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**BPRS Report Level 1:**

**How does the modelling of writing using word processor and data projector affect pupils' attainment in writing?**

**What were your original aims?**

- To investigate whether the modelling of writing with word processor and data projector (hereafter DP/WP) improves the quality of Year 8 pupils' writing within the English classroom.
- To investigate whether certain types of writing are more effectively modelled than others.
- To measure whether pupil motivation is affected by the use of this technology.

**In what ways did you refine your aims?**

The broad aims of the research project were refined to identify a target class – Year 7 not Year 8, due to timetabling constraints. This was a set 4/4 comprising children attaining at below the expected national levels for English, some of whom experienced specific learning or behavioural difficulties.

Two styles of writing – the balanced essay and the speech – were identified as being most useful to this research. Both would be challenging to the students. Both, it was anticipated, demand structures and particular language constructions which might be more easily quantifiable in a students' writing than the features of more creative writing, and might, therefore, yield some clear conclusions.

The extent to which the class's motivation was affected by the use of the WP/DP remained central to, and became one of the most interesting elements of the research.

**Which research processes did you find helpful?**

An initial questionnaire completed by the class of 16 pupils on their attitudes to the use of this technology was useful; it showed clear preferences for the use of the WP/DP in a majority of the students and identified areas to be pursued later in the research. A videoed interview with a target group of pupils added substance to the views suggested in the questionnaire and produced some amusing revelations, eg. that the improved behaviour of the class when the WP/DP was in use did not stem from any intrinsic added interest, but because the teacher's back was never turned... The most fascinating area of research was the close observation of six individual pupils in two 'writing' lessons, in one of which the WP/DP was used, and the traditional whiteboard and pen in the other. The lessons followed an identical structure, and the pupils' levels of concentration were recorded at five-minute intervals. The results for each pupil, when overlaid on a graph, showed a higher rate of concentration when the WP/DP was in use, but also showed very interesting patterns of concentration for the individuals concerned.

**Which research processes did your pupils find helpful?**

Many of the pupils seemed flattered at being involved in a research project and all completed the questionnaires very seriously. Those invited to take part in the video discussion were reflective about their learning and talked with maturity about the relative benefits of the two approaches. The students who were closely observed in class were not told that this had happened, but the knowledge gained about their

individual working patterns has been useful to me in helping them to remain focused in further lessons.

**What were the learning points you gained from undertaking the research and what were your findings?**

This research has confirmed my belief that appropriate use of the WP/DP in the English classroom improves the motivation and behaviour of pupils. The statements in bold below summarise a strong consensus of views expressed by pupils on the initial questionnaire; the comments were made by pupils during interview.

When a word processor and data projector are used:

- **writing on the board is easier to read for the pupils:**

“I don’t like the board pen because it’s hard for me to read most teachers’ writing.”

- **the lesson is easier to follow:**

“When you write on the board with a pen, your body is in the way for some people.”

“Sometimes you have to rub off the writing – but you can keep it all if it’s on the computer.”

- **the lesson is faster paced and therefore more interesting:**

“You can write it the night before- it makes the lesson go faster than waiting for you to write.”

- **Classroom management is easier for the teacher:**

“Some people mess around when your back’s turned – but that way you can see us.”

The above points highlight practical advantages for the pupils when the teacher writes on the board with the WP/DP method. Furthermore, work done in class using a word processor can be saved and projected at the start of the next lesson to aid recall. Lesson content can be printed for pupils who have missed a class (or can be sent by email.). Work sheets can be prepared and printed for the class, and completed interactively.

It is clear to me from my research and recent practice that use of the WP/DP in the classroom has many practical advantages for pupil and teacher alike. The recorded close observation of pupils in class also suggests that concentration levels are higher and off-task behaviour is reduced when writing is projected onto the board. It seems reasonable to deduce that the pupils who identify these positive benefits of the technology will also be more highly motivated to learn, as suggested by the questionnaire response showing 11/ 16 students to agree with the statement that ‘Writing lessons which use the data projector are more fun than those which do not’ and the 5/6 students in discussion who said they ‘preferred’ the approach.

However, with such a tiny sample, one cannot claim to have shown that the WP/DP method has a direct impact on the attainment levels of the writing produced. My study showed that when 16 students wrote a ‘balanced’ essay taught using the WP/DP method and then a speech modelled by traditional writing on the board, nine students scored half a level more highly on the balanced essay and four scored half a level more highly on the speech. Four showed no change. For the study to provide ‘robust’ evidence, two larger sample groups would need to be taught consistently by one

method or the other over a longer period of time, in order for any differences to be have significance.

### **What evidence relates to this learning and your findings?**

Research published in the Becta report 'What the research says about ICT and motivation' (2003) summarises how the effective use of ICT can be a key factor in improving pupils' attainment. The report focuses mainly on how students' own use of ICT can affect their motivation and consequently their levels of attainment, although research into the motivating effect of the interactive whiteboard is also published.

### **What are the questions for your future practice?**

My enthusiasm for the use of the data processor as a tool for delivery is shared (in varying degree!) by my colleagues in the English Department I lead. We have now installed data projectors in all English classrooms. Our immediate challenge is to continue to develop and share resources and good practice, so that all teachers have the confidence to exploit the technology in ways which will benefit all of our students.

### **What are the questions for your school?**

A number of other departments are also committed to the benefits of using the data projector as a tool for regular classroom delivery. It will be interesting to observe whether the motivating effect of the technology on students continues as the practice becomes more commonplace. One is also tempted to ask, as the size of the school increases and departments are forced to teach more and more outside of their own subject areas, whether the provision of a fitted data projector in every classroom should not be regarded as standard? Along with the last question remains that of security. It would be quite devastating for our department to lose its projectors now they have become such an integral part of many people's practice.

### **Are there any questions for further research?**

There is clearly a need for further research in this area:

"What is not known is whether any motivational benefits arising from the use of interactive whiteboards translate to pupil learning and attainment. Similarly, nothing robust is known at present about the relative impact of interactive whiteboards compared to other presentational technologies (such as digital projectors used in conjunction with tablet PCs.) *BecTA The Big pICture: The Impact of ICT on Attainment, motivation and learning. Some Conclusions.*

### **How did you disseminate your findings with others, e.g. within your school, other schools, the LEA, wider?**

Dissemination has been achieved:

Departmentally: discussion with close colleagues and at English Department Meetings

In school: Presentation of research as part of INSET days and at shared department meetings

To other schools: Presentation at Teaching and Learning Research Day - SUPER