neral Teaching Council
for England

# Research for Teachers Teaching methods in England and France: A comparison 

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Why compare the school systems of different countries? What lessons can be learned?
When it comes to judging the progress of the nation's education system the media tends to focus on rankings provided by international educational surveys such as the Third International Mathematics and Science Study (TIMSS). More detailed comparative studies, on the other hand, go further in contrasting the processes and contexts in which learning takes place. These studies can be informative for teachers wanting to explore effective teaching and learning strategies. They make the strange familiar and the familiar strange in ways that help us to review current practice and take on board new ideas.

In order to take a closer look at the value of comparative studies, we have selected a piece of extensive research into the differences and similarities between French and English primary schools. The Quality of Educational Systems Transnationally (QUEST) project used specially devised literacy and mathematics assessments, as well as interviews and questionnaires, to:

- establish the ways in which pupils' performance differed from one country to the other, and
- explore the pedagogical and cultural reasons for those differences.

The study is:
Broadfoot, P., M. Osborn, C. Planel and K. Sharpe. Promoting Quality in Learning: Does England Have the Answer? London: Cassell, 2000.

The literacy and mathematics tests the researchers developed for the study were based on the national tests of both countries and translated into English/French so that all children worked on the same items. The study's findings on academic performance were comparable with those of the 2000 PISA survey, which found that,
overall, pupils from the UK performed better than their French counterparts in literacy and mathematics.
In addition to describing classroom practice and academic performance, the study reports on the way students in England and France perceived themselves as learners and citizens. We think the materials on children's views of their role as citizens, and how the issue of citizenship was dealt with in the classroom may also be of interest to those practitioners with responsibility for implementing citizenship across the curriculum.

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## Overview

## Why is this issue important?

Much work goes into developing and refining the education system, but teachers can find it hard to change their current practice and take on board new ideas. Comparing the English education system with other countries is a valuable way of helping teachers explore teaching and learning strategies, their effectiveness and the beliefs that underpin teachers' practices.

## What did the research show?

When the researchers compared English and French pupil's performance, they found they had different strengths and weaknesses in literacy and mathematics. In literacy, English pupils were better at reading comprehension, use of homonyms (words which have the same spelling but different meanings, such as bear and bare), technical aspects of writing (handwriting, spelling and punctuation), and purpose and organisation in story writing. French children made greater use of sophisticated syntactic structures and literary expressions. In maths, English children were better at shape, space and measurement and applying their maths knowledge in problem solving. French children's strengths in maths were with computation (addition, division, multiplication, and understanding place value and decimal points).English and French pupils' attitudes towards school and work also differed. Whilst English pupils regarded work as a collaborative effort and recognised the important social role it played in their current lives, French pupils saw school work as an individual pursuit involving cognitive skills, and regarded schooling as preparation for their future careers. Interestingly, (given the findings about their teachers' didactic teaching style reported in the next section) French pupils found school work relatively more interesting and more fun than English children.

## How was it achieved?

Key differences were identified between English and French teaching styles. Whilst French teaching was teacher-led consisting mostly of whole class activities with some individual pupil work, English teachers promoted small group and pair work. The teachers' beliefs about what constituted equality of opportunity (underpinning their teaching styles) also differed. French teachers held the belief that "every child has the right to have access to the same educational experience", while English teachers differentiated their practice to the needs of the individual child. It was apparent that despite attempts to introduce reform at the time of the study, teachers in both countries showed a resistance to change.

## How was the research designed to be trustworthy?

The study involved a sample of 400 French and 400 English pupils aged nine to eleven years. All the children involved in the study completed a questionnaire investigating their perceptions and understandings about teaching, school, national identity and citizenship. Pupils also sat literacy and mathematics tests and researchers conducted classroom observations and interviews.

## What are the implications?

The study shows:

- that pupils' classroom experiences are connected to their attitudes to schooling
- the importance of keeping the focus on enjoyment and engagement in the classroom while at the same time maintaining effortful learning
- cultural factors, such as national identity and citizenship, influence teaching and learning styles
- that encouraging teachers to change practice requires them to explore their underlying values and beliefs
- the importance of teachers engaging with the reasons behind educational policy in order to bring about change.


## What do the case studies illustrate?

The case studies show:

- how children may encounter difficulties if they focus on rule based approaches to problem solving in mathematics without at the same time developing number sense, pointing to the benefits of developing children's computational skills, the way French schools do
- the practical benefits of supporting pupil self-esteem which the study found was an important aspect of English primary education
- how whole class reading sessions can enhance children's vocabulary and syntax when writing their own stories
- how teachers are influenced by their cultural background in the way they assess pupils as well as the way they organise learning.
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## Study

## How did the pupils' literacy skills compare?

As the national literacy and numeracy strategies have been introduced in England since the QUEST project took place, the classroom practices the researchers observed then will differ from those of today, to the extent that the strategies have had an impact on teaching and learning. Nevertheless the study provides an interesting insight into links between approaches to teaching and learning, and pupil outcomes. It is also an opportunity for practitioners to reflect on the direction their teaching has taken since the introduction of the strategies.

Overall, English children performed better than French children in the literacy tests at:

- reading comprehension
- use of homonyms (words which have the same spelling but different meanings such as 'bear' - animal and 'bear' carry)
- technical aspects of writing (handwriting, spelling and punctuation)
- purpose and organisation in story-writing.


## Comprehension

Whereas the English children used inference skills extensively, and so could work out implicit messages in the text, such as people's feelings, the French children took a more mechanistic approach. The French children tended to quote directly from the text in the hope that this corresponded with what the question required, and in so doing more often gave an inappropriate response. The researchers found that even when English children were getting wrong answers, they were still attempting to infer information rather than trying to find it word-for-word in the text. For example, when asked to explain how a character in the text felt about an outing, English pupils typically inferred the answer from a relevant section in the text. One pupil, for example, inferred the answer: 'She felt it would be a long journey' from the section of the text which stated: "Getting to Bokeham was a slow, stifling journey, as we inched our way along the A1"

## Use of tenses, spelling and punctuation

Although French schools emphasised form and quality of expression in composition work, this did not necessarily give French children the edge on the formal aspects of writing, such as the use of punctuation and spelling. Furthermore, English children performed better than French children in the set grammar tests. They also demonstrated a more consistent use of tenses in their writing: 42 per cent of French children made at least
one error in their story writing, compared with 24 per cent of English children.
These results sat oddly with the amount of time that French children spent on learning formal aspects of the language. For example, nearly 6 per cent of time was spent on verb conjugations. However, the authors referred to the more extensive use of language in the English primary classroom, as opposed to the French emphasis on structure, as possibly being more beneficial to the development of these skills. Observations showed that English pupils spent a greater proportion of classroom time on reading ( 10 per cent compared with 3 per cent) and writing ( 19 per cent compared with 1.5 per cent in France).

## Story writing

The researchers found national differences in children's story writing. These were especially marked for children attending schools in more affluent areas. Higher achieving English children's stories contained a greater use of imaginative vocabulary and descriptive passages. For example:
"I walked off into the inky darkness of the room. Everything was bare except for large flaring torches nailed to the wall."

Encouraging children to use a wide range of vocabulary, and a variety of ideas is an important element in developing their writing skills. Practitioners may like to read a case study that shows how the development of story time in one primary school helped children extend their use of vocabulary and ideas in their writing. They monitored children's writing and found the children echoed phrases they had encountered in teacher reading sessions.

## How did the pupils' mathematical skills compare?

Overall, English children performed better than the French cohort in their own national mathematics tests, and vice versa. More detailed differences emerged along national lines in relation to specific aspects of performance in particular mathematical skills.

| Overall, English children were better at: | Overall, French children were better <br> at: |
| :--- | :--- |
| placing fractions in order of size |  |
| shape (eg working out the shape of an object |  |
| seen from above) | addition <br> space (eg calculating the area of a rectangle), <br> division <br> multiplication, and <br> and <br> measure (eg working out the perimeter of an <br> irregular object). |
| points. |  |

English children were also better able to apply their maths knowledge in a problem-solving investigation which required them to identify and formulate rules for adding and subtracting odd and even numbers.

According to the researchers, the results showed that overall:

- children's performance was in part affected by the fact they had been prepared for particular tests and so, overall, did better in their national tests. The strengths of the English children reflected the wider range of maths areas they covered, including probability, averages and investigative maths. French children, on the other hand, displayed a higher level of ability but in a narrower range of maths areas
- English children were better at taking a more informal or experimental approach to a problem, whereas French pupils did better when the question required more technical ability
- children did not do so well when faced with unfamiliar test items.

The researchers suggested the better performance of French pupils on questions that required computational skills was linked with the rehearsal and practice which were such an important part of their mathematics lessons. Since this research was carried out the national numeracy strategy has specifically set out to improve children's computational skills in England. Over the same period there has been a gradual improvement in children's numeracy skills at KS2. Practitioners may be interested in reading a previous RoM about how the National Numeracy Strategy (NNS) was implemented in six primary schools. Of particular interest is how teachers have introduced individual whiteboards to check pupils' progress during whole class mental arithmetic sessions, reminiscent of the French approach in this study.

Practitioners may also like to read a case study which illustrates the importance of encouraging children to develop conceptual understanding of mathematical problems as well as skills in computation.

## How did teachers organise their pupils' learning?

The study identified quite distinct differences in the way teachers organised learning. The French classroom was on the whole a lot more teacher-focused, and children tended to work individually on the same task. In contrast, English pupils were observed conducting a variety of tasks simultaneously, and tended to receive teacher attention in groups.

Classroom observations revealed contrasting approaches to teaching in English and French primary schools. French lessons were characterised by a cycle of teacher-led introduction, individual practice, and then whole class feedback. As a consequence French children spent the majority of their time ( 76 per cent of observed time) on whole class activities, and relatively little ( 16 per cent) working with each other in pairs or groups.

English teachers, on the other hand, sometimes encouraged children to work and talk with each other. The report quoted one teacher giving instructions to pupils, "you can talk to each other to help each other". The English primary teachers spent less time than their French counterparts on whole class interaction with children ( 50 per cent), but rather arranged lessons in a way that promoted collaboration between children (39 per cent), mostly in pairs.

In order to put these percentages into context, the authors gave an account of two observed lessons, one in a French classroom, and one in an English classroom.

## An example of a French mathematics lesson observed by the researchers

When describing the French lesson, the researchers presented a clearly defined sequence of events. The teacher asked a question and the children wrote the answer on a slate. The teacher then asked all the children to hold up their answers and checked them before asking the children to wipe the slates ready for the next question, and so on. Later the teacher asked a child to write the title of the lesson on the board, and asked the pupils questions to see how much they remembered from the previous lesson.

## An example of an English mathematics lesson observed by the researchers

The researchers described the English mathematics lesson more as a direction of tasks for the children to do than a lesson as such. Initially the children worked alone, and then swapped books to mark the first exercises, while the teacher moved around the room to give brief feedback. The children then continued with their work, measuring angles, and the teacher helped individuals. As the lesson progressed the teacher brought a boy to the front of the classroom, had him stretch out his arms, and moved him round $90^{\circ} / 180^{\circ}$. Children volunteered to move the pupil following the teacher's instructions. Others put up their hands to say whether the instructions had been carried out correctly. Some children were not listening to the teacher's explanations but getting on with their work. The teacher then referred the pupils to a page in their text book, checked that they understood the task, and set them to work individually.

The lesson described above was observed before the introduction of the national numeracy strategy. English primary teachers are now required to implement whole class approaches as part of the numeracy hour. Practitioners may be interested in reading a case study from a previous RoM which illustrates how teachers employed multi-sensory strategies to teach mental arithmetic both at whole class and group level.

## What pupil behaviour resulted from the way lessons were organised?

The researchers identified a link between the styles of teaching as described above and pupil behaviour in the classroom. Analysis of observation notes revealed that French children spent more of their time on task (68 per cent compared with 57 per cent in English classrooms), and also that they were much less distracted from their work.

However, the researchers did not find that French children were necessarily more focused on their work because of self-motivation. French children had less opportunity to be distracted because the teacher dominated classroom activities to a greater extent. When French children worked individually, on the other hand, their levels of task engagement dropped. This seemed to show the higher work rate among French children was a result of the way their teachers managed classroom activities, rather than any intrinsic difference in their attitude to work.

## What underlying principles were linked to teachers' attitudes towards differentiation and diversity?

On the basis of their observations in this study, and wider analysis of related research, the authors identified clear distinctions in what French and English teachers regard as equitable treatment of pupils. They concluded, for example, that French teachers did not differentiate out of principle. French teachers felt it was every child's right to have access to the same educational experience, and by ensuring this right they felt they could secure equality in the system. French teachers were also more likely to expect children to work on a task until they completed it successfully. The emphasis here was not on the teacher to adapt strategies, these were prescribed. It was up to the pupil to make the effort. In the words of one French pupil in the survey:
"A good teacher should make the pupils work hard."

English teachers, on the other hand, expected to differentiate their practice in order to accommodate the needs of the individual child. Practitioners on this side of the Channel took into account a child's emotional circumstances. Their interaction with children was varied and diverse, facilitating deeper relationships through which social, moral, emotional and spiritual values could be developed in the context of personalised understanding. The study found that for them it was important that children felt happy in their school environment. This was a point confirmed by the children themselves when they commented on what a good teacher should be:
"Nice teachers are not always doing hard work, giving us a bit of a play, not being strict all the time, not like if you get one question wrong and you get told off."

It is not only in teaching strategies where English teachers differentiate according to the prior attainment and circumstances of the individual child, but also in the way they assess pupils. Practitioners may like to read a case study which describes the different approaches to classroom assessment taken by French and English primary teachers.The focus in France on benchmarking progress against an explicit standard contrasts with the personalised feedback given by English teachers.

## To what extent did national reform bring about change in the educational systems?

Analysis of national policy and local conditions showed that underlying national attitudes and traditions were, to a certain extent, resistant to change. The researchers found that despite reforms which brought more control to the centre in England, and attempts to create more diversity in France, the English system continued to be characterised by individuality and diversity, whilst the French system remained a centralised, bureaucratic structure.

## France

In 1989 the 'loi d'orientation' was introduced in France which looked to promote a more child-centred approach to education. The law also intended to increase school autonomy in the organisation of learning. However, the classroom practice observed in the study showed that teachers and schools were not implementing a differentiated approach. The focus of French lessons was still on:

- the acquisition of skills to standardised national levels
- a transmission style of teaching
- moving the class forward as a single unit.


## England

The authors believed that the English system had similarly absorbed recent reforms without its diverse nature, and approach to teaching and learning being fundamentally changed. They pointed out that, despite the increased powers the 1988 Education Reform Act had given to central government in terms of the introduction of a National Curriculum, there was no single line of control comparable to that which exists in the French system. In contrast with France, a wide range of bodies exist which can influence school practice, including Ofsted, QCA, TTA/TDA (all as 'arms' of central government), voluntary organisations such as churches, and parents. Indeed, reforms in English education appeared to underpin a tradition of diversity, promoting as they did:

- parental choice leading to competition between schools
- delegation of budgets to schools
- the role of the headteacher in setting out the values of the individual school.

As an illustration of how closely related national culture and teaching practice can be, practitioners may like to read a case study (click to case study 4) which explores the importance French practitioners place on the teaching of handwriting. Among other things French teachers tended to believe developing handwriting skills is linked to improved performance in other curriculum areas, such as PE, and is regarded as a prerequisite for accessing French culture.

## What were the attitudes of English and French pupils towards school work?

According to the study, English pupils found school work more difficult than their French counterparts, and saw it as taking a long time to complete. They more often regarded work as a collaborative effort, whereas the French children were more likely to see work as something that was done individually and in silence. The children of both countries defined their school work as involving finding things out, and French children were more likely to see it involving some rote learning as well. Interestingly, given the findings in relation to rote learning and working alone, the French pupils also found school work relatively more interesting and more fun than English children.

On the whole English children had a more holistic and broad perception of work. They included social and physical skills in their descriptions of work, while French children defined work in narrower terms as involving mainly cognitive skills.

When expressing a desire to do well in school, the French children displayed greater ambition: 46 per cent compared with 19 per cent of English children strongly agreed with the statement, "I would like to be the best in the class." Other comments by English pupils revealed that peer pressure was a strong factor influencing their desire not to appear a 'goodie'. They reported being teased for producing good work, something which did not come up as an issue for French children.

## What were children's attitudes towards school and their teachers?

French children viewed the function of school as preparing them for their future career, and correspondingly viewed teachers as people who primarily should facilitate their academic progress. In line with findings elsewhere in the study, English pupils believed school had an important social role to play in their present lives.

## School as a place of work

When discussing the role of school, French children stressed that it was a place where they were expected to work hard. English children, on the other hand, tended to regard school as much as a setting of social interaction as one of hard work. Practitioners may like to read a previous RoM about Vygostky, which explored the role of social interaction in the learning process.

## The role of school in children's future lives

French children expressed a clearer idea that school was there to help them find a good job in future. The views of lower achieving French children were just as strong as more able children on this point. In contrast, lower achieving English children did not make the connection between school and their future lives. They suggested instead that school should provide the conditions in which pupils could be happy.

## Children's expectations of their teachers

Similar attitudes were apparent in pupils' expectations of teachers. French children thought that teachers should make them work hard and focus on their academic progress. French pupils described their teachers' practice as a lot stricter than English pupils described their teachers' practice. French pupils also said teachers usually focused on children getting the right answer. English pupils, on the other hand, believed that teacher behaviour should be humanistic, personalised and directed to all aspects of school life. They valued teachers who were able to make learning interesting and fun. These were not characteristics touched on by the French children.

The humanistic, personalised approach favoured by English children is not just a reflection of cultural attitudes; it can also have a positive impact on pupil outcomes. Practitioners may like to read a case study that explores how teachers can help low-achieving pupils perform better academically by supporting their selfesteem.

## What was the children's image of their teacher's ideal pupil?

English children were also less keen to be identified as an ideal pupil. One child described what he thought his teacher would like a good pupil to be, and then distanced himself from the image:
"She would like him to work a lot, not get in trouble at all, be a teacher's pet, and he will be a goody-goody. I work a lot but I am not a goody-goody. I am not a teacher's pet and I don't stay out of trouble at all."

Overall children's descriptions of their teacher's ideal pupil varied. English children thought their teacher valued above all good behaviour and a desire to learn, rather than achieving good results, while the latter was predominant in the French children's responses. English children also felt their teachers valued characteristics such as kindness, honesty and a willingness to share. These were not characteristics mentioned by the French pupils.

## How did English and French pupils see themselves as citizens?

Through a series of questions the researchers attempted to ascertain the strength of pupils' sense of national pride, their sense of belonging to France or England, and the extent to which they dealt with issues of citizenship in the classroom. The responses showed that French children had a greater sense of pride in their country, and that aspects of citizenship were more overtly taught in French schools. However, it is important to bear in mind that greater emphasis and guidance on the teaching of citizenship has been introduced into English primary schools since the time of the study.

The authors distinguished between three aspects of citizenship - pupils':

- sense of national pride
- ideas of being English/French
- ideas about citizenship.


## Sense of national pride

French pupils appeared to have a greater sense of national pride. Just over half ( 57 per cent) strongly agreed with the statement: "I feel very proud of being French", and only 12 per cent disagreed. Among the English pupils there was more uncertainty regarding the equivalent statement: 35 per cent strongly agreed; and 20 per cent indicated that they were "not sure".

Ideas of being English/French
English children's ambivalence towards their nationality was even more marked when in response to the
statement: "I consider myself to be very French/English", 55\% of English children agreed, in contrast with 85 per cent of French children (of whom 70 per cent strongly agreed).

## Citizenship in the classroom

The researchers wanted to know the extent to which children felt they were learning about their role as a future citizen in school. Only 30 per cent of English children agreed that this did feature in their lessons, and 30 per cent were not sure. In France, on the other hand, 60 per cent of children agreed that school was preparing them as future citizens. It appeared that, at the time, French schools had a more overt approach to teaching citizenship values. A further question teased out how egalitarian they thought their country was: 41 per cent of French children agreed with the statement: "In France all citizens are equal" ( 27 per cent strongly). In England 31 per cent of children agreed with this statement, of which only 12 per cent strongly.

The authors also found that, despite the fact the French system apparently placed greater emphasis on learning about what it meant to be a French citizen, this was not to the exclusion of learning about other cultures. More French children agreed with the statement: "In class I learn about the life of children who are not of French origin" ( 55 per cent), than English children with the equivalent statement ( 41 per cent). Furthermore, there was a much wider gap between the responses of English children from advantaged and disadvantaged areas, than among French children. Children in disadvantaged areas felt that they were much more likely to learn about the life of children not of English origin.

Since this study was published citizenship has been formally introduced into the curriculum at all levels of the English school system. Interestingly, the national curriculum is based on a broader understanding of citizenship than is the case in the French system. The national curriculum promotes active citizenship, such as involving children in decision making, as well as requiring schools to develop an understanding of state institutions, and rights and responsibilities. Practitioners may like to read a case study on the impact of creating democratic processes for children in a primary school.

## How was the research conducted?

A sample of 800 children aged 9 to 11, half from each country, formed the basis of the research. The researchers sought to achieve a broad socio-economic and geographic mix by selecting four schools in each of four contrasting regions: Kent and Avon in England; Pas-de-Calais and Bouches-du-Rhône in France.

All children completed a questionnaire which was administered by a trained researcher. The questionnaires contained fixed response and open-ended questions covering each child's:

- perception of teaching and the curriculum
- understanding of the purposes of schooling
- views of an 'ideal' pupil and school
- perspectives on national identity and citizenship.

The researchers also carried out classroom observations and interviews with a sub-sample of children to gain a more in-depth insight into the issues raised in the questionnaires.

In addition, whole class observations provided insights into how teachers organised learning in their classrooms, as well as pupil behaviour.

The pupils also sat tests prepared especially for the research. In compiling the tests, the researchers selected questions which represented the breadth and depth of each curriculum. In maths the researchers did not include any question that could not at least be attempted by all pupils.

The tests were administered and marked following national test guidelines.

## The literacy test

The researchers assessed children's national language skills using two complementary test papers. The first,
reading comprehension paper, consisted of four test items:

- retrieval of information from a text (taken from French national tests, and translated into English)
- making inferences from a text (selected from English national tests, and translated into French)
- correct identification of the spelling of homonyms (eg 'they're', 'there', 'their' in English, and 'habiter', 'habitait', 'habité' in French)
- use of punctuation (taken from French national tests)

The second language test was taken from the English national tests and consisted of a story-writing exercise: beneath an illustration of a half-open door appeared the rubric - "Write a short story about what happens when you open the door."

## The mathematics test

The children's maths skills were assessed in three tests: one containing questions from the 1995 French national assessments, one containing questions from the 1995 English national tests, and one which assessed children's skills at problem-solving.

## What are the implications of the research for teachers?

School leaders may like to consider the following implications for practice:

- Test results showed that children performed better on the types of task they were familiar with in their national tests. Would your school also find it helpful to develop more open-ended problems in their assessments so that children become more flexible in their approach?
- Teachers' different beliefs of what constituted equality of opportunity led to different practice in the two countries: differentiation in England, and whole class teaching of the same material in France. This would suggest that encouraging teachers to change practice also requires an exploration of underlying values. What opportunities are there in your school for professional development which attends to teachers' own starting points and beliefs?
- The study found that a much lower number of children in advantaged areas felt that they were learning about the life of children who are not of English origin ( 28 per cent), than children from disadvantaged areas ( 54 per cent). This suggests that it may only be because of the physical presence of ethnic minority children that schools feel it is necessary to include the learning of their cultures in the curriculum. How many aspects of life in England beyond their immediate experience are children learning in your school? What links could schools in different areas establish so that children can get a broader understanding of the way other people in England live?

Teachers may like to consider the following implications for practice:

- The greater use of group work in English classrooms seemed to be linked to higher levels of pupil distraction. We know from recent evidence that teachers need to scaffold and structure group work for children to benefit from the collaborative learning that can take place. What group work arrangements, in your experience, engage children and give them an incentive to stay on task?
- French children felt they worked hard at school, and spent more time on task, and yet they also expressed more pleasure and interest in their work than English children. How can you keep the focus on enjoyment and engagement in the classroom while at the same time maintaining effortful learning?
- English teachers seemed under more pressure than French teachers to provide interesting lessons. Which other RoMs could you use to explore new ideas for practice in your area?


## Filling in the gaps

Gaps that are uncovered in a piece of research have a useful role in making sure that future research builds cumulatively on what is known. But research also needs to inform practice, so practitioners' interpretation of the gaps and follow-up questions are crucial. We think the following kinds of studies would usefully
supplement the findings of the study:

- more up to date comparisons which would take into account the impact of the national strategies introduced since this study was carried out
- research into the consequences of an emphasis on pupil happiness and its connection with engagement
- studies which explore the connection between teaching practice and children's acquisition of vocabulary
- studies which explore the comparative role of parents in school in different countries.


## What is your experience?

Do you have any evidence regarding the impact of different approaches to teaching in your school? Do you have action research or enquiry based development programmes running that explore cultural differences and attitudes in education, for example, which we could perhaps feature in our case study section.

## Your feedback

Have you found this study to be useful? Have you used any aspect of this research in your own classroom teaching practice? We would like to hear your feedback on this study. To share your views with us please email: research@gtce.org.uk
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## Case studies

We have selected six case studies which provide perspectives on the themes covered in this RfT: the teaching of literacy and numeracy, differentiation, affective strategies in the classroom, and citizenship. The first and fourth case studies consider different approaches to developing primary children's literacy skills. Case study 2 focuses on the importance of developing children's number sense alongside teaching them algorithmic procedures. The third case study looks at the way different concepts of equity among teachers lead to differences in the way children are assessed. Case study 5 describes how children's attitude to maths learning improved after they had received targeted affective support. Case study 6 describes how one English primary school used the vehicle of school and class councils to give children hands-on experience as active citizens.

## How listening to stories can help children develop literacy skills

We chose this case study because it illustrates a link between whole class reading and improvements in children's repertoire of active vocabulary. The main study found that higher performing French children were more likely to use literary vocabulary, and higher achieving English children used more imaginative vocabulary and descriptive passages. This case study shows how whole class reading sessions can help English primary children develop their writing skills, including adopting the syntax and vocabulary they encounter during story time.

This study grew out of a concern among teachers of Year 2 children at a rural primary school in Dorset. The teachers felt that the reading aloud component of literacy teaching and learning was being squeezed out of the school day. They felt that whilst shared reading of 'big books' offered children the opportunity to become more aware of the nature of print, listening to stories read aloud exposed children to a greater range of texts, and could possibly have a positive impact on their writing. They therefore decided to test this theory by investigating the extent to which elements of stories that had been read aloud to the children were 'echoed' in their writing.

The teachers interviewed 15 children individually to elicit their views on story time and writing as an activity. Six writing samples were collected from each child covering a range of writing styles. They also videoed three story time sessions, and kept ongoing observation notes to record classroom activities.

## How did teachers structure story time?

The teachers reintroduced regular story times which involved stories being read aloud. By promoting reading aloud to the children they hoped to present them with a rich variety of language and text structure. Teachers chose books for their relevance to current learning and the richness of their language.

The project involved a range of different approaches to engage children with literature:

- Stories were read by the teacher with breaks for pupil discussion, and also without breaks. This presents the text in a vivid fashion to enable children to grasp the power of the text.
- Pictures were shown after the page was read, which allowed children time and space to picture the idea in their heads.
- Teachers read some texts only once, and re-read others frequently at story times, individually and in small groups.
- Large texts were used for shared reading and discussion.


## Story time had a direct impact on helping children develop their writing skills

The children reacted positively to the reintroduction of story time as a regular event and pupils' writing levels improved over the course of the study. Echoes from story time were found in almost all samples of children's written work. For example, one child took ideas from Bear's Adventure (Wildsmith, 1981), to write about rabbits which were interviewed on TV, in the same way as the bear in the story, and called the rabbits 'Mr and Mrs Eeeeee' just as the bear in the story was called 'Mr Grr'.

The teachers found that pupils were adapting the language and content of the stories in their own writing. Echoes ranged from openings and characters, to the use of syntax and vocabulary used in the texts. In most cases pupils transformed and combined ideas rather than simply copying them. One girl, for instance, added a fairy tale element to her Robin Hood story, in which he found a diamond which granted him wishes.

The teachers also found that in story time sessions the presentation of the text was less significant than the power of the text to engage and motivate pupils. This underlined for them the importance of selecting quality literature for use with pupils. One child commented:
"Sometimes there are really funny things in there and they make you smile. It takes your mind round for a walk and it settles you down."

## Reference:

Dodd, M. (2006) 'Taking your mind for a walk' - Why story time is valuable. National Teacher Research Panel summary.

Available at: www.standards.dfes.gov.uk/ntrp/lib/pdf/dodd.pdf

## Supporting children's skills in calculation by developing number sense

We chose this case study because it sheds light on the difficulties children may encounter if they focus on rule based approaches to problem solving in mathematics, without at the same time developing number sense. It therefore provides an additional perspective to the benefits of developing children's computational skills, prevalent in the French schools of the main study, and which is now a prominent part of the national numeracy strategy.

Number sense refers to the ability to handle everyday situations involving numbers, for example, when making approximations and estimating answers. Having number sense is associated with the development of flexible and efficient strategies for tackling problems.

The study explored how children in Taiwan, who learn mathematics mostly through rule based approaches, tackled some problems involving decimal numbers that required them to use number sense in order to answer
the questions efficiently. The study involved 24 children aged $11 / 12$ years in four schools that were randomly selected for the study. The students primarily used standard written calculations in their approach. When the answers were correct the method was not always efficient and they frequently achieved incorrect answers through rigid adherence to the set methods.

## How was the students' reasoning explored?

In an interview setting the students were set a series of problems and then were asked to explain their reasoning. The interviewer used a number of probes which had been designed to explore the thinking employed by the students when tackling the problems, including:

- Please justify your answer.
- Please tell me your reasons.
- Please tell me how you did that.
- Can you do it another way?
- Why did you do it that way?

Students' responses were sorted into three categories:

- Number sense based - showing they could use strategies such as estimation, judging reasonableness, having an idea of number magnitude.
- Rule based - application of standard written algorithms but unable to explain anything beyond the direct application of the rule.
- Unable to explain - despite probing by the interviewer.


## What did the study reveal about the students' thinking when they tackled the problems?

Although the students answered 70 problems, correctly, only 19 were based on number sense. Exploration of the other correct answers revealed that students either presented explanations that were rule based or they couldn't provide an explanation at all. For four out of the seven problems, no students used number sense. Of the 76 incorrect responses there was no indication that students had used number sense. On a number of occasions the students commented: "I didn't learn this in my mathematics class, so it is difficult for me."

One illustrative example involved a question that required an estimation strategy. The interviewer presented each student with the problem:

- Without calculating an exact answer, circle the best estimate for $72 \div 0.025$.

An effective and efficient number sense based answer was illustrated by this exchange:

S2: A lot more than 72.
I: Why?
S2: The result will become larger when it is divided by a number less than 1 . Since 0.025 is quite a bit smaller than 1 the result of 72 divided by 0.025 will become very much larger.

Whilst some students successfully used a rule based method, it was clearly less efficient:

S1: A lot more than 72.
I: Why?
S1: This number (0.025) has three decimals, so we must add three zeros to 72 . Hence $72 \div 0.025=72,000 \div 25$. Si nce 72,000 is a very large number, the answer should be a lot bigger than 72 divided by 25 .

Here the student could not explain that 0.025 is very small, and used a method based on the rule for long
division instead.

Nine of the 21 students answered incorrectly, using a partial understanding of the long division rule. A typical response was:

S3: A lot less than 72 .
I: Please justify your answer.
S3: Because division usually makes the result smaller.

The study author concluded that an overemphasis on standard written calculations not only discourages children from developing number sense, but also acts as a barrier to the development of their thinking and reasoning. It seems to be difficult for them to attain conceptual understanding once they have learned rote procedures. So whilst they might be skilled in computation their conceptual understanding could be poor. The picture is further complicated by evidence that in some cases students apply the rules incorrectly too.

## Reference:

Yang, D. (2005) 'Number sense strategies used by 6th-grade students' in Taiwan Educational Studies, 31 (3) pp.317-333.

## How national attitudes influence the way English and French teachers assess their pupils

We chose this case study because it provides further insight into the different standpoint English and French teachers take with regard to the purposes of education. In the main study the researchers reported on differentiation as a strong characteristic of the English education system, suggesting that this might be linked to deeper cultural understandings of equity. This point is underlined by the approaches to assessment described in this case study. The study compared two examples of assessment feedback, which they used to draw out beliefs and values of teachers in the two systems:

- The French example focused on a four-year-old child who is learning to count objects and write numerals correctly.
- The English example described the process of giving a seven-year-old child feedback on a piece of written work.


## How did the teachers carry out the assessments?

The French teacher gave the child a sheet with 13 groups of objects of various quantities. The child was asked to circle the groups which contained four objects, and then write the number 4 beside each of them. When the teacher checked the child's work, she congratulated him on successfully circling the correct groups, but also pointed out that he had not completed the entire exercise successfully:
"Tu as du mal, hein, mais tu as fait des progrès" (You're finding it difficult, aren't you, but you've made p rogress).

The teacher then graded the child's work, 'assez bien' (fair). This is the third grade in a four grade system, the lowest, fourth grade indicating that the work needs to be done again.

The English scenario in the study described a process called 'good work check-up'. This entailed a committee of several teachers and a headteacher looking at the book of one child in each class of the school, selected at random. On the basis of this the teachers completed a certificate whose aim was to provide an incentive to the child and inform the child's family on progress. One comment was:
"I have looked at all your work and I can see that you are much happier at school this term. There are some good finished pieces of work. If you find your work difficult, always still have a go and remember that Miss P. will always help you if you are trying. Next time I see your work I want to see some lovely writing on the pages of your literacy book. You are getting better and better. Good girl."

## What did the two processes reveal about teacher attitudes and beliefs?

The first point made by the author was the personalised nature of the way the English teachers approached feedback: the French child received a written mark which indicated the gap between the level the child had reached and the standard expected for his year. The written feedback aimed to be objective and not related to the circumstances of the individual child, although the French teacher did acknowledge his progress in her oral feedback. The feedback the English teachers gave did not take into account the pupil's performance against set criteria, in contrast to national tests, but focused instead on the child's own progress and efforts.

Secondly, the comparison illustrated the difference in the scope of what teachers feel should be tested. The French test illustrated what the author believed to be a widely held belief among French teachers that tests should be a neutral measurement of attainment for a specific task. The certificate for the English pupil covered a broader range of factors, from academic achievement to motivation and social interaction.

The approaches to assessment also showed that the English teachers considered the formative function of feedback to be of greater importance than the French teacher. Their feedback gave the pupil a clear indication of what she needed to do in future and what teachers would be looking for in her future work.

## Reference:

Raveaud, M. (2004) 'From assessment practices to conceptions of equity: France and England compared.' Paper presented at the European Conference on Educational Research Conference. Crete, September 22-25, 2004.

Available at: www.leeds.ac.uk/educol/documents/00003671.doc

## Adopting a French approach to teaching handwriting

We chose this case study because it offers fresh insight into the place of handwriting in young children's early literacy learning, which brings into focus the different beliefs and approaches to writing in English and French infant schools. The study arose because of English teachers' concerns over the poor quality of children's creative writing and of the quality of the writing itself, in comparison with some French children's writing at a similar age.

This teacher research project took the form of a comparative study set in infant schools in Kent, England and in northern France. A teacher at one English school undertook a series of visits to infant and primary schools in northern France. She based her findings on interviews with French academics, teachers, headteachers and education professionals and on previous research relating to handwriting of both countries.

The importance of handwriting as more than a functional skill in French schools
The study showed that:

- there was a greater sense of a shared cultural understanding of the importance of handwriting among French infant teachers
- teaching of handwriting was a higher priority in French infant schools than in the English schools
- in French infant schools teachers had a much more developed knowledge of writing as a complex mix of gross and fine motor skills, and visual and spatial control, supported by a wide range of literature
- consequently, French teachers believed art and PE were closely linked to the teaching of handwriting
- in French infant schools handwriting was regarded as a facilitator to creative writing
- schools, local authorities and institutions of higher education maintained a shared commitment to handwriting as a
- when a greater emphasis was placed on developing handwriting skills in the researcher's school, teachers noticed an improvement not just in the form of the writing but also in children's ability to communicate their ideas and in their presentation.

The teaching of handwriting in France was closely associated with the French view that it is important for individuals to acquire this skill if they are to access learning and communication as a part of being a French citizen. As one headteacher put it:
"If our pupils can gain access to culture, they can communicate with anyone. And to do this they need to be familiar with its symbols - the symbols in writing, in reading, in art, in maths, in music."

Handwriting, in the French schools, was seen as more than a functional act. It was considered to be a 'graphic act' which was fundamental to the child's overall learning. Teachers needed to exercise patience, skill, knowledge and sensitivity while the children acquired handwriting skills. The findings showed that it was a lengthy process beginning at age 3 years when the children enter school to the age of $8 / 9$ years. In France practitioners considered writing, on the one hand, to be similar to an expressive art such as PE, art and music, and on the other, as a tool for developing powers of concentration and memory. By comparison English teachers felt that it was not necessary to go to such lengths which they regarded as 'too specialist' and not relevant to the average child.

## What lessons did English teachers draw from the French model?

As a result of the findings the English school in the study adopted a radically different approach to the teaching and learning of writing.

- In the initial phases of creative work children expressed their thoughts exclusively in spoken form.
- The school spent a longer time than previously on the development of the fine and gross motor skills needed for fluent writing styles to emerge.
- Teachers no longer acted as scribes for individual children, and gave them printed writing to work from.
- Teachers at the school saw a marked increase in the quality of the children's work in relation to: communicating their thoughts and in their speed of writing, punctuation, spelling and grammar. In the words of the researcher "It is as though having automated the hand, the children's minds are 'liberated' to release their ideas more effectively and creatively on paper."


## Reference:

Thomas, F. 'Une question de writing?' Research project commissioned by the Teacher Training Agency, 1996/97
Available at: www.tda.gov.uk/upload/resources/pdf/t/tta07.pdf

## Paying attention to self-esteen to raise attainment

We chose this case study because it illustrates the practical benefits of supporting pupil self-esteem, indicated as such a salient aspect of English primary education in the study.

Whereas French teachers emphasise effort rather than ability as the important factor in pupil attainment, English teachers take children's academic levels into consideration to a much greater extent. As a consequence English teachers pay more attention to differentiation when planning and devising materials. However, it is clear from this case study that, in some cases at least, differentiation has to be accompanied by efforts on the part of the teacher to support their students' learning affectively as well as, or even more so, than cognitively. It is possible that this consequence is related to pupils' sense that differentiation is a reflection on their personal characteristics at the same time as on their academic ones.

This case study explores the nature and impact of an 11-week teaching project to improve the mathematical
performance of six low-achieving Year 6 children. Five of the children had been judged to be at level 3 and one at level 2 .

## What was the problem?

The children worked with a researcher separately from the class for 11 weeks - around 60 hours altogether. All of the children had a negative view of their maths ability. When they got stuck with a problem they displayed avoidance behaviours such as crying, not saying anything and refusing to participate. When they were asked "What do you think helps people learn mathematics?" four pupils (all girls) said "working hard", while the two boys said "being clever". Each lesson was videoed; the researcher reviewed each recording prior to the next lesson in order to look for patterns.

## What was affective support and how was it used?

The key problem was that when the children got stuck they went into negative behaviour patterns of the kind mentioned above. Initially, the researcher responded by commenting on their behaviour before bringing them round to tackling the problem again. Observation of the video recording showed that she had been distracted by the children's response and had spent too much time on it; it had dislocated the learning experience. She modified her approach so that she tackled the issue of the children's self-esteem first, with the intention of creating a greater chance of the children having a clear run at the mathematical problem.

The researcher referred to this initial interaction with the children as a 'self-esteem discussion'. One such discussion was as follows:

Pupil 1: You want to see us struggle (Checking)
SP: Yes. I want to see what you know already. (Confirming)
Pupil 2: OK (Acceptance)
Pupil 3: Do we have to? (Resistance)
SP: Yes - this morning. (Insistence)
Pupil 3: (moans) (Resistance)
SP: Tomorrow we can sort out the struggling. (Insistence)

## How did the pupils' attitudes and behaviour change?

As the project progressed to its later stages the children began to struggle with the tasks without the discussion at the beginning. The researcher commented:
"When completing a difficult number line that required connecting ideas about fractions, decimals, positive and negative numbers, they struggled with the elements of the task but persisted until they understood....They accepted that struggle, being stuck and making errors were a normal part of learning mathematics and did not disengage."

From this point on she relinquished her role as providing affective support and instead provided cognitive support. When they returned to normal mathematics lessons the children who had been in the project group were observed to show a much improved attitude to learning.

Of the six children five achieved the target level four in the national tests and one of them achieved level 3 . One pupil's score placed him in the middle of his year group in attainment terms.

## Reference:

Pendlington, S., (2004) Low Self-esteem: its effect on low achievers learning. In Noyes, A. (ed) Proceedings of the British Society for Research into Learning Mathematics, 24 (3), pp. 27-32.

Available at: www.bsrlm.org.uk/IPs/ip24-3/BSRLM-IP-24-3-5.pdf

We chose this case study because it provides an insight into one way in which English schools are implementing citizenship as a school activity. The main study illustrates how civic education as a compulsory element in French primary schools had an impact on French pupils' sense of national belonging, and their awareness of at least one of the fundamental values of French civic life, the equality of all its citizens. In the time since the research was conducted citizenship has also become an integrated element of the English primary curriculum. National Curriculum guidance on teaching Citizenship in schools goes beyond familiarisation with the institutions and values of the state, to the child's potential as an agent of change.

In this case study, carried out in a one-form entry primary school, the governor who carried out the research described how staff and children reacted to a democratic model of leadership introduced by a new headteacher. The aim of this approach was to encourage all members of the school to contribute to the way the school was run, as a basis for school improvement, and to give children the experience of active citizenship.

## How did the headteacher encourage greater involvement by staff and pupils?

On starting work at the school the new headteacher found that the staff did not play an active role in staff meetings. She felt this reluctant was linked with the leadership style of her predecessor, who had set the agenda, and discouraged open discussion. Having arranged staff meetings in a way which created a dialogue among teachers (rotating chair and secretary; use of notice board to post agenda items), the head involved the school council in several aspects of governance, including the appointment of staff and review of school policies. In order to widen pupil participation beyond the ten representatives on the school council, staff decided to introduce weekly class council meetings, in which each pupil could propose agenda items and discuss issues concerning the structure and function of the school.

## How did teachers perceive the changes brought about through greater pupil participation?

Several themes emerged from the interviews with seven members of staff concerning changes in their own and pupil behaviour and attitudes.

## Greater respect between teachers and pupils.

This theme was picked up by support staff. One classroom assistant told of the respect shown to her by members of the school council because of the help she had given them on using catalogues to order new equipment. Teachers also felt that as a result of the change of culture in the school, they listened to children more. This was a view backed up by the observations of a support assistant.

## Improved behaviour

Three members of staff commented on how children's behaviour had improved since the introduction of wider pupil participation. There was better behaviour in the playground after the council responded to complaints about noisy lining up by devising behaviour guidelines. Class councils also spent a large amount of their time (about half) discussing issues around behaviour. Teachers also felt their behaviour towards pupils had changed. One described how she allowed pupils more time to come to their own resolution of problems, rather than imposing solutions on them.

## Improved self-confidence

Two members of staff remarked on how pupils' involvement in the councils had had a positive affect on their self-confidence. One KS2 class teacher described how children who would not normally speak up or cooperate in class nevertheless played an active and constructive role in meetings. He felt sure active democracy had helped the quiet children in his class to make progress. This teacher also remarked on how participating in class councils enabled children to develop team roles such as shaper, chairperson and monitor/evaluator, which they would not have been able to develop in lessons about citizenship.

## More mature outlook

Two teachers commented on the maturity they felt the children displayed in the school's democratic fora. Children took it upon themselves to put issues on the meeting agenda to be discussed, and to discuss and agree on solutions. One KS2 class teacher illustrated the children's ability to deal with serious issues by
describing a review of the sex education policy in which two governors, two teachers and four pupils were involved.

Reference:
Flecknoe, M. (2002) Democracy, citizenship and school improvement: what can one school tell us? School Leadership and Management, 22 (4), pp.421-437.

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Further reading

1. What else might I enjoy reading?

Alexander, R., (2000) Culture and pedagogy: international comparisons in primary education. Oxford: Blackwell.

Lang, P. (1998) Affective education: a comparative view. London: Continuum.
2. Other comparative research

IEA
The findings for England of the IEA Citizenship Education Study can be found at: www.dfes.gov.uk/research/data/uploadfiles/RR375.pdf

PISA
The Programme for International Student Assessment (PISA) is an internationally standardised assessment administered to15-year-olds in schools. Reports are available at: www.pisa.oecd.org
3. Related research

Grammar teaching
The findings of a systematic review about the effect of grammar teaching (sentence combining) in English on 5 to 16 year olds' accuracy and quality in writing are available at:
http://eppi.ioe.ac.uk/EPPIWebContent/reel/review groups/english/eng rv7/eng rv7.doc
Grouping Pupils
A review of research about the effects of different ways of grouping pupils is available at: www.dfes.gov.uk/research/data/uploadfiles/RR688.pdf

Mathematics
The findings of a systematic review of the impact of the daily mathematics lesson on pupil confidence and competence in early mathematics are available at: http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?page=/reel/review groups/maths/Maths rv1 summary.htm
4. Resources

Citizenship in the curriculum
For details on delivering citizenship in the curriculum visit the National Curriculum online at: www.nc.uk.net/webdav/servlet/XRM?Page/@id=6004\&Subject/@id=4164

Research in maths education
The Collaborative Group for Research in Mathematics Education has links to a number of mathematics resources for teachers at:
www.crme.soton.ac.uk/index.html
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