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TEACHING THE GIFTED AND TALENTED

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Abstract

The two major questions teachers usually ask about gifted and talented and talented children are how to spot them and how to teach them. Focussing on these two questions, I surveyed the international scientific evidence for Ofsted, (Freeman, 1998). A major finding is that there is currently a move away from selection of the gifted and talented by achievement tests (SATs or IQ) towards a more holistic profile of a child. It was clear that to reach an exceptionally high standard in any subject area, very able children need the means to learn, which includes material to work with, focused challenging tuition and encouragement. Opportunity is essential for achievement. No single style of teaching can be expected to cater for each one's needs: neither general enrichment nor simple grade-skipping are adequate as blanket measures. Education for the most able must be supported by suitably trained teachers, informed parents, and most importantly the pupils themselves.

Problems of definitions

The general tenor of work in the area of teaching the gifted and talented is away from the concept of relatively fixed abilities identified by high-level achievement. I am using gifts and talents here to mean either the demonstration of exceptionally high-level performance, whether across a range of endeavours or in a limited field, or the potential for excellence which has not yet been recognised by either tests or experts.

There is a distinction between the recognised abilities of children and those of adolescents and adults. The children's are usually seen in their precociousness and the adults' are in productions based on many years of dedication to a chosen domain. Indeed, adult success resulting from specially designed educational programmes for the talented is not promising. For example, none of a selection of 210 New York children (average IQ 157) provided with a dedicated 'gifted' education, had reached eminence by the ages of 40 to 50 (Subotnik *et al*, 1993).

The gifted and talented are not a homogeneous group, whether in terms of learning style, creativity, speed of development, personality or social behaviour. Consequently, there are dozens of definitions of 'gifted and talented' around. Almost all of them refer to children's precocity, either in psychological constructs such as intelligence and creativity, though by teachers more usually in terms of high marks in school subjects (Hany, 1997). This use of precocity as the prime identifying feature is probably responsible for so-called 'burn out', which is usually due to the others catching up. To some extent, the way a talented child is

defined depends on what is being looked for, whether it is academic excellence for formal education, innovation for creative commerce, or solving paper-and-pencil puzzles for Mensa.

So often it seems that it is political and social attitudes, rather than the availability of resources, which are more influential in the recognition of the needs and consequent educational provision for the talented. In some richer countries such as Sweden and Denmark, it is *not* generally acceptable to recognise and provide for outstanding potential, although this view is now softening. In poorer countries, such as China and the former USSR, though, educational emphasis has for many years been placed on practical provision for the promotion of excellence, largely via specialist schools which have produced so many outstanding achievers in sports, mathematics and chess. In the West there has been a steady growth in the development of theories and models, virtually all American.

The value of the evidence

Research in this area of child development brings some specific problems. For example, a summer school for very able children may well increase their knowledge, which the organisers perceive as highly satisfactory; but only a double comparison, both with other 'gifted' programmes and with non-specialist summer schools, could indicate whether that programme would be the best choice for those or any other children - and this has never been done. Almost all out-of-school provision for the gifted and talented, especially when run by parent organisations, does not have the slightest drop of research evidence to support it. (See Freeman, 2002)

Most children defined as gifted and talented for special programmes, particularly in the USA, are identified by conventional tests involving achievement, such as Standard Assessment Tests or IQ tests. But achievement tests can neither distinguish the processes of learning and thinking nor predict high-level creative production. IQ tests cannot even measure extreme gifts and talents because of the 'ceiling effect', the upper limit of the tests being too low to distinguish reliably between the top few percent. In schools, sometimes highly achieving pupils spend so much time learning they have considerable problems producing original insightful ideas; often they are not even asked to make a creative effort but instead use their well trained memories to gain high marks.

So much current research is indicating that intelligence, however defined and measured, is only part of the complex dynamics of exceptionally high-level performance, which must include both opportunity and motivation. Yet high intelligence, in a general sense, appears to be a basic condition of gifts and talents. Intelligence is seen in rapid cognitive development, a precocious knowledge base and flexible metacognitive skills.

So many studies, especially retrospective ones, do not make comparisons with any other children, not even of siblings in the same family (e.g. Bloom, 1985), though it is generally accepted that parental influence and provision is paramount in promoting talent. In fact, many parents work extremely hard at encouraging their children to reach great accomplishments - without success - and others, such as the musician Leonard Bernstein's father, who sold the piano because his son practised too much, actually discourage their talented children.

Looking back at the lives of eminent adults inevitably presents problems of interpretation, particularly the unreliability of memory affecting the perception of early experiences in terms of later achievements and the different outlooks of earlier times. Biographical work has shown, though, how so many who became outstanding in later life were not talented as children. In his investigations into great people of this century, such as Freud, Einstein, and Virginia Woolf (Gardner, 1993; 1997), found that by the age of 20 only Picasso's work had been so outstanding that his world stature could have been predicted. Perhaps we have to recognise that we can never identify and measure the exact context and promise of anyone's life.

How the talented are different

Advancement: Talents and gifts in children are often recognised through their advancement in one or more areas of education. Advancement, though, is the product of many factors, notably opportunity and encouragement, as well as the coordination of potential with the culture. Children without those supports will be handicapped in the development of their learning and coping skills (Freeman, 1992). But in many Pacific Rim countries success is largely attributed to effort rather than native ability. In fact, Flynn (1991) argues that it is the culture of hard work which enables many American Asians with lower IQs than their classmates to be more highly achieving. Yet research with people in creative work (e.g. Simonton, 1994) indicates that above a certain high level, personal characteristics such as independence may contribute *more* than intelligence to reaching the highest levels than intellect. An exceptionally high intelligence is not, then, the only precursor of a gifted and talented performance.

Gender: Girls and boys respond differently to knowledge of their gifts as well as to educational experiences (Freeman, 2003). Girls, for example, are more likely to dismiss their success as due to luck (Heller & Zeigler, 1996). High achieving girls are much more like boys in their intellectual interests and behaviour, but more like other girls in their social-emotional reactions, such as in underestimating their abilities (Reiss & Callahan, 1989).

Gender achievement is seriously influenced by culture, and not only in restrictive Moslem states. In Chicago, Hedges & Nowell (1995) analysed scores from six meta-analyses over 35 years. In science and mathematics, not only did the males score 8-10 times more frequently than girls within the top 10%, but for several tests no female managed to score at all in the top 3%... However, in literacy skills boys trailed by as much as a year and a half. These researchers (and other American researchers) concluded that the differences in innate abilities between male and females across the arts-science divide are large and deep. But outside the USA in many countries, girls are now scoring more highly than boys at all levels of

mathematics while at school, though do not go on to study the subject at university in anything like the same proportions (Arnot *et al*, 1998).

Emotion: The ongoing 30-year study by Freeman (2001) has made a three-way comparison of recognised gifted and non-recognised gifted children and a random control group (initially aged 5 to 14) across Britain. In-depth interviews were conducted with all the subjects and their families in their own homes, and the teachers in the schools. The children were also given a wide variety of tests, and their environmental circumstances rated. A major aim was to find out why some were seen as talented, while others - of identical measured ability - were not. It became clear that the children who had been labelled talented or gifted (whether they actually were so or not), had significantly more behaviour problems than those of *equal ability* who were not so labelled. However, the possession of a Stamford-Binet IQ of 140 or more was not found to be related to emotional problems. Any emotional problems in the children, whether talented or not, had come from other difficulties in their lives, even though the gifts often got the blame.

In fact, most studies of high achievers of all ages have found them to be emotionally stronger than others, with higher productivity, higher motivation and drive, and lower levels of anxiety. As children, though, the talented are vulnerable to extra pressure from parents and teachers to be continually successful. In school, there may be stress from the unrelenting pressure and high expectations. No-one can perform at a high level all the time, fear of failure and feelings of failure and of disappointing mentors will inevitably occur, with possible poor emotional consequences.

The gifted and talented also suffer from widely different stereotyping and its expectations; the spectrum of expectations runs from emotional handicap to perfection. Problems can arise because a child's talents produce reactions in others which may be too difficult for the child to adjust to. Abilities may develop at different and extreme rates, which can bring difficulties of developmental coordination. Whatever problems already exist in the family, these can be intensified when there is an unusual child present (Freeman, 1993).

Educating for the development of talent

Talented achievers appears to think and learn differently from others. They have been found to use self-regulatory learning strategies more often and more effectively. They are also better able to transfer these skills to novel tasks, to such an extent that measures of autonomous learning could even indicate talent. Both their less-able age-peers and older youngsters need more external regulation by the teacher (Span, 1995). Research with young children has also found an extra quality of playfulness among the talented learners (Kanevsky, 1992). Because of such differences in learning ability and style, it is important to teach talented pupils appropriately. There are quite a number of new techniques which can help, such as child-initiated learning, peer tutoring, guided dialogue. Such techniques have been found to be particularly useful for deprived bright children (Ari & Rich, 1992).

Gifts and talent can be strengthened and mobilised by encouraging a mixture of attitudes, including curiosity, persistence, and confidence, as well as the efficient use of learning strategies such as planning, monitoring, and evaluation. Differences in problem-solving strategies between high and average school performers were investigated by Shore and his

colleagues (1992), who concluded that the performance of the more successful learners was closer to that of experts, in that they made more reference to prior knowledge, rather than to information only presented in the problems. Knowledge is, of course, vital to outstanding performance: individuals who know a great deal about something will be better at it than those who do not.

Teachers do not always recognise and encourage the skills of their potentially talented pupils, often because they lack confidence in their own ability to identify them. There is evidence of a wide difference in teacher identification and attitudes towards the talented, which can vary from an unwillingness to recognise them at all to all-round overestimation. But teachers have been found to judge the talented consistently, in that they will continue to pick the same kind of children. Teachers often keep a mental image of a gifted and talented pupil: usually the pupil would have excellent logical reasoning, quick comprehension and intellectual curiosity – in combination with good school grades. The available special facilities are also likely to affect teacher's choices about who is gifted.

Check-lists of the supposed characteristics of gifted and talented pupils vary considerably; some items can be confusing and socio-culturally biased. For example, a child asking a lot of questions can either be seen as gifted and talented or as attention-seeking, or perhaps lives in a home where questioning is encouraged rather than one where children are encouraged to work things out for themselves. One list may ask the teacher to look out for dedicated seriousness, while another suggests a keen sense of humour. Other lists point to perfectionism and introversion as typical features of the high IQ child, although there is no reliable evidence of any personality features being associated with IQ. Others suggest that the teacher looks for sad friendless children as signs of gifts and talents.

Very able children who think in different ways are less likely to be recognised as having high potential. It is not only culture which can cut children out of recognition and special provision, but poverty (Wallace & Adams, 1993). Yet when pupils move to more challenging work, both teacher and pupil expectations are increased. What is more, the Inspectorate found that where the highly able were given special attention, the effects often spread so as to raise the teachers' expectations for all pupils, sometimes improving the whole school's examination results (DES, 1992).

Trends in developing gifts and talents

In their various forms, the two most frequently used methods in schools which aim to provide special help for the talented pupil are accelerating the learning of children, either by moving them up to an older age-group or compacting the material they have to learn, and enrichment, rounding out and deepening the material to be learned (see Freeman, 2000). The success of acceleration is very dependent on the context in which it is done, e.g. the flexibility of the system, how many others in a school are accelerated, the child's level of maturation, and the emotional support received. Enrichment is certainly enjoyable for the talented as well as other pupils, but unless it is focussed does not appear to lead to exceptionally high-level adult achievement.

The newest approach is interactive and child-driven, considering aptitude and provision together, which places less emphasis on school-type achievement, and instead seeks to find and provide for strengths and talents of all kinds. It means considerable involvement by the pupils in their own identification as they come to understand their own potentials and decide

their own goals. This does not mean a one-off self-selection, but is continuous over the school years, resulting in a flexible open-ended talent profile which is regularly added to by all those involved. The evidence indicates that specific provision within subject areas is by far the most effective in promoting talent, rather than general enrichment without identified goals. This might be, for example, a journalism class for sharp writers or photography for the visually talented.

The Sports Approach

I have proposed that given the opportunity, and with some guidance, the highly able - and motivated - should be able to select themselves to work at any subject at a more advanced and broader level. I call this the 'Sports Approach' (Freeman, 2000). In the same way as those who are talented and motivated in sports can select themselves for extra tuition and practice, they could opt for extra foreign languages or physics. This would mean, of course, that such facilities must be available to all, as sport is, rather than only to those pre-selected by tests, experts, or money. This is neither an expensive route, nor does it risk emotional distress to the children by removing them from the company of their friends. It makes use of research-based understanding of the very able, notably the benefit of focusing on a defined area of the pupil's interest, as well as providing each one with what they need to learn with and make progress.

But to practice the sports approach, teachers will need more training in differentiated teaching methods, in addition to a variety of specific techniques for bringing out high-level potential. For example, there would have to be some training in helping pupils to collect information for a portfolio. But most importantly there would have to be some unification of approaches within a school or authority. The recognition of talent in this way would also include some form of recognition of the provision to which the pupils had access. This could be done by a simple rating scale so that children who were excelling within their context would be seen to be doing so and not penalised because they had less provision than others to teaching and to material to learn with.

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