

Case Study 4: A Device for Evaluating Creative Working and Problem Solving

Udny Green Primary School, Aberdeenshire

This case study describes how one school has gone about evaluating the impact of teaching and learning approaches that actively encourage and promote creativity and problem solving.

Udny Green Primary School is a small rural school in Aberdeenshire. There are 52 pupils housed in three classrooms with additional accommodation to support general-purpose activity and computers. The headteacher has been in post for sixteen years and is well placed to comment on the impact of strategies employed over time to develop creative working in all areas of the curriculum.

The staff of the school believe that they should plan opportunities for real problem solving, decision taking, taking responsibility and collaborative working into the everyday experiences of pupils. The school organises four mixed-age inter-house events each year. This is used partly as a device to test the effectiveness of these planned opportunities and also to allow staff to assess how well children apply their skills and attributes. Two of the events are sporting in character, a third is a quiz and the fourth is a creative workshop/technology challenge. Staff put a lot of effort into the planning of the workshop event, which has run every year since 1989. Pupils are enthusiastic about the experience and very aware of the challenges about to be undertaken but also that they will have fun.

In 2000, the workshop took the form of a literature focus with children carrying out a range of challenges arising from the context of two books (both drawn from the reading programme – one from early stages and the other from upper stages). The challenges included scripting playlets of the books, making costumes and props and recording audio and written reports of the proceedings. Each workshop involved the group of pupils in a presentation of their experiences and outcomes to their assembled peers and teachers.

In 2001, the workshop challenge had a technology focus with the challenge being to design four fairground experiences, to make posters and radio advertisements for these and also to make audio and pictorial recordings as part of the reporting process. The four teams were drawn from mixed-year groups from P1–P7 with older children acting as supporters for younger ones in their team.

The school report on the event makes interesting reading and offers some insights to others who might see such an activity being organised and used as a way to assess creativity and problem solving in a short-term task.

The date for this activity is always set during the In-service Day at the beginning of each new session.

Very little is then done about it until the In-service Day in February, when decisions are taken as to the specific tasks that will be set for the children. This year we wanted to see how well the children could transfer some of their ongoing 'project' and problem-solving skills and knowledge.

Considerations

- Ensuring a range of practical activities that can usefully employ all of the children (13 or 14 in each House).
- Identification of different levels of competency required to be successful in a variety of activities.
- Considering the numbers of children in each year group (only one Pr7 in one House).
- Assessing materials available within school – in sufficient quantities to share equally.
- To equalise starting points only materials on the basic list should be available to the children — other classroom equipment is out of bounds.
- Consider the layout of classroom/workshops to provide space and work facilities.
- Clearly defining rules for staff involvement — in effect, no involvement in decision making or planning, staff there only to observe and record.
- Contingency arrangements for replacement materials or additional requirements during the morning — all Houses had to be kept equal.

The day before the staff divided up the list of basic materials, each person taking responsibility to provide all four classrooms with their selection of materials. At the end of an hour of hard work, the allocations were checked against the list in each room, the doors closed and everyone went home very tired. Everything was ready for the following day.

Introduction to the tasks

The day started off with the House Leaders from the senior class collecting their House members from the other classes and assembling in the school hall. All the children were given their House ribbons to wear and the waiting time was used by some to start the organisation process – inducting the younger children who had little or no experience of what was in front of them.

Miss Campbell (Headteacher) called everyone to attention and the older children immediately settled their House members. There was a palpable feeling of expectancy in the hall. All other members of staff in school in the morning were also present to hear the outline of the tasks set.

An initial review of the general aims and expectations for the day, with a little constructive advice on working together, was given. A copy of this would also be available for reference to each House on the back of their task card.

Next, an outline of the assessment criteria which would be used during the day was discussed, with an explanation of house points available and how they would be scored under each category.

Finally, Miss Campbell explained the specific tasks required from each House, as was outlined on the task card (the same outline for each House). She made sure that the children understood precisely (through questioning) how each of the fairground attractions worked in reality. No models or pictures were on display however.

House leaders were asked to pick a task card each. This determined the room in which their House worked for the rest of the morning. Once the staff was satisfied that the children had been given full explanations, the children filed out of the hall to their respective rooms, closing the doors behind them! The creative process was now underway – and top secret!

Assessment

Each member of staff had a clipboard with a copy of judging criteria and paper for taking notes on what they observed in each room.

Their remit was to circulate continuously amongst the rooms, making notes on their observations at different times of the morning.

They could:

- ask questions but not give advice
- (after discussion with another member of staff) provide a necessary piece of equipment or material so long as they gave the same to all rooms
- allow children to the toilet
- give time checks throughout the morning.

At morning interval the children were sent outside as usual. The curtains and blinds were closed and the door locked in each room. The children jealously guarded their work and no advice was exchanged between Houses. Everyone took the 'competition' seriously. Meanwhile the staff recounted anecdotal evidence of the first part of the morning activities.

Fifteen minutes before lunchtime the children were advised to finish off, prepare their presentation for the afternoon and tidy their work area. Points were given for tidiness when the rooms were inspected at the end of the day.

A new element for the children to respond to this year was making a video. This is the first year we have had a really child-friendly camcorder available for them to use. Originally we were only going to give each House one short session. However on the day, one member of staff took charge of moving the camcorder from group to group at regular intervals and each House had at least two sessions of about 10 minutes each. These snippets were then copied onto videotape and later used with the senior children to discuss choice of shot, camera technique and use of commentary. We also scored their attempts on the assessment sheet.

The presentations

Finally the afternoon session was given over to presentations of the morning's work. Each House had to gather all the items it had produced, display them, prove how their models worked and talk about how they had fulfilled the set tasks. This was done in the hall in front of all the other children and all the staff and was in every way a celebration of achievement. At the end of each presentation the staff looked carefully at all the evidence and asked any further questions which might help clarify how the children had been thinking. A video record was also taken of each presentation (by a teacher). This was also used to assign points, under various categories, to the House teams.

The presentations were completed by 2.45 p.m., when the infant children had to go home. The senior children helped to tidy away a certain amount of the materials in each classroom. They were then left to read or play chess for the last fifteen minutes of the day, while the staff came together in the central library area to start the discussions which would end in the agreed allocation of points to each House. Use of this time was also taken into account in the cooperation and organisation scores. The senior children were dismissed at 3.30 p.m. and discussion continued.

The category scores for each House were given out at a school 'assembly' the following day. Miss Campbell explained the marking criteria again and read out each House score for each category. The interim totals (without the video scores) were then given in reverse order, each House receiving a round of applause from the others.

What do the pupils gain from this activity?

- Interaction with a range of ages.
- Proof of the need to work together before a goal can be reached.
- Opportunity to use specific talents and appreciate that everyone can provide something different to enhance the whole.
- A sense of excitement in their 'work'.
- A sense of fulfillment when their contribution goes on display.
- An opportunity to address various sizes of audience (one-to-one – whole school – adults – other children).
- A better understanding of community.
- An opportunity to express their thoughts and creativity, including a need to refine and clarify their explanations to each other.

What do teaching staff gain from this activity?

- An opportunity to see close at hand, the interactions of an age-range of children usually only observable in the playground.
- Ability to identify academic and social strengths and weaknesses in individual children.
- Insights into how children approach problems and the diversity of solutions that are arrived at from an identical baseline (usually totally different from the expected adult approach).
- An opportunity to discuss child development both generally and specifically.
- Input useful for defining teaching strategies in general and often in specific strategies for supporting individual learners in higher order skills such as collaborative team-working.
- A highly exhausting day, which strangely enough, renews our *raison d'être*.

It is fascinating to watch the staff completely withdraw and put the children on their own resources. It is difficult to do and it certainly highlights the areas we need to work on next session. Of course it is also fascinating to see how the children respond to the challenges – usually with tremendous innovation and skill.

Morag Campbell, Headteacher

And the pupils?

It was great. I enjoyed the challenges and working in a big group. It was good to have a big slice of time for the tasks.

Andy, P7

I loved all the making – it was fun.

Connie, P2

It was good to be helping the wee ones with their bit of the tasks – it was like a family team with everyone supporting to get the best results.

Camilla, P6