

INDEPENDENT STATE SCHOOL PARTNERSHIP
Bromley High, Newstead Wood, Prendergast Schools
Bromley Local Authority and Oxford Brookes University
September 2003 – October 2005

**UNDERSTANDING THE CHALLENGE OF THE EXCEPTIONALLY ABLE
LEARNER**

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Section A

Background to the Project

1. The Partners:

This Independent State school Partnership (ISSP) project was one of a number of projects funded by the DfES to encourage collaboration and learning between the independent and maintained school sectors. This project brought together three schools, a Local Authority and a Higher Education Institution:

- Bromley High School – an Independent Girls' Day Schools Trust
- Newstead Wood School for Girls – a highly selective girls state school and Specialist School (Engineering) in the London Borough of Bromley
- Prendergast School for Girls – a comprehensive school in the London Borough of Lewisham
- Oxford Brookes University
- Bromley LA

Bromley LA and Oxford Brookes University have a long standing commitment to supporting gifted and talented education and both have recognised expertise in the field. The three schools were selected because they were very different in context but all successful, high attaining schools. Furthermore all three headteachers know each other and have worked together previously and with the Project Manager.

The aim of the Project was to promote further development in the three schools in gifted and talented education, specifically in relation to 'exceptionally able' pupils.

The project arose because of initial work undertaken between Bromley LA and Oxford Brookes University. It was felt that there was a need to explore further the learning needs and dispositions of the exceptionally able, particularly girls. Shortly after the Project began we were encouraged by the NFER / LGA research (*'What works for gifted and talented pupils: a review of research.'*) which reached the critical conclusion *'the question remains as to the uniqueness of provision for gifted and talented pupils'* and that a potentially useful source of evidence has been ignored that of selective and specialist schools.

2. The Key Objectives:

- To identify 10 – 12 pupils (girls) considered to be of exceptional ability within each of the three partner schools
- To seek the views of teachers and pupils on the learning behaviours and dispositions of exceptionally able pupils
- To seek a greater understanding of the learning needs of exceptionally able pupils and the views of pupils of what constitutes effective teaching to meet those needs
- To identify within the partner schools good practice in teaching and learning to meet the needs of exceptionally able learners
- To share the experience and expertise of three different schools which nevertheless share some common features in intake and ethos
- To consider whether there is sufficient flexibility within the curriculum to meet the needs of exceptional learners

3. The Intended Outcomes:

- To gain an understanding of the learning needs of exceptional learners in the three partnership schools
- To gain a greater understanding of the learning behaviours and dispositions of exceptionally able learners
- To describe some of the factors contributing to exceptional achievement and the characteristics of effective teaching and learning for such pupils
- To share good practice in teaching and learning for exceptionally able pupils between partner schools and with the wider educational community
- To share the information gained about the needs of able learners and good practice in their teaching and learning through professional development activities and a range of dissemination strategies

The particular challenges of the project were, therefore, to illuminate an understanding of the needs and the kind of provision which might be appropriate for exceptionally able pupils as well as to initiate and develop improvements for them.

The focus of the Project takes place against a background of local and national interest and developments in gifted and talented education and a more personalised approach to educational provision for all pupils. However, the concept and definition of '*exceptionally able*' and the needs of exceptionally able pupils have been given relatively little attention nationally, given the greater emphasis on a more inclusive and relative definition.

Section B

The Project Plan

At all stages of the project the schools and partners were engaged in discussions and decisions about how it should be developed and managed. Given the dual nature of the project, which included a research enquiry and a staff development focus, the framework below was decided on by the schools and partners.

1. Research Investigation

The purpose of the enquiry was:

To identify the characteristics and learning needs of exceptionally able pupils in years 8 and 10 and some of the features of effective teaching approaches and environments to enable those needs to be met.

The enquiry took the form of a survey undertaken in following stages:

Stage One

An investigation of the perceptions of teachers and of pupils of the characteristics of exceptional ability and the provision which should be made for exceptionally able pupils. This was undertaken through a questionnaire to all staff and to the selected pupil focus group. The pupils were selected by staff for inclusion in the focus group on the basis of their abilities in English and mathematics. The evidence used to select them included test scores, teacher assessment and the pupils' general contribution to school.

Stage Two

An investigation of the views of the focus group of pupils in relation to:

- The learning experiences which challenge them
- Their learning preferences

- Teaching strategies and styles which help them most
- The kind of classroom climate most conducive to their learning
- The optimal structures for and organisation of learning experiences
- How they improve their own learning

A semi-structured interview was used to gather information from pupils in year 8 and year 10, with one year 10 group in one school subsequently unable to participate.

Stage Three

An enquiry via questionnaire on a joint Inset day for all 3 project schools into the range of practices in the three schools in relation to:

- Definitions of exceptional ability
- The identification of pupils of exceptional ability
- Provision made to nurture and develop the learning of exceptionally able pupils

Stage Four

The final part of the information gathering process was an investigation, via focus group discussion, of year 8 pupils' views on:

- When they feel most challenged in school
- The advice they would give to parents of very able students
- What they want from their education

2. Professional and School Development

In addition to ongoing discussion with the Headteachers of the 3 schools the more focussed staff development aspect of the project included feedback and discussion of the interim findings with a group of senior staff and staff identified as having good practice with able pupils. As a result of this discussion a joint school INSET event took place to disseminate and discuss the interim findings of the research, to decide on next steps as well as to share current practice in the schools.

The final stage of the formal staff development element of the project involved:

- The production of action plans, including curriculum plans, by each school in relation to the outcomes of the project

Section C

Enquiry Findings

In analysing and drawing tentative conclusions from the findings of the research enquiry the following factors need to be foregrounded:

- *A recognition that the concept of exceptional ability is a hypothesis and contested ground in educational and psychological theory*
- *The difficulties of distinguishing aspects of exceptionality from high ability in general*
- *The limitations associated with qualitative research data drawn from interview and questionnaire based surveys*
- *The distinction to be drawn in researching pupils' views between what children like from what they benefit from*

- *The need to distinguish between what is effective teaching and learning and what might be particularly effective provision for the exceptionally able*
- *The problems in educational research in addressing issues relating to psychological traits, skills and abilities rather than observable behaviours*
- *The considerable problems for research posed by the 'language' of the G&T field, where the terms gifted, talented, more able, very able are often used interchangeably*
- *The need to relate the findings of the research to the literature on exceptional ability and to particular theoretical stances espoused in that work*
- *The considerable data yielded by the investigation, raising challenges for interpretation, analysis and synthesis*
- *The focus of the study on pupils already achieving highly*
- *The relatively small sample of pupils*

It is also important to highlight that no pre-determined view of what constitutes 'exceptional ability' was provided for the project, so that it could emerge from teachers' and children's views. However, the project partners did start with the assumption of the existence of a category of learners with exceptional learning abilities. The issue of how to identify exceptionally able pupils was not a particular feature of the project although teachers' views about '*triggers to awareness*' were sought. Naturally, views on what *exceptionality* is will have implications for how exceptionally able pupils are identified. Neither did the investigation focus specifically on issues relating to gender and achievement; this is highlighted in the report only where the data might indicate that this is a significant factor and warrants further reflection and investigation.

The report on the findings of the research enquiry focuses on perceptions of:

- The characteristics and learning dispositions of exceptionally able children
- The learning needs of exceptionally able pupils
- Features of effective teaching and learning for exceptionally able pupils
- Environments and experiences enabling or inhibiting effective teaching

The findings comprise a synthesis of trends and patterns emerging from the survey data with the analysis distinguishing, where it is illuminating, between what teachers say and what children say. The findings are also set against the relevant literature base to allow for a more informed analysis and to compare and contrast where this provides particular insights. The main criteria for the analysis and synthesis of the data were:

- To provide some emerging consensual views and indicative areas in relation to the key categories investigated in order to inform further discussion, professional development and curriculum planning
- To select those aspects likely to be especially important and distinctive for the exceptionally able, as suggested by other related sources of data and information

1. Characteristics of Exceptionally Able Pupils

The responses of the teachers and pupils in relation to what characterises exceptional ability fell into 3 broad categories:

- Cognitive / intellectual aspects
- Learning dispositions
- Learning strategies and styles

In addition, teachers were asked to comment on what – notwithstanding achievement and attainment data - triggered their initial awareness that they might have an exceptionally able pupil in their class.

To a greater or lesser extent there is an arbitrary distinction between these categories as they could, arguably, all be considered to belong to the cognitive domain, with some features in all categories representing skills to be acquired through learning rather than as 'fixed assets'.

1a. Cognitive / intellectual aspects

The following are the cognitive / intellectual characteristics extrapolated from the data as having particular resonance with the notion of individual differences at the upper end of the ability spectrum. The cognitive / intellectual aspects fall broadly into two categories:

- quality and nature of the learning process
- outcomes of the learning process ie performance / achievement.

Teachers and Pupils: generic features	
<p>Process: quality and nature of learning</p> <ul style="list-style-type: none"> - Openmindedness - Tolerance of uncertainty - Concentration - Intellectual independence - Intellectual voracity - Good memory – retention / recall - Transferability / cross-referencing - Logical thinking - Fast rate of learning <p>Outcome</p> <ul style="list-style-type: none"> - Exceptional performance; speed of working 	
<p>Pupils</p> <ul style="list-style-type: none"> - Capacity to work hard 	<p>Teachers</p> <p>Process: quality and nature of learning</p> <p>Ability to:</p> <ul style="list-style-type: none"> - think abstractly - think critically make coherent links and perceptive connections from different parts of the course and previous knowledge - think beyond the information provided and to question further - manipulate information and concepts and - good memory - insight into underlying structures - keen eye for detail - feel for, and selection of, different disciplinary approach - asking relevant and perceptive questions which challenge others including the teacher - not accepting things on trust or

	uncritically – Fast rate of learning, absorbing new concepts and ideas
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Teachers and Pupils: Features in Mathematics	
Process: quality and nature of learning	
<ul style="list-style-type: none"> – Transfer of skills to real life – Application of methods / skills to unknown situations – Logical thinking – Calculating mentally at speed 	
Pupils	Teachers
Process: quality and nature of learning	Process: quality and nature of learning
<ul style="list-style-type: none"> – Going further than set boundaries and question all aspects of problem – Understanding complexity – Requiring less teaching – Ability to use skills and concepts in lessons and put them to good use in everyday life – Feeling confident and comfortable with numbers 	<ul style="list-style-type: none"> – Creative thinking – Identify trends / patterns – Imaginative / creative approaches to problem solving – Working with ease with symbols – Quick to absorb new ideas – Toleration of uncertainty – Mathematical intuition – Intuitive ‘feel’ for mathematics – instinctive categorisation – Making leaps when applying logic to problem solving – Desire to get to the right solution – Often getting straight to the answer, seemingly ‘missing out’ explicit stages
Outcome	Outcome
<ul style="list-style-type: none"> – Doing well in tests and exams – Consistently high grades 	<ul style="list-style-type: none"> – Ability to ‘surprise’ with exceptional work

Teachers and Pupils: features in English	
Process: quality and nature of learning	
<ul style="list-style-type: none"> – Range and maturity of vocabulary / language – Awareness of nuance – Love of words – Creativity and imagination – Strong communicative skills – Fast / fluent reader – Ability to absorb quantities of information / text 	
Pupils	Teachers
Process	Process
<ul style="list-style-type: none"> – Ability to understand mature texts – Able to put feelings into words 	<ul style="list-style-type: none"> – Ability to manipulate language to effect – Ability to justify opinions with

<p>Outcome</p> <ul style="list-style-type: none"> - Good grades 	<p>evidence</p> <ul style="list-style-type: none"> - Penetrating aesthetic response - Lucid / cogent writing style - Strong debating skills eg analysis, selection of arguments, well formulated responses - Ability to make inferences; strong deductive reasoning skills - Empathy with characters <p>Outcome</p> <ul style="list-style-type: none"> - Original fiction - 'Slick', effective production of eg magazine or leaflet
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1b. Learning dispositions

A key question which emerged from the data is whether exceptionally able pupils are different in kind from other learners or just more accurate / quicker / more incisive. How exceptional ability is defined both reflects and structures beliefs about it. For example, ability might be seen as 'thinking / acting like a historian / mathematician', with exceptionally able pupils doing this with particular insight. However, the data seems to suggest two main strands in exceptional ability, whether subject specific or generic:

- the type of process / response involved in learning – eg originality, creativity, sensitivity; speed.
- the type of outcome – high attainment, exceptional level of performance

Linked to these are ideas of *convergence* (working towards a specific outcome) and *divergence* (going off in unusual directions), with the former possibly linked more closely to high attainment and the latter to pupils who show high levels of originality / creativity. Conceivably, convergence and divergence might have relative importance depending on the subject area / domain. For example, an exceptionally able engineer might try all sorts of different approaches, but would at some point need to converge on one particular approach and carry it through to completion. One might argue that the exceptionally able child should be able to do both.

Broadly speaking, the data from teachers and pupils indicated that the learning of exceptionally able children might be said to involve them engaging in deeper, more complex, wider or faster learning in terms of processes, though it is often thought of or manifested in terms of outcomes. The outcomes may be high attainment and / or original / creative products – the former based on teacher-led outcomes, the latter on pupil / learner-led outcomes (although this distinction is a bit crude).

The literature, such as it is, confirms the key notions of *depth*, *pace* and *breadth* of learning as characteristic of able children generally and the most common set of characteristics quoted in guidance to teachers. How these translate into observable characteristics in particular disciplines is evidenced in the subject specific comments by the project teachers questioned. The generic literature on gifted and talented children often links deeper learning to the type of learning experienced eg dealing with abstract concepts, but interestingly, does not link it to the *process* of learning itself. In the literature *deep* and *surface* learning are often associated with how assimilation and retention take place. Nevertheless, the concept of deeper learning

in gifted and talented education implies that teachers should examine how this can occur in their own subject area and in inter-disciplinary contexts. The concepts of deeper, faster, wider learning, also need to be considered in terms of what they signify *in real terms* for exceptionally able pupils. Rogers (2003), in her meta-analysis of the literature speaks (albeit in relation to high IQ definitions of ability) of the implications for teaching of pupils with an IQ in excess of 130. She mentions, for example, the need for *'pace 2-3 times faster than 'normal' class pace'*, and the lack of need for repetition and drill.

Whether one belongs to the developmental camp in understanding exceptional ability, seeing it as the precocious manifestation of particular 'cognitive leaps' or to the camp which sees exceptional ability as something *qualitatively* different, the related literature can illuminate some of the project teachers' – and pupils' – views. Worthen (in Shore 2000) discusses what she terms 'relativistic' thinking as a hallmark of advanced thought, a perspective supported by many researchers. She defines the 'relativistic thinking' associated with cognitive giftedness as:

'An awareness and tolerance of uncertainty, change, flux, ambiguity, contradiction, and paradox... This form of relativistic thinking is considered to be advanced because the thinker maintains a cognitive balance or dialectic between or among apparently opposite contradictions.'

Shore (2000) maintains that gifted children exhibit metacognitive strategies to a greater extent than those not identified as gifted and that whilst gifted learners do not seem to use strategies that others never use, there are differences in the way in which different strategies are invoked and the fluency and speed with which they are used. Shore also compares *gifted* performance with the performance of *experts*, likening gifted behaviours to *'expertise in development'* at a precocious stage.

Porter (2004) also draws attention a range of *metacognitive* skills which characterise able learners, although qualifies this by stating that the evidence for highly developed metacognition as the defining characteristic of exceptional ability is by no means substantial.

Porter (2004) however contradicts the common myth that the exceptionally gifted child inhabits a completely different ether:

'It is likely, instead, that exceptionally gifted children display similar characteristics to children of lesser degrees of giftedness, although the characteristics occur earlier and sometimes more intensively. This means that exceptionally gifted children will have some unique needs and manifestations compared with other gifted children.'

Interestingly, there was little in the evidence of the teachers in the project to show that they had distinguished between gradations of high ability although much of the gifted and talented literature supports the notion of a distinctive upper end of the ability spectrum, eg Gardner's 'giftedness matrix' (in Shore, 2000), Gross (2003), Feldman (1992), Porter (2004). Tolan (1998) comments:

'Within the gifted range there is a far larger span of cognitive difference than there is between normal and gifted'.

The teachers in the project did not comment specifically on different *types* of giftedness, Feldman and Morelock (1991) divide the field of 'extreme giftedness' (what they in fact term 'extreme precocity') into the broad categories of high IQ, prodigies, savants and subject-specific precocity. The pupils selected for the project study would have fallen largely into the high IQ category, whilst having particular abilities in English and mathematics, along with a range of other non-curriculum related talents.

Again, interestingly, none of the project teachers talked about measured high IQ as an indicator of exceptional ability, although one might infer some of the features mentioned in the surveys to relate to this.

Neither was there a strong explicit emphasis in the enquiry on high level language skills as characteristic of exceptional ability although perhaps this was considered to be a given. The jury is out in this regard in the research literature, with some researchers stressing high level language skills as both an early indicator of giftedness and a manifestation of giftedness. Nevertheless a facility with symbolic systems seems to be an indicator of intellectual giftedness (Freeman, 1998).

In the data from teachers and pupils there was relatively little which highlighted socio-emotional features which might be associated with giftedness (eg Porter, Gross), except perhaps, for example, the reported tendency to perfectionism and to 'awkwardness' (traits picked up in the section on learning dispositions).

Finally, the issue of the extent to which nature and nurture are influential in achievement was also present in the project. The pupils selected were already high achievers in the eyes of their teachers. Are we to assume that they were high achievers in the school system because they had a unique constellation of opportunities and dispositions in place – or would they have been so anyway? Would they, whatever their social circumstances, have sought out 'mediational tools' (Morelock, in Shore, 2000) to help them to express their exceptional ability - rather like Roald Dahl's Matilda? The literature is not entirely conclusive but there is enough there to suggest that intrapersonal and external factors are important constituents on the journey from potential to achievement. The so called 'confluence of traits' theory of high achievement seems to be borne out by some of the views of the teachers in the project, hence the rationale for including learning dispositions and strategies as separate categories.

For want of a better term, the set of characteristics described below have been labeled as 'learning dispositions'. Whilst acknowledging the chicken and egg difficulties of associating particular attitudinal and affective traits and cognitive and processing styles with giftedness – and trying to distinguish between them – the teachers' and pupils' responses to the survey did draw attention to a set of factors which one might loosely term as 'learning dispositions'. Research in the gifted and talented field veers between support for the notion of giftedness as high intellectual ability combined with 'task commitment' eg intellectual persistence and sustained attention, and a critique of this stance for not taking into account individuals who have the intellectual wherewithal but are denied – or don't take up - opportunities to achieve. Gagne () and Tannenbaum (), for example, point to the need for particular types of personality traits to be present for 'talents' to emerge, although they remain silent on whether these are instinctive or can be developed. Dweck's () work on motivation suggests strongly that self-concept and self-esteem are major components in achievement. To what extent this plays as strongly in the territory of exceptionality as distinct from more general achievement is little in evidence in the literature. There is also a lack of research into how self-concept and self-esteem and motivation play out in the development of gifts and talents in specific disciplines, although research into the development of *expertise* would suggest that they are key factors.

At the very least one could justify including the notion of learning dispositions as a guide to how one might encourage the features positively associated with achievement, although one must acknowledge too the possibly self-fulfilling nature of some of these 'dispositions'.

The key patterns emerging from the survey of teachers and pupils were as indicated below.

Teachers and pupils: all subjects	
<ul style="list-style-type: none"> - independence - intellectual curiosity - thirst for knowledge - need to know and understand - enquiring / questioning mind - love of learning - enthusiasm / passion / love of learning - desires / enjoys challenge - self discipline / self-motivated - motivation - confidence, eg to take risks, ask questions / challenge - ability to concentrate - good organisational skills - desire to do well and achieve - energy 	
Pupils	Teachers
<ul style="list-style-type: none"> - Competitive – need to be the best ('but not proud of this', 'naturally competitive', 'helps to be competitive by nature') - Ability to work hard – sometimes excessively to achieve a high mark - High personal standards - Personal enjoyment from learning something new - 'Reading, listening, watching anything and everything from Ancient Egyptian mummification techniques to reading about cosmology' - Interest and finding enjoyment in reading across a range of genres - Conscientious - Open minded - Good discipline - Good listener - Able to work alone or in a group 	<ul style="list-style-type: none"> - Well read / reads a great deal - Engages in discussion - Risk taker / not frightened of failing - Tolerates uncertainty - Responds well to pressure - High level of decision making - Empathy / sensitive - Calm - Quirky - Challenging and thought provoking - Unconventional / offbeat - Subversive - Unusual and atypical in approach - May appear bored - Often can be messy - Can be very restless and frustrated at having to show working to reflect their thought process - humour / playfulness - originality eg designing experiments - emotional engagement with learning
<i>Pupils – mathematics</i>	<i>Teachers - mathematics</i>
	<ul style="list-style-type: none"> - <i>Able to deal with uncertainty and enjoy the challenges it produces</i> - <i>Desire to be right / to get to the 'right' solution</i> - <i>Prepared to ask why</i>
<i>Pupils - English</i>	<i>Teachers - English</i>
	<ul style="list-style-type: none"> - Empathy for character

	<ul style="list-style-type: none"> - Contextual awareness - Awareness of audience - sometimes reluctant to commit to paper - behaviour may be awkward / unconventional / difficult - tendency to go off at tangents - self-motivation or extrinsic motivation (both elements evident)
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The idea of ‘cognitive relativism’ surfaces again here as does the ‘confluence of traits’ theory linking advanced or exceptional cognition to particular learning dispositions and styles. It is also interesting to speculate as to whether exceptionally able children simply have lots of the above dispositions or a combination of several of them or whether some have particular predispositions in specific areas? Are there, for example, exceptionally able children who are particularly aware of the nature of specific disciplines or the inter-connections between different knowledge fields?

Whilst affective and socio-emotional factors were not particularly prevalent in the teachers’ or pupils’ accounts, one could also speculate as to whether the reference to, for example, heightened sensitivity and empathy in English supports or emanates from the views of some researchers that:

‘Gifted children not only think differently from their peers, they feel differently.’
(Silverman,)

Piechowski: *(Gifted) is not a matter of degree but of a different quality of experiencing:....’*

A number of researchers attribute greater emotional sensitivity and depth to gifted children.

1c. Learning strategies

As with learning dispositions a note of caution must be sounded in any discussion of learning strategies, reliant as this area is on the interpretation of observable behaviours and on a relatively poor research evidence base regarding learning strategies as they relate to individual differences in ability and achievement. Again, the question of whether specific strategies are more or less innate and indissociable from high intelligence or ability or whether they are learned behaviours which lead to more effective learning also makes this area of enquiry problematic. There is some evidence in the literature that gifted children not only are able to learn more but that *how* they learn is different (Sternberg and Grigorenko, 1993; Porter, 1999; Silverman, 1989; Martinsen, 1997). Shore and Dover (1997) attribute the intellectual successes of the gifted to thinking flexibility and Silverman (in Gross, 1989:75) speaks of flexibility as ‘the major component of the learning style of this group’. Porter’s (2004) categories of ‘intellectual style’ consist of what one might term features of intellectual processes along with some of the ‘dispositions’ mentioned earlier, again indicating that care needs to be taken with the language used to describe particular phenomena in the learning process and with the different interpretation of those phenomena.

The findings of the enquiry relate to learning strategies and styles considered to be generic and those specific to particular subject areas.

Generic

- actively engagement in learning
- using a range of learning styles ie multi-modal
- divergent and convergent - division between high attainers more convergent, the more imaginative more divergent
- ability to approach a problem from different perspectives / angles
- picking up interesting, surprising leads and pursuing them
- working at different speeds appropriate to task - intensively, carefully, accurately etc. (link to metacognition about nature of the task and strategy needed?)
- use of different ways of processing information eg fast reading, skimming, note-taking, reflection, specific ways of memorizing,
- knowing how to revise, seeing bigger picture, linking to other learning
- different, (in the sense of original and wide-ranging), but not necessarily neat, types of presentation

Subject specific

Maths

- ability to apply formulas
- looking for underlying patterns

English

- ability to articulate thoughts coherently
- ability to link context, writing structure, purpose and meaning

1d. Triggers to awareness

Teachers were asked what, apart from attainment, alerted them to the possibility that they might have an exceptionally able pupil in their class.

These triggers to awareness fell broadly into the categories of:

- Intellectual or performance related features
- Behavioural features

Intellectual / performance	Behavioural
<p>Depth / complexity / sophistication of comprehension, ideas and thinking eg</p> <ul style="list-style-type: none"> - <i>'Profound comment from the early part of a topic, showing that thinking has raced ahead'</i> - Quickly linking knowledge, concepts and topics together – seeing links - Fluency of thinking - Identification of flaws in argument - Confidence in challenging accepted doctrine, querying misconceptions <p>Standards of performance</p> <ul style="list-style-type: none"> - <i>'Ability to solve a problem that others find daunting'</i> - Work completed to a standard beyond what is required or expected 	<p>Eg</p> <ul style="list-style-type: none"> - Joy in the subject - Sparkle / twinkle in the eye - Sense of humour - Explosive power - <i>'They command attention'</i> - Energy, enthusiasm, demeanour, conscientious, sensitivity - Easily bored, window gazer, subversive, sometimes a reluctance to commit to paper, sometimes awkward and belligerent in class. - Desire to learn and improve

<ul style="list-style-type: none"> - often with <i>'finesse'</i> - sophistication of explanations, more complex answers - Work shows originality and unexpected depth - Poor written work, parts missing but answer always correct <p>Quality of questioning</p> <ul style="list-style-type: none"> - <i>'Level and nature of questioning – asks challenging, probing and searching questions</i> - <i>'eager to answer questions and ask them'</i> <p>Originality / creativity</p> <ul style="list-style-type: none"> - <i>' Unusual ideas 'thinking outside the box'</i> - <i>'The interesting aside or reflection beyond the immediate subject'</i> - Unusual responses - Curious thoughts <p>Memory</p> <ul style="list-style-type: none"> - Excellent memory and recall <p>Language</p> <ul style="list-style-type: none"> - Oral ability and responses - Use and recall of vocabulary <p>Rate of learning</p> <ul style="list-style-type: none"> - Quick to grasp new concepts, speed with which new ideas are assimilated 	
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There is arguably overlap between the two categories above, not least because the intellectual features were manifested in *observable behaviours*.

2. The Learning Needs of Exceptionally Able Pupils

The learning needs of exceptionally able pupils are strongly correlated to the characteristics discussed above. With regard to the learning strategies and dispositions of exceptionally able pupils, one key issue is how much to encourage those strategies which seem to lead to high attainment, and how much to try to broaden strategies. One might argue that high attainers need to broaden their repertoire whilst more creative / divergent thinkers need particular *focus* to be encouraged. Interestingly, the needs of the learners identified in the project survey related broadly to both to how pupils learn and the outcomes expected or desired from the pupils.

2a. Learning needs and the learning process

This category can be broken down into the following dimensions:

Generic learning needs

Teaching / learning experiences

Teachers and Pupils

- different models / types of explanation
- taking leadership / organisation roles within a group
- high level of challenge but time for reflection / thinking / more breaks
- working with experts (eg writer in residence)
- recognition of pupils' own interests and personal preferences, but no labelling or singling out
- variety of teaching techniques / styles
- acceleration / pace
- freedom / flexibility
- resources
- enrichment
- feedback / assessment for learning

Pupils

- lots of discussion
- opportunities to ask questions / ask for clarification
- opportunities to discuss mistakes
- comprehensive feedback

Teachers

- pupils to have more control of learning than others
- to be pushed to limits of ability
- to develop 'whole person'
- pupils to know they have freedom to go forward
- space to explore anything
- opportunities to go off at a tangent
- to have challenging reading and research
- acceptance of work sometimes not at optimum level

Learning environment

Pupils and teachers

- stimulating environment

Pupils

- relaxed, comfortable, peaceful atmosphere
- no distractions
- curiosity and debate encouraged

Teachers' attributes

Pupils and Teachers

- recognition / validation of ability

Pupils

- reassurance
- positive, enthusiastic, inspiring, kind, patient teachers
- teachers who communicate effectively
- teachers with good subject knowledge

Organisation of learning

- more flexible timetable
- opportunities for one to one learning / support
- grouping with others of similar ability
- Individual progression routes / rates

Pupils

- One-to-one
- Small groups in class

Teachers

- Stimulus of like minds
- Work with older abler students
- Access to adult conversation

Maths

- Enrichment / extension
- to extrapolate from specific to general / abstract
- less need for repetition
- more open investigative work
- competitive environment
- working with other able mathematicians
- good textbooks
- application of maths in real world

English

- more extended reading
- demanding texts
- stimulating discussion
- independence to develop personal views
- planned routes of learning
- opportunities to go beyond the syllabus and be rewarded for it
- recognition of ability
- opportunities for presenting to different types of audience

2b. Learning needs and the nature of the outcome

- clarity of expectation (but originality often means outcome is not pre-determined, or only in a broad way)
- working sometimes towards defined outcomes, sometimes in a more exploratory way – but knowing when to be convergent to reach a solution
- range of different presentations / recording

Maths

- showing thinking / working process as part of outcome

English

- writing at length, creating an argument
- presentations of different types (oral, verbal, multi-media) for different audiences

Many of the above findings synchronise with the key messages from the literature, which are that the socio-emotional needs of all children need to be met if optimal learning is to take place and that the latter can then be achieved through an extended and enriched curriculum which broadens their knowledge and improves their problem-solving skills. The specific features of such a curriculum identified in the project are suggested below. Such a curriculum needs to take account of the

issues raised by the project teachers and pupils, with the additional emphasis brought out in the literature and less by the project on:

- the rate of learning and information processing of highly able children
- the need for self-agency in balancing the often seemingly intuitive and unconscious route to problem solutions with the need to develop self-awareness and metacognitive skills
- developing perseverance
- developing 'expert' skills and knowledge in a specific domain
- balancing the need for independence with the need for structure and skills acquisition

3. Features of Effective Teaching for Exceptionally Able Pupils

The following findings include those features of teaching more likely to be of benefit to exceptionally able pupils, rather than a prescriptive list, and emerge from the learning needs section. Again, the list suggests that maybe teachers (at least at times) should prompt high attainers towards divergence, and 'creatives' towards convergence / particular focus.

3a. Appropriate teaching and learning experiences

Extended and enriching tasks / learning experiences which:

- are open-ended
- are of differing lengths, including extended assignments and something the child has to keep coming back to
- are varied (not just more of the same), not requiring too much repetition of already-acquired skills
- are challenging ('something we can't do')
- are related to real life
- do not have too tightly determined outcomes
- are not too test focused
- build on previous learning, linking to previous topics progression (eg Tudors in KS2 v Tudors KS3 / 4) and making connections
- 'stretch the imagination'
- provide chance for groupwork with debates, in-class, role play and hot seating, making different types of presentation,
- offer greater flexibility, use of cross-curricular work, use of real-life situations
- offer leadership opportunities eg 6th formers leading groups
- provide individual progression routes, voluntary extension work, with no obligation to complete
- require more research and in-depth understanding
- require different types of presentation of results
- require creativity
- offer a greater freedom of choice eg GCSE texts

The following were highlighted by **pupils**

- greater one to one tuition
- homework specific to individual needs
- plenty of discussion as this aids understanding
- more research
- high expectations
- more pupil involvement in lessons

Teachers also mentioned

- discussing the 'bigger picture' with pupils
- thinking time and thinking skills development
- support to enable pupils to take responsibility for their own learning
- alternate not extra activities
- resources which go beyond the NC
- *'challenging pupils to go the extra mile'*

English

- comparison of different texts
- giving opportunities to write at length
- extended range of reading
- development of project work, magazines, publications etc

Much of the data highlights what is good teaching for anyone, although the following might merit special attention:

Generic

- adopting more than one approach / style / using variety, fun, visual prompts
- interspersing pace with space
- using range of types of differentiation – by task, by outcome, by way of working...
- encouraging children to ask questions
- encouraging higher order thinking, not just about content by open-ended questioning
- balance of teacher talk and pupil activity
- enabling and expecting lots of pupil talk
- expectation of varied types of presentation of information (not necessarily neat)
- linking tasks to previous work and prior knowledge
- setting open-ended tasks
- using real life examples
- being aware of individual's ability and needs
- providing fair share of attention to all
- considering lesson structure
- reflective and varied approach to grouping, depending on desired outcomes, eg at times ability grouping, but mentoring chances with less able require mixed ability at times
- providing opportunities for mentoring / teaching other children (implications for grouping)

Subject specific

Maths

- develop specific technical language
- develop longer term projects and enrichment activities

English

- enable / encourage conversation and discussion
- require imaginative responses and alternative viewpoints
- encourage critical thinking eg spot a fake text, or phoney arguments
- encourage inference

3b. Types of assessment

- examination and qualification structure

- eg less rigidity in GCSE etc requirements – fast tracking, A2 course in 6th form, integrated 2 year course
- special courses / materials for the exceptionally able especially in particular subjects
- need for additional extrinsic motivation, but danger of overtesting
- clear aims, objectives and assessment criteria
- specific types of feedback
 - tests, grades
 - timely feedback
 - one to one feedback
 - personalised / individual, challenging targets
 - use of action planning and self-evaluation
 - differentiated progress plans

3c. Teaching approaches / styles

- well stocked library
- range of approaches to ability grouping
- ICT availability – and as means of independent learning

3d. Teacher attributes and expectations

- flexible, prepared to follow different sorts of lead, ideas etc
- enthusiastic / inspirational
- respectful
- honest and open about being able to learn from children
- sensitive to (intellectual and other) needs of the exceptionally able
- not always concerned with outcomes / neatness of presentation

The enquiry revealed a number of views which resonated with the recommendations in the gifted and talented literature. However, the findings also related strongly to current broader English education contexts and to the individual schools, adding value therefore in this respect. It is interesting to note the views on the need for more individualised approaches and assessment, the emphasis on the value of discussion and the implications for quite radical reform of some of our most embedded practices in schools and classrooms. Interesting too is the focus on the important role of the teacher, whilst acknowledging the need for accessible, up to date resources and ICT.

Two interesting comments from teachers and pupils – among the many – were:

'Push them until they push back – often they are like energy vacuums and soak up everything'

'I like something which pushes my brain to the limit – like a challenging jigsaw puzzle which you have to keep coming back to until something sets off a chain reactions and you get the picture.' (Year 8 pupil)

4. Environments and Experiences Enabling or Inhibiting Effective Teaching and Learning

4a. School environment

There was not much which was subject specific in the data except that areas such as music, sport and art would need specific and tailored opportunities.

Internal school factors		
Environment / organisation	<ul style="list-style-type: none"> - Displays / exhibitions - concentrated, relaxed atmosphere - comfortable working environment where ideas can be easily shared - lack of distractions and time wasting - learning environment which values and caters for exceptionally able pupils (special places where it is acceptable to be exceptionally able) - working with experts and with children of different ages but similar high ability - one-to-one academic support; small group work 	<ul style="list-style-type: none"> - Poor pupil behaviour - mixed ability classes - staff-pupil ratios - inconsistent identification of able pupils - small numbers of EA pupils - higher number of lower ability pupils - administrative demands
Learning and resources	<ul style="list-style-type: none"> - outside visits, museums etc - research facilities, libraries, ICT, etc – do exceptionally able use them -differently from how other pupils do? - access to facilities / resources at home - use of range of resources eg film, internet - extension work / homework - computer-based / distance learning linked to individualized / personalized learning - less / more / different homework, not all having to be completed - learning how to learn, study and improve 	<ul style="list-style-type: none"> - Lack of time to develop resources - inadequacy of resources for ILPs - lack of time - short lessons - teaching to exams - control and conformity - inconsistent identification and support of EA pupils - lack of extension - curriculum rigidity - passive learning approaches - lack of good comparative data - mixed ability
Curriculum / examinations	<ul style="list-style-type: none"> - AEA; AL modules earlier - flexibility 	<ul style="list-style-type: none"> - Exam system; parental expectations; need to introduce new subjects; no early entry to GCSE

E / curricular	<ul style="list-style-type: none"> - extra-curricular / - field trips, (eg theatres, museums) - specific clubs, (eg reading circles) - competitions 	
Staff issues	<ul style="list-style-type: none"> - CPD - appropriate planning / SoW - supportive links / networks lesson observation - co-ordinators - expertise and availability - GandT WP and sharing of practice 	<ul style="list-style-type: none"> - Lack of opportunities to share good practice - cross-curricular observation - lack of enthusiasm
Ethos	<ul style="list-style-type: none"> - Expectations of staff / pupils - Positive attitudes of pupils - celebration of achievement 	<ul style="list-style-type: none"> - Expectations

4b. outside the school

Factors external to school		
Curriculum / examinations	<ul style="list-style-type: none"> - Primary-Secondary continuity 	<ul style="list-style-type: none"> - AS exams - NC - testing regime and exam specs – content v process - mediocre exam success at early age
Learning opportunities and resources	<ul style="list-style-type: none"> - Internet - enrichment eg summer schools, masterclasses, societies - links with peers from other schools - competitions - collaborations 	<ul style="list-style-type: none"> - Status of some subjects in HE - lack of robust identification strategies
Professional development	<ul style="list-style-type: none"> - CPD / outside expertise, sharing of good practice, materials eg QCA / KS3 - networking / collaboration 	<ul style="list-style-type: none"> - Teachers who believe only learning is in the classroom - teacher workload

National Policy	<ul style="list-style-type: none"> - Recognition of able pupils - GandT strategy 	<ul style="list-style-type: none"> - Focus on inner city schools - NAGTY - too much change - lack of funding
Socio-cultural	<ul style="list-style-type: none"> - Parental support - Appropriate level of trust and expectations - Visits; books - Treatment as individual - Regular holidays 	<ul style="list-style-type: none"> - Short-termism - social life / pressures eg 'not cool to be bright.' - lack of parental support parents' lack of awareness of constraints - adolescence

The final word ... from the pupils

Towards the end of the formal project period pupils from each of the schools were invited to spend half a day together to reflect on the project and to explore their views on the following questions:

- **When are you most challenged in school?**
- **What advice would you give to parents of exceptionally able children?**
- **What are the outcomes of a good education (apart from exam success)?**

Their responses are listed below more or less verbatim in order to retain their immediacy and freshness. The selection highlights of course the difficulty for pupils in interpreting what is meant by the researcher eg what is 'challenge' and their freedom to say what they like! I have taken my own liberty of highlighting the responses which may be of most interest.

The times in school when I am most challenged are when.....
<ul style="list-style-type: none"> • <i>I have a one to one interaction with the teacher</i> • <i>I am pushed harder to do more challenging questions</i> • <i>There are interesting and varied methods of teaching</i> • <i>I have to design an experiment in science</i> • <i>I am learning new rules of grammar in German</i> • <i>I try to set a goal to get onto the extension work in maths</i> • <i>In history you are left in pairs to study a source and understand it</i> • <i>I am using textbooks with difficult language – especially in another language and there is no translation</i> • <i>I have to choose the method of working</i> • <i>At the start of a lesson the teacher asks questions about the topic or the work we did in the last lesson</i> • <i>Teachers ask you questions and you don't know the answers</i> • <i>I have to talk about how to work something out and not write it down</i> • <i>Writing down important points eg in maths especially</i> • <i>I start a new topic</i> • <i>Trying to remain focussed on subjects I am not doing for GCSE</i> • <i>I do exams</i> • <i>I do revision</i> • <i>Visitors do speeches in assembly</i> • <i>I am asked questions like this</i>

- *I have to attempt a difficult concept which has not been previously explained*
- *I have to try and do a question or written explanation for something I don't understand and no help is available at the time*
- *I have to understand something that has not been explained properly*
- *Questions are not explained fully*
- *Trying to understand something after I have been told to get on with it, work in silence and not ask my friends*
- *I am trying to cram information for the test in five minutes*
- *I am revising and do not know if I am revising the correct things*
- *Teachers do not make sense*
- *Teachers muddle their words*
- *Teachers expect you to understand and you don't.*
- *Teachers pick on you for answers*
- *I do not have enough time for homework*
- *I am trying to understand physics*
- *I am trying to pay attention in IT*
- *I have to sing in assembly*
- *I am trying to think of an excuse for not doing my homework*

What advice would you give to parents of exceptionally able children?

- *Trust their judgements / them*
- *Let the child make the decisions*
- *Support the decisions of the child*
- *Don't try to point them in the 'right' directions*
- *Encourage you to do the best you can*
- *Be supportive*
- *Make time to listen*
- *Talk to them*
- *Give one to one time*
- *Do not put too much pressure on*
- *Try to understand them*
- *Take an interest in hobbies and what you like to do*
- *Take an interest in your work and be involved*
- *Try to help them when they need it*
- *Make sure you remain motivated*
- *Recognise you need your own space*
- *Recognise that you can decide when you feel like doing your homework*
- *No extension homework*
- *Do not interfere*
- *Do not expect too high achieving it could have negative results*
- *Do not push them too much*
- *Allow them to have free time to do fun things*
- *Encourage non academic activities*
- *Reward them, spoil them give them treats*
- *Give praise*
- *Treat as an individual*
- *Do not compare with siblings and friends*
- *Don't smother them let them have individual time*
- *Take them to places*
- *Give them useful experiences*
- *Recognise and value their abilities*

We decided to ask the pupils what is a fairly fundamental question but perhaps one we rarely seek pupils' views about:

What are the outcomes of a good education (apart from exam success)?
<ul style="list-style-type: none">• <i>Skills to enable you to participate in intelligent conversations</i>• <i>To be put into a room with a stranger and hold an interesting conversation</i>• <i>Knowledge to do things you enjoy</i>• <i>Good and broad and wide range of general knowledge</i>• <i>Ability to discuss things and change views</i>• <i>Ability to listen to various views</i>• <i>Ability to discuss and be heard</i>• <i>An understanding of many things</i>• <i>Full understanding</i>• <i>Relevance of topics and subjects</i>• <i>Use of relevant skills</i>• <i>Learn new skills</i>• <i>New practical skills</i>• <i>Curriculum choices</i>• <i>Social skills</i>• <i>Friends</i>• <i>Clubs and activities</i>• <i>Good communication skills</i>• <i>Skills that can be used every day</i>• <i>Skills that will last into later life – both academic and vocational</i>• <i>Confidence</i>• <i>To be confident in your own thoughts</i>• <i>New opportunities are opened up</i>• <i>Having as many different experiences and opportunities opened up to me as possible</i>• <i>Understanding of how things work</i>• <i>Meeting new people – enrichment</i>• <i>To be able to teach other people and for them to learn from me</i>• <i>If other people could learn from me</i>• <i>An understanding of the world and how it works today</i>• <i>A general all round knowledge of current affairs</i>• <i>If ICT was more interesting</i>• <i>Learning outside the classroom</i>• <i>Good memories of school!</i>• <i>A good job in a field I like</i>• <i>An idea of what jobs are suited to me before I get one.</i>• <i>The ability to get the job you want</i>• <i>To be able to do things that other people can't do</i>• <i>Being able to put into practice what we have learnt</i>• <i>To feel that it was a good use of time and you have gained a lot from it</i>• <i>It will help me in the future</i>• <i>Learn how to read train and bus timetables.</i>• <i>To be able to get far on 'Who wants to be a millionaire'</i>

SECTION D

Conclusions and Recommendations

One of the key assumptions for the project was that there exists a sub-group of able children whose learning abilities and needs could be termed exceptional. Views of the teachers in the project seem to confirm the existence of such a group although it was difficult to discern what distinguished that group from the most able generally in the three schools and also difficult to discern specific features which correlated with those often described as distinctive in the literature on *exceptional* ability. However, it is clear that some unique needs of very able learners were identified, with implications for teaching and learning experiences and for curriculum and school organisation more broadly. A further question raised was whether the exceptionally able form a homogeneous group, and if so with what characteristics? Can some broad groups be identified? Two at least – convergers and divergers – have emerged from the findings of this project and the research base.

In terms of the difference between Y8 and Y10 there did not seem to be much that is significant, except perhaps for greater sophistication and the teachers' views that one should be more cautious with the identification of younger children's particular abilities.

The findings highlight the following key issues as worthy of consideration in relation to schools' provision for exceptionally able pupils. The issues relate broadly to the professional development of teachers and to how the school and individual teachers support the learning of exceptionally able pupils.

1a. Professional development

Further staff development might include:

- Discussion as to what characterises their exceptionally able pupils, how this is informed by pupil level and comparative national data and how such pupils' learning needs are understood
- A shared understanding and use of achievement and attainment data for all staff
- Sharing 'triggers to awareness' as well as evidence based characteristics of high ability in subject disciplines and beyond and the range of identification methods to be used in school
- Strategies and models for teaching appropriate planning / SoW
- Development of individual / group learning plans
- Developing supportive links / networks

1b. Curriculum development

Whole school policy and organisation

The schools could consider and review:

- The assessment, monitoring and tracking processes for individual pupils, to include personal, pastoral as well as academic matters
- How the school and curriculum can be organised for greater personalisation to recognise and meet the needs of exceptionally able pupils eg choice, curriculum and examination flexibility, timetabling and pupil grouping issues
- How the school can accommodate and plan for
 - lesson observation
 - team teaching
 - professional development for GandT

- The management and leadership structure for G&T
- What resources, including eg ICT and availability of expertise
- The provision of portfolios of exemplification of exceptional work and related teaching stimuli
- Self-evaluation and school improvement processes for GandT
- Their learning and physical environments, including resources, parental and extra-curricular issues

Teaching and learning models and strategies

The schools could consider and review:

- How formative assessment and assessment for learning is meeting the needs of the most able pupils
- How an already rich repertoire of teaching and learning experiences for the most able might become further developed and distinct for the exceptionally able, to include, for example, the areas of
 - Independent learning
 - Research
 - Pupil discussion and dialogue
 - Individual support and tutoring
 - Homework
 - Critical thinking
 - Enrichment and experiences beyond the school
 - Higher order / challenging questioning and problem solving
 - Real world problems and contexts

Cross –school collaboration

The three schools might wish to consider how they can liaise and collaborate to support their respective priorities through, for example:

- Sharing case studies of good practice and pupils' work
- Sharing resources and even staff
- Joint events eg annual seminar on an aspect of practice
- Joint pupil events
- Web-site resources

1c. Further research questions

Further questions to research and questions for teachers to consider might include:

- Why identify the exceptionally able? Eg to raise their attainment in one area or extend their range of skills and interests, or some other purpose?
- Are there any dangers in so doing? (Raised by a few teachers eg Oxbridge experience is not the ultimate experience.)
- Do the children, once identified, remain exceptionally able and / or do other children show exceptional ability later?
- How can deeper, faster, wider learning be characterised in different subject areas and at different stages of schooling?
- Are there aspects related to gender (eg different issues for boys / girls)?
- What are the needs of different groups eg in terms of ethnicity (support in particular subjects, pupil groupings), class (specific support for those from disadvantaged backgrounds especially in terms of resources)?
- What issues are there in other subject specific areas - sport, music, science?

A final consideration – both good news and bad – is that the route to eminence, often quoted as the outcome of exceptional ability, is not a well charted or predictable one. The literature abounds with stories of early promise which have not materialised into eminence, although who knows how it may have influenced in private domains. It – and real life – also abound in stories of adult achievement and eminence which would not have been predictable or predicted in childhood or in school. Whatever the start of the journey, the importance of ‘crystallising experiences’ en route are crucial and schools can play their part in providing some of these.

Section E

Reflections on the ISSP Project

The project was an ambitious one and in a sense was really the beginning of a process. In fact the more ‘digging’ the project did the more complex the more complex the undertaking revealed itself to be. The exploration of exceptional ability in this specific context gave the schools involved a starting point and it is hoped for other schools a benchmark from which to explore their own context, particularly where there may be underachievement by very able pupils. The project also gave a starting point from which to explore issues related to gender and achievement.

Involvement in the project certainly raised awareness on the part of pupils and staff of the needs of – and potential underperformance – of exceptionally able pupils. It also gave to the girls involved a greater role and ‘voice’ in the organisation of the school and their own learning, together with a validation of their ability.

The project design and methodology had their limitations and problems as acknowledged, not least because of the quantity of data and its qualitative nature. A future related project would seek to alleviate and broaden the methodological base and research strategies.

Whilst the project was the start of a process the schools nevertheless began as a result of it to initiate or further develop support for their most able pupils through, for example:

- The establishment of student curriculum review groups
- Changes to the curriculum such as critical thinking programmes
- Planning for changes to timetabling and curriculum offer
- Further CPD opportunities

For the project leaders their main priorities are to:

- Disseminate and discuss more widely the project findings
- Provide for and prompt further discussion at a regional and national level
- And
- Develop CPD opportunities (eg Oxford Brookes module on ‘*Exploring Exceptionality*’)
- Undertake further research on exceptionality in different school contexts and explore the gender related questions

The final word must go to the schools and the words of one of the Headteachers, Mrs Elizabeth Allen:

'One striking feature of exceptionally able girls is their ability to articulate the finite and the infinite. They can recognise the environmental, physical factors conducive to good learning. They understand how and when they need to relate to others to learn well. Most importantly, they are extremely self-aware, knowing the personal conditions that they require in order to learn best. The ISSP experience gave the students a voice, the space and the audience to explore their learning environments and their own approaches to learning.

However, the project was not self-indulgent. Very able girls are keen to generalise from the particular - "If a stimulating, flexible learning environment excites me, then it will excite everyone." They moved from personal analysis to strategic thinking with enviable alacrity - another significant feature of a very able girl. Their thinking about solutions was pragmatic yet impressively creative at the same time.

What the students wanted most of all was action. They were very co-operative in completing questionnaires and generous in interview. However, they demanded outcomes, something to do, putting their insights and ideas into action. Very able girls are the leaders and shapers of the not too distant future. Listening to them now and giving them a voice in how their learning is best resourced has helped them to become confident, collaborative community leaders. At the 2005 DfES National Gifted and Talented Conference, some of the research students led a workshop on Student Voice. The conference evaluation described them as "confident, professional and inspirational". They always were, but they deserve to be recognised and the ISSP project has allowed them to be heard.'

Contacts:

Elizabeth Allen office@newsteadwood.bromley.sch.uk
(Headteacher – Newstead Wood School)

Lorna Duggleby bhs@bro.gdst.net
(Headteacher – Bromley High School)

Erica Pienaar - admin@prendergast-school.com
(Headteacher – Prendergast School)

Hilary Lowe hlowe@brookes.ac.uk
(Oxford Brookes University)

Sue Mordecai sue.mordecai@bromley.gov.uk
(Bromley LA)

A summary of the project is available in hard copy as a printed brochure – contact Sue Mordecai by email.