

Teacher Leadership

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Contents

Teacher Leadership is in two parts. The first part includes brief articles written by teachers and edited by the Editorial Team. The second part includes short ‘stories’ of teacher-led development work written by the Editorial Team on behalf of the teachers who led the projects described.

Editorial	1
<i>David Frost</i>	
Articles	
Building teacher leadership through Teacher Led Development Work groups	4
<i>Joanne Mylles, Sir John Lawes School, Harpenden</i>	
Collaborative learning in a Primary School ICT Suite	12
<i>Jill Jones, Four Swannes Primary School, Waltham Cross</i>	
Promoting thoughtfulness in 6th Form students	20
<i>Kate Healer, St George's V.A. School, Harpenden</i>	
ICT and self advocacy in students with severe learning difficulties	26
<i>Robert Good, (formerly of) Watling View School, St Albans</i>	
Using ‘Learning Preference Profiling’ to develop teaching and learning across the school	33
<i>Jackie Johnson, Barnwell School, Stevenage</i>	

Stories

<i>Debbie Davies' Development Work</i>	41
Developing a 'Learning to Learn' course at The Highfield School, Letchworth	
<i>Jill Borchers' Development Work</i>	43
Using interactive whiteboards as a motivational tool at Stanborough School, Welwyn	
<i>Vicky Dean's Development Work</i>	45
Improving writing through formative assessment at Icknield Infant and Nursery School, Letchworth	
<i>Elizabeth Clarey's Development Work</i>	48
Enhancing learning in English through the use of De Bono's 'Thinking Hats' strategy at The Highfield School, Letchworth	
<i>Susie Hoad's Development Work</i>	50
Exploring learning styles in Science at The Nobel School, Stevenage	
<i>Richard Cave's Development Work</i>	52
Using peer-assessment in Design and Technology at The Nobel School, Stevenage	

Editorial

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Welcome to this, the first issue of *Teacher Leadership*, a new journal which aims to publish teachers' accounts of their leadership of development work in schools. The journal addresses the need to bring into the spotlight teachers' heroic efforts to improve the quality of teaching and learning. For too long such leadership has been either completely invisible or it has been compartmentalised and sidelined under headings such as 'continuing professional development'. Real school improvement, that has real impact, does not occur without such teachers leading change.

Teacher Leadership has come into existence to assist members of the HertsCam Network in their effort to build knowledge about teaching and learning in Hertfordshire schools. The membership of HertsCam consists of teachers from all phases of schooling, some of whom are employed by the local authority as Teaching and Learning Consultants or Advisers. All members of the Network have participated in a programme that began in 1999 and includes the 'Herts. M.Ed in Teaching and Learning' and the linked, school-based 'Teacher Led Development Work' (TLDW) groups (Frost *et al.*, 2006). The network is supported through the alliance of the University of Cambridge Faculty of Education and the local education authority in Hertfordshire, now known as CSF (Children, Schools and Families). The journal is part of a wider strategy to extend the influence of members of the HertsCam Network beyond their own classrooms and schools. The network can be seen as a 'knowledge creation engine' which enables us to work together to accumulate professional knowledge based on rigorous inquiry and to make that knowledge available to all schools in Hertfordshire and beyond. This is not just a matter of dissemination however; rather, the journal constitutes a forum in which we can clarify and synthesise what has been learnt and invite others to participate in critical reflection on the development of pedagogical practice.

Teacher Leadership breaks new ground in that it provides a forum for teachers to present credible yet accessible accounts of their learning-centred leadership work. In the main, academic journals have tended to publish papers written by professional researchers working in the university sector, but *Teacher Leadership* is exclusively for teachers. The university does play an important part, but it is an enabling and support role. Lawrence Stenhouse argued the case for this twenty years ago.

In order to offer support for schools, the 'educationist' needs to assume a consultancy role in the fullest sense. He needs to see himself as notionally employed by the teacher, and as accountable to him.

(Stenhouse, 1975: 192)

More recently, Michael Apple argued that the academic world has to recognise that teachers work in increasingly intensified conditions and that this demands a form of research in which university academics act as 'story tellers and secretaries' for teachers to enable their voices to be heard (Apple, 2006).

The articles and stories presented here are case studies of teacher-led development work. They are not making generalisable claims but are offered as relateable accounts (Bassey, 1999) that could provide other practitioners with valuable insights and starting points for their own improvement strategies.

The articles are all based on masters theses which have been subject to the rigours of the University assessment system. They have not been subject to the sort of peer review that we are accustomed to seeing in academic journals, but the material has been defended and scrutinised in a way which may be even more demanding than the traditional peer review system.

Jo Mylles' article focuses on a thread that runs throughout all of the work of the HertsCam Network. She homes in on *teacher leadership* and the ways in which that has been nurtured in her school. Her account also reveals how a school-based Teacher Led Development Work group can be established. Both Jill Jones' and Jackie Johnson's articles focus on whole-school change processes and how specific learning-centred projects can draw colleagues into reflection and review of pedagogical practice. Jill led an investigation into the use of the ICT Suite in her primary school; this transformed her own understanding of how pupils collaborate around the computer, but more important perhaps is the account of how the enquiry enabled her to raise issues with her colleagues and work with them to improve practice. Jackie's account is remarkable in that it demonstrates how she and her fellow strategists were able to influence almost the entire staff of a large secondary school. She played a key role in leading the Learning Preferences Profiling project which drew teachers and students into a pedagogic dialogue that made a major contribution to the school being named as one of the most improved schools in the country. Kate Healer's article is more tightly focussed on a small number of classrooms and a particular strategy for promoting thoughtfulness among the students. It is in itself a very thoughtful account and one which provides a very useful set of tools for improving learning. Robert Good's account of his work in a Special School has resonance for us all. Robert focuses on how modern technology can be used to free up students from whatever constraints affect them, enabling them to have a voice and to exercise some control over the process of their own learning.

The 'stories' presented here are quite different in character to the articles. They have all been written on behalf of the authors rather than by them directly. These brief case studies have been drafted by the Editorial Team on the basis of the authors' portfolios of evidence of their development work.

The portfolios had been assessed for the purposes of the award of the Certificate of Further Professional Studies. They can be said to constitute 'case records' (Rudduck, 1985) which are valuable sources of evidence although, in that format, not particularly accessible beyond the particular schools. The stories represent a way of broadcasting the news so that other practitioners can enquire further if the development activity interests them.

The stories all indicate how teachers are pursuing in different ways the major contemporary themes in classroom practice. Debbie Davies and Elizabeth Clarey both work in a secondary school that is a hotbed of classroom experiment and they belong to a large group of colleagues who have engaged in such work. Debbie's work focused on the development of a 'Learning to Learn' course which complements very well Elizabeth's experiment with De Bono's Thinking Hats. These are two interesting examples of strategies to support metacognition. The Nobel School has also fostered a great deal of *teacher leadership* having sustained a school-based TLDW group with twelve members. Susie Hoad experimented with a way of taking account of older students' learning styles using a quite different approach to the one used by Jackie Johnson at Barnwell School in the same town. Jill Borchers' story about interactive whiteboards draws further attention to the way technology is impacting on classroom practice and Richard Cave's development work makes some interesting connections between self-assessment and collaborative relationships in the classroom.

Overall, it is an impressive body of work which demonstrates that, in spite of the unprecedented pressure that teachers are under, there is still an enormous capacity to take on the challenge of change and improvement. These accounts show us that, given the right opportunity and appropriate frameworks of support, teachers will devote considerable enthusiasm and energy to the business of investigating, evaluating, reflecting on, and most importantly, acting strategically to improve the quality of teaching and learning in our schools.

References

- Apple, M. (2006) *Markets, Standards, and Inequality - Keynote Address to ICSEI* (International Congress on School Effectiveness and Improvement) Fort Lauderdale, Florida, USA audio recording retrieved from the world wide web on 10th March 2006 <http://www.leadership.fau.edu/icsei2006/archive.htm>
- Bassey, M. (1999) *Case study research in educational settings*. Buckingham: Open University Press.
- Frost, D., Roberts, A. with Lightfoot, S. & McCrorie, M. (2006) *Teacher leadership and knowledge building: the experience of the HertsCam Network*, a paper presented within the symposium: 'Leadership for Learning' at ICSEI 2006, the 19th International Congress for School Effectiveness and Improvement. Fort Lauderdale, Florida, 3rd–6th January.
- Rudduck, J. (1985) 'A Case for Case Records?: A Discussion of Some Aspects of Lawrence Stenhouse's Work in Case Study Methodology' in R. Burgess (ed.) *Strategies of Educational Research*. Lewes: Falmer Press.
- Stenhouse, L. (1975) *An Introduction to Curriculum Research and Development*. London: Heinemann Educational Books.

Building teacher leadership through Teacher Led Development Work groups¹

Joanne Mylles
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Abstract

Joanne Mylles graduated from the Herts. MEd in Teaching and Learning in 2005. Her project focused on the way she and her colleagues have been developing teacher leadership through the establishment of Teacher Led Development Work (TLDW) groups in Hertfordshire schools. In this article she provides an account of her research in which she evaluated TLDW groups in two contrasting schools.

Sir John Lawes School, Harpenden, is one of a group of schools in Hertfordshire engaged in an effort to build teacher leadership. Through the HertsCam Network, experienced teachers work in partnership with University staff to support Teacher Led Development Work (TLDW) groups.

Sir John Lawes School has been on an upward curve of development for ten years and has recently achieved Training School Status (DfES, 2004). This involves a commitment to provide Initial Teacher Training (ITT) but also enables the school to address questions related to teachers' professional learning more widely.

The well-established partnership between Hertfordshire and the University of Cambridge Faculty of Education (HertsCam) enabled the school to establish a Teacher Led Development Work group. The model set out in 'Teacher Led Development Work: Guidance and Support' (Frost & Durrant, 2003a) was adopted. Through a series of twilight seminars, teachers undertake development work, documented in a portfolio of evidence leading to academic certification up to masters level. The group sessions scaffold teacher leadership by supporting their enquiry-based development work, helping them to design a range of improvement initiatives that will have direct impact on the quality of teaching and learning in the school. The sessions give teachers the opportunity to clarify their vision, values and professional concerns and plan for maximum impact (Frost & Durrant, 2003b). The process is supported by occasional visits to the Faculty of Education library, occasional participation in county-wide networking events and online research. The aim is to help the teachers to build their 'agency' so that they can act strategically to make a real difference to professional practice and to pupils' achievement (Frost, Durrant, Head & Holden, 2000).

4 ¹ A similar article also appears in *Improving Schools* 9(1) March 2006.

At Sir John Lawes, the group is led by myself and Head of Humanities, Maria Santos Richmond in collaboration with David Frost from the University Faculty of Education. Maria plays an additional role which involves mentoring the teachers, facilitating meetings between them and the Headteacher, organising opportunities for them to share their work and giving support and advice on a one-to-one basis.

Changing policy environment

Since the inception of the National Curriculum at the end of the 1980s successive governments have pursued reforms aimed at raising standards and improving schools. It has been a multi-pronged attack that includes initiatives such as the publication of attainment data, the performance management of teachers, the spread of ideas about leadership through the NCSL² and, more recently, training in pedagogy through the Key Stage Three Strategy (DfES, 2002). A significant feature of the national reforms has been the gradual devolution to schools of funding to spend on continuing professional development (CPD). Recent policy initiatives encourage schools to engage in school-based learning that is more collaborative and makes better use of teachers' existing knowledge (DfES, 2001; DfES, 2005). There are clearly competing discourses here, but there is increasing support for strategies in which teachers can identify development needs and priorities for themselves. More than ever before there is scope for schools to be more imaginative in creating the conditions for teacher leadership. For Sir John Lawes and the other schools in the HertsCam Network the policy environment is now more conducive to teacher-led development work.

At Sir John Lawes, the impetus to establish a teacher-led development programme was also provided by a successful OFSTED inspection in 2003. The report highlighted the excellent leadership provided by the Headteacher, praised the quality of teaching and learning and described the school's programme of leadership and professional development opportunities as excellent. However, given the spotlight on pupil attainment as a measure of a school's success, it was imperative that the school maintain its momentum. Although the school was flush from its success there was uncertainty about how best to move forward. There was a mixture of excitement and trepidation about how to create further capacity for improvement and success. One strategy which emerged was to develop the collegiate and collaborative work at the school as a way of further empowering staff to engage in development activities to innovate and make a difference.

Discussions within the school's Senior Leadership Team focused on the school's capacity to innovate (Harris & Lambert, 2003). The discussion was nourished by some of the recent literature on distributed leadership (Bennett, Harvey, Wise & Woods, 2003; Gronn, 2000; Spillane, Halverson & Diamond, 2001; see also Spillane, 2006). Additionally, articles by David Hargreaves (1999 & 2001) offered a vision of what a 'knowledge creating school' could be like. Hargreaves argues that the potential for change is rooted in schools rather than something which can be orchestrated from outside, and that innovative schools need to engage in knowledge creation.

It was in this context that a Teacher Led Development Work group was established: within an already successful school where staff are hungry for leadership opportunities; where collaborative work is well-established; and where the Headteacher is passionately committed to empowering colleagues and de-centring his leadership

² NCSL – National College for School Leadership

(Murphy, 2002). I had been a strong advocate for the idea of teacher-led development work and undertook to carry out an evaluation of the initiative as part of my research as a participant in the Herts. MEd in Teaching and Learning (Mylles, 2005). My evaluation included a comparison with the working of a group in another school in the network.

I began my research by establishing a dialogue with Caren Earp, the Deputy Head who co-led the TLDW group in the other school; we subsequently agreed that she would interview the Headteacher in my school and that I would interview the Headteacher in her school. We would carry out reciprocal observations of TLDW group sessions in both schools and I would interview three of the participants in each group.

In this paper I provide a brief glimpse of what I learnt about the potential for teacher leadership by focussing on just two cases. Discussed below is the work of two of the nine original members of the Teacher Led Development Work group at Sir John Lawes School.

Danielle Heley's story

Danielle's development work centred on girls' self-esteem which she had been concerned about within one of her classes and also within her work as an Assistant Head of Year. She read around the subject and found a useful 'self-esteem checklist' that could be used to identify pupils with low self-esteem (Lawrence, 1996). She talked with a range of colleagues who taught Year 8 girls and asked them to use the checklist to help her identify a group of target pupils. She followed this up by talking with the teachers concerned to get their views on these pupils' dispositions and achievements.

In spite of what was said in the leaflet inviting teachers to join the TLDW group, it took a long time for Danielle to embrace the idea of leadership. During an interview about her work, she explained that at the beginning she had assumed a traditional idea of what leadership was: '*I thought if you have a title or management point then you are a leader*'. At this stage the concept of leadership, for Danielle, was bound up in role and title rather than a set of skills or behaviours.

During the first year, Danielle was modest about her capacity to influence others and in the TLDW group sessions her accounts of her own leadership had to be coaxed out of her. She struggled to articulate her aims in this regard. In an interview she confessed: '*I had the conflict, what do I lead? Do I lead? Am I just doing this for the children? Am I doing it for the school or for me?*'

A key part of Danielle's development project was a series of interviews with the target girls and the subsequent creation of materials to use with pupils. In the early stages, the development of her own practice in this way was the main purpose. However, as the process gathered momentum, the scope of Danielle's influence grew. Later in the year, she involved outside agencies in her work, produced a guidance leaflet for colleagues and led a workshop on self-esteem at the school's annual residential conference.

Towards the end of the process Danielle was more confident about linking her leadership to pupils' needs but also about using the knowledge she had gained from her project with a wider audience. She eventually became confident about her ability to influence others.

People can come and observe me. I have been to observe people as well, where things aren't going as well as with the same students in my lesson. I feel quite able to do that and share how to move pupils forward.

(Danielle interview)

Towards the end of the academic year, Danielle assembled the evidence of her development work in a portfolio which she presented at the HertsCam Network Event at the local authority Professional Development Centre. She was subsequently awarded a Certificate of Further Professional Studies. Her portfolio concluded with a brief reflection on her experience with the TLDW programme.

My understanding of what a leader is has changed vastly during this programme. My initial thoughts were that leaders and managers were synonymous; that to lead on a subject you had to have some management responsibility. I now see that there is no link. Leaders can be anyone who has a passion and the knowledge to lead in an area. To be a leader doesn't mean you hold all the answers; it is the process that's important – the continuation of learning.

(Heley, 2005: 29)

Central to the development of Danielle's leadership identity was the support of the Headteacher. Danielle drew confidence in her own ability from the Headteacher and felt that his confidence nurtured belief amongst the staff in her leadership potential.

I am now going to be Head of Year at 24 and I feel quite confident that I can do it. I think that other people have the confidence in me because of him. He sees me as fine and he encourages me with his confidence.

(Danielle interview)

These comments resonate with Murphy's description of the role of the headteacher as a community builder. One element of this is the importance of fostering leadership in others. 'They must learn to lead by empowering rather than controlling others' (Murphy, 2002: 77). In the period immediately before the launch of the TLDW group, the school's Senior Leadership Team had discussed a report of research into the impact of teachers' development work in schools in Hertfordshire and Kent (Frost, 2004). The report emphasised the crucial role that headteachers play in enabling teachers to have the confidence and belief that they can exercise leadership.

Anne Kenney's story

Anne was Head of Science. She had a position of responsibility and already considered herself as a leader, but there were clear limitations to her leadership. She was a leader within the Science Faculty, which she saw as being '*in a safe pond*', but the leadership did not extend beyond these boundaries.

Her development project centred on her concern about the space and time provided within the science curriculum for pupils to develop their thinking and metacognition. She was concerned that pupils were wasting valuable thinking time copying material from the board and she wanted to try out other approaches to enable them to think through the scientific concepts. She tried out a range of different strategies with one of her groups and evaluated the work as it progressed. Of central importance was that the pupils were partners in the project from the outset. She used a technique based on the

Force Field Analysis from John Macbeath's 'Self-Evaluation Files' to get feedback from pupils about what helps them to learn and what hinders their learning (MacBeath, 2003).

Anne developed a new set of resources for Year 9 pupils to avoid the need for significant copying; notes were provided for them in the 'revision booklet'. She then used this work in discussions within the Science Faculty to influence the future direction of the science curriculum. She arranged with a local authority Science consultant to carry out a 'book look' in which they analysed pupils' notebooks to see the range of writing tasks and to gauge the extent to which pupils were being asked to copy material from the board. She also used a learning styles inventory based on the VAK model to provide additional insight into the range of ways in which pupils prefer to learn. All of this evidence enabled Anne to work with colleagues in the team to review schemes of work within the Faculty.

Through her work in the TLDW group Anne was able to share her work with a wider audience. In addition she used the lunch time teaching and learning forum to share accounts of the work. At the end of the year she considered that she could influence others outside her Faculty.

(at the beginning) I would never have said I had any impact on the rest of the school whereas now I actually think I do.

(Anne interview)

In an interview about the work, Anne pinpointed two factors which had helped her widen her view of leadership. Firstly, Anne's development as a leader was supported by Maria, co-leader of the TLDW group. Maria's support and mentoring underpinned Anne's confidence to influence beyond her Faculty.

If Maria hadn't been doing her role I wouldn't have done the Learning Lunch. There are lots of things I wouldn't have done. She says, how about this? What about talking to him? Leading the Learning Lunch is not something I would have put myself forward for ever.

(Anne interview)

This is in line with Holden's (2002) view of the kind of mentoring someone on a leadership team can provide.

The accumulation of shared wisdom through ongoing critical conversations was at the heart of a particular and effective vision of school improvement, a vision founded on a commitment to building and supporting communities of practice.

(Holden, 2002: 20)

Secondly, the collaborative and collegiate culture at the school enabled Anne to widen her conception of leadership. She talked about the prevailing culture of trust and respect where risk taking was encouraged but no blame attached if things did not go as well as expected: '*chatting about teaching and learning, it is nothing official it is just part of the conversation at school*'. Anne spoke of how she had found the discussions at the Teacher Led Development Work group enriching and that this wider forum enabled her to think more deeply about how to move her work forward.

I talk to Alan about stuff and I will say how do you do this and he will tell me how he does it in Maths and I might not do it exactly the same but I will certainly take his ideas and work on them.

(Anne interview)

This is akin to the *tinkering* which Hargreaves (1999) argues contributes to knowledge creation. It also underscores the suggestion that universities can be brought in to nurture critical discourse through the establishment of a support group such as ours (Frost, 2004). In an interview, the Headteacher at Sir John Lawes school suggested that the Teacher Led Development Work group had contributed to a greater level of critical discourse in the school.

It is an interesting coincidence that this year we had an INSET day for the first time which started from pre-conference reading which was discussed at the conference. It has been quite a research-led period over the last term. There has been a variety of times that we have published research documents in advance to promote further discussion. Well we didn't do that a year ago. It's a funny co-incidence if it's nothing to do with it.

(Headteacher interview)

However, research in this case has to be understood as an integral part of teacher leadership rather than a separate activity.

The impact of teacher leadership

The Teacher Led Development Work group at Sir John Lawes School is now into its second year. At the beginning of year two another ten teachers joined the group and five of the teachers from the first year continued their involvement in the group; they are now pursuing their project work at masters level. These five may achieve the Advanced Diploma or proceed all the way to an MEd. Anne has joined the Herts. MEd in Teaching and Learning based at the Hertfordshire Development Centre, but she still attends all the sessions of the school-based TLDW group. Maria's role in supporting the group has developed and her own research project is helping us to understand more about how to scaffold teacher leadership in the school.

The impact of the TLDW group has been substantial and this has been demonstrated recently through an evaluation exercise we conducted using the Impact Framework devised for this purpose (Frost & Durrant, 2002). We used this framework to discuss a range of development initiatives within the school with the Heads of Faculty involved in the TLDW group, other colleagues in the group and the Headteacher; subsequently several colleagues were interviewed on camera so that their views could be easily shared with wider audiences. The Headteacher offered the view that the TLDW group is *'the key contributory factor to school improvement at Sir John Lawes School at the moment'*. The impact of the group members' work grows exponentially because of the emphasis on teacher leadership. One example is where a newly qualified teacher, Tom Murphy, picked up on Anne Kenney's work and has developed some very exciting work involving student leadership in science classrooms. In turn, Tom, together with some of his students, made a presentation to the whole staff at a recent staff conference. The idea of 'Student Led Learning' has been adopted as the focus of the school's development for the forthcoming academic year. Another member of the group, Lisbeth Ricciardi, has convened a research and development group specifically to investigate and develop strategies for supporting 'gifted and talented' students.

The impact of the initiative is being felt beyond the school. I am now also supporting TLDW groups in other schools in the region and many members of our group at Sir John Lawes have had the opportunity to share accounts of their development work at HertsCam Network events. At the time of writing there are TLDW groups in 10 schools. This network constitutes a rich community of practice in which teacher leadership is flourishing. Increasingly teachers are discovering that leadership is an important dimension of their professional role and that it enables them to fulfil their desire to make a significant difference to the quality of pupils' learning.

References

- Bennett, N., Harvey, J.A., Wise, C. and Woods, P.A. (2003) *Distributed Leadership: A Desk Study*, www.ncsl.org.uk/literature reviews.
- DfES (2001) *Learning and Teaching: A strategy for professional development.* London: DfES.
- DfES (2002) *Key Stage 3 National Strategy Training materials for the foundation subjects.* London: DfES.
- DfES (2005) *Leading and coordinating CPD in schools.* www.standards.dfes.gov.uk Ref: 0192-2005.
- DfES (2004) *Training School Status* www.standards.dfes.gov.uk/trainingschool.
- Frost, D. (2004) 'What can Headteachers do to support teachers' leadership?' *Inform* (4) 1-7 occasional papers published by 'Leadership for Learning The Cambridge Network'.
- Frost, D. & Durrant, J. (2002) Teachers as Leaders: Exploring the Impact of Teacher Led Development Work, *School Leadership and Management*, 22(2), 143-161.
- Frost, D. & Durrant, J. (2003a) *Teacher Led Development Work: Guidance and Support.* London: David Fultons.
- Frost, D. & Durrant, J. (2003b) Teacher Leadership: Rationale, Strategy and Impact, *School Leadership and Management*, 23(2), 173-186.
- Frost, D., Durrant, J., Head, M., and Holden, G. (2000) *Teacher-Led School Improvement.* London: RoutledgeFalmer.
- Gronn, P. (2000) Distributed Properties: A New Architecture for Leadership, *Educational Management & Administration*, 28(3), 317-38.
- Hargreaves, D. (1999) 'The Knowledge-Creating School.' *British Journal of Educational Studies*, 47(2), 122-144.
- Hargreaves, D. (2001) 'A Capital Theory of School Effectiveness and Improvement.' *British Educational Research Journal*, 27(4), 487-503.
- Harris, A. and Lambert, L. (2003) *Building Leadership Capacity for School Improvement.* Buckingham: Open University Press.
- Heley, D. (2005) *Sir John Lawes Teacher Led Development Work* (unpublished) portfolio.
- Holden, G. (2002b) Towards a Learning Community: the role of mentoring in teacher-led school improvement. *Journal of In-Service Education*, 28(1), 9-21.
- Lawrence, D. (1996) *Enhancing Self-Esteem in the Classroom.* London: Paul Chapman.
- McBeath, J. (2003) *The Self-evaluation File: Good Ideas and Practical Tools for Teachers, Pupils and School Leaders.* Glasgow: Learning Files Scotland.
- Murphy, J. (2002) 'Reculturing the profession of educational leadership: New blueprints.' In: J. Murphy, (ed.) *The Educational Leadership Challenge: redefining leadership for the 21st century.* Chicago: National Society for the Study of Education.
- Mylles, J. (2005) *Developing Teacher Leadership: an exploration of an award bearing teacher led development programme.* Unpublished M.Ed Thesis. Cambridge: University of Cambridge Faculty of Education.

Spillane, J. P. (2006) *Distributed Leadership*. San Francisco, CA: Jossey Bass Wiley.

Spillane, J. P., Halverson, R. & Diamond, J. B. (2001). Investigating School Leadership Practice: A Distributed Perspective. *Educational Researcher*, 30(3), pp 23-28.

Collaborative learning in a Primary School ICT Suite

Jill Jones

Four Swannes Primary School, Waltham Cross

Abstract

Jill Jones was a member of the very first cohort of the Herts. MEd in Teaching and Learning. When she graduated in 2001 she was the Deputy Head at Four Swannes Primary School but has since been appointed to the Headship. This article provides an account of her investigation into the use of the ICT Suite in her school and the teaching strategies that seemed to be most effective in that context.

Introduction

I had always assumed that pupils perform better when using a computer because they seem to enjoy it, but I had begun to question whether enjoyment was a sufficient indicator of successful learning. The question I had to ask was: does using a computer actually raise standards of achievement and if so how can this be maximised?

My school is situated in an urban area of Hertfordshire and provides for children from a low socio-economic background. The percentage of children on free school meals is above the national average, attainment on entry for the majority of children is below national expectations and there are a number of children from ethnic minority groupings with English as a second language. It is into this setting that a computer suite was introduced. As a Senior Management Team we were confident that the ICT Suite would contribute to raising standards but seven months in we wanted to know whether it was having any impact on the teaching and learning within the school. My research project would help us to address this. I was keen to know why teachers take their pupils into the suite and what they do there. I wanted to know whether it moves pupils' learning forward and whether we could develop school wide strategies for using the suite to improve our teaching.

At an initial staff meeting we discussed the issues arising from an audit of practice by questionnaire. As a result of these discussions I decided to concentrate on the specific areas of English and Mathematics. In English, I would look at the use of the Internet as a research tool to aid skimming, scanning and note-taking skills. In Mathematics, I would look at data handling and the skills associated with using graphs.

I was keen to involve my colleagues so as to develop practice in the school; I met regularly with the Headteacher and the Key Stage 1 teacher whose Year 2 children I would be observing and recording. I also consulted with all of the pupils to be involved in the project.

The use of computers in schools

Computers are now such a familiar part of everyday life that it is hard to imagine a time without them, but in the early 1980s they were unfamiliar to teachers. In the 1980s Riding sought to encourage teachers to embrace the new technology, describing the attitude of many teachers as:

...either one of bewilderment, or fear, or that the computer is yet another seven day wonder, which if ignored will go away.

(Riding, 1984: 1)

Even though virtually every primary school classroom had at least one computer in 2000, our staff questionnaire highlighted colleagues' lack of confidence.

In January 2001 a BECTA (British Educational Communications and Technology Agency) report described the extent of the investment in ICT infrastructure in primary schools and seemed to suggest a clear link between the use of ICT and improved standards of attainment.

The better the ICT rating of a primary school, the more likely it is to be amongst above average schools for national tests in Mathematics. Statistically, there is a significant positive correlation between the schools' Ofsted ICT resource grade and their grade for Key Stage 2 Mathematics.

(BECTA, 2001: 6)

Correlation should not be taken to imply causation; nevertheless I found the BECTA report encouraging. I asked myself similar questions to those raised in the report: questions about the impact of ICT on standards, about colleagues' perceptions of the efficacy of ICT in their work, and about the impact on teaching and learning in Maths and English. As these questions developed it became clear that it is not always the computer provision that is important but how it is integrated into the curriculum. Therefore, when seeking to explore the use of the ICT Suite I was keen to see what previous research has to say about the pedagogy teachers employ, particularly in English and Mathematics.

In the early 1990s the National Association for the Teaching of English (NATE) advised that computers could contribute to the development of speaking and listening, reading and writing. Straker and Govier (1997) suggested that, when working in pairs or small groups, children could be encouraged to talk about their activity.

One of the most impressive aspects of the use of the computer in the primary classroom is the amount of talk generated. When three or four children are sitting around a computer they have a natural focus for their talk, which encourages listening, reflection and participation.

(Straker & Govier, 1997: 128)

Because listening, participation and reflection are very important parts of the learning process, the level of talk and collaboration emerged as important dimensions in my project. When using the computer children are faced with many decisions. They might choose which websites to visit and what information to record. Straker and Govier (1997) outline a number of skills that children gain when problem solving and investigating with computers.

Problem solving skills – deciding upon identifying a problem; planning strategies, carrying them out, and recognising when they are successful and when they are not.

Investigational skills – asking questions and deciding which ones to pursue; recognising patterns and relationships.

Reasoning skills – reasoning logically; drawing inferences; deducing new information from existing information; describing and explaining methods, reasons, strategies, predictions, results or conclusions.

(Straker & Govier, 1997: 71)

I attempted to structure my observations and questioning around some of these areas.

I was also seeking to see if the ICT Suite had any influence on raising standards in Mathematics. Our questionnaire for staff indicated that there was scope for development; whilst most teachers were ready to explore word processing and perhaps the Internet, there was not the same eagerness to use Mathematics programmes. Arguments for the use of computers in Mathematics emphasise the idea that the technology should complement rather than replace traditional teaching strategies (Ainley, 1996). Again the idea that the use of computers could be an aid to collaboration was suggested. There is evidence that where pupils are using computers, working in pairs and small groups enhances performance (Light, Littlejohn, Messer & Johnson, 1996). There is also evidence to support the argument that children find it easier to work collaboratively when working on computer tasks than when they are working on standard classroom tasks, provided that these tasks involve the opportunity for collaboration.

Computers can support, and are supporting a range of teaching and learning styles. This renewed focus on the role of social interaction has led to an increasing interest in collaborative and co-operative learning and new technologies can be a key to such social interaction.

(Underwood & Underwood, 1999: 11)

For our ICT Suite to be effective in raising standards there was a need for the children to work collaboratively on tasks that encouraged this.

In order to evaluate strategies I would need to focus on:

- the task given by the teacher
- the level of teacher input / explanation
- the groupings of children – gender, ability, age, behavioural factors etc.
- the kind of talk pupils engage in whilst doing the activity
- the pupils' perspective on the activity
- the teachers' perspective on the activity

- the quality of the work completed compared to that arising from classroom work without the use of a computer

The process of inquiry and development

Much of the data I collected would be of a qualitative nature including observations, questionnaires, interviews and the sampling of pupils' work. I paid attention to the guidance I read in Hitchcock and Hughes (1995) and Silverman (2000). I did most of the data gathering myself but employed a research assistant for a total of three days. I asked her to observe pairs of Year 2 and Year 6 pupils whilst I would only observe pairs of Year 2 pupils. The reason for this was that I was the Year 6 teacher and I did not want to influence their responses. Also our interpretations could be assessed from different points of view.

Observations

The observations focussed on five pairs of pupils in both Year 2 and Year 6 classes. The composition of the pairs was quite experimental; some of the pairs had mixed genders; some were the same gender; some had pupils of similar ability levels and some had quite different ability levels. I carried out a pilot observation with the purpose of deciding how best to observe pairs working on a computer. No pupil was observed twice during the study and all except the pilot observation was followed up with an interview.

Interviews

The interviews were conducted as soon as possible after the observations, their purpose being to ascertain how the children perceived they had fared in the task they were set and how they had worked 'together'. Of the four interviews, I conducted one and my research assistant conducted the other three. Therefore my researcher interviewed all Year 6 pupils and one Year 2 pairing. I observed and interviewed two Year 2 pairings including the pilot observation. I felt it was important that whoever did the observation also carried out the interview, as they were best placed to address any issues or points that might arise.

The children were asked the same set of questions with minor alterations where appropriate e.g. name of teacher, relevant task. This was so that some comparisons could be made in the analysis and to gain some consistency as two people were conducting the interviews. All interviews were taped with the exception of one where the tape recorder failed.

Samples of pupils' work

Samples of children's work were taken to ascertain the nature and quality of their 'normal' classroom work in data handling and research methods, skimming, scanning and note taking. Then I looked at a sample of work they had done in the ICT Suite, under observation. Any comparisons or issues were then raised with the class teacher. As I was one of the class teachers, this was discussed within the internal analysis group of Headteacher, Year 2 teacher and myself.

Data analysis and issues

I developed a set of categories as a lens or filter to hold up against the data. I started with the question – 'In what ways does collaboration play an influential part in learning

when using computers?’ As I read through the data I generated the analytic codes through an inductive process – identifying a pattern of themes and then going back to the data to try them out, refining the categories as I went. The codes I eventually settled upon are as follows.

- AC active co-operation/joint decision making/genuine working together
- IA independent action/no partner input
- DT directing the task, taking control of where they wanted the task to go
- NP non participation/off task behaviour
- CT compliance with partners’ actions regarding the task, usually occurring as a direct opposite of their partners DT

This analysis enabled me to gain insight, for example into the way pupils responded to the challenge of collaboration in the ICT Suite and the way they responded to the tasks set for them.

Collaboration seems to be valuable in itself although there seems to be a tension between what the pupils say about that and what the observations told me about their behaviour. All of the pairs agreed in the interviews that they had worked together and that they had helped each other. This was contradicted by what had been observed for example in the Year 6 pairing where Sam had clearly taken the lead in the task and Samantha had either unintentionally or deliberately opted out, playing what appeared to be a subservient role. The younger Year 2 pupils seemed to be actively collaborating at some level but the extent to which they were actually ‘working together’ as opposed to ‘working alongside each other’ is questionable. Bowman (1996) found similar responses from children when invited to comment about working together. The children’s expressed view is that they preferred the group activity to writing alone, and despite observational evidence to the contrary, many were prepared to say that group members had all contributed equally. No child was prepared to say that they had done more work than the other. Even Sam in his interview said that Samantha had helped him. This suggested to me that collaboration is important to pupils and it is clearly something worth pursuing but we need to find ways of making the collaboration more productive.

The observation process told me a great deal about how pupils were responding to the tasks I set. I was disturbed to find that what I had thought to be relatively ‘easy’ tasks proved to be so difficult for the Year 6 children. The data handling activity, which I thought would have been appropriate for younger children, proved to be difficult. This was surprising, as the two girls were mathematically quite able as the results in their National Curriculum Mathematics test later revealed. Having the opportunity to observe the children working in such a detailed manner (which would not normally be the case) my Year 2 colleague and I were able to assess what had actually occurred during the task.

Discussing issues with colleagues

The data analysis also provided a foundation for a productive discussion with colleagues. A wide range of issues were raised and discussed initially within a small group consisting of my research assistant, the Headteacher and the Year 2 teacher. I list below in outline the sort of issues that were covered. These were not presented as definitive findings but rather as a number of puzzles and questions that had arisen through my inquiry.

- Data handling can be taught in the ICT Suite although this is underdeveloped
- Teachers' decisions about the pairing-up of pupils in the ICT Suite is a crucial factor in their learning
- How can we achieve a better balance in terms of time spent by different groups of pupils in the ICT Suite?
- How can we achieve a better balance in terms of the full range of curriculum areas using the ICT Suite?
- How can we make better judgements about the suitability of software and related tasks throughout the Key Stages? Colleagues need time to be able to evaluate these.
- Using the ICT Suite has a positive effect on pupil attitudes to learning. How can this help us in other areas?
- Teachers' confidence and competence is a crucial variable in successful use of the ICT Suite. How can we build on the benefits of the NOF (New Opportunities Funding) training that took place alongside this project?
- The most common activity in the ICT Suite focuses on writing, particularly within the context of English. How can we develop the uses of the computers for other purposes?
- The teacher's intervention strategies are an important variable when pupils are working collaboratively. We need to share good practice with regard to this.
- Teacher questioning is important for checking understanding when pupils have been working collaboratively at the computer. We need to share good practice in this area.
- Pupils' understanding of the tasks set is sometimes partial. How can we improve the way we explain the task and reinforce with the display of learning objectives?
- There is a need for better planning to ensure that the use of the ICT Suite supports a variety of programmes such as literacy and numeracy at the optimal time of the year.
- Access to computers outside of school is a key variable. How can we take this into account?

Implications for practice

Discussions within the Senior Management Team enabled us to consider the implications of these issues for practice in our school. The discussion was subsequently extended to include the staff as a whole and this process has continued to develop and enrich the way we work as an organisation.

It is hard to generalise from such a small scale project of course but a few insights stand out for me. For example it is clear that using the ICT Suite promotes positive attitudes to learning. All the pupils enjoy using the computer even when they are not so successful in completing their tasks. The 'learning can be fun' message helps to offset the stresses and strains of the National Curriculum testing regime.

It was also evident that pupils in our school saw a value in working together on a computer. Collaboration does seem to have the potential to enhance learning if it is the right type of collaboration with a carefully chosen partner. Collaborating around a computer certainly lends itself to more interaction and discussion between pairs, which helps them to express what they are doing. This can encourage the pupils not only to see the end product but to be more aware of how they got there and what happened on the way, thus developing their metacognitive capacity.

The Year 2 teacher and myself agreed that the standard of work arising from working in the ICT Suite is usually higher than that produced in class. Using the Internet allows pupils to access more information quickly. The computer enables a high quality of presentation which all children can achieve, with a high level of pride in their work being evident. As their skills develop, the pupils find that they can alter mistakes more readily, free from the teacher knowing what original errors they made and without spoiling the presentation. In data handling they can print a graph which they have made without errors.

The project enabled us to identify aspects of practice which we needed to work on. We were able to agree on a restructuring of the use of the suite including key decisions about timetabling, what it is actually used for and how we can meet National Curriculum learning objectives. This involved target setting and planned continuity and progression throughout each year group. The ICT Suite is now used for more Mathematical activities and staff are much more familiar with all the software currently available. We also learned that we need to be very careful in setting tasks, intervening during the sessions, instructing the children, making the learning objectives clear and being aware of what is happening between the pairs when working on the computer.

My reflections on the process

The research process was a most worthwhile experience not only for myself, but for my school and subsequently the pupils. I learnt many things both about the research process and about my own practice. I now have the confidence and knowledge to be able to design further projects. One important lesson for me as a teacher researcher is that it can all look good on paper but in practice things go wrong; tape recorders break down, you forget to ask a question, the pupil you want to work with is absent and so on. Time for reflection throughout the process is therefore crucial. It keeps you on track and allows you to consult with others to help validate your interpretations and proposals for improvement.

The study enabled me to develop insight into children's learning which I would not normally have the opportunity to do. Now I have more confidence in my observing, interviewing and questioning abilities and since then I have been able to use them continuously to inform my practice. It was fascinating to see just what happens in the teaching and learning process once a task has been given. I am more conscious of my role as teacher in the setting of tasks and how they are interpreted by children. My practice has been enhanced because of this.

In the four years or so since the completion of my project we have continued to monitor the way we use the ICT Suite. We have upgraded the equipment and changed from using Macs to PCs largely to align the computers with the Interactive Whiteboards we have introduced. Colleagues are now much more familiar with the range of software

available and how it can be used more effectively and in a wider range of contexts to enhance pupils' learning. However, as Headteacher, I continue to encourage the kind of critical discussion that my project sparked.

References

- Ainley, J. (1996) *Enriching Primary Mathematics with IT*. London: Hodder & Stoughton.
- BECTA (2001) *Primary Schools of the Future – Achieving Today. A report for the DfEE*. London: DfEE.
- Bowman, M. (1996) The role of social interaction in word processing, *Topic*, Issue 15 Spring 1996.
- Hitchcock, G. & Hughes, D. (1995) *Research and the Teacher: A Qualitative Introduction to School-based Research*. London: Routledge.
- Light, P. Littlejohn, K. Messer, D. & Johnson, R. (1996) Social communicative processes and computer based problem solving. *European Journal of Psychology of Education*, 7(4), 1-14.
- Riding, R. J. (1984) *Computers in the Primary school: A Practical Guide for Teachers* Bucks: Open Books.
- Silverman, D. (2000) *Doing Qualitative research: A Practical Handbook*. London: Sage.
- Straker, A. & Govier, H. (1997) *Children using computers* (2nd Edition). Oxford: Nash Pollock Publishing.
- Underwood, J. D. M. & Underwood, G. (1999) Effective Collaboration with Classroom Computers, in K. Littleton & P. Light (eds.) *Explorations of Computer Based Learning*, London: Routledge.

Promoting thoughtfulness in 6th Form students

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Abstract

Kate Healer graduated from the Herts. MEd in Teaching and Learning in 2005. This article provides an account of her use of a classroom intervention to promote thoughtfulness in a group of middle-ability AS level Business Studies students. It describes her development of a 'key fob' of 'thoughtfulness' tools and her small-scale qualitative investigation into its impact on those students. It concludes with a critical reflection on its implications for classroom practice.

Several years ago my departmental colleagues and I were having difficulties in engaging some Business Studies students in the skills of analysis and evaluation needed to move beyond an E or D grade at A2 Level. We tried a number of initiatives such as changes in teaching style, lesson structure and differentiated support; these had some impact but did not resolve the issue. At that time senior management had also identified a core group of students for whom we were adding least value, namely those entering our sixth-form with a 5.33 to 6.33 average GCSE points profile and classified as 'middle-ability'. Some of these students were not meeting their Minimum Target Grades (MTGs). These were grades determined by the school using national data to identify the results a student entering the Sixth Form with a given GCSE / Key Stage 3 profile should achieve, at GCE AS and A2 Level.

Reflections on classroom events and pupil dialogue led me to identify a number of dispositions common to the middle-ability student in Business Studies. I realised that the staff complained of students' apparent need to be spoon-fed knowledge and their unfailing desire for the 'right' answer and refusal to accept 'it depends' answers. We were fed up with their plaintive cries of "write it on the board, miss and we'll copy it down" and "can you just tell us the answer ...it's easier than working it out". We despaired of the willingness to merely regurgitate knowledge and their reluctance to take risks or test out ideas. It was my belief that these students were not acting, or even perceiving themselves, as 'thinkers'.

Invigilating an A2 Business Studies examination the following summer I noticed that many of my middle-ability students began writing almost immediately they had finished what can only have been a cursory read-through of the paper. I was surprised because the paper contained detailed appendices of statistical and graphical data and I

had given them firm advice on the need to plan answers and to allocate time appropriately between preparation and writing. Reflecting on this, and the dispositions I had identified, led me to believe that ‘thoughtfulness’, a concept that I define as a willingness to engage in deliberate thinking in a structured manner, was a closed door to them. It seemed that this lack of thoughtfulness was linked in some way to their struggle to acquire the examination skills of analysis and evaluation. I began to think that promoting thoughtfulness might have a role in raising their achievement.

The intervention

I needed an intervention to unlock and open that door; to engage middle-ability students in effortful and deliberate thinking and to move them from being dependent and passive regurgitators of knowledge to independent, pro-active thinkers. I was particularly influenced by Shrag (1988) who considers that thoughtfulness is more than the acquisition of a skill base; it is also a question of attitudes towards thinking. He argues that thoughtfulness requires a belief that thinking is worthwhile, which allows deliberateness to be balanced with flexibility, avoiding both impulsiveness and rigidity. He concedes that, whilst thinking cannot be reduced to a skill, it shares some of its characteristics in that it can be taught, improved and that some people are more adept at it than others. Both McGuinness (1999) and Kite (2000) link the creation of ‘good thinking’ habits with an appropriate learning environment, relating the success of the development of higher quality thinking to the use of methods in the classroom that encourage the disposition to think as well as the acquisition of thinking strategies. My reading made me realise that the use of traditional thinking skills programmes would not necessarily lead to the kind of *thoughtfulness* I was looking for.

I wanted to design an artefact that would help the students to remember the elements of thoughtfulness. I devised a ‘thoughtfulness’ key fob to which I attached ten cardboard labels. Each label represented a ‘key’ to an aspect of the deliberate structured thinking process that I wanted students to use. The keys were based on some of De Bono’s (1981) CoRT programme tools. Some keys were used to broaden initial thinking and widen the perspectives from which students approach tasks. This gave them scope to demonstrate knowledge and understanding and the application of skills; a secure base on which to build their analysis and evaluation skills. Others would encourage analysis and evaluation through comparison, contrast, selectivity, judgement and justification. I hoped the tangible key fob would provide an easy reminder of the keys; that it would act as a prompt to students to stop and think before they write and give students a sense of ownership in the project.

Working with the thoughtfulness key fob

My aim was to explore the use of the key fob to promote thoughtfulness in the classroom. I also wanted to investigate its impact on middle-ability students in developing habits of thoughtfulness and the ability to link thoughtfulness to the skills of analysis and evaluation. I chose to focus on a class taught by a colleague, an experienced and established teacher. The class teacher’s views resonated with mine and she was willing to act as a reflective partner in my research. I began to keep a research diary in which I recorded the progress of the project, noting down critical incidents, issues and feelings as they arose.

Although the intervention was to be used with the whole class, I decided to focus on a sample comprising the nine middle-ability students with between 5.3 and 6.3 average GCSE points profiles and MTGs for A2 Level in the range B/C to C/D. We carried out some pre-intervention activities during December 2004 once the class teacher had established a good relationship with the class. Students were asked to assess a number of statements adapted from Sternberg's (1997) list of learning strategies and constraints. This allowed me to establish the degree to which the sample group matched the middle-ability profile I had identified.

The class teacher and I then reflected on a tape-recording and observation notes of the class attempting an exam-style task. We were both stunned at what had happened. Whilst one group, led by the higher-ability students, forged ahead with the task, the sample group sat in silence for almost twenty minutes with no evidence of them underlining key words or annotating or coding the text. It was clear that they found it difficult to start the thinking and planning process. We agreed that had we been doing the question with them we would have been instructing them '*underline this word because it tells us...*' and '*here is an important point - mark that bit of text*'. Their only creative idea, when one student suggested they should listen to and copy the other group, simply affirmed their passivity and their desire to be spoon-fed. I realised that as teachers we often do the thinking for them without signposting how we are doing it. They obey instructions, not recognising the instructions as tools nor assimilating them.

In January 2005 the class teacher handed out the key fobs and began to introduce the keys (see Appendix 1). We had intended that they should be introduced through a series of worksheets, one per lesson, over a period of three weeks. I had selected worksheets which were most appropriate for sixteen to seventeen year olds and, where possible, had some business relevance from a scheme called Think Before You Act (Hymans, 2003). She would then continue to model the use of the tools in class (Kite, 2000); to make links between the tools to particular tasks in the classroom and to show how they could be used in combination providing a scaffold for their use (Leat, 1998). She would gradually incorporate them into her own lesson planning for the remaining six weeks of the Spring Term. Wanting the keys to be accessible ultimately to students without dependence on the teacher, I asked her to encourage students to talk about and use the key fob both individually and collaboratively. I also wanted students to refer to specific aspects of deliberate thinking and to call the keys by their acronyms; for example 'doing a FIP' or 'using a PMI' to enable them to develop a language for exploring, discussing and reflecting on thoughtfulness thereby creating a shared vocabulary for use in the classroom (McGuinness, 1999).

I asked the students to keep 'open' diaries during the intervention to capture contemporaneously the introduction and use of the key fob. I tried to reduce the burden of responsibility that diaries would place on the students (Robson, 2002) by providing exemplar pages and by emphasising the collaborative nature of the project.

Unexpected timetable changes in January meant that the teaching of the class became shared with a Newly Qualified Teacher (NQT). For various reasons, and despite my reminders, the diaries and worksheets were not taken into class and the keys were not introduced or used consistently. Being thrown into the project unexpectedly I wondered if the NQT was ambivalent about the worth of the thoughtfulness project and that this

attitude was being transmitted to the students. I later discovered that although he had made some effort to incorporate some of the keys into his lesson planning, he had been put off by student resistance to the diaries which they said were ‘tedious’ and ‘an imposition on their subject-matter learning time’. Although many of the comments were brief, giving little scope for detailed interpretation of the thinking behind them, I analysed the diaries, producing for each an A4 sheet to summarise its contents. By colour coding and annotating each sheet I identified that students’ use of the key fob had broadened their thinking and encouraged selectivity. It was also possible to discern the kind of difficulties that students had with the way the key fob thoughtfulness tools were introduced.

With only four weeks of term left I was seriously worried about the project’s sustainability. Therefore I decided to introduce the key fob to my own teaching group to allow me to investigate the flaws of the key fob at first hand. I approached this with a one-session introduction, explaining the nature of each key and relating them to examination skills. I then asked my class to use them in a task and to give me feedback. As this group’s reaction was very positive I intervened with the other class and pushed through the last few keys before their mock AS examinations.

Post-intervention, I recorded and transcribed interviews with the sample group of students using my analysis of their diary entries to scaffold the questions in my semi-structured schedule (Munn and Drever, 1995). I was able to confirm and clarify some of their comments and investigate further their ability to link thoughtfulness to the skills of analysis and evaluation. I was very surprised when their responses indicated a change in attitude towards the key fob. I discussed my findings with my colleagues in order to reflect on why this had happened. I then asked the students to complete anonymously a short questionnaire comprising simple closed questions to confirm their views, independent of the interview data and my presence.

What I learnt

The evidence from the interview and questionnaire data suggested the students now appreciated the need to use a structured approach to thinking before acting or writing and found some benefit from using the ‘thoughtfulness key fob’. Most students regretted their early resistance which seemed to stem from three issues extraneous to the key fob itself: the timing of the intervention; the manner in which it was introduced and the fact that students did not at first see clear links between the intervention and their subject-learning.

Their views on thoughtfulness appeared to be more sophisticated than those expressed during the pre-intervention tasks; they recognised the value of how to do things rather than just to know things and could link deliberate structured thinking to the examination skills of analysis and evaluation. I interpreted this as students beginning to identify themselves as ‘thinkers’ (Kite, 2000) and valuing the trait of thoughtfulness (Shrag, 1988). The fact that some students had used the keys in their mock examination paper at the end of the term was particularly promising.

Despite my reading I had underestimated the challenge in changing student attitudes towards thinking (Burden, 1987; Blagg, 1991) and the extent to which a degree of co-operative collaboration in the classroom is paramount to the success of an intervention.

I learnt more from these problems than I would have done had the project run smoothly. This has already begun to shape my practice for other teaching and learning interventions.

I am aware that my data does not allow me to generalise beyond my own classroom context and that my claim that the intervention has merit is merely relateable rather than generalisable (Bassey, 1999). The key fob is clearly not the only solution, but it appears to have the potential to prompt the kind of deliberate and structured thinking I had in mind. Middle-ability students not only benefited from an improved ability to think for themselves but also drew on this in examination questions, finding the skills of analysis and evaluation more accessible.

Was it worth it?

The project has had a positive impact on the way we collaborate, share and support each other in the department. We have become a more cohesive force in our attempt to raise achievement in middle-ability students. In spite of the difficulties, I believe I have successfully implemented change and extended the ethos of collaboration (Mitchell and Sackney, 2000). The project enabled me to illuminate an issue that fed into discussions in a whole-school professional development day on thinking skills and thoughtfulness. Whilst I am still using the 'thoughtfulness key fob', I am at present concentrating on 'teacher signposting' (the words we use and the models we set) and examining further the constraints on thoughtfulness.

In this project I tried to avoid the usual pitfalls of teacher action research (Somekh, 1995). It is imperative neither to work alone nor to become too introspective about one's research, but instead to engage in collaborative partnership with colleagues. I have also learnt that it is necessary to bear in mind that a project should be conducted in a manner that allows the dissemination of findings, makes a difference in the classroom and generates enthusiasm in others. There is no doubt that classroom research is demanding, especially when you are full-time teacher and possibly have additional responsibilities such as Head of Department, but the intellectual challenge has not only helped me to develop a vision for my students but has also enriched my professional practice (Desforges, 1989). I hope that by sharing my own experiences I might encourage other teachers to engage in classroom research.

References

- Bassey, M. (1999) *Case Study Research in Educational Settings*. Buckingham: Open University Press.
- Blagg, N. (1991) *Can we teach intelligence? A Comprehensive Evaluation of Feuersteins's Instrumental Enrichment Programme*. Hillsdale, NJ: Erlbaum.
- Burden, R.L. (1987) 'Feuersteins's Instrumental Enrichment Programme: Important issues in Research and Evaluation'. *European Journal of Psychology of Education*. 2(1), 3-16.
- De Bono, E. (1981) *CoRT – I Thinking*. Oxford.: Pergamon.
- Desforges, C. (1989) 'Understanding learning for teaching.' *Westminster Studies in Education*. 12, 17 – 29.
- Hymans, M. (2003) *Think Before You Act*. Bristol: Lucky Duck Publishing.
- Kite, A. (2000) *A guide to better thinking: teachers guide*. London: nferNelson.
- Leat, D. (1998) *Thinking through Geography*. Cambridge: Chris Kington Publishing.
- McGuiness, C. (1999) *From Thinking Skills to Thinking Classrooms: a review and evaluation of approaches for developing pupils' thinking*. DfEE Research Report 115. London: DfES.

- Mitchell, C. & Sackney, L. (2000). *Profound improvement: Building capacity for a learning community*. Lisse, NL: Swets & Zeitlinger
- Munn, P. & Drever, E. (1995) *Using Questionnaires in Small Scale Research*. Edinburgh: SCRE.
- Robson, C. (2002) *Real World Research*. (2nd Edition) Oxford: Blackwell.
- Shrag, F. (1988) *Thinking in School and Society*. London: Routledge.
- Somekh, B. (1995) The Contribution of Action Research to Development in Social Endeavours: a position paper on action research methodology. *British Educational Research Journal* 21(3), 339-55.
- Sternberg, R.J. (1997) *Thinking Styles*. Cambridge: Cambridge University Press.

Appendix

Table of keys to deliberate thinking

Consider All Factors (CAF): an attention-directing tool encouraging students to identify and list all factors that might have some relevance to the issues in their classroom task or examination question.

Alternatives Possibilities Choices (APC): an attention-directing tool to increase detail in the thought process by asking students to identify parallel possibilities.

Other Peoples' Views (OPV): this broadens perception in two ways by encouraging students to consider both sides of an argument and by developing their sense of objectivity.

Consequences & Sequel (C&S): a tool to encourage students to look at consequences in terms of benefits, costs and risks relating to three key issues: timescale (immediate, short-term, medium-term and long-term); risk (best and worst case scenario); and certainty.

Plus Minus Interesting (PMI): a scanning tool can be used for a single idea or to assess a number of alternatives. All Plus points are identified before the Minus points and only after that should Interesting points be searched for. This tool can be used at a number of stages of the task: to assess initial issues; to analyse solutions; to evaluate conclusions; and to justify decisions.

Aims Goals Objectives (AGO): an attention-directing tool to encourage thinking about focus and purpose.

First Important Priorities (FIP): a parallel-thinking tool that is used to narrow down a wide list of ideas. I chose it to guide students in measuring the value of alternatives when making decisions.

Key Values Involved (KVI): the notion of key values introduces some selectivity into the generative thinking process. Students require an ability to identify whose values need to be considered, what those values are and then to identify the key values which take precedence.

Compare: a tool to be used in conjunction with others to bring in a further element of selectivity, encouraging students to weigh up factors, options, and solutions.

Decisions: a tool to identify three possible decision problems: where one has no idea what to do; where one has only one idea which may not be sufficient; and where one has a number of ideas but cannot choose between them.

ICT and self-advocacy in students with severe learning difficulties

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Abstract

Robert Good graduated from the Herts. MEd in Teaching and Learning in 2002. In this article he provides an account of his work with post-16 students with severe learning difficulties (SLD). The article focuses on the use of video recording to support the students' self-advocacy and enable them to develop more ownership of their learning.

The school context

Watling View is a day special school for students from age 2-19 years. At the time of my project there were eighty four pupils on role with a great diversity of needs, from those with more profound and multiple learning difficulties (PMLD) to those with more moderate learning difficulties (MLD). All students had Individual Education Plans (IEPs) that identify the nature of their learning difficulty and targets for intervention.

In the class where the project began, there were fourteen students aged between sixteen and nineteen following the school's post-sixteen curriculum. The Further Education curriculum aims to build on the knowledge and experience gained in earlier years while focussing more directly on the opportunities, responsibilities and experiences of adult life. Fundamental to such preparation is the recognition of emerging adulthood and its application to students as a basic right. This should be reflected through a curriculum that incorporates approaches which seeks to promote students' identification of themselves as young adults through self-advocacy, choice and decision making leading to increased responsibility for their own learning.

Self-advocacy in learning

Self-advocacy is about providing students with opportunities to control their environment through effective choice and decision-making. Empowering students to realise greater degrees of personal autonomy requires opportunities to develop key skills in contexts which are meaningful, accessible and adaptable to individual need. The Special Educational Needs Code of Practice emphasises the moral obligation to provide such opportunities.

Participation in education is a process that will necessitate all children being given the opportunity to make choices and to understand that their views matter.

(DfES, 2001: 3:6)

Students need to be motivated to initiate approaches to their learning and to develop these views so they can make realistic judgements of their performance based on shared and valued criteria. Arguably a key component for such a mechanism is for students to develop ownership of their learning objectives and to be encouraged to set their own related targets.

In their study of effective target setting amongst students with SLD, Rose *et al.* (1999) identify opportunities for future initiatives including the production of student-friendly Individual Education Plans (IEPs) and the provision of regular tutorials during which students can be helped to discuss, review and produce targets. These initiatives were important in the development of the project. The aim was to enable students and staff to contribute ideas towards IEP development and approaches to target setting and stimulate an improvement in student ownership of IEPs. This involved the establishment of a new format that would help them to set related targets reflecting a growing understanding of their learning.

The research dimension

The setting up of my project featured collaboration, active participation, assessment and development as illustrated by Rose and Grosvenor (2001). I was fortunate in having help from a research assistant funded under the DfES Best Practice Research Scholarship scheme. There was an initial need to clarify where students were getting their ideas for targets and if there was any reference to IEPs in this process. In the initial interviews I wanted to identify how students perceived their IEPs, the obstacles that were impeding ownership and ways in which the format could be developed to facilitate improved knowledge and involvement. This would provide the background for the introduction of the new format into classroom routines. Using specific criteria, students were asked to rank themselves in terms of their learning objectives and to identify their own learning needs. The interview schedule was designed to meet individual needs and elicit personal views.

Students were also observed in their target setting. They were succeeding in setting themselves some valid targets and most sought help from their own sources of information such as previous work and timetables, but some found the process daunting and would have given up without detailed guidance from staff. There was little peer discussion and some of the targets set were rather haphazard. Students often found it difficult to explain the sources of their ideas and none of the students used their IEPs as they did not have access to them in an appropriate format. There was scope for most targets to be more directly linked to the learning needs of individuals.

The ICT used in this project

ICT helped us to make the IEP process interactive by providing an adaptable format which can encourage involvement. There was a range of commercial software available to deal with IEPs (Tod *et al.*, 1998) but there was a need to develop a specific format for this new way of working with IEPs. The school is very well resourced regarding ICT. In our classroom area, there were six networked PCs, a networked laptop linked to a large interactive board, a digital camera and an Intel 'Movie Creator' video camera. The Movie Creator in particular brought advantages to this project in that it is very portable but shoots up to a minute of good quality film that is adequate for evidence purposes. It is easy to download any clip while editing features are simple to use. Students used Power Point to produce a slideshow to present what they had achieved.

The software itself was flexible enough to enable students to present their work and actively develop their IEPs. Each IEP was located in a specific network folder while all files were backed up in case information should be deleted. Each had a front page where the student talks about their IEP. Each target had its own page with a video clip of the student talking about it. Each of these clips plays automatically when a new page is accessed. Photos and symbols were imported into the documents as appropriate.

Students were encouraged to view their slideshow in two daily tutorial sessions. This was a time for planning when they could propose action points and suggest how they might meet them. Soon students were making suggestions for video clips and photos that represented a range of activities. They were identifying their targets and then watching clips of themselves involved in related activities. Any photographs or videos could be imported quickly so that there could be immediate reflection on achievements. Students were increasingly encouraged to place a judgement on their performances within each target by using the criteria laid down and negotiated with them earlier. It was only a matter of weeks before most of the students were independently accessing these interactive files on a daily basis and, with limited support, adding new information.

IEP development and piloting

The new format was piloted with the students and appropriate evaluative adjustments were made. Once the formats had been established three more target setting observations took place using the methods previously described to gauge any developments in students' use of IEPs. The students seemed to have enjoyed giving their responses and seeing their views being acted upon and valued. It began to seem that the students were setting themselves more challenging learning targets, most of which had a direct link to an IEP objective and therefore reflected individual learning needs. They appeared to have an improved ownership of this process and were more self-reliant. If a student was asked for their reasoning behind a target they were able to give an answer. Students were able to access their weekly targets in their own folder on the computer network. Most had video clips to which they could refer. The mixture of symbol, text and video was very powerful. Students were now looking to staff for confirmation once they had an idea in their minds and had expressed their view. Often these ideas were prompted through reference to their IEPs. Discussion amongst peers remained limited although whole class sharing of achievements at the beginning of sessions was valued and appeared to be a motivating factor.

After some experience, the students began to interact with their IEPs in a purposeful manner, with video clips helping them to put their thoughts into context and form judgements on their progress. Some students began to consider their skills in terms of the context in which they used them and made judgements accordingly. They appeared happier to consider the need for improvement and tended to view this as an appropriate plan of action rather than outright failure. Students seemed proud of their achievements and wanted to discuss them. The IEPs themselves contributed to the communicative process by providing motivating factors to communicate information with a clear purpose.

When interviewed again, students in general demonstrated an improved understanding of the role of target setting and its relationship to IEP objectives. A range of these views included:

You work on your own
Something you can't do yet but can do with practice
It confirms myself as an adult
I feel confident and concerned
It helps you with your learning
It's things you can't do but can get better at
Things you want to do in the future
Things you can do
Something you need to work on
Something to help you
It's about target setting and trying to do it without help
My education plan: I'm doing my targets
Talking about yourself

During the interviews, several students were able independently to call up their IEP folders on the computer and refer to their targets on screen, demonstrating how the new format was informing their answers.

The development of key principles

IEP development has had a significant impact on the ownership of learning amongst these students in that they formed a range of views and could locate sources for their opinions. Their perceptions appear to be based on what they know they are doing in school in terms of both success and failure and their respective strengths and weaknesses. Their improved knowledge and ownership has been reflected in their target setting where they have set a range of targets that are related to their needs. They are increasingly defining these needs for themselves. The students are now using their tutorials to reflect on achievements and seek ways to approach new challenges. An enjoyable part of this process is to identify appropriate activities which can be incorporated into the IEP content as evidence. All of the students enjoy opportunities for whole class celebration by accessing and playing their video clips on the interactive board. In simple terms the students can talk about what they can do and why they are doing it and identify what they want to do next and how to plan for this.

This interaction with their learning environment has helped students to recognise when they are successfully coping with challenges. Such recognition may be helping to improve self-esteem (Powers *et al.*, 1996). In turn it is possible that this degree of efficacy and self-worth encourages perceptions of effective and purposeful learning. If these students can learn to deal with degrees of failure in positive terms then their self-esteem may improve.

Towards principles for practice

Wade and Moore (1993) found that the self-concept of many students with special educational needs was low. If students feel that they are underachievers by nature then the teacher must change this perception by actively seeking to raise self-esteem. Key principles for achieving this include the following.

- Perceptions of inadequacy must never be reflected in the classroom if students are to be motivated to take risks in order to succeed.
- Students must discuss how they feel they learn best and see their views acted upon (Wehmeyer, 1996).

- With success there must be recognition of achievement to subsequently inform future progress.
- IEPs should belong to students and represent their developing knowledge of their learning and the expression of associated self-advocacy skills (Pearson, 2000).
- Practice must be underpinned by classroom mechanisms which enable students to gain an improved ownership of their learning. Students must be helped to actively contribute to the direction that they believe their learning should take based on their own informed judgements (Rose & Grosvenor, 2001).
- ICT has a key role to play in helping students to access their learning needs.

If students with SLD have the opportunity and support to make choices in a variety of contexts then they can become more self-determined (Wehmeyer, 1996). To facilitate this the students' community must not only be able and ready to recognise such choices, they must be prepared to honour them. ICT has a key role in facilitating and recording such mechanisms.

Laying the foundations for ownership

The term 'special needs' is built upon assumptions of difference and alternative learning strategies, but this project has suggested that this is a world where students with very specific needs can be helped to develop their skills as independent learners. To this end the environment and ethos within which they work can enable them to develop their views so that they can control aspects of their learning. My study suggests that there is more to student involvement than just participation. It is about connecting students with their education, enabling them to influence and affect the programme and enabling them to become enwrapped and engrossed in their educational experiences (Good, 2002).

Genuine involvement requires a sense of control in the learning environment as well as the independent performance of specific activities. Students need opportunities to set a learning agenda that gives them the confidence and motivation to actively participate in partnership with their teacher (Cooper, 1993). They must see themselves as '...working towards a full role in the outside world and needing a full role in the world of the school' (Wade & Moore, 1993: 172). This project suggests that SLD students can be helped to develop such confidence and motivation through sustained involvement with their IEPs.

Initially the aim of this project was to examine self-advocacy skills in general terms and to explore beneficial teaching strategies. It became evident that students need to be helped to identify what they are learning in school and to express their opinions about these activities in terms of their own strengths and weaknesses. They need to develop their knowledge of specific targets and identify the obstacles that they must overcome. They then need to problem solve and create action plans with personal targets that have their own measurable criteria of success. As they do this any notion of failure should be viewed as a natural part of the learning process which can become a stepping stone towards achievement. A key activity in this process is the provision of a weekly target-setting session that can help students to identify their own realistic learning needs.

The IEP should be at the heart of this process. If students can become more active in the development of their IEPs then there may be a beneficial impact on self-knowledge

which will contribute towards an improved ability to set individually relevant and challenging learning targets. These students were able to achieve more control over the decision-making that affects their learning lives. It seems that there have been elements of self-realisation and genuine participation in the mechanisms of IEPs as they have become a living learning resource that is changing constantly due to direct student input. This project has suggested that the IEP should be a mirror for what the student recognises as 'school' and 'learning', a source of reflection and a route to celebrating the successful negotiation of failure and the subsequent attainment of success.

The desire to listen and respond

This study has confirmed that a teacher must take every opportunity to consult students regarding their needs and how they may learn most effectively in different contexts. Teachers must be ready to listen to what students have to say and respond with all the resources at their disposal. Technology has a great deal to offer in such developments.

This project confirmed for me a number of some key principles. Effective learning depends on:

- the evaluation of success and failure in positive terms in the classroom
- students being helped to attribute notions of failure to flaws within an action plan rather than personal attributes
- the provision of an enabling environment
- students being treated with respect and experiencing situations in which they perceive that those around them value them as individuals
- students being encouraged to interpret and respond for themselves so that they develop their own voice
- students having the means and motivation to communicate
- students developing their skills in self-determination together with a level of assertiveness that helps them to express their needs
- the provision of an IEP format which affirms students' responsibilities for their own education
- regular opportunities for students to set for themselves challenging learning targets which reflect a working knowledge of their IEP

Through the adaptation of such principles and the effective use of appropriate ICT resources students need to be helped to develop and communicate a voice that is listened to and then acted upon in ways that they recognise. It is then that students may begin to question the purpose of what they are doing and play an enhanced role in defining it. Recognising their own strengths and weaknesses and developing a sound knowledge of target setting is likely to help them to make well-grounded personal decisions and to plan for their future in realistic terms. In doing this an interactive IEP can help them to evaluate and plan for the successful negotiation of identified objectives. If they can work effectively within their IEP then they may begin to break down the barrier that exists between the formality of an educational objective and the expression of a self-determined individual.

References

Cooper, P. (1993) Learning from pupils' perspectives. *British Journal of Special Education*, 20(4), 129-133.

- Good, R. (2002) *Self-advocacy and Individual Education Plans: research with students with severe learning difficulties aged between sixteen and nineteen*. Unpublished MEd Thesis. Cambridge: University of Cambridge Faculty of Education.
- Pearson, S. (2000) The relationship between school culture and IEPs. *British Journal of Special Education*, 27(3), 145-149.
- Powers, L.E., Sowers, J., Turner, A., Nesbitt, M., Knowles, E. & Ellison, R. (1996) Take charge: a model for promoting self-determination among adolescents with challenges. In L.E. Powers, G.H.S. Singer, & J. Sowers, (eds) *On the Road to Autonomy: Promoting Self-Competence in Children and Youth with Disabilities*. Baltimore: Paul H. Brookes, pp. 291-322.
- Rose, R. & Grosvenor, I. (2001) Case study. In R. Rose, & I. Grosvenor, (eds) *Doing Research in Special Education: Ideas into Practice*. London: David Fulton, pp.70-75.
- Wade, B. & Moore, M. (1993) *Experiencing Special Education: What young people with special educational needs can tell us*. Buckingham: Open University Press.
- Wehmeyer, M. (1996) Self-determination for youth with significant cognitive disabilities: from theory to practice. In L.E. Powers, G.H.S. Singer, & J. Sowers (eds) *On the Road to Autonomy: Promoting Self-Competence in Children and Youth with Disabilities*. Baltimore: Paul H. Brookes. pp. 115-134.

See also

- Barber, M. (1994) Profound and multiple learning difficulties. In J. Coupe O’Kane and B. Smith (eds.) *Taking Control: Enabling People with Learning Difficulties*. London: David Fulton Publishers, pp. 49-60.
- Des Jardins, C. (1986) Assertiveness is / is not. In E. Weiner, (ed) *No apologies: A guide to living with disability, written by the real authorities – people with disabilities, their families and friends*. New York: St.Martin’s Press, pp. 122-123.
- Nisbet, J. (1996) The interrelationship of education and self-esteem. In L.E. Powers, G.H.S. Singer and J. Sowers (eds.) *On the Road to Autonomy: Promoting Self-Competence in Children and Youth with Disabilities*. Baltimore: Paul H. Brookes, pp. 155-170.
- Rose, R., Fletcher, W. & Goodwin, G. (1999) Pupils with severe learning difficulties as personal target setters. *British Journal of Special Education*, 26(4), 206 – 212.
- Tod, J., Castle, F. & Blamires, M. (1998) *Individual Education Plans: Implementing Effective Practice*. London: David Fulton.
- Wehmeyer, M. (1998) Student involvement in education planning, decision making and instruction: an idea whose time has arrived. In M. Wehmeyer, & D. Sands, (eds) *Making it Happen: Student Involvement in Education Planning, Decision Making and Instruction*. Maryland: Paul H. Brookes, pp. 3-25.

Using 'Learning Preference Profiling' to develop teaching and learning across the school

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Abstract

Jackie Johnson graduated from the Herts. MEd in Teaching and Learning in 2004. She is now one of the co-leaders of a Teacher Led Development Work group based at Barnwell School. In this article she provides an account of the leadership of a whole school development project using learning preference profiling based on multiple intelligences categories to build a pedagogic dialogue. The article examines the impact of the project on teaching and learning and the way the project has contributed to the school's rapid improvement trajectory in recent years.

I am a middle manager and Advanced Skills Teacher (AST) at Barnwell School, an 11-18 co-educational, comprehensive school in Stevenage. My development work centred on the use of a learning preferences profiling process which played a significant part in the improvement of teaching and learning in my school.

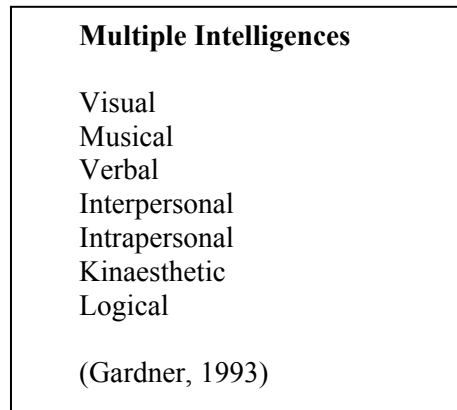
Rising to the challenge

When I first joined the Herts. MEd our school was struggling. Attainment levels were low and, in 2001, the numbers of children achieving five or more A*-C grades in their GCSE examinations dipped below 25%. We fell into the DfES category of 'Schools Facing Challenging Circumstances' (SFCC) which brought with it additional resources but also the challenge of frequent external inspections. Raising standards in teaching and learning became an urgent priority and this coincided with my own personal interest. Because we had been relatively successful in my department it was agreed that I would coordinate the learning preferences project the school had committed to during the previous year. My development work would be the evaluation and development of learning preference profiling as a school improvement strategy (for a full account, see Johnson, 2004).

My school became involved in The Hertfordshire Learning Preferences Project when the Deputy Head heard a talk by Julie Roberts, a fellow member of HertsCam, who had used a learning preference profiling technique. She had asked students to complete a brief questionnaire based upon multiple intelligence categories. The students were then informed of their most preferred and least preferred means of learning. This data was used to generate a dialogue in the classroom about teaching and learning issues. After two years of research, Julie was able to report dramatic improvements in attainment with her GCSE students as well as improvements in students' attitudes to learning and

classroom behaviour (Roberts, 2002). Julie's research also included a statistical comparison of the two most popular sets of learning styles categories: one based on the VAK (Visual, Auditory, Kinaesthetic) and the other based on the idea of multiple intelligences (MI). She concluded that the MI categories provide a more useful discrimination (see *Figure 1* below).

Figure 1:



The way the project would be structured and managed as a whole school process was discussed with the Senior Leadership Team (SLT). I had been identified as school co-ordinator but, in addition, the Deputy Headteacher would provide a supporting role and two other colleagues identified as 'aspiring Advanced Skills Teachers' (AST) would join me to form the strategic team. By introducing these roles and distributing leadership of the project, the SLT provided us with the opportunity to exercise leadership (Frost and Roberts, 2005). We were each allocated three hours each week to support the work of the project, one hour of which was to be used specifically to meet as a team to ensure that the project was running smoothly and to discuss any issues that had arisen during the course of the previous week.

The project was launched with a brief outline during our staff training day at the beginning of September. Interested colleagues were invited to a fifteen minute, after-school meeting. I was surprised when forty three members of staff attended the meeting and with the subsequent level of commitment to the project. Perhaps this reflected the capacity building which had already taken place (Frost, 2005) and may also have been a response to the fact that this initiative was not externally driven but instead was a local, Hertfordshire based research project supported by the University of Cambridge.

The process of learning preference profiling

The first stage of the project was the completion of the learning preferences instrument by all students in Key Stage 3. The multiple intelligences-based instrument originally used by Julie Roberts had been evaluated and developed in the early stages of the Hertfordshire Learning Preferences project. It had forty nine statements instead of the original twenty eight and wording had been carefully revised in response to feedback from pupils in the ten schools which had participated in the project. I also altered the visual appearance of the instrument to make it more 'user-friendly'. We looked at the layout of a number of multiple intelligence instruments and then adopted the style where the questions are not enclosed by boxes and each coding box stands alone, thus

producing a clear, more professional looking document. The instrument was then printed onto coloured paper in a further effort to make it more attractive.

In September, the students in our project were asked by their form tutor to complete the instrument. Each form tutor was requested to read the same information and instructions to the students in an attempt to ensure uniformity. The instructions printed at the beginning of the instrument were also read out and an example was given to illustrate how the questions should be answered. I asked form tutors to record any issues that had arisen so that we could subsequently refine and improve the instrument. We discovered for example that two of our students struggled to understand the word 'tunes'.

We divided staff into three groups each with an AST link who took responsibility for assisting these colleagues by recording student profiles on class registers, monitoring the progress of the project, disseminating materials and providing additional support when required.

Feeding back the results to the students was accompanied by explanation and discussion at a whole school level. Each AST led an assembly in which they reminded the students of the profiling instrument they had completed at the beginning of term and provided them with an overview of the different learning preferences. Assemblies were a powerful means of reinforcing awareness of the learning preferences idea and stimulating a discourse with students about teaching and learning. In addition, they demonstrated to the students that, despite having previously worked on this area in the relative isolation of their form groups, this was actually a whole school project involving a large number of teachers and all their peers in Key Stage 3. During the same week as these assemblies, each form tutor was provided with a list of their form group's most preferred and least preferred ways of learning, together with brief instructions to help them handle the feedback to students. In their planners, the students had a pre-printed page which read, 'My most preferred way of learning is.... and my least preferred way of learning is....'. Form tutors were requested to help the members of their form group to complete this page. They were issued with a list of the profiles and a brief description of each of the seven categories. This would equip them with basic information and underpin initial discussion. The school PSHCE³ team played a crucial role by teaching a series of lessons to develop students' understanding of the learning preference categories.

In the meantime, we created and published the first edition of a staff resource booklet entitled 'Learning Matters'. This contained information relating to the seven multiple intelligences on which the learning preference profiling categories are based, along with guidance and exemplar material for use in lessons. This was issued to all staff, regardless of whether they were involved in the project or not.

Building pedagogic dialogue

Prior to the end of term, we asked colleagues to review the scheme of work they would be using over the next half term and to identify any changes they would make in light of the learning preference profiles of their classes. Once completed, these were photocopied and returned to the appropriate AST.

The strategic team had to make a decision regarding how the data from staff and students was to be collected and analysed. It was important to be able to get field notes of some description from colleagues who had agreed to experiment with learning

³ PSHCE – Personal, Social, Health and Citizenship Education

preference profiling. We issued staff with 'post-it notes' on which they could make brief notes at intervals during their classroom teaching. They were asked to record:

- amendments to their teaching
- dialogue between students and teachers about issues related to teaching and learning
- students reflecting upon their own learning
- students developing a more positive attitude to learning

We gave them a guide sheet printed on brightly coloured paper and asked colleagues to place these in their planners to act as a reminder. We wanted to encourage colleagues to use the 'post-it' notes on a regular basis so we colour-coded them to identify different departmental teams. We could then identify, at a glance, departmental teams who were contributing / not contributing to the data collection process. In cases where data was not forthcoming, the AST link could monitor this and encourage colleagues to use the post-its or offer assistance in the completion of them during their allocated research time.

We needed a method where all staff could access this information whether they were involved directly in the project or not. Paul Barnett, the Deputy Headteacher, proposed an idea used in another school – a 'virtual wall'. We selected a notice board situated in the main corridor leading to the staffroom since this was one place that each member of staff would pass at least twice a day, if not more. The Head of Art painted the notice board during the half term break to represent a wall. It was on this 'wall' that we asked staff to pin their 'post-it' notes.

To inform parents, I organised a carousel activity for a Year 7 Parents Evening which would serve to inform them of the project. It was considered that if parents were aware of their son / daughter's preferred learning style then they may feel more confident engaging in conversations about learning at home or may be able to provide more appropriate support with extended learning.

At this time teachers began posting their observations and thoughts on the 'wall'; I made a record of each item and collated them all under the four categories on the guide sheet. This data was fed back to the strategic team at weekly meetings where we would reflect on it and plan our next course of action. We also monitored the progress of the project to decide whether we needed to provide any additional support for our colleagues.

By Christmas 2003, we had 120 'post-it' notes on our wall. Most of these items indicated changes in teaching strategies; the development of teachers' repertoires was an important aim of the project but we had also been hoping to see evidence of an increase in dialogue about teaching and learning occurring in our classrooms. However, through informal conversations within the staffroom and comments made directly to myself, I was aware that although dialogue had taken place between students and teachers within the classroom it had not been recorded on the 'post-its'. I recorded these conversations in my research journal. It was clear to us that we needed to encourage all the teachers participating in the project to think about ways in which they facilitated dialogue about learning and to share examples of productive interaction through the virtual wall.

At the beginning of the Spring Term a brief meeting for all staff involved in the project was held. This was used to update them on the progress of the project, to explore their questions and to emphasise the need to record instances of dialogue in their classrooms. Colleagues were also issued with a new scheme of work proforma, an additional copy of the guide sheet and a new set of blank 'post-its' to be used during the forthcoming term. It was decided that the visual appearance of the 'post-its' would be altered on a termly basis and these were now brightly coloured 'flash cards'. It was hoped that this would encourage staff to take note of the new items pinned on the 'wall'.

Evaluating the project

In the Summer Term we intensified our data gathering so that we could evaluate the project. We wanted to evaluate the project for two main reasons. Firstly, we wanted to know how to adjust the process and identify further need for support and secondly we wanted to try to assess its impact. The term 'impact' can be problematic as it is often associated with an improvement in attainment. However, we were interested in impact in a wider sense (Frost & Durrant, 2002). In order to reflect upon the impact of the project we were able to draw upon data collected by our project researchers, Katy Redgrave and Sarah Lightfoot, by means of student interviews, staff interviews and classroom observations, as well as the teachers' field notes and my own research journal. A sample of students from Years 7, 8 and 9 were interviewed on a group basis with six students present.

Developments in practice can be discussed under two main headings: *developing teaching repertoires* and *fostering pedagogic dialogue in the classroom*.

Developing teaching repertoires

During the first term of the project, one third of the classroom field notes posted onto our virtual wall were concerned with adjustments that staff had made to their teaching. In order to assess the impact of these strategies it is worth reflecting on the teaching at Barnwell prior to the commencement of the project. Our students were asked for their views of this during the interview process and their responses were all very similar. They indicated that teaching often features '*doing things just one way*' and '*copying stuff*'. These views were extremely alarming to hear. As a conscientious practitioner who had witnessed many examples of good practice at Barnwell, I had had no idea that these teaching methods were still being employed on a regular basis. If this was the type of practice which had been previously observed by inspectors, it was no wonder we had faced harsh criticism. However, since the implementation of the project, the students have a very different perspective of our teaching and suggest the staff are '*trying to find the best ways of helping everyone*'. Many of the students also said that lessons were now '*more fun*'. One of the teachers interviewed reported that she deliberately focused on developing a repertoire that made learning more fun. This is extremely encouraging as students who are enjoying lessons are more likely to become fully engaged in the learning process. Another colleague reported that the project had had an immense impact upon the enjoyment levels of her students which, in turn, led to an improvement in their attitudes towards learning. This enthusiasm has also been reflected in staff attitudes. One colleague who had been teaching for over twenty years stated that she felt as though she was a '*born again*' teacher and that her passion for teaching had been rekindled.

Fostering pedagogic dialogue

Dialogue about learning was also becoming evident in the classroom where students and teachers were frequently heard discussing why the teacher had selected a particular task, and why certain students might find the activity slightly easier to engage with. It

was also evident that increasingly teachers were working with the class to devise strategies to support those who may find particular activities more difficult. In some situations, the students were also allowed the freedom to discuss and select their own preferred means of responding to a given task. During the interview process several of the students commented that some of their teachers were now asking their class for feedback about their lessons and for ideas of how to improve them. One student said that he could now talk to his teachers about the way that they teach, whilst another reported that some of his teachers tell him why they are doing things in a certain way.

Impact on students' learning

Being aware of the ways in which practice is changing is very helpful of course but we also needed to know whether these changes were having the desired effect. It appeared from the students' responses that there were three main areas where the project has had most impact. These can be categorised as:

- attitude towards learning
- developing an understanding of themselves and others as learners
- success in learning

Attitude towards learning

The impact of the project on student motivation and the development of a more positive attitude towards learning has been immense. Previously, Barnwell School had high instances of poor behaviour within the classroom. This not only affected the learning of the individuals involved, but also the learning of the other students present at the time. Although some of these students were frequently sent out of classrooms as a result of their behaviour, this did not address the issue of why they were behaving in this manner and what could be done to remedy this. Since the project began, both students and teachers have reported an improvement in students' attitudes towards learning resulting in less instances of disruptive behaviour in the classroom. For example, one teacher said that she felt the students were much more prepared to try to learn because there was a variety of activities in the lesson. Prior to the project the school also operated an 'on-call' system whereby middle managers and the SLT would be allocated one period where they would remove disruptive pupils from lessons, at the teacher's request. As a result of the improved attitude of our students this system is no longer in effect at Barnwell. It would appear that we now have a culture where it is not unusual for students to discuss their learning with both their teachers and their peers. One teacher reported that she often hears students talking about what they have done in lessons, how they prefer to learn and what they have found interesting. She finds this exciting as she has never worked with students who are so enthusiastic about their learning.

During the interview process many of our students reported that previously learning had been monotonous. As one student explained, "*It was just reading and writing*". This meant that when faced with a task which they found difficult, the students were reluctant to try it, or simply gave up. Now the situation is very different. When asked how they would feel if they were given a task that was not suited to their preferred way of learning, the students interviewed responded in a very positive manner demonstrating a dramatic shift from the attitudes experienced before, for example, one student commented that he found it a challenge, whilst another student stated that she would, '*try and have a go at it as it was just another way of learning*'.

Some students were enjoying the experience of learning so much that they choose to attend 'fast-track' classes. In selected subject areas students are given the opportunity to participate in additional extra-curricular lessons, with a view to completing their GCSE examinations in either Year 9, or Year 10, rather than Year 11. These classes have grown in popularity over the last year and, for example, we now have 20 students on the 'fast-track' Physical Education programme, compared to 2 students in the year prior to the start of the project. I believe that much of this enthusiasm and motivation originates from our students gaining a deeper understanding of their own strengths and weaknesses as learners.

Developing an understanding of themselves and others as learners

The responses of our students in the interviews suggests a growing understanding of the idea that there are many different ways in which they can learn although there may be ways that they prefer and others which they need help to develop. For example, one student suggested that she had to work harder on her logical way of learning to enable her to complete a set task, whilst another said that he hated visual activities but would have to try and develop these skills as his exams would be presented in a visual format.

There has only been one instance during the project where a teacher recorded a conversation with a student where the student was implying that the task being set had no value at all because he was not that type of learner. The teacher responded by trying to dispel this misconception and suggested that, although this was not his most preferred way of learning, he could still learn in this way but may simply find it a bit more difficult. One of the main criticisms of the use of learning styles inventories is that students can be 'labelled' as a specific type of learner. If this perception is not challenged, it may lead to students' believing there is nothing they can do to become more effective learners or that their learning experience is restricted.

Evidently, our students now also appreciate that there are others in their class whose most preferred way of learning may be their own least preferred way of learning. As a result of this awareness, they know which of their peers can support their learning and, when faced with a task which is not suited to their preferred way of learning, are now willing to work with students who can offer them most help rather those within their friendship group. For example one student stated, '*I want to work with John because he is good at interpersonal things and I am not*'. This understanding has led to greater empathy within the classroom between learners. They are much more tolerant of each others' weaknesses and now try to support rather than ridicule each other.

Success with learning

Students at Barnwell seem to be experiencing much more success with learning since we began the project. Examples of this include comments from students such as, '*I'm really good at this*', '*It really helps you remember*' and '*The information is still in your head and you can think about it in exams*'.

During the academic year there were a number of indications that attainment was beginning to show improvement. My research did not depend on the measurement of attainment and I was well aware that any attempt to attribute any improvement to the learning preferences project would be fraught with difficulty. Nevertheless, there were several examples of students being more successful in formal tests. For example, one teacher reported that her 8W class (middle band), her project class, taught in ways that

addressed their learning needs, consistently scored higher than her 8R (top band) class – a class not involved in the project. One of the students interviewed also reported that his grades are now higher as he was able to think back to what he had done in lessons.

The learning preferences project continues to have considerable impact on teaching and learning at Barnwell School. The use of learning preference profiling has now become an embedded feature of the teaching and learning process rather than operating on the voluntary, ad hoc basis we began with. In the summer of 2005, the GCSE results showed a very significant rise (from 24% in 2001 to 47% in 2005). It would be questionable to attribute this doubling of this particular measure of attainment to the use of learning preference profiling but I think I can safely claim that the whole school approach to improvement in which learning preference profiling has played a major part, has fostered a positive learning culture which is now evident in measured attainment.

Reference

- Frost, D. (2005) 'Resisting the juggernaut: building capacity through teacher leadership in spite of it all'. *Leading and Managing*, 10(2), 70-87.
- Frost, D. & Durrant, J. (2002) Teachers as Leaders: Exploring the Impact of Teacher Led Development Work. *School Leadership and Management*, 22(2), 143-161.
- Frost, D. & Roberts, J. (2005) From teacher research to teacher leadership: the case of the Hertfordshire Learning Preferences Project. *Teacher Development Journal*, 8(2&3), 181-199.
- Gardner, H. (1993) *Multiple Intelligences: the theory in practice*. New York: Basic Books.
- Johnson, J. (2004) *A capacity building approach to school improvement: using learning preference profiling as a focus*. Unpublished M.Ed Thesis, University of Cambridge.
- Roberts, J. (2002) *Learning preferences and pupil attainment: an investigation into improvement strategies*, a paper presented within the symposium: 'Leadership for Learning: the Cambridge Network' ICSEI 2002 Copenhagen.

See also

- Barnwell School (2005) *Multiple Learning Activities: providing for different learning preferences*. Stevenage: Badger Publishing.

Debbie Davies' Development Work: Developing a 'Learning to Learn' course at The Highfield School, Letchworth

Debbie Davies teaches at The Highfield School, a Leading Edge School with an ethos which promotes the development of teachers as reflective practitioners. She participated in the Certificate in Teaching and Learning course at Hertfordshire Development Centre in 2004-05 and, at the time of writing, co-leads a Teacher Led Development Work group which serves schools in Letchworth.

Debbie had visited Two Waters Primary School and was inspired. All teachers at Two Waters are trained in De Bono's Thinking Skills approach to pedagogy and practice. Debbie was particularly impressed by the children's ability to discuss their own learning. She decided to develop a Learning to Learn course at The Highfield School in the hope that it would promote independent learning.

Her reading of the literature on independent learning strengthened Debbie's resolve and helped her think about the ways in which a Learning to Learn course might impact on students' independence as learners. She was encouraged by the argument that the ability to think and learn independently should be valued above all else, despite the fact that the current national focus on achievement tends to lead to a view of learning which emphasises the acquisition of knowledge (Stoll, Fink and Earl, 2003). A compilation of recent research in which schools had experimented with Learning to Learn approaches was also encouraging. Many schools reported positively on the programme with raised standards, motivation and morale being cited as indicators of potential impact (Greany and Rodd, 2003).

Debbie discussed her ideas with members of her school's Leadership Team. It was agreed that she would write a ten week Learning to Learn course which would be operate as part of the Year 7 Personal and Social Education course. She designed her Learning to Learn course by looking at other courses, for example one written about by Burnett (2002), and Alistair Smith's 'Accelerated Learning in Practice' programme. Her course included:

- Gardner's Multiple Intelligence Wheel and questionnaire
- De Bono's Thinking Hats
- memory techniques
- how the brain works
- Brain Gym
- Mind-maps
- Emotional Intelligence

She chose resources that she thought would be suitable for her Year 7 students. The aim was to enable the students to become independent learners by raising their self-esteem, helping them to know more about how they learn best and teaching them the skills to become better learners.

Debbie wanted to evaluate this and assess the impact of the course on the extent to which students are able to learn independently. She summarised her areas of interest in the following questions.

- Did students feel more confident to attempt tasks alone after following the Learning to Learn course?
- Did students now have a wider range of learning strategies that they could use in subjects across the curriculum?

She focused on a small group of Year 7 students and used a number of ways of collecting data to help her to understand the impact of the Learning to Learn course. Student interviews demonstrated that students were more confident in working independently when they had a choice of task. Lesson observations conducted by Debbie gave her further information on the degree to which students had developed independent learning strategies. A log of learning strategies was also used by Debbie to show the range of strategies used by the students.

Group interviews with students confirmed Debbie's view that students were able to transfer their learning strategies to subjects across the curriculum and to work undertaken at home. She also found that confidence levels among students were considerably boosted by having a degree of independence in the learning process.

Debbie felt that the importance of student ownership of the learning process was confirmed by her project. Students clearly articulated their wish to continue to practice their new-found skills across the curriculum. They similarly emphasised the importance of having a choice of learning activity. This allowed them to practice their independent learning skills and thus increase their confidence. It is interesting to note that some students felt that a potential barrier to their development in this area was a lack of opportunity for independent learning in some of their lessons. Debbie rightly raises this as an issue to be addressed.

Following this evaluation Debbie was able to revise and improve the scheme of work for her Learning to Learn course.

She then turned her attention to strategies for supporting more teachers in developing both their understanding of independent learning and their inclusion of a choice of activity in their lesson plans in order to scaffold the development of students as independent learners.

References

- Burnett, G. (2002) *Learning to Learn*. Carmarthen: Crownhouse.
- Greany, T. & Rodd, J. (2003) *Creating a Learning to Learn School*. Stafford: Network Educational Press.
- Stoll, L., Fink, D. & Earl, L. (2003) *It's About Learning: Its About Time*. London: RoutledgeFalmer.

Jill Borchers' Development Work: Using interactive whiteboards as a motivational tool at Stanborough School, Welwyn Garden City

Jill Borchers completed the Certificate in Teaching and Learning based at the Hertfordshire Development Centre in 2005. This provided her with a framework for her professional development focused on how to use interactive whiteboards (IWB).

On her arrival at Stanborough School in September 2004 Jill discovered that her teaching room had a newly installed interactive whiteboard. She was excited at the prospect that this new technology might provide an opportunity to develop a new approach to teaching and learning Mathematics. Colleagues in the Mathematics Faculty shared Jill's enthusiasm. They discussed their own developing practice and agreed that there were several distinct ways in which they were incorporating the whiteboard into their teaching and learning routines:

- using the whiteboard as a projector screen for a single image
- using the whiteboard as a projector screen for several images, a slide show or animation
- direct teacher interaction with the whiteboard, using touch or the special pens, rather than working through the medium of a laptop mouse
- direct student interaction with the whiteboard, through touch or writing

Jill's reading told her that the Mathematics teachers at Stanborough School appeared to be developing their use of the whiteboard in similar ways to teachers in other schools (Knight, Pennant & Piggott, 2004). Students seemed to be responding positively to this new technology but Jill was interested to know more about how the use of interactive whiteboards affected student motivation. Was it simply the novelty value or was there something important in the ways in which the boards were being used? She decided to investigate.

Before looking closely at classroom practice Jill examined some of the literature on motivation. She read for example that motivation can be intrinsic or extrinsic. The term 'intrinsic' signifies that the learner finds the activity satisfying or rewarding in itself whereas the term 'extrinsic' suggests that motivation is more instrumental and linked to goals such as passing a test or winning a prize (Baumann, Bloomfield & Broughton, 2000). She reasoned that there was intrinsic motivation because of the novelty value of using the interactive whiteboards but was concerned about what would replace this once the novelty had worn off.

Jill was keen to learn from colleagues who had greater experience of using a whiteboard as part of their teaching and learning toolkit. She was similarly interested in gaining the students' own views on the effect of the whiteboard on their motivation. She therefore decided to observe the same group of Year 9 students in Modern Foreign Languages and Science lessons as well as other Maths lessons. She also observed the use of interactive whiteboards in her own children's Primary School and arranged a discussion with a group of Year 12 students who had experience with the technology.

She then chose twelve Year 9 students to work more closely with to explore their views. She divided the students into discussion groups of three and asked them to share their views on the advantages and disadvantages of using whiteboards to support their learning. She circulated around the groups listening to the students' discussion, picking up issues and passing them on to other groups. At the end of this review session the students were asked to complete an individual feedback sheet.

Jill analysed her observation notes and the notes from the review session with students using a framework consisting of the four categories she had identified in the initial discussions with colleagues. She found that she had learnt a great deal about ways to use the IWB and how this motivates students.

The key motivating aspects for students appeared to be the variety of activity involved in the use of the whiteboard, together with the belief that the activity would help them to learn more effectively.

Some of ways in which the IWB could be used included:

- accessing the internet and sharing this with the whole class as part of the lesson – both as a planned activity and as a response to questions that come up during a lesson
- students presenting their own work using PowerPoint
- teachers scanning in examples of students' work to illustrate good practice
- showing extracts from television programmes and DVDs - clear images frozen for whole class discussion
- retrieving and displaying electronically stored material
- playing electronic learning games

It appears that students are well motivated because the high quality images attract and maintain attention. The whiteboards enable the teacher to enhance the pace of the lesson; the use of games brings fun and humour into the lesson and the element of competition. Presenting on 'the big screen' can generate a lot of pride for students.

Jill's work not only served her own professional development but also enabled her to contribute ideas to new schemes of work within the Mathematics Faculty and to the Stanborough Teachers' Toolkit.

References

- Baumann, A., Bloomfield, A. & Broughton, L. (2000) *Becoming a Secondary School Teacher*. London: Hodder and Stoughton.
- Knight, P., Pennant, J. & Piggott, J. (2004) 'What does it mean to "use the interactive whiteboard" in the daily mathematics lesson?' *Micromath*, (Summer 2004).

Vicky Dean's Development Work: Improving writing through formative assessment at Icknield Infant and Nursery School, Letchworth

When Vicky undertook her development project in 2005 she had multiple roles: she was a Year 2 Class Teacher, English Subject Leader and a member of the Leadership Team. Her aim in joining the Certificate in Teaching and Learning course at Hertfordshire Development Centre was to raise standards in learning and teaching as set out in the School Development Plan. She believed that formative assessment could enable children to take ownership of their learning and in her initial reflective statement she made the following comment:

I want to bring some of the joy back into teaching and learning that has been somewhat lacking since so many 'top down' initiatives have been introduced.

Vicky taught a number of children who were reluctant writers and she wanted to have a positive impact on their disposition towards writing. In her role as Subject Leader for English she had looked at the way writing was marked across the school and concluded that, although teachers put a lot of time and effort into marking, it does not have sufficient impact on pupils' learning.

Vicky participated in a school INSET focussed on formative assessment and read 'Unlocking Formative Assessment' by Shirley Clarke (2001). This suggested that she should introduce formative assessment slowly, beginning with one area and extending it to others over a period of time. She wanted to have an impact both on pupils and on her colleagues. She began by focussing on writing and targeted a selected group of children – two more able; two middle ability; two lower ability; two with special needs. She hoped that there would be a noticeable effect upon these children's disposition, which would have a positive effect on their attainment. Vicky also read 'Inside the Black Box' which emphasises the idea that feedback should focus on the pupils' work rather than on comparisons with other pupils (Black & Wiliam, 1998). Maintaining self-esteem was important in building commitment to writing. Further reading gave her sound evidence – most of it from work with older children but the basic principles seemed to be applicable to Year 2 pupils.

Also influential were sessions with Diane Croston of the Herts CSF⁴ Assessment Team. Diane had been asked to lead two staff meetings in the Autumn Term to help the school update its Learning and Teaching Policy. At those meetings Vicky was able to share her ideas with colleagues. For example, a number of classes subsequently

⁴ CSF – 'Children, Schools and Families' - the local authority. 45

introduced the use of 'talking partners' which Vicky had found effective with her own classes (Clarke, 2003).

Vicky began her project by looking at pupils' responses to the Learning Styles Questionnaire and the Framework for Assessment of Personal and Social Development provided by Herts. CSF. These told her a great deal about such things as pupils motivation, learning strategies, attitudes to learning, resilience and self-esteem. Then, having first secured permission from parents, Vicky interviewed the target children to assess how they saw themselves as writers at that stage. She wanted to establish the ways in which they like to learn: the learning strategies they found helpful, and those that they didn't. From these interviews it was clear that working independently was extremely challenging for them.

In order to address these issues Vicky decided to work on the idea of the 'learning intention' (Clarke, 2001), discussing with the whole class the meaning of the term. She also introduced the idea of success criteria for each writing task and sometimes asked the pupils to suggest what these might be for a given task.

With her target group she concentrated on providing 'quality marking and feedback'. The presence of a student teacher in the class enabled her to spend time doing this. She was able to mark the work alongside the pupil highlighting, with a marker pen of the pupil's choice, three areas where they had met the success criteria. This involved sometimes quite lengthy discussion with the pupil as to what should be highlighted, which laid the foundations for self-assessment. At first pupils needed help to identify the areas they were pleased with and to identify those that were included in the success criteria. However, after just one or two sessions all the pupils understood what was expected.

The discussion also identified an improvement to be made to the piece of work in relation to the success criteria. The area for improvement was marked with an asterisk and the pupil asked to make the improvement at the end of the piece of work. Some were able to say for themselves what they wanted to improve and how they were going to do it; others needed more guidance on how to improve the work. On one occasion a pupil found it extremely difficult to record his ideas for improvement, but because his verbal response was so impressive Vicky felt it appropriate to act as scribe and write his ideas for him.

Vicky experimented with these practices over the period of a few months and then repeated the data gathering she had begun with. Her analysis of the data from the Learning Styles and Personal and Social Development instruments and her own five question interviews indicated considerable improvement in pupils' confidence in writing and in their dispositions towards learning. Their measured attainment also improved, in some cases by a whole level. This evidence, and an account of the process of her project, was shared with colleagues at an INSET day in the following term. The project has been very influential in discussions towards a new marking policy for the school. This is likely to specify that not all pieces of work will be marked in detail but where they are, reference will be made to the learning intention and the success criteria.

Vicky built on this project to embrace further formative assessment strategies including self-assessment and formative assessment which is now part of the School Development Plan at Icknield Infant and Nursery School.

References

Black, P. & Wiliam, D. (1998) *Inside the Black Box: Raising standards through classroom assessment*. London: King's College London.

Clarke, S. (2001) *Unlocking Formative Assessment: Practical Strategies for Enhancing Pupils' Learning in the Primary Classroom*. London: Hodder & Stoughton.

Clarke, S. (2003) *Enriching Feedback in the Primary Classroom*. London: Hodder & Stoughton.

See also

Black, P., Harrison, C., Lee, C., Marshall, B. & William, D. (2002) *Working Inside the Black Box: Assessment for learning in the classroom*. London: Department of Education & Professional Studies, King's College London.

Elizabeth Clarey's Development Work: Enhancing learning in English using De Bono's 'Thinking Hats' strategy at The Highfield School, Letchworth

Elizabeth Clarey was in the unusual position of being both a newly qualified teacher and Head of Year 7 when she undertook this teaching and learning project in 2004. She had joined the Certificate in Teaching and Learning based at the Hertfordshire Development Centre along with several other colleagues at The Highfield School. Highfield is a school where reflective practice is encouraged and where great strides have been taken in the development of teaching and learning.

Early on in the certificate course Elizabeth became interested in looking at ways of enhancing students' learning through developing their thinking skills, so she read some of De Bono's work (1990) which seemed to offer ways to help students structure their thinking.

The Thinking Hats strategy supports students' thinking by using the metaphor of wearing different hats to signify different thinking tasks. There are six hats.

White Hat thinking: With this hat on you focus on the available data such as dates, facts and quantities. You try to interpret the facts and identify the gaps in the data.

Red Hat thinking: With this hat on you use your gut reactions, intuition and emotions. You also try to focus on imagining other people's emotional reactions.

Black Hat thinking: With this hat on you look at the problem cautiously and defensively. You try to spot the weaknesses in your argument.

Yellow Hat thinking: With this hat on you take an optimistic standpoint focussing on the positive benefits of whatever it is you are arguing for.

Green Hat thinking: With this hat on you focus on creativity and unrestrained problem solving.

Blue Hat thinking: With this hat on you are encouraged to think about thinking itself, metacognition in other words.

The basic theory behind Thinking Hats is that dividing thinking into separate areas makes it easier to think, allowing you to concentrate on one thought process, or Thinking Hat, at any one time. It is claimed that this helps you to think clearly and prevents confusion (De Bono, 1990).

Elizabeth decided to use an existing English scheme of work that requires students to research animal testing and to write a discursive essay based on what they had found

out. She planned to use the Thinking Hats strategy and explore the extent to which the students themselves found this way of working helpful. She began by constructing her own lesson plans using the processes suggested in De Bono's book 'Teach your child how to think' (1992). She chose to work with a focus group of Year 8 mixed ability students. She asked them to keep a journal of each lesson, recording the activities they had undertaken during the lesson and their feelings about how these activities had helped them to learn. Elizabeth decided to interview these students to ensure that she fully understood their views. Video recordings of the interviews allowed her to reflect on what the students had said later on.

Elizabeth taught her students how to use De Bono's Thinking Hats. Each lesson focussed on a contrasting pair of Thinking Hats: for example the red hat that involves very subjective and intuitive type of thinking and the white hat which demands the processing of more factual information. She used various activities from De Bono's book to help students to put the hats into use. Students were, for example, presented with leaflets and information from various sources on the topic of animal testing. They were asked to highlight the information in various colours to show the different types of thinking evident. They experimented with using a new page for each Thinking Hat in their exercise book and made notes on the appropriate page.

When the students had used all of the hats, they discussed how, by using the thinking which took place under each hat as a new section, they could arrange their thoughts into the discursive essay which they had been asked to write.

Elizabeth was able to use evidence from her explorations to initiate discussions with other colleagues across the school. She was able to share a number of insights:

- Year 8 students found using Thinking Hats helpful in supporting their learning
- students' confidence levels rose, because using the hats emphasised that thinking does not depend on producing an answer that is right or wrong
- students' ability to work independently seemed to be enhanced

This project has influenced Elizabeth's own work in a number of ways. It enabled her to learn more about what thinking involves. She had also discovered a new strategy which she can use to scaffold students' learning, particularly when they are faced with the more complex writing tasks. She also learnt about the power of teacher-led development work for improving both teacher and student learning. Elizabeth's work contributed to a school wide effort to raise the profile of learning through the sharing of good classroom practice and accounts of inquiry-led innovation.

References

De Bono, E. (1990) *Six Thinking Hats*. Harmondsworth: Penguin.

De Bono, E. (1992) *Teach your child how to think*. Harmondsworth: Penguin.

Susie Hoad's Development Work: Exploring learning styles in Science at The Nobel School, Stevenage

Susie Hoad was a member of the Teacher Led Development Work group at The Nobel School, Stevenage (2004-05). She was awarded the Certificate of Further Professional Studies in the summer of 2005.

Susie was Second in Science at Nobel when she carried out a project to try to develop a wider teaching repertoire for Key Stage 5 students. She thought that investigating students' preferred ways of learning would enable colleagues to devise classroom activities that more closely matched the students' needs.

Susie had taken note of what 'Pedagogy and Practice' (DfES, 2005) tells us about learning styles:

Successful learning takes place when teachers play to pupils' strengths and build their capacity to learn in a range of styles. For this to happen teachers need to have an understanding of the different learning styles within a class and create learning opportunities through a variety of teaching strategies and techniques.

(DfES, 2005: Unit 19:1)

She believed that it was important to recognise the diversity of learning styles within any group of students but was aware that colleagues needed support in developing their understanding of this diversity and in developing their teaching styles in response.

Susie began the development work by using a learning styles questionnaire with all students taking Science at Key Stage 5. The instrument she used was based on the VAK learning styles which is a very popular approach publicised by Mike Hughes amongst others. This approach uses three categories: 'visual', 'auditory' and 'kinaesthetic' and the questions are intended to determine which of these categories is the dominant way of learning for each student.

Susie wanted to know if there was a link between preferred ways of learning and the students' academic performance so she compared the results of this learning styles questionnaire with the ALIS⁵ data. Like YELLIS, the ALIS procedure provides predicted grades by analysing previous test results.

She also carried out some lesson observations to try to determine the dominant teaching approaches being used and to see to what extent these matched the students' preferred ways of learning.

Another interesting question concerned the relationship between students' choice of specialism within Science and their preferred ways of learning. For example it seemed that those who had chosen Biology tended to be categorised as visual learners whereas those who had opted for Physics tended to be predominantly kinaesthetic learners. This raised interesting issues about the way these different specialisms are taught and the extent to which these approaches are 'built into' the subject.

Another fruitful comparison was between two groups being taught the same specialist subject but with different teaching approaches being dominant in each case. This exercise suggested that the group in which the more active and visual approaches were used tended to outperform their counterparts in the group that experienced predominantly auditory approaches.

These explorations and comparisons provided Susie with evidence that she used in discussions with her colleagues in the Science Department. The indications from her work were that students:

- perform better when classroom activities correspond more closely with the students' preferred ways of learning
- perform better when they have the opportunity to learn in active and visual ways
- seem to choose options within Science according to their preferred ways of learning

Susie's work fed into the Science Department's review of Schemes of Work and into the Department Action Plan. It was clear that the issues raised by this work had to be pursued at Key Stages 3 and 4 to ensure that students were not only better prepared for learning Science at Key Stage 5 but also that they were able to make their option choices for the right reasons.

It is interesting to note the point that Susie makes in the final reflection at the conclusion of her portfolio, that as students' awareness of their own learning preferences and habits increases, they are likely to become more demanding of their teachers. Responding to this demand represents a considerable challenge to us all but one which Susie argues is only right.

References

DfES (2005) *Pedagogy and Practice: Teaching and Learning in Secondary Schools. Unit 19: Learning styles*. London: DfES.

Richard Cave's Development Work: Using peer-assessment in Design and Technology at The Nobel School, Stevenage

Richard Cave was a member of the Teacher Led Development Work group at The Nobel School, Stevenage (2004-05). He was awarded the Certificate of Further Professional Studies in the summer of 2005.

Richard came into teaching from a design background in the toy industry only a couple of years before joining the Teacher Led Development Work group at Nobel. At the end of his first year as a newly qualified teacher (NQT) he was appointed to the post of Head of Year 7. He saw his participation in classroom inquiry as a way of developing his teaching skills.

Richard's development project focussed on the use of a structured peer assessment system which he hoped would improve pupils' perception of their achievement and boost their self-esteem. He chose to work with two Year 8 mixed ability groups studying 'Systems, Control and Structures' over an eight to ten week period.

Richard had read Shirley Clarke (2005) on the subject of formative assessment and had linked this to his own observations as an NQT to conclude that students need a lot of support if they are to move beyond simplistic quibbles about spelling and neatness. Richard's early experiments confirmed that students did not discriminate very carefully when asked to mark their classmates' work. He then asked a different Year 8 group to assess each other's work but this time he provided a set of criteria and asked them to provide a short, two line commentary. The pupils responses were more helpful but still not as thoughtful as Richard hoped they would be.

Richard then turned his attention to the question of pupil motivation and self-esteem. He used a simple instrument consisting of four questions. How can I make my work better? How can I improve my learning? How can I get a higher grade? How can I get more merits? The results of this exercise suggested that pupils did not find the award of merit marks particularly motivating; it suggested instead that improving their work was more highly valued.

Following this assessment of what pupils regard as valuable, Richard monitored pupils' perceptions of their own performance. For example, at intervals they were asked to indicate how confident they felt about themselves as learners and how proud they were of what they had done by holding up between one and five fingers. Richard's reflections on the issue of students' self-perceptions led to the insight that pupils need

to learn how to make realistic judgments about the performance of a task without drawing negative conclusions about their own capacity as learners. He chose to use the ‘Structures Challenge’ exercise to help them learn how to do this.

The Structures Challenge is an experiential learning activity used widely in training situations (Kolb, 1984). It requires students to work in small groups and co-operate to build the tallest structure possible from a collection of paper straws and card. The following points are stressed to the students:

- there is no right or wrong answer or way to do it
- you have to be prepared to take risks
- if it doesn’t work, you can have new materials, and reattempt the task, as long as you can explain what you have learned and how you will proceed
- you need to listen to each other

The optimum group size appears to be three and the single biggest indicator for success is co-operation and discussion skills. Richard noted that in this exercise almost all the students indicated that they were proud of their work. Even the students he believed to have low self-esteem indicated that they “would make the tallest” and theirs “would be the best”. Both the students and their teacher learnt a lot from this exercise. One clear message was that opportunities for dialogue and collaboration tend to enable the students to feel that they have achieved something. Another important lesson was that students tend to perceive oral feedback as valuable whereas they see the written format as constituting ‘work’.

Richard began to place more emphasis on inter-student dialogue and planned questioning of students. He drew encouragement from Paul Black and his colleagues (2002) who have drawn attention to the need to make time for thinking and reflection through questioning and ‘wait time’. In his portfolio Richard noted that:

At the beginning of the unit, between three and four ‘curiosity’ questions were being asked by students in a lesson. These were unprompted, enquiring questions, for example, *If a lever has a joint in it, does it still have a fulcrum?* By the end of the unit, the frequency of this type of questioning had risen substantially.

Richard emerged from this project with a firm conviction that the quality of interaction between the students was a key factor in building positive attitudes to learning. Good relationships make possible the regular provision of oral feedback between peers, generating a climate in which students are not afraid to make mistakes and feel confident to build on errors and thereby improve both their learning and self-esteem.

References

- Black, P., Harrison, C., Lee, C., Marshall, B. & Wiliam, D. (2002) *Working Inside The Black Box*. London: NferNelson.
- Clarke, S. (2005) *Formative Assessment in the Secondary Classroom*. London: Hodder & Stoughton.
- Kolb, D. A. (1984) *Experiential Learning: Experience as the Source of Learning and Development*. New Jersey, US: Prentice-Hall.

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Teacher Leadership

Volume 1 Number 1 April 2006

Editorial

David Frost

Articles

Building Teacher Leadership through Teacher Led Development Work groups

Joanne Mylles, Sir John Lawes School, Harpenden

Collaborative learning in a Primary School ICT Suite

Jill Jones, Four Swannes Primary School, Waltham Cross

Promoting thoughtfulness in 6th Form students

Kate Healer, St George's V.A. School, Harpenden

ICT and self advocacy in students with severe learning difficulties

Robert Good, (formerly of) Watling View School, St Albans

Using 'Learning Preference Profiling' to develop teaching and learning across the school

Jackie Johnson, Barnwell School, Stevenage

Stories

Debbie Davies' Development Work

Developing a 'Learning to Learn' course at The Highfield School, Letchworth

Jill Borchers' Development Work

Using interactive whiteboards to improve a motivational tool at Stanborough School, Welwyn Garden City

Vicky Dean's Development Work

Improving writing through formative assessment at Icknield Infant and Nursery School, Letchworth

Elizabeth Clarey's Development Work

Enhancing learning in English using De Bono's 'Thinking Hats' strategy at The Highfield School, Letchworth

Susie Hoad's Development Work

Exploring learning styles in Science at The Nobel School, Stevenage

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