

Re-designing the curriculum to develop children's creativity

National Teacher Research Panel
engaging teacher expertise



This summary was commissioned by the National Teacher Research Panel for the Teacher Research Conference 2006, which explored and celebrated teacher engagement in and with research. All conference materials are available at www.standards.dfes.gov.uk/ntrp

Aims of the research

We wanted to know:

- if there are generic competencies that learners need to be creative;
- what those learning attributes are; and
- whether being creative develops children's life-long learning skills.

so that we could:

- focus on teaching those key life-long learning skills and change / simplify our school curriculum;
- adapt teaching & learning to enhance children's creative opportunities; and
- ignite a broader professional debate about future curriculum content.

Dimensions of the study

The new Primary Strategy & Every Child Matters encourage schools to free up the curriculum and allow children to be more creative. My teachers and I visited forty-three schools between us over a two year period. In our interviews and observations we found that no school had developed a completely new curriculum approach based around Creativity that incorporated Personalised Learning.

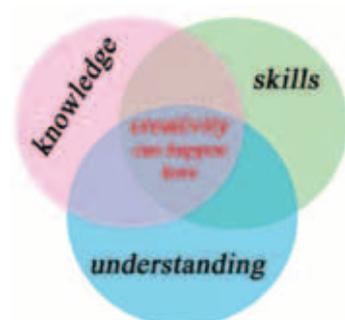
Summary of main outcomes

Through various forms of enquiry, we have developed:

- a simplified curriculum which focuses on life-long learning and creativity with a clear process for progressing and developing skills as children move through school;
- a simple generic creative process that learners use in any area of learning;
- strategies to provide more opportunity for child-initiated creativity in school and for teachers to use this to assess learners' key skill acquisition; and
- justification for a whole school curriculum which leads from first-hand experience and focuses on being creative, holistic, child centred and practical.

Background and context

Black Firs School serves the local housing estate in which the school is situated. There are 246 children on roll with equivalent numbers of boys and girls; 12% are on the SEN register and 7.6% are entitled to free-school meals; and 8% of the children are from ethnic minorities.



A team-teaching model is employed. The children are organised into seven pastoral classes; two teachers and two teaching assistants work across a pair of year groups giving a ratio of less than 1:18 across the whole school. The semi-open plan design of the building allows organisational flexibility. A variety of teaching strategies are employed including

whole class, group work and individual work as appropriate. Senior teachers receive half a day non-contact time a week for their management responsibilities. All of the teaching staff have Friday afternoon for planning, preparation and assessment (PPA). The school hosts a playgroup and after school club.

The philosophy of the School centres on the belief that creativity is a natural human precondition of learning. Teaching staff agree that where children are taught creatively and creativity is valued in children's thinking, connections between knowledge, understanding and skills occur.

Strategies and processes

Embedding child-initiated creativity, as an established part of the learning culture at Black Firs was prioritised for school improvement, through the vehicle of independent study. A target of 20% of contact time was agreed by Governors for the academic year, 2004/05. We have continued experimenting with various formats for each half-term - the week long model seemed to be the most successful.



In order to provide an effective framework within which child-initiated creativity could take place, teachers took steps to ensure that children had mastered the precursors to new skills before introducing the skills themselves - it was important to know when and how far to challenge each child. For example,

in September 2003 we identified that children would only improve their ICT skills if they could spend more time on a computer and type quicker. We aimed to develop their keyboard skills so that the children could use ICT more efficiently. We therefore introduced a typing tutor program and reorganised the teaching groups. One third of the children in the lower juniors spend a third of each half-term on a computer; following the same learning objectives as their peers, but producing IT outcomes. They can now keep up with their peers working conventionally, with an average speed of twenty-five words a minute.

As children progress through school we base teaching strategies on the understanding that the overlap between knowledge, understanding, and skills, depicted in the Rohnke model above, needs to expand, and so increase the opportunity to be more creative.

We adopted three research methods to explore creativity in the curriculum. The active involvement of children was an essential element in these research processes.

Research method 1:

Investigating creativity in learning

The headteacher used action research to explore the creative process, working with and observing five groups of eight Year 5 children, over a period of three terms. Each group project was different and exposed the generic elements that learners needed to be 'creative', i.e. command of ideas, control of materials, innovation, communication, cultural understanding, a systemic strategy, thinking or behaving *imaginatively*. The projects were in fine art painting, dance, mathematics, music, science and technology. The group learning was initially open-ended, but by the end of the first session all groups had agreed an 'outcome'; to be developed half a day per week for six further weeks. The art, music and dance curriculum areas were chosen because they were perceived to be aesthetic / creative areas. Maths and science were included because the children didn't perceive these subjects as creative. Children chose which project group they wanted to join.

- The **music** technology group were investigating the new music suite to compose a 'new piece' of music. They wanted to perform their composition to the whole school, accompanied by a PowerPoint slide-show of linked images.
- The **fine art** painters wanted to produce a modern interpretation of the Nativity around Robbie Williams' song 'Jesus in a camper van'. The outcome was 3D painting around the idea of a religious triptych but asking the question, 'If Jesus was born today, who would visit?'

- The **dance** group wanted to know how we express our feelings and emotions through movement. The starting point was Munch's picture 'The Scream'. Outcomes were individually choreographed but performed by the whole group.
- The **maths** group examined how computers allow mathematicians to investigate shape and space; investigation into 'infinity' and 'iteration' looking at fractal geometry. The outcome was planned as a multimedia presentation to music.
- The **science and technology** investigation was around the Lego International Mission to Mars competition. The group had to produce a programmed robot that could complete a series of tasks, a presentation about the planet Mars and a presentation about how they worked as a team to complete the project.

The headteacher worked with the five groups in different ways. Group one, music, worked completely independently. Group two, fine art, worked collaboratively alongside me with a directed outcome. The headteacher chaired a planning meeting at the beginning of the session for group three, dance, and an evaluation session at the end but had no contact with them during the session. The fourth group, maths, were given a collection of internet resources to get the basics, and then worked independently at their own investigations referring to the materials when they wanted. The final group, technology, worked to provide instruction for the first two sessions in order to find a viable solution and then spent the remaining five sessions refining, improving, re-inventing.

The children evaluated their own outcomes, performance and learning via a learning-journal. Children kept a plan of their goals for each session; a record of what had gone well and how they could improve next session; comments about the groups agreed targets. I observed all the sessions and made notes as children worked.

Research method 2: Evaluating existing practice

Through our network-learning community CHILL, we developed 'School2School Enquiry' as a self-evaluation tool. In this process pairs of teachers and groups of children carried out exchange visits to one another's schools. Visitors investigated key factors of our creative approach. Through discussion, explanation and active engagement they were all able to reach a common understanding of how and why our learners develop their creativity.

Research method 3: Embedding curriculum creativity

Feedback from subject coordinators revealed that while there was a lot of creativity in all subjects around school it was largely initiated by the teacher and put in to practice by the children. Our challenge was how to put children at the centre of the creative process so that we could investigate further how children gain this skill.

Independent Study was devised as a means for children to exercise choice and generate their own learning. High expectations were agreed with individual children for the learning to be rigorous. After every Independent Study Programme, the children are involved in evaluating their own outcomes. Staff evaluate the process and we adapt and experiment again with increasing success.

Findings and outcomes

Through the three strands of the project we were able to answer our research questions as follows.

- Those children who, in groups, could listen to others, take and make constructive criticism, empathise, express an individual opinion, and self organise, were the most successful.
- Maths and Science produced the most 'creativity' in terms of the NACCCE definition: 'Imaginative activity fashioned so as to produce outcomes that are both original and of value.
- When provided with a process, children could self-organise and engage in child initiated creativity with teachers acting as only facilitators.
- Individual confidence and self-belief were also key emotional intelligences which needed to be developed and 'grown' – for the children to take risks and step into the unknown they needed some form of 'belly'; the trust and support of the adults around them was their safety.
- 'Creativity' happened where knowledge, skills and understanding overlapped - they did not have to be in equal measure, but learners required some element of all three.
- Teachers needed to 'plan' for reflection and appreciate that nurturing emotional intelligences was of equal importance as developing academic intelligence.
- Researchers' evaluations and discussion determined that 'good learning' was:
 - a consequence of good thinking;
 - an activity which required reflection as much as it did action; and
 - the stuff that often happened in the space between the planned parts.

The outcomes of the individual research projects were as follows.

1: Investigating creativity in learning - *what we found out from the Action Research*

Some of the projects were successful; others were incomplete, mainly due to the short time restrictions. Some project groups could not reach consensus and fragmented into smaller groups. All the children reported enjoying the opportunity they had. Their ideas and plans were very exciting and creative but the children were frustrated by their lack of skills to achieve the outcome they visualised.

We also found that children wanted to produce a tangible 'outcome' – a performance, an artefact etc. When they didn't achieve this they were disappointed and felt they had failed.

2: Evaluating existing practice - *what we found out from our School2School investigation*

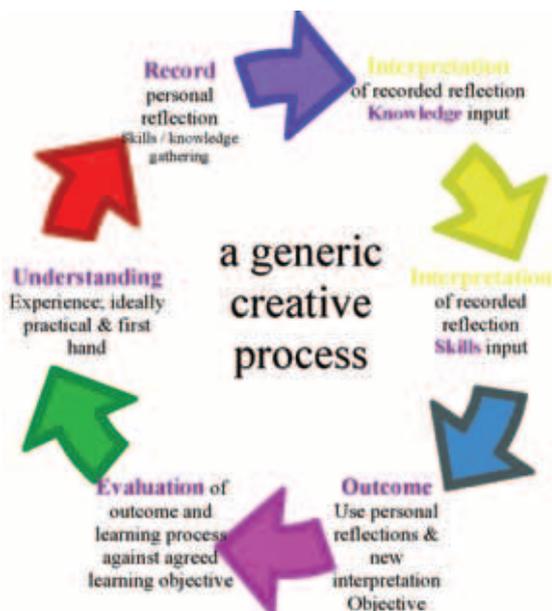
Children who successfully participated in *an imaginative activity which produced outcomes that were of value and were unique* fused the three elements of understanding, knowledge and skills:

Knowledge / Information: this is well covered in National Curriculum, QCA, a variety of schemes and literacy and numeracy frameworks.

Skills / Processes: this is a list of Life-Long-Learning skills, which we are still adding to, but includes oracy, reading, writing, being numerate, research skills, discussion and debate, presentation, ICT, evaluation, etc.

Understanding / Experience: we believe comes from practical, ideally first hand, experience; the greater the range and variety of the experience the better the understanding.

Understanding was identified by all 'researchers' as the element that was observed least. In response, more effort was made to develop this aspect of our teaching and learning with direct regard to National Curriculum Attainment target 1; 'using and applying'. Teachers found that in developing a deeper understanding, children made a more personal link to the learning and through this the learner sustained interest and focus. The process reinforced learning and strengthened children's recall of the learning.



3: Embedding curriculum creativity - what we found from assessing children's creative development.

Independent Study demonstrated that high expectations lead to high quality outcomes. We now know far more about children's creativity and it has raised even higher our expectations of what children can do. Independent Study has become an important tool for assessing children's creativity.

The wider parameters for learning enabled children and teachers to engage in more interesting areas of study and teachers observed more challenging / creative outcomes than had been possible with a whole class Study Work assignment. It was observed that greater emotional intelligence can be developed by mixed age groups of children working on the same study areas.

Conclusions - a generic process for creativity

Through our enquiries, experimentation and discussion we are clear that to generate creative outcomes you need the physical, emotional and intellectual space to be able to problem solve and imagine. As a school, we provide a stimulating environment, the resources and the subtle balance of teacher-led and child-initiated creative opportunity - this is our expertise.

A generic process for creativity was identified: a personalised focus for learning; mastering the skills and techniques; assimilating the knowledge; developing the understanding by gaining more and more varied and connected experiences; providing the space and time to be able to reflect and develop an independent state of 'flow'. Creative learners end up beyond the predicted expectation. This is what we believe is 'thinking outside the box'. Good practice should result in children being equipped with the skills and processes they need to investigate any area they choose for Independent Study.

References & suggestions for further reading

The 21st Century Learning Initiative www.21learn.org
 Information about Ken Robinson & his new book "Out of our Minds" - www.sirkenrobinson.com

Karl Rohnke's website with access to his books
www.karlrohnke.com/index.html

CHeshire Inspiring Leadership & Learning, CHiLL,
www.chillnetwork.org.uk

Everything you wanted to know about Emotional Intelligence
www.eqi.org

National Advisory Committee on Creative and Cultural Education
www.dfes.gov.uk/naccce/index1.shtml - 'All Our Futures' NACCCE report, May 1999. NACCCE define creativity as 'An imaginative activity which produces outcomes that are of value and are unique'. These four elements form the basis of our enquiry.

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