

# NERF Bulletin

## Evidence for Teaching and Learning

Issue 3 - Summer 2005

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#### **Learning together**

is much more than chatter. Dialogic learning involves high quality talk that brings two perspectives (or logics) together to deepen thinking and learning. Read about strategies and ground rules that make talk work. **Page 3**

#### **Careers education is not an add on**

Good careers skills can transform students' choices about post-16 options. What are these skills and when should we start careers education and guidance? **Page 4**

#### **Interactive whole class teaching and maths**

Students are moving on to new topics in maths before they have grasped the topic in hand, because some of us have not completed the journey from traditional to interactive whole class teaching. The research might help you to figure out where you need to go next. **Page 11**

#### **Teacher tests are best**

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What's in a noun? Not a lot, according to the evidence from a research review of English grammar teaching and its effect on writing. But other techniques have been found to be much more effective. **Page 14**

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Teaching thinking skills has been enthusiastically embraced by many practitioners. There are some great opening moves but there's more to this than meets the eye. Get the bigger picture on **Page 6**

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Not least in helping students acquire the information skills necessary to steer their way around the dodgier bits of the information super highway. Oh, and raising attainment levels too, according to three large-scale studies. What do teachers and schools need to do to make their libraries more effective? **Pages 8-9**

#### **Citizenship**

Five years down the line, engaging students with values is emerging as a key factor in the implementation of the new citizenship curriculum. **Page 13**

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*'Every child matters' means working with partners in the community: get evidence-based guidance and case studies from [www.renewal.net](http://www.renewal.net)*

And at [www.thinkingtogether.com](http://www.thinkingtogether.com) you'll find tried and tested approaches to learning through effective dialogue

## Research Round-up

Thanks to all for the comments and ideas we received in response to Issue 2 of the *Bulletin*. In this issue we have picked up on some of the topics you said you wanted to know more about – and were delighted to find so much robust evidence in the form of systematic research reviews. We have learnt a lot and we hope you'll enjoy the results. Since we picked up on young people's health issues in the last *Bulletin*, the debate about healthy eating has really taken off. See the update on the back page. The *Bulletin* has also been seized on by the new Teachers' TV which will be featuring material from the *Bulletin* in an upcoming series on 'hot research'.

### Time to Talk

In the first issue of the *Bulletin* we were struck by the messages about the effectiveness of structured dialogue for learning. To help us make sense of this we have sought out research into what's called **Dialogic Learning** (see next page). This shows how we can use talk effectively to bring more than one perspective to bear on aspects of learning.

There are also consistent messages in this issue – in diverse topic areas – about the role of dialogue in student learning. Take a look for yourself: there's research into citizenship education on page 13 which highlights the importance of "good quality dialogue and discourse for learning about values, rights and issues". Then we follow up our report in Issue 1 on thinking skills in the post-16 sector with a review of the impact of thinking skills on learning on page 6. There, the evidence led the researchers to conclude that "some of the benefits of thinking skills programmes and approaches derive from making thinking and reasoning explicit through a pedagogical emphasis on classroom talk and



interaction." Interactive whole class teaching in maths (page 11) is about getting students to talk more too. There's definitely something very powerful for learning in structuring dialogue.

### How can you use some of the evidence in this issue?

Things that occurred to the writing team as we were preparing the *Bulletin*:

- take note of the evidence about effective libraries on the centre pages. We know specialist resources are scarce, but many schools are now part of bigger networks. Could networks share the benefits that working with a skilled librarian can bring?
- could you make use of school librarians to help school leaders find and access research evidence about developments in teaching and learning that speaks directly to the concerns of colleagues?
- although Learning and Skills Sector colleagues are likely to have good access to libraries in principle, do the particular strategies highlighted in the libraries study provide pointers to using them more effectively for learning?
- try setting ground rules (see page 3) for group work. Do they make a difference to the quality of your students' learning?
- adult learners are usually more articulate; Learning and Skills Sector teachers may naturally involve them in designing and reviewing teaching practices as a matter of course. But do younger learners in colleges need a more explicit approach to consulting them about learning? Are there strategies in the toolkit (see page 5) you'd like to use?
- give sentence-combining a go in your English teaching. In the midst of furious debates about literacy teaching and learning it's nice to have a clear message about one effective practice!

## Learning in small groups

### *It's not just talking - it's what you say and how you say it that matters*

There is plenty of evidence about the effectiveness of learning collaboratively.

But simply sticking children or young people into small groups – “discuss amongst yourselves” – and hoping for learning miracles seldom works by itself.

In the last *Bulletin* we reported on a systematic review of small group work in science, with students from age 11 to post-16, which showed that it was critical to guide and structure the group focus and tasks for effective learning to take place. In this issue we have synthesised evidence from three reports about two research projects which go further than that: their findings help to demonstrate the importance of guiding the quality of the talk and of creating the right learning environment for talk for all ages, even among very young children.

There was evidence of student benefit in both projects:

- quiet children became more confident and participative;
- improved test results related to more effective group work;
- children's reasoning improved significantly over pre-programme scores;
- subject-related knowledge and understanding improved; and
- children exchanged their thoughts more clearly, asked more questions and gave reasons more often than comparison groups.

One project involved 230 Year 5 children and one involved six Year 2 classes. They both used strategies from the Thinking Together programme which was designed because, while “there is a strong expectation that learners will work and talk together, it is rare that children are actually taught how to do this”.

So how can children be helped to understand what it is they need to have an effective discussion? Two important aspects of the projects (but by no means the only two) were the use of “exploratory talk” and a set of ground rules to help generate this talk. Exploratory talk is based on bringing more than one perspective to bear on a problem or topic. The students debate ideas, ask for other ideas, provide justifications when challenges are made, and offer alternative suggestions. Exploratory Talk demonstrates the active, joint engagement of the children with one another's ideas. In Exploratory Talk the reasoning is more

#### **Disputational Talk**

Effectively unproductive disagreement, characterised by an initiation (e.g. proposition or instruction) followed by a challenge (be this a direct rejection or a counter proposition/hypothesis). Such challenges typically lack clear resolution or else result in resolution that is not supported by agreement.

#### **Cumulative Talk**

Adds uncritically to what has gone before. Initiations are typically accepted either without discussion or with only superficial amendments. It is characterised by repetitions, confirmations and elaboration. Everyone simply accepts and agrees with what other people say.

#### **Exploratory Talk**

Demonstrates the active joint engagement of the learners with one another's ideas. Whilst initiations may be challenged and counter challenged, appropriate justifications are articulated and alternative hypotheses offered. Where alternative accounts are offered they are developments of the initiation. Progress thus emerges from the joint, critical consideration of ideas and agreement on which are best.

The Thinking Together website is well worth a visit (see our review on p.15). Meanwhile, according to the evidence, these ground rules will help ensure that multiple perspectives are brought effectively to bear:

- invite everyone to contribute to the discussion;
- share all relevant information;
- respect and consider all ideas;
- make reasons clear – reasons are expected;
- negotiate challenges and discuss alternatives; and
- seek to reach agreement before acting.

Interestingly the aims of these two studies were different: one study wanted to see if teaching students to work and talk together raised achievement in science; the other was designed to improve student's access to education through teaching them how to interact and reason with each other. Both aims were achieved by using similar interventions based on the same principles.

### **How do we know this?**

Wegerif, R., Littleton, K., Dawes, L., Mercer, N. and Rowe, D. (2004) **Widening access to educational opportunities through teaching children how to reason together**, *Westminster Studies in Education*, 27(2), pp.143-156.

Report of the findings from an empirical 2-year research study called the Talking for Success project. Data collected included non-verbal reasoning tests; observations and field notes; video recordings; interviews; reasoning tests.

Littleton, K., Mercer, N., Dawes, L., Wegerif, R., Rowe, D. and Sams, C. (in press, 2005) **Talking and thinking together at Key Stage 1**, *Early Years: An International Journal of Research and Development*.

An additional report on the same project

Mercer, N., Dawes, L., Wegerif, R. and Sams C. (2004) **Reasoning as a scientist: ways of helping children to use language to learn science**, *British Educational Research Journal*, 30(3) pp. 359-377.

23 week empirical study involving 109 student experimental group and 121 children as control group. Data collected from classroom observation, video and audio recordings, non verbal reasoning scores, science national test scores and a concept mapping activity. You can see more detailed digests of this work at <http://www.standards.dfes.gov.uk/research/>

## Transition post-16

### *Are we giving our students the guidance and preparation they need?*

For young people to make the most of the opportunities in the proposed 14-19 reforms, the Tomlinson report was adamant that they must be prepared with the skills and self-awareness to exercise their choices effectively. But how? There's helpful evidence from a recent systematic review of research.

The reviewers found evidence that quality Careers Education and Guidance (CEG) had a positive effect:

- it helped to develop students' career-related skills (these include career exploration skills, self-awareness skills and decision making skills.) Those with a high level of skills were less likely to modify choices, switch courses or drop out;
- CEG had the greatest impact on students of moderate and higher ability in schools with lower or average achievement, typically without their own sixth forms. (The researchers suggested career provision might have had more impact on these students because of the necessity to leave school); and
- additional CEG provision tailored to meet the needs of young people identified as being 'at risk' and delivered by staff with appropriate skills, knowledge and attitudes had a significant impact on young people's learning outcomes.

### What is 'quality' CEG?

The quality of CEG provision varied from school to school – in one study of 1,000 students from 20 schools only one in seven students was judged to have received an acceptable CEG package. Indicators of quality included:

- the integration of the programmes with the wider curriculum;
- collaboration – both between school departments and between the school and other agencies;
- interventions designed to meet the needs of individual young people or specific groups (such as those 'at risk', 'leavers', 'stayers' and those with special needs);
- involving students in practical activities (e.g. role plays and visits to workplaces with the opportunity to talk to people about their jobs); and
- presenting information in a variety of formats and by a variety of deliverers (for example, training providers and employers) within and outside the curriculum.

### What kind of guidance did students feel was the most helpful?

Young people often found that career advice and guidance during Key Stage 4 did play an important part in their decisions about the future, but they said they would have found it more useful to have career guidance lower down the school. They also wanted more information about courses, jobs and careers, especially through the workplace and contacts with working people.

Information given directly by people was more useful than written information – few documents were read extensively. Students also highlighted the importance of speaking to people with personal experience of a particular career, course or institution. Some young people found career guidance from advisers more helpful than others – depending whether they

felt they had made progress towards reaching a conclusion or solving a dilemma during their career interviews. Parents and individual subject teachers also had an influence upon the choices made by young people. For example, one study found that science teachers in six case study schools unwittingly influenced students' choices through positive classroom experiences, the provision of information about post-16 courses in science, individual discussions with students and their parents, and extra-curricular activities.

### What can schools do to help make their CEG provision effective?

The reviewers suggested a number of implications on the basis of their findings:

- integrating career education with guidance and the wider curriculum;
- actively promoting the value of CEG to students from lower down in the school and to staff to raise awareness of the potential benefits;
- ensure that provision is differentiated and available in ways and at times that meet the needs of individual young people and groups of people, such as those 'at risk', 'leavers', 'stayers', those with expected higher or lower attainment and those with special needs;
- identify ways in which they can support parents and provide them with information that will help them to support their sons/daughters; and
- ensure that progress made during a career interview is summarised by the practitioner and understood by the young person at the end of each guidance session.

### Jargon Buster

**Career education** describes activities provided through interventions that help students make informed choices and transitions about their future education, training and employment. Such activities are normally part of a planned, co-ordinated programme designed to help students develop their knowledge and understanding of themselves, be realistic about their capabilities and aspirations, and to make informed decisions about their future career.

**Career guidance** refers to provision through which students are helped to apply their knowledge, skills and information. Guidance may be provided through interviews and small-group work, resulting in action planning and recording of achievement.

### How do we know this?

Smith, D., Lilley, R., Marris, L. and Krechowicka, I. (2005) **A systematic review of research (1988–2004) into the impact of career education and guidance during Key Stage 4 on young people's transitions into post-16 opportunities.** In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education. [Online] Available at: [http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/review\\_groups/transitions/review\\_two.htm](http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/review_groups/transitions/review_two.htm)

(See page 14 for more information about the processes involved in systematic reviews)

## Research Round-up

### Students personalising their own learning?

Asking young people for their views about teaching and learning offers a practical first step towards personalising learning. Thanks to a recently completed research project, we now know much more about their point of view than we used to.

The researchers found that when students felt their perspectives were listened to, they felt more positive about themselves as learners, and could understand and manage their own progress better. Consulting with the students also helped them feel more included in the school's purposes – they believed that what they said made a difference to teaching and learning in their schools. Teachers found consulting students helped them understand how to support student engagement and build more open and collaborative relationships with their students.

Based on their research the researchers have developed a toolkit for teachers to use in consulting their students:

MacBeath, J., Demetriou, H., Rudduck, J. and Myers, K. (2003) **Consulting pupils: A toolkit for teachers.** Cambridge: Pearson Publishing.

Sample pages are available at:

[http://www.pearsonpublishing.co.uk/education/samples/S\\_498461.pdf](http://www.pearsonpublishing.co.uk/education/samples/S_498461.pdf)

Jean Rudduck and Julia Flutter have also produced a leaflet 'Consulting young people in schools', outlining some of the practical issues involved in consulting students. This can be downloaded at <http://www.consultingpupils.co.uk/>

See also:

Flutter, J. and Rudduck, J. (2004) Consulting pupils: **What's in it for schools?** London: RoutledgeFalmer.

Arnot, M., McIntyre, D., Pedder, D., and Reay, D. (2003) **Consultation in the classroom: pupil perspectives on teaching and learning.** Cambridge: Pearson Publishing.

There are many more interesting and useful findings in these studies which will be available in summary form at <http://www.gtce.org.uk/research/romhome.asp> from May.

### Involving parents in homework

Not all parents involve themselves to the same degree in their children's learning. Some don't see it as their 'role,' some are too busy and some just don't feel they are up to it. Then there are teachers, under pressure of time and league tables; for many, involving parents is not easy. Yet there are clear benefits for schools as well as students if they can bring parents into the education process – is homework one way of doing this?

One study of three US schools found that when students were set interactive homework assignments, the amount of time parents spent working with their children more than doubled and there was a marked improvement in reading skills. The researchers followed the progress of 84 children, aged 7-8, in three schools over a four-week period. In the first school children received interactive assignments, plus their parents were briefed about how to help their children. In the second school the children received the interactive assignments with no special messages for parents. The third school continued its normal practice.

Training for the teachers on how best to prepare interactive homework assignments involved a presentation, collaborative work, and feedback on their work. The design of the worksheets had to:

- take into account parents' and students' interests;
- be appropriate for a diverse student population;
- require students to use reasoning strategies to draw conclusions from reading texts;
- foster parent-child collaboration; and
- foster self-directedness and self-management skills.

The children's reading skills were tested before and after the four-week period. They were set four questions from a short text which tested their inferential skills. The improvement in test scores of the children in the first school was nearly four times that of the children in the second. So there may be real gains to be made if we set homework tasks aimed at arousing the interest of parents as well as students.

We are interested in hearing from teachers or researchers about evidence of effective, innovative homework ideas to involve parents. Email [info@nerf.org.uk](mailto:info@nerf.org.uk)

Battle-Bailey, L., Silvern, S., Brabham, E. and Ross, M. (2004) **The effects of interactive reading homework and parent involvement on children's inference responses,** *Early Childhood Education Journal*, 32(3), pp.173-178.

### Jargon Buster

**Interactive assignment** – an assignment designed so that it is appealing to both student and parents, and will encourage speculation and discussion.



## Thinking Skills

### *What do we know about the impact of teaching thinking?*

Teaching thinking is one of the real growth areas in schools and colleges. (See Issue 1 for research on Thinking Skills in the post-16 sector.) Thinking skills are often embraced enthusiastically by teachers but there are now so many different approaches that while we may be familiar with one or more of the individual techniques (e.g. Odd One Out, Fortune Lines, Living Graphs, Mysteries, Memory Mapping, Mind Mapping), few of us have an overview of the range of approaches involved and how they work and connect with each other.

A team of researchers and practitioners systematically reviewed the research on thinking skills approaches and learning to provide such an overview. According to them, what all the approaches have in common is the requirement that learners articulate and evaluate specific learning approaches. A thinking skills approach not only specifies what is to be taught but also how it is taught: the content of lessons and the teaching and learning processes form a dynamic and interactive part of thinking skills approaches. Examples of programmes and approaches in widespread use are instrumental enrichment, philosophy for children, Cognitive Acceleration through Science Education (CASE) and Somerset thinking skills.

### How did the review find out about impact on students?

Considerable interest has also been shown by teachers in how formal programmes can be 'infused' into teaching approaches instead of being taught as a supplementary lesson. So it was interesting to note that although the majority of the 23 studies in the review reported positive impact on students' attainment across a range of non-curricular measures (such as reasoning or problem-solving), about half of them also showed immediate, positive impact on learning on curricular measures of attainment.

There was also evidence that:

- students can apply or translate this learning to other contexts;
- where there was little or no immediate impact on curriculum measures, such improvement may appear later or increase over time;
- there may be greater impact on low attaining students, particularly when using metacognitive (see jargon buster) strategies; and
- students benefit from explicit training in the use of thinking skills strategies and approaches.

The review found that some of the benefits of thinking skills programmes and approaches derive from making thinking and reasoning explicit through a pedagogical emphasis on classroom talk and interaction. The role of the teacher is especially important in establishing collaborative group work, in developing effective patterns of talk and in eliciting students' responses as illustrated in the thinking skills activity described here.

### Fortune Lines

'Fortune Lines' allow consideration of what happens to a person over the course of time. This could be a fictional character, such as Max from 'Where the Wild Things Are', or an historical figure, such as Anne Frank. Statements from the story or the person's life are presented to students on small pieces of card. The students have to discuss with a partner or as part of a small group the sequence of the statements and then relate these pieces of information to a graph of how the character feels. They can then draw a line (the 'Fortune Line') to show changes in the character's fortune over the course of the story. If this task is repeated for a second character it is possible to show how different 'fortunes' relate to each other. One example might be that of Little Red Riding Hood and the Wolf where the contrasting fortunes of the heroine and the villain can be compared. If the fortunes of both characters are drawn on the chart the lines can help to show the development of the plot. The main aim of the activity is to develop skills in drawing inferences and in explaining and defending their interpretation.

(Example taken from <http://www.teachers.org.uk/resources/pdf/thinking-skills-2913.pdf> where there are lots more ideas and accounts of teacher's own research in their classrooms into thinking skills activities.)

### So what can we take away from the findings of this review?

Here are some of the conclusions drawn by the researchers:

Whilst teachers can be confident about the potential of Thinking Skills interventions to enhance students' learning, there is a need to select interventions carefully in response to in-depth knowledge of students' learning needs. It's also important to be prepared to persist with an intervention, as improvements on curricular measures may take time to emerge.

The research also indicates that the causes of improvement in student learning are complex. Particular programmes or techniques will help, if carefully matched to the needs of the learners and the subject. Interestingly, a specific emphasis on making aspects of teaching and learning explicit (in particular reasoning) may have similar benefits to those obtained through particular programmes of intervention.

### Jargon Buster

**Metacognition:** *The ability to plan, describe and evaluate one's thinking and learning*

### How do we know this?

Higgins, S., Baumfield, V., Lin, M., Moseley, D., Butterworth, M., Downey, G., Gregson, M., Oberski, I., Rockett, M. and Thacker, D. (2004) **Thinking skills approaches to effective teaching and learning: what is the evidence for impact on learners?** In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education [Online]. Available at: [http://eppi.ioe.ac.uk/EPPIWebContent/reel/review\\_groups/thinking\\_skills/t\\_s\\_rv1/t\\_s\\_rv1.pdf](http://eppi.ioe.ac.uk/EPPIWebContent/reel/review_groups/thinking_skills/t_s_rv1/t_s_rv1.pdf)

A systematic review using the tools and guidelines produced by the EPPI-Centre.

## Assessment for Learning

### *The teachers' role in summative assessment*

There is now much interest amongst policymakers in giving a greater role to teachers in the assessment regime. Assessment is also at the top of the agenda for many schools and colleges. In the last *Bulletin* we reported on evidence about overcoming the negative effects of tests on student confidence and motivation. Here we build on some of this evidence by looking more closely at research findings from two independent studies (one in schools, one in post-16 learning) about teacher summative assessment. Does this put less de-motivating pressure on students than external tests?

A new systematic review shows some of the benefits – and the potential hazards – of the use of teacher assessment for summative purposes. Amongst many other things, the review found that when teacher assessment took the form of coursework for an external award, students responded positively. They were motivated by coursework because it provided an element of choice and incentive to acquire and use new skills. The research also found that students needed more help, in the form of better descriptions and examples, to understand the assessment criteria and what is expected of them in meeting these criteria.

According to the research, when used for internal school purposes, teachers' assessments can be influenced by behaviour and the effort students put into their work. The end result, according to the review, can be that teachers may use grades as a system of rewards and punishment, which can have a detrimental effect on the way their students regard the learning process. The emphasis on effort also reduces the value of the information for parents and other users. Internal assessments can, however, be made more reliable and motivating by using clear criteria, providing guidance about their use and offering some internal moderation.

The research also emphasised the need for transparency in the assessment process by making explicit the learning objectives and the criteria by which work is graded. This particularly benefits less confident students, as it provides a framework for progressive development, and enables the student to understand their competences better. In the words of one student, 'explicit criteria 'make the teacher talk to you more'. Failure to communicate clear objectives and assessment criteria can lead to disengagement, and, in post-16 education, contribute to poor retention. A study of NVQ students found that nearly all of those who dropped out of the course had found the performance criteria and requirements for assessment 'hard to understand'. The message, from initial assessment on, is to enter into a dialogue with students on their performance, and make clear the learning path they need to follow.

#### What assessment means to the student

Assessments are the basis of students' perceptions of what it is important to learn. Like it or not, because of the store society puts by qualifications, assessments are the tail that very often wags the dog of learning. The research findings suggest that this makes it all the more important that we try to help students see assessment as a means of guiding them in their learning. In effect, assessment should be regarded as an integral part of the learning process. If students' focus is purely on the grades they will achieve, it is likely they will develop a shallow approach to learning. The feedback students receive on their work plays a key role in determining the effort they will apply to new tasks. The judgemental allocation of a grade can have a positive or a negative impact depending on whether it is high or low (although even a high grade may encourage complacency and a lack of effort!). For this reason it is important students receive additional information on the improvements they can make, and plenty of encouragement to aim high.

#### The dangers of combining behaviour with learning outcomes in teachers' internal assessments

- Although students may understand that their grades may be affected by judgements of their behaviour, parents perceive grades as reflecting their child's achievement level only. This can lead to misunderstandings between parents and teachers.
- Combining a variety of different kinds of educational outcomes into one grade means that none is communicated effectively.
- Using grades to control student behaviour does not teach students the value of learning.
- If grades are lowered as a result of poor behaviour, students may be regarded as less able than their achievement suggests. This may lead to negative attitudes to learning, and a lowering of expectations.

#### How can teachers use the assessment process to their students' advantage?

- Help students understand the criteria by which their work is assessed. This can be done by discussing examples that illustrate how the criteria work in practice.
- Be sure grades given for academic performance only reflect academic performance. It may be helpful to comment on effort separately, or to use an alternative grading system for that.
- When presenting assessment tasks to students, emphasise learning outcomes and not the attainment of a high grade. This will help to avoid the encouragement of extrinsic motivation which leads to shallow learning.
- Try to be non-judgemental in your feedback, and give clear guidance on what the student can do to improve.

#### Jargon Buster

*The purpose of **Summative Assessment** is to indicate how much learning has taken place in order to grade, certificate, or record progress. When the aim of assessment is to help the learner and teacher to decide the next steps in the learning process then it is **Formative**.*

#### How do we know this?

Harlen, W. (2004) *A systematic review of the evidence of the impact on students, teachers and the curriculum of the process of using assessment by teachers for summative purposes*. In *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education [Online]. Available at: [http://eppi.ioe.ac.uk/EPPIWebContent/reel/review\\_groups/assessment/ass\\_rv4/ass\\_rv4.pdf](http://eppi.ioe.ac.uk/EPPIWebContent/reel/review_groups/assessment/ass_rv4/ass_rv4.pdf)

Torrance, H. and Coultas, J. (2004) *Do summative assessment and testing have a positive or negative effect of post-16 learners' motivation for learning the learning and skills sector?* London: Learning and Skills Research Centre [Online]. Available at: <http://slartibartfast.ultralab.net/~blogger/uv/archives/1610.pdf>

## Libraries and learning

### *Are school libraries redundant in a digital age?*

Certainly not, according to recent reviews of research into the impact of school libraries. If anything, the sheer volume, dodgy quality and rapidly obsolete nature of much information now available from the Internet means it's even more important that today's students are given guidance to develop the skills of locating, evaluating and using information. Research shows that student use of libraries and support in using them are key aspects of gaining such information skills.

But that's not all. Recent reviews of research into the impact of school libraries on students' achievement and learning show that a strong library programme which is adequately staffed, resourced and funded can lead to higher student achievement, regardless of the socioeconomic levels of the local community. Other key findings from the research include:

- the quality of the library collection has an impact on student learning;
- a print-rich environment leads to more reading and the extent of voluntary reading is strongly linked to improved comprehension, vocabulary growth, grammatical ability and writing style;
- use of libraries can improve students' motivation and confidence and foster independent learning;
- integrating information literacy (see jargon buster) into the curriculum can improve students' mastery of both content and information-seeking skills;
- when computer networks connect the library's resources to classrooms and laboratories, this has a positive impact on student attainment;
- collaborative relationships between school librarians and classroom teachers, especially in relation to planning teaching units and developing the collection of resources, have a positive impact on student learning;
- links between school and public libraries can help student achievement; and
- evidence on the impact of school libraries seems strongest at primary school and the early years of secondary school.

### **Students do better when they can access good libraries**

Students from all backgrounds tended to perform better on reading tests in schools with good libraries.

The quality of the library collection and the resources allocated to the libraries were important, but they weren't the only factors that determined how well a library contributed to student attainment. Students also needed good access to the collection, support so they could choose suitable material for their needs and a reason to use the library in the first place. The research showed that librarians and teachers could work together to take action to improve each of these factors. The keys to this lay in close collaboration and maximising flexible use of the library.

Before students could use libraries, they needed to get into them. Student access to the library could be improved by:

- flexible use of opening times to allow students access to the library when they needed it, rather than limiting them to fixed times in the week;

- using computer networks to connect the library's resources to classrooms and laboratories; and
- higher staffing levels that enabled libraries to stay open longer. (Student and parent volunteers can help here – see below)

Some students needed a reason to use the library. Others needed support in choosing suitable materials, whether these were digital or print based, but the research found that teachers did not always offer this support, especially to older students. Both these issues could be addressed when teachers and librarians worked together.

### **Working collaboratively**

Students benefited when library staff built collaborative relationships with teaching staff and external bodies such as public libraries and School Library Services.

Joint working between teaching staff and librarians was a form of professional development that could be of benefit to both parties and to students. The following joint activities were helpful:

- choosing library materials together;
- checking the library collection and matching it to particular curriculum needs;
- exploring how library resources could be used to support particular course units and used for a wider range of curriculum areas;
- modifying teaching activities and learning goals so that they offered students opportunities to learn information-seeking skills within different topic areas;
- evaluating course delivery and student learning; and
- negotiating how the library could be managed so that it could support both scheduled and spontaneous student visits.

Research found that where librarians and teachers worked together, teachers became more confident in giving students assignments that required independent library study. They also rated the effect on student learning positively. (The need to complete independent assignments was an important factor in encouraging library use amongst secondary students.)

In one case study in a primary school, a proactive librarian compiled statistics of library use for each class. She found that:

- younger students, whose teachers planned alongside the librarian, benefited more from the resource-based learning than older students, whose teachers expected them to work independently and who did not plan collaboratively with the librarian;
- reading scores began to climb as library use increased; and
- students were increasingly likely to choose non-fiction matter to read.

Some school libraries forged effective links with their local libraries. They did this through electronic network links, book talks by public library staff at the school, bulk loans of books and homework alerts from school to public library. Many English schools have close links with School Library Services, which offer bulk book loans and other resources.



## Affording librarians?

In the literature reviews, researchers cautioned that much of the research was undertaken in American schools where it is not unusual to have a librarian who is also a trained teacher. Most secondary schools in Scotland also have professionally qualified librarians, but there are far fewer schools in England and Wales with specialist librarians. Primary schools in England offer a wide variety of library provision. Many have classroom collections of books. Some have central libraries with a qualified or unqualified librarian; others rely on parental volunteer help. A member of the teaching staff is likely to take responsibility for the library in addition to class teaching responsibilities.

Research into how librarians spent their time showed that about half was spent on administration, one quarter on teaching and rather less time on using their information specialist skills or collaborating with other staff. In our own primary school context, this means that:

- parent volunteers have a vital role to play in keeping the library running smoothly and in making sure it is open to students;
- teachers with particular responsibility for the library could capitalise on their close relationships with colleagues to engage in professional dialogue and explore how well the collection fits the teaching and learning needs of the school; and
- primary teaching staff might well benefit from training in library skills to help them explicitly teach these skills to their pupils.

Ideally, according to the research evidence, all schools should have funds to support the service of a qualified, full time librarian to manage well resourced school libraries. In the real world, with limited resources, priority might be given to:

- training for teachers in library management and resource integration within the curriculum;
- training in curricular issues and resource integration for librarians working in school library services, public libraries and volunteers working in school libraries;
- ensuring that all primary schools have the support of a schools library service; and
- establishing close relationships between schools and their local Schools Library Services.

## How important is the school librarian's role?

The studies showed that funding school librarians helped students in several ways. When librarians had enough time in the library, they could complete necessary administrative tasks and then pursue a wider range of activities that were found to be linked to improved student performance. These included:

- seeking out and acquiring materials for teacher use;
- making cooperative links with public libraries;
- providing online access to information;
- actively evaluating the material in the library collection; and
- offering instruction in information skills to students.

A few research studies looked at whether the professional knowledge, skills and qualities of librarians had an impact on student learning. The research showed no clear evidence that the great variation in qualifications and professional experience of librarians affected student learning. However, the personal qualities of library staff had an important influence on the learning environment. Librarians who were proactive, flexible, prepared to take risks, comfortable with change, had a sense of humour and who were able to deal with different kinds of people were very much more likely to introduce positive changes to the running of the school library, such as implementing flexible scheduling. Other helpful characteristics included competence, persistence, enthusiasm and inquisitiveness.

## What can head teachers do to help?

Much research showed that head teachers had an important role to play in promoting school libraries. Primary head teachers were especially likely to try to integrate library use into the teaching and learning philosophy of the school. School leaders needed to ensure that:

- sufficient resources were allocated to the library;
- the library environment was welcoming and provided comfortable seating;
- the collection matched the school curriculum and was sufficiently broad;
- the use of the library was frequent and well coordinated; and
- all teachers integrated library use into their activities.

## How do we know this?

We synthesised some of the key messages for practitioners across three reviews making sure we omitted findings and recommendations that were specific to the Australian context.

Williams, D., Wavell, C. and Coles, L. (2001) *Impact of school library services on achievement and learning: A critical literature review of the impact of school library services on achievement and learning to inform the work of the DfES Task Group set up to implement actions contained in the government's response to "Empowering the learning community"*. London: DfES [Online]. Available at: <http://www.mla.gov.uk/documents/impacts1.pdf>

Williams, D., Coles, L. and Wavell, C. (2002) *Impact of school library services on achievement and learning in primary schools: A critical literature review of the impact of school library provision on achievement and learning in primary level students*. London: DfES [Online]. Available at: <http://www.mla.gov.uk/documents/rm004.pdf>

Lonsdale, M. (2003) *Impact of school libraries on student achievement: a review of the research*. Victoria, Australia: Australian Council for Educational Research [Online]. Available at: <http://www.acer.edu.au/research/documents/schoollibraries.pdf>

Blase, J. and Blase, J. (1998) *Handbook of instructional leadership: How really good principles promote teaching and learning*.

## Jargon Buster

**Information literacy** – This refers to a set of skills related to finding, evaluating and using information.

**Resource integration** – The process of linking aspects of the curriculum to related information resources, including books, periodicals, CD ROMs and other artefacts.

## Research Round-up

### Whiteboards on the web

Everybody's doing it. Once the exclusive preserve of the rich and adventurous, interactive whiteboards are now found at all levels of education. But what are the most effective ways of using them in different contexts? We found two studies which offered some evidence about the motivational value of interactive whiteboards in practice and some helpful details about how they were being used effectively. Here is a brief review so you can decide whether to follow them up for yourself. It's easy if you do – just follow the weblinks below.

A common finding of both studies was the enthusiasm generated by the use of interactive whiteboards among teachers and students alike. The increased participation of students in presentations which interactive whiteboards enable was felt to be of particular value. The reports also agreed that interactive whiteboards make it easier for teachers to present materials, allowing them to move between resources with ease, and adapt as the situation requires.

There are a lot of different interactive whiteboard systems out there. For those of you interested in the capacities of different technologies, the Sheffield study gives a detailed description of the Promethean system, while several features of SmartBoard technology such as Screen Capture are covered in the Kent study.

In terms of teaching strategies, the research in Sheffield has a comprehensive description of how the use of interactive whiteboards can be incorporated into a lesson. It also has a wealth of comments from teachers and students on how the technology can be employed for different purposes in the classroom. Although not as extensive, the Kent study also reports on teacher and student use of interactive whiteboards in a variety of primary school contexts, including literacy and numeracy activities.

Neither of the studies shies away from difficulties encountered in the introduction of interactive whiteboards. The Sheffield study warns how technical hitches can disrupt lessons and negate the benefits of interactive whiteboards. The Kent report points

out that what may work well at secondary level can be more problematic in a primary setting, because, for example, younger people need longer to use a mouse effectively.

Levy, P. (2002) *Interactive Whiteboards in learning and teaching in two Sheffield schools: a developmental study*. Sheffield: University of Sheffield [Online]. Available at: <http://dis.shef.ac.uk/eirg/projects/wboards.htm>

A detailed study undertaken by the University of Sheffield in two secondary schools. It explored perceptions of the impact of a relatively large-scale introduction of interactive whiteboards.

Smith, H. (2001) *SmartBoard evaluation: Final report*. Maidstone: Kent NGfL [Online]. Available at: <http://www.kented.org.uk/ngfl/ict/IWB/whiteboards/report.html#top>

A review by a National Grid for Learning (NGfL) advisor of the introduction of interactive whiteboards in six primary schools in Kent.



CLASS 5B WERE SPELLBOUND BY PROFESSOR UGG'S USE OF CUTTING-EDGE TECHNOLOGY

### Colleges are best for some young people

What do 2,616 Year 11 students, 248 schools and 78 colleges think about the impact of the Increased Flexibility for 14-16 year olds Programme (IFP)? An independent evaluation of the first two years of the IFP, introduced in 2002 to 'create enhanced vocational and work-related learning opportunities for 14-16 year olds who can benefit most', has found that students have indeed benefited and are on target to achieve their qualifications.

The survey also found that over 80% of the students planned to progress into further education or training. Other benefits included the development of the students' social skills, and their confidence in their employability skills (including interpersonal, communication and problem-solving skills). The students also had a more positive attitude towards school than they had in Year 10.

Fifty-six percent of the students said that their IFP course had helped them to decide what they would like to do in future, 40% wanted to follow a course in the same subject as their IFP course and 20% planned to get a job in the same occupation as their IFP course. There was also evidence that schools and colleges had built on their experiences of the first year: many more were working with employers to deliver the IFP and the colleges and training providers were more involved in identifying likely students. For more details of how students are responding to the new opportunities you can read a summary of the research at <http://www.dfes.gov.uk/research/data/uploadfiles/RB609.pdf>

Golden, S., O'Donnell, L. and Rudd, P. (2005) *Evaluation of increased flexibility for 14 to 16 year olds programme: The second year*. Executive Summary. (DfES RB no. 609)

## Teaching mathematics

### *How good are we at improving students' confidence and competence?*

Getting better – but “we still have some way to go”. That was the conclusion we came to after reviewing some of the research into numeracy teaching in Issue 1 of the *Bulletin*. A new systematic review of research into the daily maths lesson offers some helpful signposts along that road. The research focused on helping students to become confident in themselves as learners of mathematics because confidence is an important basis for progress.

As colleagues in primary schools will already know, the daily mathematics lesson has a clear three-part structure: a mental starter activity, main teaching, and plenary coupled with lots of use of whole-class interactive teaching methods. The reviewers did find some evidence that this change in teaching approach has increased student confidence and competence in mathematics. But they suggested that the gains may be the result of students being ‘taught to the test’ rather than an improvement in students’ understanding of mathematics because there was little evidence that students are better able to think strategically.

### Why have the gains been limited?

When they examined the studies more closely, the reviewers found that rather than implementing the interactive teaching style advocated by the National Numeracy Strategy (NNS), there was evidence of an increased use of traditional whole-class teaching with ‘pace’, which is undermining the development of a reflective, strategic approach. Could it be that many of us are confused about the difference between interactive and traditional whole class teaching? This would certainly help to explain why:

- students were moving onto another topic before they had grasped the topic in hand, giving them gaps in their understanding and undermining their confidence; and
- question and answer sessions which emphasised speed and correctness made some students feel anxious, with evidence that boys were particularly vulnerable.

### What is the difference between interactive and traditional whole class teaching?

The interactive whole-class teaching approach advocated by the NNS is intended to involve students actively in the lesson through the teacher asking searching, higher-order questions that challenge and extend their thinking. Students’ answers are probed, built upon and elaborated. Students are also encouraged to ask questions and to interact with peers. For example, this teacher used an interactive approach to encourage students to share their criteria for evaluating methods with their peers:

Teacher: Give me a number between 2 and one-third and 2 and a half.

Student: Miss, 2 and three-eighths.

Teacher: (In a non-evaluative tone) How do you know? Can you convince me that you are right? (The student goes to the board and draws ‘fraction cakes’ – circles divided roughly into halves, thirds and eighths).

Teacher: (To the class) What do you think? Is he right? Are you convinced? (Some nods from the class).

Student 2: But, ... the fraction parts need to be exactly the same size really ...

Teacher: Yes, they should be, shouldn't they? If you could draw them accurately then maybe that would be OK but with just rough sketches on the board I'm

not convinced ... Can you find a more precise way to show it?

Student 3: Miss, we could change them to decimals ... (the student is invited to the board to demonstrate the conversion).

Teacher: What do we think about the method? Is that OK? ...Yes? OK, any other ideas?

Student 4: Change them to a common denominator ... (the student is invited to the board to demonstrate this and a similar evaluation follows).

This approach is quite different to traditional whole-class teaching, which is a teacher-centred didactic approach that makes heavy use of explaining and demonstrating. In traditional question and answer sessions, teachers ask a high proportion of closed questions or questions requiring a simple recall of facts or procedures and student answers are often quite short – often just two or three words.

### What can teachers do to help?

In Issue 1, we reported evidence from another systematic review about the benefits of teachers observing each other's lessons and giving each other feedback. Collaborative lesson planning was also found to be a highly effective and enjoyable learning experience for teachers (sometimes referred to as peer or co-coaching.) One way of developing more interactive whole-class teaching might be to join forces with a colleague, plan a lesson together and then observe and discuss each other's lessons. For good advice about how to do this, have a look at the GTCE website: <http://www.gtce.org.uk/pdfs/peer.pdf>

### Jargon Buster

**Confidence** refers to students' belief in their abilities. Indicators of students' confidence are holding positive attitudes towards learning mathematics, finding mathematics interesting and enjoyable and a feeling that they will succeed with a given mathematics task.

**Competence** refers to what students know, understand and can do, as evidenced by their performance.

**Strategic thinking** refers to the development of a repertoire of mental and written calculation strategies and informed decision making about the use of them.

### How do we know this?

Kyriacou, C. and Goulding, M. (2004) **A systematic review of the impact of the Daily Mathematics Lesson in enhancing pupil confidence and competence in early mathematics**. In *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education [Online]. Available at: [http://eppi.ioe.ac.uk/EPPIWebContent/reel/review\\_groups/maths/Maths\\_rv1/Maths\\_rv1.pdf](http://eppi.ioe.ac.uk/EPPIWebContent/reel/review_groups/maths/Maths_rv1/Maths_rv1.pdf)

This systematic review was conducted using the procedures for systematic review of research in education developed by the EPPI-centre.

Jones, S. & Tanner, H. (2002) **Teachers' interpretations of effective whole-class interactive teaching in secondary mathematics classrooms**, *Educational Studies*, 28 (3), pp. 265-274 [Online]. Available at: <http://math.unipa.it/~grim/ATanner122-127.PDF>

### Memory as a predictor of attainment in national tests

Research has found that most of the children who do not achieve expected levels in national tests at ages seven and fourteen have poor working memory function. The researchers, who were sponsored by the Medical Research Council, believe that their findings will help educators to make a clearer distinction than they do now between the environmental and cognitive factors influencing a child's current level of attainment, and as a means of identifying the child's true learning potential.

The research set out to investigate the relationship between one particular area of 'working memory' and children's performance in national curriculum assessments at age 7 and 14/15. The children completed a selection of tests from the Working Memory Test Battery for Children. These results were then compared with their attainment in English and maths at Key Stage 1 and English, science and maths at Key Stage 3.

The tests included:

- Backwards digit recall – children repeat sequences of spoken digits in backwards order, starting with two digit sequences.
- Listening recall – children listen to a series of sentences, judge their veracity and then recall the final word of the sentences in sequence.

- Digit recall (but not in backward order).
- Word list matching – children listen to a sequence of familiar one-syllable words and when the same words are presented again, either in the identical sequence or with changes, they judge whether the sequences were the same or different.
- Non-word repetition – children hear 40 spoken non-words, from 2-5 syllables, and attempt to repeat each item.

Most children failing to achieve nationally expected levels at 7 years and at 14 years also had low working memory function. The exception was in the Key Stage 3 English tests. The authors attribute this to the strong focus on the acquisition of literary skills in Key Stage 1 for which good working memory is needed. By Key Stage 3 they believe the children will have acquired these basic literacy skills and are able to deploy their intellectual and analytic skills without drawing on their working memory function to the same extent.

Gathercole, S., Pickering, J., Knight, C. and Stegmann, Z. (2004) ***Working memory skills and educational attainment: Evidence from National Curriculum assessments at 7 and 17 years of age***, *Applied Cognitive Psychology*, 18: pp.1-16.

### Teaching foreign languages in primary schools

By the end of the decade, every child in Key Stage 2 will be entitled to study a foreign language (DfES, 2002). Yet what do we know about language teaching in primary schools? Thanks to a systematic review of the characteristics of effective foreign language teaching to students between the ages of 7 and 11 we now know a bit more than we did, although the researchers who carried out the review were astonished at how few studies they found.

#### Teachers' knowledge

Amongst the findings they reported was that teachers' knowledge is important. This includes knowledge about the subject, the foreign language content (e.g. verbs and nouns), the skill to use the target language in clearly defined areas for communication, subject-specific teaching methods, age-specific teaching methods, resources, and knowledge about primary curriculum and children's learning needs.

#### Benefits for primary teachers

The researchers also warned that specialist language teachers may have an advantage in teaching primary modern foreign languages as they are likely to be fluent in the target language, but there is a danger, if they are secondary trained teachers, that they may import inappropriate methods into the primary school. The good news for primary trained class teachers is that they are at an advantage because they are

part of the whole primary school culture and teach across other curriculum subjects so that they can use the foreign language in other contexts too – all through the day.

Other findings were that:

- purposeful use of activities, such as games and songs, provides enjoyment and reinforces children's learning; and
- audio-visual and other resources are useful aids to teaching and learning. They can also be a support for teachers' language and cultural knowledge but they are not a substitute for it. There was evidence that some teachers were highly dependent on these aids rather than using them selectively and as part of a planned sequence of learning.

The summary of this review contains lots of useful suggestions for practitioners, based on the evidence from the research. You can find it at [http://eppi.ioe.ac.uk/EPPIWebContent/reel/review\\_groups/TTA/MFL/MFL\\_2004summary.pdf](http://eppi.ioe.ac.uk/EPPIWebContent/reel/review_groups/TTA/MFL/MFL_2004summary.pdf)

Driscoll, P., Jones, J., Martin, C., Graham-Matheson, L., Dismore, H. and Sykes, R. (2004) ***A systematic review of the characteristics of effective foreign language teaching to pupils between the ages 7 and 11***. In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education.

## Education for Citizenship

### What impact has citizenship education had on schools?

It is one thing to describe what should be taught to students but quite another to actually do it. If schools take citizenship education seriously, what sort of impact will that have on the schools' core activities? How can we engage students in citizenship education in ways that are meaningful to them? How can we avoid citizenship education being only a subject on the timetable? Five years after the government made citizenship education a part of the National Curriculum, a systematic review of research set out to find out what citizenship education might mean for teaching and learning, curriculum construction and development, leadership and management, school ethos and external relations.

The review interpreted citizenship education as those three strands of activity identified in the Crick report (1998):

- the moral and social development of students;
- political literacy; and
- community involvement.

So how have schools been implementing citizenship education? Here we focus on some of the teaching and learning findings in relation to moral and social development, but you can access the full review at: [http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/review\\_groups/citizenship/review\\_one\\_abstract.htm](http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/review_groups/citizenship/review_one_abstract.htm)

The reviewers found that schools and colleges were concerned to include good quality dialogue for learning about values, rights and issues. Practitioners had also found it very important that there were opportunities for students to *engage* with values issues through all curriculum subjects. This is consistent with the findings of a British Educational Research Association (BERA) review of citizenship education which also found values to be important. In that review researchers recommended the 'development of a whole school approach to values education, drawing on clear and coherent theoretical frameworks and strategies.'

#### How can students engage with values issues?

##### An example

Teachers in one study in this review introduced citizenship education through a number of different subjects. After initial input by teachers about listening to each other, respect for each other, sharing equipment and other themes, science students took part in an activity which involved a number of different tasks. These included practical work, group discussion and homework. The homework activity revealed how Charles Drew, a road traffic accident casualty, had died after he was refused a blood transfusion from a whites-only hospital.

The students' responses were quite emotive and revealed their deep and reflective engagement with the moral issues. Observation suggested that as well as students' acquisition of knowledge, skills and understanding their personal and emotional sides were brought out too and that their response had been intensified by the intervention. Teachers felt that putting values centre stage led to higher order creative and critical thinking skills.

The review also found that involving students in sharing perspectives (see page 3) and participating actively in lessons helped to sustain their achievement. Such learning required:

- good quality teacher-student relationships that are inclusive and respectful; and
- listening to the voices of students and empowering them to express their views and make sense of their experiences.

Other important ingredients in teaching and learning in citizenship education found by the review included:

- making sure that students could relate knowledge to their own experiences and the real world;
- involving them in thinking through problems; and
- providing educational experiences that are challenging and attainable.

#### A community of citizenship learners at post-16

At Sir Bernard Lovell School in South Gloucestershire all students are introduced to the post-16 key skills and active citizenship programme through the Be Real Game. Here the students take on adult roles in the worlds of finance and social and economic policy. They research, discuss and form opinions together about topical matters including student loans, taxation, transport and housing. Typically these include challenging 'not in my backyard' scenarios such as housing for asylum seekers or where a new car breaker's yard should be sited. The 'real world' nature of the activities includes opportunities to meet professionals.

The students work together in communities and each community presents a consensus view to a 'planning committee'. Other students try to influence decisions before final decisions are made, for example, by a vote. For more details visit [http://www.qca.org.uk/downloads/cs\\_sir\\_bernard\\_lovell.pdf](http://www.qca.org.uk/downloads/cs_sir_bernard_lovell.pdf)

Based on their review findings the researchers conclude that citizenship education:

- should be an intrinsic part of whole-school development planning;
- needs to focus on higher order critical and creative thinking skills and the processes of learning itself, including the quality of relationships and dialogue; and
- should support and enhance a learner-centred approach through the curriculum, through approaches to assessment and through catering for individual differences.

#### How do we know this?

Our article draws on the findings of a recent systematic review which identifies empirical evidence about the way in which citizenship education is implemented in schools.

Deakin Crick, R., Coates, M., Taylor, M. and Ritchie, S. (2004) **A systematic review of the impact of citizenship education on the provision of schooling.** In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education.

This can be accessed at:

[http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/review\\_groups/citizenship/review\\_one.htm](http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/review_groups/citizenship/review_one.htm)

Further information comes from an interpretative review of citizenship education which surveys historic, current and potential future research (in the UK) in citizenship education for practitioners and policy makers.

Gearon, L. (2003) **How do we learn to become good citizens?** Professional User Review of UK Research for the British Educational Research Association

Case studies of good practice in citizenship education can be accessed at:

[http://www.qca.org.uk/downloads/cs\\_sir\\_bernard\\_lovell.pdf](http://www.qca.org.uk/downloads/cs_sir_bernard_lovell.pdf)

## The English curriculum

### *To teach or not to teach? The great grammar debate.*

Not many of us can have missed the brouhaha in January over the publication of two systematic reviews of research about grammar teaching. The reviewers' findings were pounced on by the press. They provided a controversial answer to a question that has haunted the teaching of English for over a century – what is the effect of teaching grammar on young people's writing? In case you missed it, the first of the two reviews found:

*there is **no** high quality evidence that the teaching of formal grammar is effective at improving the accuracy and quality of young people's writing.*

The reviewers also recommended that ministers review the National Curriculum in the light of this finding. Currently, teachers are required to teach traditional, formal grammar. Children aged from five to seven are expected to learn about nouns, verbs and pronouns. Older primary school students are expected to learn the names and functions of all the main parts of speech as well as the grammar of complex sentences, whilst Key Stage 3 students are expected to use their knowledge of sentence grammar in their writing.

But let's just set the record straight. The reviewers didn't conclude that traditional grammar teaching is a 'waste of time' – as suggested by some of the press – simply that formal grammar teaching doesn't help young people to learn to write well. They acknowledged that grammar teaching might bring other benefits, such as the ability to read with understanding, to use a dictionary, to learn foreign languages, or to edit and proof-read text.

### What helps young people to improve their writing?

Having found no high quality evidence that traditional grammar teaching helped young people to improve their writing, the reviewers went on to investigate the impact of teaching sentence combining. The results of this second review clearly showed that sentence combining is one effective method of helping young people to improve their writing skills.

### What is sentence combining?

The term 'sentence combining' covers different activities to help writers create longer and more complex sentences. For example, two sentences can be combined into one with a connective (such as, because, whilst, if, although, when, with, otherwise, as, since, rather):

The bag felt heavy. It had books in it.

The bag felt heavy because it had books in it.

A simple sentence can have complex constructions embedded into it. For example, the simple sentence, 'The bag felt heavy' could become, via a number of embeddings:

The faded blue bag, which (according to the detective) had been lying on platform 10 overnight, felt heavy to John when he picked it up on Thursday morning.

How young people are taught sentence combining is important – the activity is best set within meaningful writing contexts rather than presented as drill and practice exercises.

### Where next?

The reviewers suggested that although teaching formal grammar may be interesting or useful in its own right, teaching time is limited. So consideration should be given to other techniques such as sentence combining, which have been shown to be effective at helping young people to write well. They also called for a large-scale, well-designed randomised controlled trial to answer the question about aspects of grammar teaching that are effective at improving young people's writing.

### What's your evidence?

What have you found to be effective in improving writing? Until July 2005, the Qualifications and Curriculum Authority is hosting 'English 21' – a debate about how English should develop as a subject over the next decade, including how much emphasis there should be on the 'nuts and bolts' of language. The QCA hopes this will be the greatest debate on classroom English in the 21st century.

### How do we know this?

These were systematic reviews conducted within the guidelines and framework of the EPPI-Centre. The process involved a systematic search of electronic databases and reference lists from previous research published between 1900 and 2004 on the theme of grammar teaching. Thousands of citations were then screened for potential relevance to the review questions on the basis of their title and abstract. The papers obtained were re-screened on the basis of the full paper. Fifty-eight (25 literature reviews and 33 primary studies) met the criteria of the first review (syntax) and 64 (26 literature reviews and 38 primary studies) met the criteria of the second review (sentence combining). Out of these, the reviewers identified ten studies as highly relevant to the first review and 18 as highly relevant to the second. The reviewers assessed the quality of these studies and rated the evidence as high, medium or low. Then, they synthesised the evidence into two reports:

Andrews, R., Torgerson, C., Beverton, S., Locke, T., Low, G., Robinson, A. and Zhu, D. (2004) ***The effect of grammar teaching (syntax) in English on 5 to 16 year olds' accuracy and quality in written composition.*** In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education [Online]. Available at: [http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/review\\_groups/english/review\\_six.htm](http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/review_groups/english/review_six.htm)

Andrews, R., Torgerson, C., Beverton, S., Freeman, A., Locke, T., Low, G., Robinson, A. and Zhu, D. (2004) ***The effect of grammar teaching (sentence combining) in English on 5 to 16 year olds' accuracy and quality in written composition.*** In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education [Online]. Available at: [http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/review\\_groups/english/review\\_seven.htm](http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/review_groups/english/review_seven.htm)

## Hot websites

Every Child Matters is the hot new agenda for schools and colleges. But how easy is it to form effective partnerships between schools and other groups or organisations? How can we support students to participate more effectively in decision making?



### Renewal.net

<http://www.renewal.net/>

Try this site for examples of multi-agency working to solve common educational problems. Renewal.net covers topics from housing to health, and, of particular interest to Bulletin readers, an education section. Select this from the menu at the top of the page and four subsections appear below: Adult education, Post-16, Pre-16, and Early Years. An overview document introduces you to each of these sections, which are then broken down further, covering issues such as children in care, increasing participation, and Black and minority ethnic achievement. Each section contains a "problem solving" document with accompanying, validated case studies which offer real life examples of how that problem has been tackled in different schools and communities. There is also policy guidance, published research reports, and links to other relevant websites.

Once you've found something you're interested in, click on the preview link to open a window which gives a short summary of the document. You can also rate its usefulness (once you've read it of course!), or email it to yourself or colleagues. And you can see in the preview pane what else the document is linked to on the site, so you can get a better idea of its relevance to your purposes before spending time downloading the full document.

You can even get involved by sending in your own case studies. Click on "Send us content", to download templates and help on how to use them, then send them in.



### Thinking Together

<http://www.thinkingtogether.org.uk/>

We have introduced some of the work by the Thinking Together team in this Bulletin (see page 3). Led by Rupert Wegerif, this programme covers:

- "raising children's achievement through developing their thinking skills;
- making the most of computers; and
- developing and supporting good citizenship."

Key to these is the importance of talk between children, which facilitates reasoning. The simply designed website introduces the individual projects which have evolved from the Thinking Together programme.

In the downloads section, you can view and use examples of software that the team have developed for "Thinking Together" – why not try them out with your students? "Bubble dialogue" gets students to work in pairs to solve problems such as when "Kylie" comes home two hours late from a party – students can write the dialogue between "Kylie" and her dad and play it back, print it off, and save it (but be warned, to use this you will need RealPlayer installed). You can also try out "Kate's choice", an interactive programme where children can see the consequences of different actions, such as what to do if they knew their friend had stolen something.

There are also links to publications from the team, many available online, and some which need to be paid for.

## Litebites .....

### Alliance for Excellent Education

<http://www.all4ed.org/index.html>

The AEE aims to promote high school transformation to make it possible for every child to leave school prepared for post-secondary education and success in life. In particular, the Alliance aims to get low-performing students to aim higher and achieve higher. It is an American site, but see the Publications & Materials section and "Other Resources" for links to research and case studies covering literacy, preparation for FE, and teacher excellence, written by both the AEE and other organisations.



### The Freechild Project

<http://www.freechild.org/index.htm>

This large and busy American site aims to "advocate, inform and celebrate social change led by and with young people around the world". The Freechild project helps to give young people a voice on issues they care about through:

- training and technical assistance;
- public outreach in the form of conference presentations, network gatherings, and regional conferences; and
- resource development.

It is worth having a browse around – try clicking on "The Issues" blue box to find a list of summaries on such topics as Economic justice, and Community involvement. Each of these links to subgroups such as job discrimination against youth, and community libraries. Although some parts of the site verge on the unsuitable/wacky – for example the page on "ephebophobia", the fear of youth – this site may give you helpful ideas and examples in how to get your students participating in their learning, their school and their futures.

## Healthy, wealthy and wise - an update

So was it the last NERF bulletin or Mr. Oliver who hit the spot? One thing's certain: healthy eating's centre stage. Even before the C4 transmission, 2,000 schools were requesting Jamie's School Dinner recipes. And with filming long past, 600 children from the featured school continue to eat school lunch regularly, with another 100 buying the healthy packed lunches. Jamie Oliver's cycle of menus are in place in 25 Greenwich schools, the number rising to 80 in the autumn.

By now nobody can fail to know that the current average catering spend per child found by Oliver for a school meal was 37p. Nor that he found he needed all his contacts and expertise to provide healthy tasty meals within this budget. Could it be more than simple student choice that keeps the cheap and popular chip so permanently on the menu?

But the issues are further-reaching than a simple per capita spend. Twenty years ago most of the food served in schools was regional and cooked onsite, with the help of 240,000 dinner ladies – double the current number. Almost £154m has come off the national school meals budget since 1994. But according to Nelson et al, problems first started in the 1980s when the introduction of compulsory competitive tendering encouraged private contractors to undercut each other to get business. Catering contracts are therefore generally for a substantial period, and many modern schools have kitchens that are only capable of reheating or providing fast foods. They also generally have snack/drink vending machines, each of which might bring in an annual average of £13,000 to the school.

### WHAT DO THEY SPEND ON MEALS?

Barkerend Primary School, Bradford (providing a nutritionally-balanced meal for 340 4-11 year-olds) **about 40p a head**

Scottish Prison Service (providing three daily meals per prisoner) **£1.57 per head**

The average French school (providing a well-balanced four-course meals with fresh ingredients) **about £1.10 per head**

### TWO WAYS TO SPEND 37p

**Typical school dinner:** Turkey burger 15p, Chips 9p, Onion rings 7p, Beans 6p

**Jamie Oliver version:** Lemon roasted chicken 17p, Tomato pasta 9p, Green salad 11p

Now the government has stepped in with plans to improve the situation. It also wants to give parents a bigger say in ensuring that school food is healthier. Already many parents have opted out, sending an estimated 5.5 billion packed lunches to school each year. Sadly, according to the Food Standards Authority, three quarters of these also fail to meet basic nutritional standards.

So what is happening now? We did a survey of official websites and latest news reports to find out. As the contracts come up for renegotiation, schools are reviewing the options for their individual situation. Some schools are reacting quite simply, forgoing the profits from unhealthy vending machines, and trialling healthier options in the dining room. Some schools – both big and small – have turned their back on contractors in favour of an in-school chef, with remarkable results for food quality, meal take-up and profits. Some LEAs have created catering services that rely on good quality local providers. All-day cafés for staff and senior students, pre- and after-school meals, milk bars, and “healthy eating” vending machines are all in use to varying degrees. The concept of healthier eating is definitely on the menu – time will tell how effectively it appears in actuality.

Nelson, M., Bradbury, J., Poulter, J., McGee, A., Msebele, S. and Jarvis, L. (2004) **School Meals in Secondary Schools in England**. London: DfES (DfES RR no.557) [online]. Available at: <http://www.dfes.gov.uk/research/data/uploadfiles/RR557.pdf>

*Sustainable food in Schools* [http://www.dfes.gov.uk/valueformoney/docs/VFM\\_Document\\_290.pdf](http://www.dfes.gov.uk/valueformoney/docs/VFM_Document_290.pdf)

*The Guardian* <http://education.guardian.co.uk>

*Daily Telegraph* <http://www.telegraph.co.uk>

*Food Standards Agency* <http://www.food.gov.uk/news/newsarchive/2004/sep/lunchboxfactsfigs>

*The Observer* <http://observer.guardian.co.uk/>

## About this publication

The Bulletin has been produced for teachers, lecturers and all the professionals who support learning, wherever it takes place. It is a pioneering publication in the field of education, which aims to bring research evidence to the attention of practitioners to help them directly in their work. It does this by identifying matters of practical concern and selecting reliable research that addresses them.

Further copies are available free of charge by emailing [nerf@prolog.uk.com](mailto:nerf@prolog.uk.com), writing to **NERF publications, PO Box 5050, Sherwood Park, Annesley, Nottingham, NG15 0DJ**, or phoning **0845 6022260**. Please quote reference code **NERFB3** for this issue, or **NERFB2** for Issue 2. Issue 1 is now out of stock, but is available on our website.

All previous Bulletin issues and individual articles can be downloaded from [www.nerf-uk.org](http://www.nerf-uk.org)

This is the third pilot issue of the Bulletin. We hope to be able to bring you Issue 4 in the autumn term. Meanwhile, please let us know what you think by emailing [info@nerf-uk.org](mailto:info@nerf-uk.org): what topics would you like to see in the next issue? How can we improve the Bulletin?

This is a NERF project directed by Andrew Morris and coordinated by Jenny Buckland and Patricia McLean. The Bulletin is produced by the Centre for the Use of Research and Evidence in Education (CUREE) on behalf of NERF. The CUREE team is: Philippa Cordingley, Director; Miranda Bell, Editor; Zenobia Daar, Coordinator; Caroline Page, cartoons. Design and layout by Noel Stainer, DfES.



*National Educational Research Forum*

The National Educational Research Forum is an independent body with a remit to oversee the development of a national strategy and framework for educational research in England.