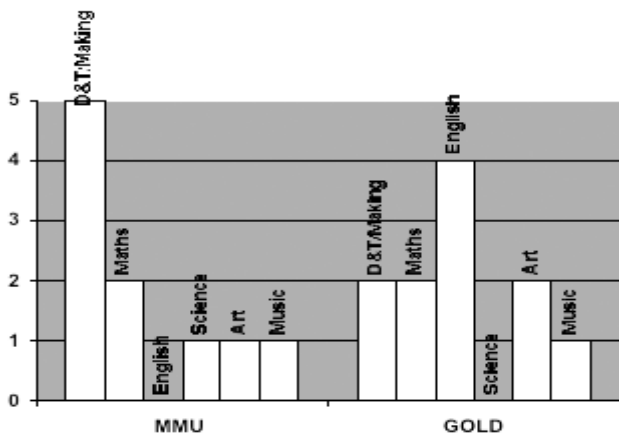


Figure 9: Comparison between D&T and all subjects: opportunity for critical reflection in a supportive environment

From the evidence in Figure 9, for MMU trainees, critical reflection appears to have been an important element in their observations of D&T lessons. Given the emphasis upon this transferable skill in the National Curriculum, (see, for example, the [naction.org.uk](http://naction.org.uk) website), it is surprising that it did not occur more frequently in all subjects.

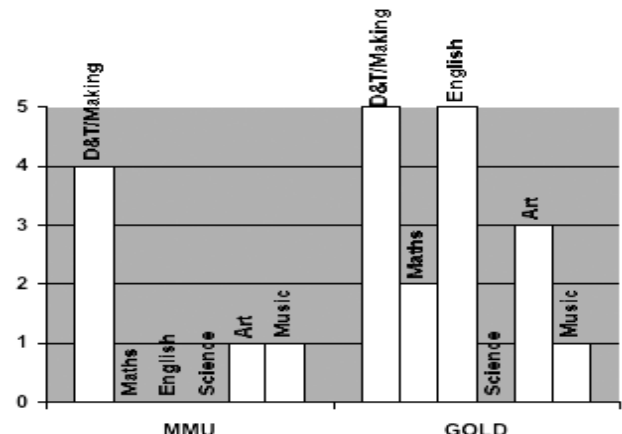


Figure 11: Comparison between D&T and all subjects: respect for difference and the creativity of others

Fig. 11 shows that MMU trainees recognised this element of Harrington's Creative Ecosystem occurring most frequently in D&T lessons and it was rarely noted in other subjects. The Goldsmiths trainees' observations led to D&T and English having the same number of citations.



Bearing in mind that the sample was very small (34 observations of subjects in total in the two institutions) conclusions are that D&T and its sister curriculum area, Making, in the Early Years classroom, provided the most opportunities for the elements of Harrington's Creative Ecosystem to be demonstrated. It is apparent that English scored very highly overall. At Goldsmiths, the trainees' responses show that it equalled the scores for D&T in four elements and in three elements it exceeded the scores for D&T: *critical reflection, activities in exciting or unusual contexts and choice of resources and methods*. It was only in opportunity for play and experimentation that English did not equal or exceed the top score for at least one institution. It is accepted that the results for English at Goldsmiths skew the findings somewhat, but it is D&T that scores the highest in every element at one or both institutions except *activities in exciting or unusual contexts and choice of resources and methods*. At MMU, maths was in equal or second place to D&T in five elements and at Goldsmiths it came in at equal or second place to D&T in three elements. It is notable that art scored consistently well in the Goldsmiths data, often assuming third place. Apart from English and maths no other subjects equalled or exceeded D&T scores and only English, maths, music and art came second to D&T: science was never a 'runner up'. This is contrary to the findings of the 2003/4 and 2004/5 questionnaires where trainees perceived the core subjects as generally offering less scope for creative teaching than D&T, drama, art and music. In effect, apart from D&T lessons, they found that it is only the core subjects of maths and English that consistently offer scope for creativity as measured by Harrington's Creative Ecosystem. Primary science educators may be alarmed by the low scores for science: one or more frequently none, for all categories in both institutions.

Turning now to the discussions between trainees and tutors that took place after the trainees had carried out the Bath Spa Directed Task, it became apparent that the trainees had chosen curriculum areas to observe which were either 'traditionally' creative or which they had had previous experience of, either teaching or observing being taught creatively. However, some trainees found that the lessons observed did not offer creative opportunities, with over control, restriction of choice and pressure of time; three of the Goleman et al (1992) creativity inhibitors. Even in Early Years classrooms, trainees observed that teachers were rushing the children on from one activity to

another to make sure that all of the children had covered each of the activities.

One trainee commented: 'The problem with the literacy lessons in that class was that there wasn't enough time for speaking and listening. The children listened to the teacher, but weren't given time to listen to each other'. Goleman writes: 'If intrinsic motivation is one key to a child's creativity, the crucial element in cultivating it is time'. (1992:63)

Several trainees raised the question of the restriction of experimentation in the lessons they had observed. This chimes with two more of the Goleman et al creativity inhibitors: over control and restriction of choice. It was felt that sometimes the teacher's sheer enthusiasm masked these shortcomings and freedom from the structure of the morning's literacy and numeracy strategies helped to energise the lesson.

A discussion about the boundary between very structured skills building tasks as distinct from experimental and risk taking teaching, led the trainees back to a consideration of the restrictions which a structured curriculum placed upon them. Howe (2004) comments that, 'Keeping risks within bounds may require an ability to monitor and evaluate events'. It is perhaps the need for specialised classroom management skills in practical subjects such as D&T that result in teachers shying away from allowing risk taking. This is an aspect of teacher training that needs to be prioritised if creativity is to be promoted in the classroom.

After completing the Bath Spa Task, the discussion amongst the trainees developed into their ideas about how they would teach the lessons they had observed to ensure they did not inhibit opportunities for creativity. Through the experience of identifying subjects that support creativity and auditing their experiences against Harrington's Creative Ecosystem, creativity is high on the agenda for the rest of their courses. However, the findings of this, albeit small-scale, research gives weight to the importance of D&T in providing opportunities for creative teaching and learning.



## References

Craft, A. (2003), The limits to creativity in education: dilemmas for the educator. *British Journal of Education Studies* 51 (2), 113-127.

Bowen, R., (1999), 'Using ICT to facilitate planning for primary school design and technology: a case study that also considers the impact of literacy and numeracy developments on the primary curriculum'. In P H Roberts and E W L Norman (eds), *IDATER 99*, Department of Design and Technology, Loughborough University.

Davies D., Howe. A., Fasciato M. and Rogers, M. (2004), 'How do Trainee Primary Teachers Understand Creativity?'. In E W L Normam, D Spendlove, P Grover and A Mitchell (eds) *Creativity and Innovation: DATA International Research Conference 2004*, Wellesbourne: DATA.

DfES (2003), *Excellence and Enjoyment: a strategy for primary schools*, Department for Education and Skills, London.

Goleman, D. Kaufman, P. and Ray, P. (1992), *The Creative Spirit* New York: Penguin Puttnam.

Harrington, D. M (1990), 'The Ecology of Human Creativity: A psychological perspective'. In M A Runco and R S Albert (eds.) *Theories of Creativity* London: Sage Publications.

Howe, A. Davies D. and Ritchie, R. (2001), *Primary Design and Technology for the Future: Creativity, Culture and Citizenship*, London: David Fulton.

Howe, A. (2004), 'Science is Creative'. *Primary Science Review* 81,14-15

Kimbell, R (2002), 'Assessing Design Innovation: The Famous Five and the Terrible Two', *Journal of Design and Technology Education*, 7(3), 172-180. Wellesbourne: DATA

Howe, A. (2004a), *Creativity, creative partnerships and initial teacher training: options paper*. Scoping study for Creative Partnerships.

National Advisory Committee on Creative and Cultural Education (NACCCE) (1999), *All Our Futures: Creativity, Culture and Education*, Suffolk: DfEE.

OfSTED (2003), *Expecting the unexpected: Developing creativity in primary and secondary schools*, London: OfSTED



## Appendix 1

Harrington's framework consists of the following elements:

- opportunity for play and experimentation/exploration;
- a non-threatening atmosphere in which children are secure enough to take risks and make mistakes;
- activities presented in exciting or unusual contexts;
- opportunity for generative thought, where ideas are greeted openly;
- choices given to children in terms of resources and methods;
- opportunity for critical reflection in a supportive environment;
- children given a sense of engagement and ownership of ideas and tasks;
- respect for difference and the creativity of others.

## Appendix 2

### Bath Spa Directed Task - Teaching for Creativity

#### Aim:

- To begin to gain an understanding of teaching strategies, contexts and constraints that influence teaching for creativity

**QTT Standards:** 3.3.1, 3.3.3, 3.3.8

**Task:** Read Howe et al (2001) Chapter 1.2, Teaching for creativity and teaching creatively, in *Primary Design and Technology for the Future*. David Fulton. Although focused around a particular subject area, this chapter picks up on a theme that has received a lot of attention recently; for example the *National Curriculum* (2000) includes a section on creative thinking. Teachers can bring about what Harrington (1990) calls a 'creative ecosystem' within the classroom. This might include:

- opportunity for play and experimentation/exploration;
- a non-threatening atmosphere in which children are secure enough to take risks and make mistakes;
- activities presented in exciting or unusual contexts;
- opportunity for generative thought, where ideas are greeted openly;
- choices given to children in terms of resources and methods;
- opportunity for critical reflection in a supportive environment;
- children given a sense of engagement and ownership of ideas and tasks;
- respect for difference and the creativity of others.

1. Choose two lessons to observe. One should be in a subject area that you consider to be 'creative'. The other should be in an area that you think has less potential for creativity. (e.g. you might think that Art is creative, maths less so). Write a brief rationale for your choices.
2. As you observe each lesson, take note of any elements of a 'creative ecosystem' that exist in the classroom. Use the list above or other criteria of your own to help you make a judgement. Watch how the teacher introduces the activities, how she/he interacts with children and how the children respond. Talk to them about their work and take particular note of any children who are taking a novel approach to an activity or expressing interesting ideas.
3. Compare your notes from the two lessons. Which offered the greatest potential for creativity? Why? Did this confirm your hypothesis? How could the other lesson have been made more creative? What are the key factors in teaching for creativity in your view?





**Modification for trainees working in Foundation Stage**

Look at the range of activities going on in the nursery/Reception class. Which of these in your view offers greatest potential for creativity? Choose two activities to observe in detail (see above) and note the factors that contribute to (or inhibit) children's creativity in each case.

**Name:**

**Tutor group:**

Rationale for choice of two lessons to observe

Lesson 1:

Lesson 2:

What elements of a 'creative ecosystem' did you observe in each lesson? (please list)

Lesson 1:

Lesson 2:

Other indications of creativity in lessons (e.g. teacher introduction, interaction with children, children's response)

Lesson 1:

Lesson 2:

Which lesson offered the greatest potential for creativity and why? Did this confirm your expectation?

How could the less creative lesson have been made more creative?

From your experience, what are the key factors in teaching for creativity?

