

MENTORING GIFTED PUPILS: AN INTERNATIONAL VIEW

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Abstract

Mentoring provides a specialised form of educational help for pupils whose special educational needs cannot be met in school. For the gifted, this ranges from discovering high level potential, through helping develop unusual abilities, to keeping gifts active throughout life. The role of the mentor is to broaden their charge's viewpoint, not only in the subject selected, but in aiding their holistic development and to help them think independently and at a higher-level. Their aims are to develop interests, originality, initiative and self-direction. Experts can provide mentoring at a high level: students in tertiary education are particularly suitable, particularly from the emotional point of view. Organising individuals for mentoring calls for care in checking suitability, including responsibility, personality matching, timing, emotional concerns, communication and evaluation.

Keywords: gifted, school, education, enrichment, mentoring

INTRODUCTION

A mentor in Greek mythology was someone who provided leadership, support and encouragement and set a fine example to the wider community. Today's understanding of mentoring, is the provision of a focused form of enriched education for pupils whose learning needs cannot always be met within the normal school system. This may be because they need a broader and more advanced approach than the school can provide, to identify unrealised gifted potential, maybe to realise creativity in high-achieving school learners, or to help able underachievers, perhaps for those who have been accelerated in their education, and also for the encouragement of the life-long continuation of gifts. It is different from tutoring which is concerned with academic learning, usually in a classroom, involves a one-to-one relationship and takes place over a short period of a few weeks (Goodlad, 1998). Mentoring usually focuses on life-skills, often outside the classroom, involves a one-to-one relationship and can last for months or years.

The gifted are defined here as those who either demonstrate either exceptionally high-level performance, whether across a range of endeavours or in a limited field, and those whose potential for this has not yet been seen. Aptitudes may range across different areas, such as intellectual, artistic, creative and physical abilities, or be limited to one or two (see Freeman, 1998a).

Mentoring extends opportunities for learning

This is the role of the mentor, to broaden their charge's viewpoint and alert teachers and parents, not only within the subject area selected, but in a holistic way looking at areas which the school may not have considered. We know that the highly able are as varied as any other

children, whether in terms of learning style, creativity, speed of development or social behaviour. Mentors are particularly valuable in enabling individual pupils to see ahead, and to provide the encouragement and sense of identity which teachers and parents cannot always do.

Mentoring is not new: Socrates mentored Plato and Sigmund Freud mentored Carl Gustav Jung. This form of perceptive guidance has long been known in business, the arts and in vocational education, and there are government plans to expand this in schools in Britain. Acting as mentors of gifted pupils is a particularly appropriate activity for students in tertiary education, many of whom are likely to have been gifted pupils themselves and so can understand the special problems which may arise Freeman (1998b). In addition, because they are not far distant in age and experience they are able to set up a bond of sharing exploration within the subject area in a learning partnership which has a two-way benefit to both parties.

THE SPECIAL VALUE OF MENTORING OF THE GIFTED

Gifted pupils may need more than school can provide

Schools are institutions run for the benefit of the majority and they can find it difficult for to provide the individual attention that a member of a minority such as the gifted may require. Over and over again, research shows that the child's own interests are an excellent and often neglected indicator of future adult attainment (e.g.. Hany, 1996; Milgram and Hong, 1997; Schneider, 2000), yet teachers are so heavily occupied with their daily obligations that they are not always able to discover pupils' personal interests nor provide the time and energy to help develop them.

Rich educational circumstances must be present to promote the intrinsic motivation which is vital for outstanding progress in the school years; it goes with curiosity and love of learning, which Renzulli and Reiss (2000) call "task commitment". Part of mentoring is to become closer to individual pupils than classroom teachers, and so guide them to develop what they are keen to work at, separately from the school curriculum. Studies of mentoring in high school programs for the gifted emphasise the importance of presenting gifted pupils with a variety of 'hands on' experiences (Zorman, 1995).

An inexpensive and highly successful mentoring scheme has been carried out for nearly a quarter of a century in the Galilee area of Israel at the Technological Centre, which is dedicated to the study of ecology, producing extremely high pupil achievement (Brumbaugh, *et al* 1994). The scientists work with the local comprehensive school, from which teenage boys and girls have been invited to work on their own projects. They are not selected in any way. The centre has the specific aim of developing scientific thinking, using projects such as the effects of magnesium on plants, cultivating wild mushrooms or the effects of hormones on fish reproduction. The youngsters design and do original work to which there are neither answers nor (often) methods, such as aspects of pH, then continue to work with the data at school. The teenager has to prepare and write a proposal, which is discussed with the mentor (usually a PhD student) before he or she can begin, either alone or in a group. Each one has to be able to work on a computer, eventually to summarise and provide a dissertation. The organiser says that by the time the children leave at 18, some are better than MScs., and many go on to be full-time research scientists.

Mentoring can be essential for some children if they are to be enabled to reach out beyond their circumstances. To a large extent, the way a very able child is identified and encouraged depends on the adult's goal, whether it is academic excellence within education or solving paper-and-pencil puzzles for an high-IQ club such as Mensa. However, it is educationally more productive (and more scientific) to look at the interaction between individuals and their opportunities for learning; to recognise achievement within each one's context. If potentially gifted pupils come from unsupportive homes they are very dependent for their formal education on their few hours at school, which will restrict the quality and variety of what they can achieve.

Mentoring can help identify creative potential

Kaufman (1992), in her follow-up of American Presidential Scholars, found that the major creative way in which those individuals used their vast memory banks was to build props for their self-esteem from their resultant fame as Scholars. However, she also found that 58% of them reported that it was mentors who had given them the support to reach their success. In fact, the careers of creative people were often triggered by meeting others who helped them – mentors.

Creative thinking involves both emotion and personality, including enough confidence and courage to consider new approaches to problems, rather than hiding in the security of familiar and accepted ways of thinking. The conflict for the high school-achiever is between the need for emotional control for academic excellence and that of a more free and open-minded approach needed for creative endeavour. Youngsters who were extremely successful academically were found to be creatively inhibited because of the narrow focus and pressure of their school education (Freeman, 1995). In her 14-year study she found that some who were highly achieving at school were sometimes inhibited in their creativity by their heavy obligations in academic work. Some of the gifted young people grew bitter about this loss in their lives, most noticeably the boys and the scientists, who appeared to be the most deprived in that way.

Indeed, Sternberg and Lubart (1995) found that the high-IQ student often has considerable problems in producing original insightful ideas. More than 200 teenagers in the Yale summer program, were divided via Sternberg's Triarchic Theory of Intelligence into 'high analytics', 'high creatives' and 'high practicals' on the criterion of their scores in a given ability being outstandingly better than those for other abilities. These groups were compared with a balanced-gifted group (equally high in all three areas) and a balanced-above-average control group. All the young people took a very challenging college-level psychology course, at the close of which they were assessed for - basic (traditional) recall, analysis, creative use and practical use. The high analytics, those who had often been identified as gifted by IQ, did worst of all on the creativity tests. The authors concluded that these pupils had rarely been asked to make a creative effort, but had conformed to expectations of being good scholars by using memory to gain high marks. In agreement, investigations into American prize-winners in both arts and sciences showed that a very high intelligence was not always necessary for outstanding results - sheer memory was much more useful (Walberg 1995).

The problem for teachers is to enable intellectually gifted pupils, who have the ability to achieve top grades in examinations, to keep a playful, creative approach to their work and general outlook. An environment in which the exceptionally able child can prosper all round

must be balanced; implying enough time with other people to make good social relationships and develop interests outside study areas. Sometimes this may seem impossible, but mentors can make all the difference.

Mentoring can help the potentially gifted who are underachieving

The potentially gifted, who are not exercising their natural abilities, are not always easy to spot, not least because of the wide variety and changing nature of developing human abilities. High-ability children, who are 'merely' working at above average level can all too easily be missed.

IQ tests are not always helpful, (nor probably the upcoming Master Classes). They can neither distinguish the processes of learning and thinking nor predict creativity (Cropley, 1995), and because they only measure a narrow band of intellectual behaviour they cannot predict other aspects of life, such as what career a person is likely to follow or how individuals will cope in social situations or a talent for, getting on with people or succeeding at business. So, although an extremely high IQ is doubtless an advantage, drive and energy has very often been found to be relatively more predictive of life success (e.g. Gottfried et al, 1994; Subotnik *et al*, 1993; Holahan & Sears, 1995; Schaie, 1996). In a detailed overview of the research on prediction, Trost (2000) concluded that "less than half of 'what makes excellence' can be accounted for" (p. 323) by measurements and observations in childhood.

Gifted pupils may not realise their potential at school, either because of emotional problems or inadequate provision of learning materials - as indeed for any child. But in addition, they may find a mismatch of thinking styles between instruction and learning style. West (1991) examined the lives of ten famous visual thinkers, including Einstein, Edison, and Churchill, all of whom had underachieved at school. He presented research which indicated that the visually talented can encounter particular learning problems in a normal classroom where teaching is linear, one fact following another in a specified order.

Although teacher judgement of giftedness is not always reliable, naturally their judgements will affect their expectations and treatment of pupils, such as in the organisation of learning groups and selection for examinations, which will in turn affect the way the pupils react to education. Although teachers have been found to judge the highly able consistently, in that they will pick the same kind of children (Hany, 1997), the relationship of those judgements to objective measures varies considerably. Bennett *et al* (1984, P.215), found that 40% of potential high achievers had been underestimated by their teachers. Teacher's personal attitudes towards the very able vary greatly; some feel resentment while others overestimate their all-round abilities (Ojanen & Freeman, 1994; Chyriwsky & Kennard, 1997).

Check-lists of the supposed characteristics of the gifted vary widely. Some pointers are confusing, many being socio-cultural. For example, a child asking a lot of questions can either be seen as gifted 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 current LEA checklist presents a list entirely composed of emotional problems as distinguishing features of the gifted, when in fact the evidence suggests that the gifted are generally more stable than other children (Freeman, 1995). It would be important for mentors to work with underachieving potentially able pupils to help them overcome their

problems, not only in a counselling manner but in terms of subject matter and expanding outlooks.

Mentors assigned to possibly bright pupils who may be underachieving, such as the culturally disadvantaged, those with incorrect gender expectations (Freeman, 1996), emotional problems at home, and so on, are often better placed than teachers to give the personal attention and inspiration needed to lift a pupil's self-concept and in broadening horizons and possibilities allow the untapped high-level potential to flourish.

The gifted who are accelerated can be helped through mentoring

Moving pupils up by a year or more beyond their age group is something which only happens to highly achieving pupils, and it can bring emotional problems. In a review of American research on emotional development of the accelerated gifted, Cornell *et al* (1991), concluded that "few authors have examined socio-emotional adjustment with adequate psychological measures" (p. 91), and few have looked at the long-term effects. No data has emerged from any study to indicate which students will fare well in early entry to higher-education. There are many different types of acceleration (see Montgomery, 1996) of which mentoring, working with an expert in the field, can itself be one form.

The major problem with grade-skipping, the most common form of acceleration, is that the child 'hurried' on in that way may be not be either physically or emotionally mature enough to fit in socially with the rest of the class. Intellectually, certain subject areas (such as language) require the appropriate life experiences which come with age, and without these the necessary conceptual development may be lacking. Nor, for that matter, is a four year-old as physically adept as a five year-old, and particularly for grade-skipped boys, their apparently late physical development encourages the 'little professor' image as being hopeless at everything which is not school-learning (or music). The role of the mentor with accelerated pupils is to offer a companion/guide who is working on the same lines and who understands the emotional and intellectual problems of learning at a level beyond age-peers.

Mentors can encourage the life-long exercise of gifts

Evidence from follow-up studies shows that high marks in school do not provide a reliable indicator of adult careers - teachers and academics excepted (Subotnik *et al*, 1993; Holahan & Sears, 1995)! The gifted child does not necessarily become the gifted adult. Giftedness is a continuous developmental phenomenon, which can rise - and fall - over time: 'late bloomers' do exist and can be missed if identification is not continuous (Gottfried *et al*, 1994).

Overall, schools appear to have relatively less effect on the fulfilment of gifted potential than that of average ability children, possibly because they do not, on the whole, focus on the development of their special gifts. In addition, because precocity is the usual identifying feature of young gifted children it is probably the reason for its later apparent loss, often called 'burn out', which is usually due to the others catching up. It is as though a boy is two years in advance for height at 12 and becomes known as very tall, but because most others have a later growth spurt he ends up just a little taller than the average man. The Goetzels' (1978) study of 317 eminent people found that two-thirds of them were not in any way precocious, and Gardner's (1993) study of seven world-changers found that even by the age of 20 only Picasso's future world status was apparent.

Mentors can provide the stability and continuity that pupils may need to continue functioning at an exceptionally high level. This foundation is essential if the outcomes of early precocity are to be continued in a life-span perspective. But without clarity in such aims, attempts at mentoring may not always be successful.

SPECIFIC MENTORING CONCERNS WITH GIFTED PUPILS

Most mentoring of school-children is aimed at raising standards, often in high-risk and underachieving populations, but it also includes pupils who are already functioning at a higher level of learning. The Australian NSW Mentor Links programme aims at both (MacCallum & Beltman, 2000). It links teacher-nominated children from 10 years-old with (usually) trained mentors who have special expertise of all kinds, including students at Sydney University. It starts with an interview, and if the child is accepted, negotiated contact can be in person (often with a parent present) or by other means of communication. It operates out of school and out of school hours, usually for 6 one-hour sessions. Workplace mentoring involves insurance and careful checks. In 1997 Mentor Links operated in 26 of the 40 school districts, school coordinators being given time to find and organise the mentors. There need not be any school contact during the mentoring, but there must be at the end. All participants claim they have benefited, especially the families who say their child grows in self-esteem

Mentors of the gifted should be aware that their charge is able to comprehend the subject area in a greater depth and breadth, and at a faster pace than most others of the same age. Possibly, because of their exceptional advancement, a gifted child could benefit from mentoring at a younger age than others (Zorman, 1995). There are sometimes false assumptions about these pupils, for example, that a gifted child is equally able all-round, which can be confusing because of the sometimes unbalanced or 'dyssynchronous' learning of many such children (Terassier, 1985).

A highly motivated youngster who is keen to pursue a chosen path of learning may need help in deciding whether to broaden their interests or focus on one area for long-term excellence. The mentor also has to know that gifted children at different stages will show passionate interest in areas of interest which may not last, so that time to be spent on the child's current passion may have to be negotiated (Winner, 1996). Several universities (e.g. Middlesex University, London, NSW, Australia and in the USA, Columbia and William and Mary College) have developed student mentoring programs for gifted pupils, which attempt to broaden pupil outlooks by integrating the classroom and the community, many culminating in a product, such as a public exhibition of work. Evaluation via self-reports (e.g. Beck, 1989) found that participants rated such programs more highly for the promotion of life-skills than subject work.

PERACH is a nation-wide programme in which Israeli university and college students work with needy children as mentors (Fresko & Kowalsky, 1997). Mostly, they meet twice weekly for two-hour session over the school year, usually in the child's home. Currently, about 20,000 students work with about 50,000 children. The students are prepared for this task, notably to adapt to the pupils' particular needs. Comparison research between student

mentors and others acting as tutors showed that although both groups of recipients were very satisfied, the boys preferred a more academic approach and the girls greater enrichment.

Although most mentoring of gifted pupils takes place in the United States, it is growing internationally. But it means that most information about mentoring is based on American educational systems and standards, which may not be entirely appropriate for other countries. For example, teachers' perceptions of giftedness, and consequently the youngsters they identify has been seen to vary considerably. German teachers have been found to estimate 3.5% of children as gifted, Americans 6.4% and Indonesians 17.4% (Dahme, 1996). Even within the USA, percentages of the child population identified as gifted vary between 5% and 10% across the states (OERI, 1993). What is more, in the USA, whole-class mixed-ability teaching is normal, and in fact in most states ability or interest grouping is actually prohibited. This is countered to some extent by special programs, even by "1990, 38 states served more than 2 million gifted students", and since then "the number of programs for gifted and talented youngsters has grown substantially" (OERI, 1993, p. iii). In an overview of gifted American pupils' attitudes to school, Winner (1996) states that it is clear that they are often dismissive of what is available to them, and in order to progress to excellence they must find mentors and teachers outside, especially in art and music.

In such circumstances mentoring can provide a life-line for children whose needs cannot be met in the ordinary school. Many who won the Westinghouse Talent Search had done their work out of school in a hospital or university library (Subotnik, 1988). Usually a university teacher or laboratory supervisor acted as a mentor. Many children who go to the large summer camps for the gifted report that the mentors they found there were their most valuable resource (Durden & Tangherlini (1993).

In a review of mentoring for the gifted, Zorman (1995) points out that in almost all cases where individuals reached the heights of creative achievement they had received intellectual and spiritual support from another individual who served as a mentor. This is true even at the highest levels: Zuckerman (1983) found that about half the Nobel laureates she studied had had another laureate as an "elite master" – a mentor. She wrote: "The laureates, in their comparative youth, sometimes went to great lengths to make sure they would be working with those they considered the best in their field. (p.158) "Their self-confidence, the laureates typically report, was increased through study with master scientists." (p167) Charles Darwin had just such a special relationship of shared intellectual passion with his tutor at Cambridge. The results of a 22 year follow-up of 220 mentored and non-mentored young adults by Torrance (1984), indicated that the mentored subjects had reached significantly higher levels of education. Werner (1989) too found in a similar study of 698 children in Hawaii that the ones who achieved at an exceptional level, even those at high-risk, had had the support of a mentor. In retrospective studies, both Torrance and Pizzini (1985) have shown that at times when the gifted individual met barriers on the road to achievement it was their mentors who gave them the encouragement to keep going.

Choosing the mentor

The most difficult challenge in all mentoring is finding the right match between the people involved. Mentoring the gifted calls for special understanding of how it is to be gifted, and the ability to help these special children. One can use Goodlad's (1998) analogy of map reading as an example of how to learn, by asking how a mentor would deal with a future

cartographer who can already use a map with enthusiasm and expertise far in advance of age-peers?

The best mentors are those who are at the peak of their careers, rather than retired people who are resting on their laurels and may resist new ideas - which makes it even more difficult to persuade potential mentors to take on the job. For the gifted, more than one mentor may be needed to attend to different aspects of a subject area. This can modify potential pressure on a pupil from a mentor who wishes to live vicariously through their charge. There is also the need for the mentor to be aware of any embryonic jealousy, competitiveness and frustration with regard to a gifted protégé. This is particularly important for student mentors because of the narrow age difference between them and the pupils, and their possible lack of experience outside education. In mathematics, successful student mentors were themselves found to be extremely talented and had experienced mentoring (Stanley *et al*, 1990).

Gifted children can themselves act as peer-mentors, for example, in a creative writing project or the learning of computer languages. It provides them with the opportunity to take responsibility, to assess their own cognitive as well as interpersonal skills. The same rules would hold for a child as for an adult - the peer-mentor must be able to present a valid, honest critique at the end of what has been done together, both as a teacher specialist and as a friend. However, there is a danger in peer-mentoring that advanced learners may be exploited, as Freeman (1991) found. Instead of spending time on their own learning they are then obliged to help others who are less able advanced, and it must be clear that the peer-mentor really wants to play that role and does not feel coerced and resentful.

Ideally, both the student's teaching style and the pupil's learning style should be compatible: some mentors might use a gentle, encouraging style, while others might hold highly idiosyncratic views about the teaching process influenced by their own not too distant experiences in school.

Mentoring and counselling to improve self-esteem have been found to be effective in promoting a more realistic acceptance by gifted girls of their abilities (Arnold & Subotnik, 1994), notably in helping them to integrate family and careers (Beck, 1989). Beck also found that boys often look for other males as mentors, and girls for a female model who can help them take risks and work independently. However, it is more difficult for gifted girls to find a mentor, as women experts are less easily found, especially in the sciences. Boys generally prefer a mentor who is a skilled expert, hard working and able to motivate and prod them, whereas girls generally prefer one who encourages and praises, acts as a friend, instils confidence and inspires them. Interestingly, the female Presidential Scholars who had received mentoring were similar in their salaries to the males, whereas those without mentoring had lower salaries than the males (Kaufman *et al*, 1986).

Of the American Presidential Scholars, 66% said that their most valuable mentoring came from teachers, at either high school or graduate level, although teacher-mentors could sometimes set unreasonably high standards (Kaufman *et al*, 1986). For the gifted who may have much less need of classroom teaching, mentoring calls for some teacher accommodation, so that pupils can leave their classes occasionally to work with their mentors. Mentoring, though, can also be done before school, during the lunch-break, or (more usually) after school. A teacher might continue the work of the mentor to keen pupils

after school, or a specialist teacher could extent the mentoring role to a small-group project, such as the production of a play.

Specific educational aspects of mentoring the gifted pupil

- * Modelling. Student mentor offers the protégé the mentor's personality and level of skill or knowledge with which to identify.
- * Keeping tradition. Mentors not only encourage the development of a knowledge-base, but also pass on the processes of acquiring it, including curiosity, and cultural thinking about the area. This is what many high achievers have great need of as the foundations for their future work.
- * Offering direction. A good mentor will help the gifted pupil to develop his or her own plans for the future and ways of achieving them. For the multi-talented this can be a considerable problem.
- * Suggesting a new language. The gifted pupils are offered new ways to think about reality: their frame of reference may expand to take on extra meanings, as they learn to look at familiar problems in new ways.
- * Providing a mirror. The mentoring relationship should expand pupil awareness of the self through honest feedback, allowing them to analyse their thinking and their own development. This is something the high achiever may not have time to do in the scramble for high marks.

Emotional aspects of mentoring the gifted

The mentor must be emotionally mature because s/he must be able to share, listen, care, encourage, and accept the protégé's mistakes - especially important for some of the many pressured-to-be-perfect gifted pupils - and act as a role model. There are also special problems of other people's attitudes towards them which the gifted encounter in being different (Freeman, 1991; 1997; Deslisle, 1992).

Some student mentors may find it difficult to relinquish their domain over a keen and highly able protégé who has stretched the limit of their ability to intellectually nurture and assist. This problem has even been found with mentors of little children (Shore, 1995). But when the relationship has reached a point of diminishing returns it must end or it will stagnate. The gifted and their mentors, though, not infrequently keep up long term informal contact (Zorman, 1995).

The gifted protégé's potential development is very dependent on self-esteem, which can be put at risk when requests for advice are met in a sneering or hostile way. But it is also threatened if advice from the mentor is constant and unsolicited, possibly to meet their own psychological needs. Mentors should realise that any rejection of their ideas by bright youngsters with ideas of their own should not be taken personally.

Gifted pupils can be keen and demanding, risking overusing the mentor's time and good will. However, the mentor should always be positive and supportive, and continually reinforce the confidential nature of the relationship. Even for the keenest protégé's the contract should build time spent in other areas of life. The mentor can offer to support other matters

concerned with administration, such as making arrangements for visits, but responsibilities that belong to the evaluator or others should not be taken over.

Ways of starting up student mentoring for gifted pupils

- * Start small, with a few pilot projects.
- * Build a resource file of possible mentors through local institutes of tertiary education. In finding good mentors, it is important to describe what is expected to everyone involved, and to acknowledge the existence of other support, such as extra classes that the pupil may be attending.
- * The integrity of the mentor in this position of trust is vital: it may well be necessary for schools to obtain references before a mentor starts, while the activities must be monitored by some other responsible adult, preferably in the school.
- * Allow enough time for administrating, finding, thanking, travelling, discussing, evaluating, and so on; this is likely to be much more than expected.
- * Arrange it so that the organiser can communicate to all interested persons. Keep copies of all written and verbal communications. Important notices should be posted to all concerned.
- * A volunteer, probably the teacher whose idea it was to start the scheme, should explain to staff, parents, and students what mentoring is and why it is particularly beneficial to bright pupils.
- * It is important to be flexible in developing a mentoring scheme so that other staff members will become convinced of its value for pupils who they may feel are already advantaged.

Here are three clear aims for mentors of gifted pupils:

Aims for mentors to encourage in gifted pupils:

1. to think independently and at a higher-level.
2. develop profound worthwhile interests.
3. develop originality, initiative and self-direction.

The essence of mentoring gifted pupils is to help them realise their considerable potential, not only at school but for the rest of their lives. The evidence is clear - it works.

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