supporting gifted & talented students in the secondary school

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Contents

Chapter 1

Defining Giftedness

This chapter looks at:

- Definitions of giftedness
- Françoys Gagné's differentiated model of giftedness and talent
- The role of the teacher
- A school-based definition

The term 'gifted' is frequently used to describe abilities demonstrated in sport or in the creative arts – 'a gifted athlete', 'a gifted actor' and so on. These references often apply to a specific ability, and may imply that this ability has appeared without systematic learning or teaching, and that those possessing such 'gifts' have somehow been endowed with their particular ability in a way that is beyond the control or scope of education, despite clear indications that the 'gifted' individuals have usually spent years honing their skills.

A number of terms are commonly used by teachers to describe 'gifted' pupils: bright, talented, high flier, exceptionally able, brilliant (George, 1995, 1997; Wallace, 2000). Teachers use these terms interchangeably to refer to pupils who have demonstrated particular abilities and for whom different educational provision is needed.

One definition is that *gifted* pupils have the potential to demonstrate superior performance in a number of areas, and *talented* refers to those who do this in a single area (George, 2000). Eyre's (1997) multi-dimensional view of giftedness is a more complex one and she considers that 'gifted and talented' describes not only those with high academic abilities, but should also include those with musical, sporting or artistic ability.

Most definitions of giftedness in secondary school pupils refer to their abilities and achievements in particular areas, fitting the popular theory of multiple intelligences (Gardner, 1993) indicating different kinds of 'giftedness'.

The English definition of 'gifted' learners as those who have abilities in one or more academic subjects and 'talented' learners as those displaying abilities in sport, music, design or creative arts is not universally accepted by researchers

and educators, even across the United Kingdom. In Scotland, teachers often use 'more able' when referring to their highest achieving pupils (McMichael, 1998), while the Welsh Assembly used 'more able and talented' in their 2003 *Guidance for Local Education Authorities*.

In New Zealand giftedness is defined in terms of learning characteristics indicating the possession of special abilities that give pupils the potential to achieve outstanding performance (Riley et al., 2004). No specific definition of giftedness is given, but, as in many other 'national' guidance publications, schools are expected to develop their own definitions based on the published principles.

Most teachers would agree that gifted pupils are those who require greater breadth and depth of learning activities and extended opportunities across the curriculum in order to develop their abilities. The learning needs required by some pupils to develop their abilities is fully illustrated by Gagné's (1985, 2003a) differentiated model of giftedness and talent (DMGT) (see Figure 1.1). In this, Gagné proposes that giftedness is the potential or aptitude within an individual, and that this can be developed into talent (developed abilities or high performance) by environmental and other factors.

This model explores what an individual needs to do in order to transform an aptitude into a developed skill. Gagné clearly defines giftedness as 'natural' abilities that may be made apparent through the ease and rate at which individuals acquire new skills – learning appears to be easier and faster in individuals whose natural abilities are high, but these aptitudes must pass through a developmental process before they can be demonstrated as 'talents' (systematically developed skills). Talent development requires systematic learning and practising, and the more intensive these activities are, the greater the demonstrated skills will be. In the DMGT, while one cannot be talented without first being gifted, it is possible for natural abilities not to be translated into talents, so that academic underachievement of some intellectually gifted pupils may be linked to a failure to engage fully in the developmental process.

ROLE OF THE TEACHER

What makes Gagné's model particularly meaningful to teachers is the place given to the developmental process of learning, training and practice combined with environmental and intrapersonal catalysts which transform natural aptitudes into skills that can be publicly demonstrated. In sport, for example, coaches assess those athletes most likely to attain high levels of performance using not only natural abilities but also catalysts like intrinsic motivation, competitiveness, persistence and personality, while sports organisations provide the best environmental conditions to foster athletes' development. Even chance plays a role! No matter how much natural ability a young athlete may have, and no matter how well trained and motivated (even with the very best of coaching and equipment), if the international selector does not see him perform, he may never attain at the highest levels. However, the teacher/trainer/coach will always try to ensure that protégées are given every opportunity to shine – and most of them will go to great lengths to eliminate chance as a factor that might prevent this.

In the DMGT, teachers are able to see a clear role for themselves in the transformation of natural aptitudes into developed skills. Learning implies a role for the teacher in devising programmes for pupils to follow in order to

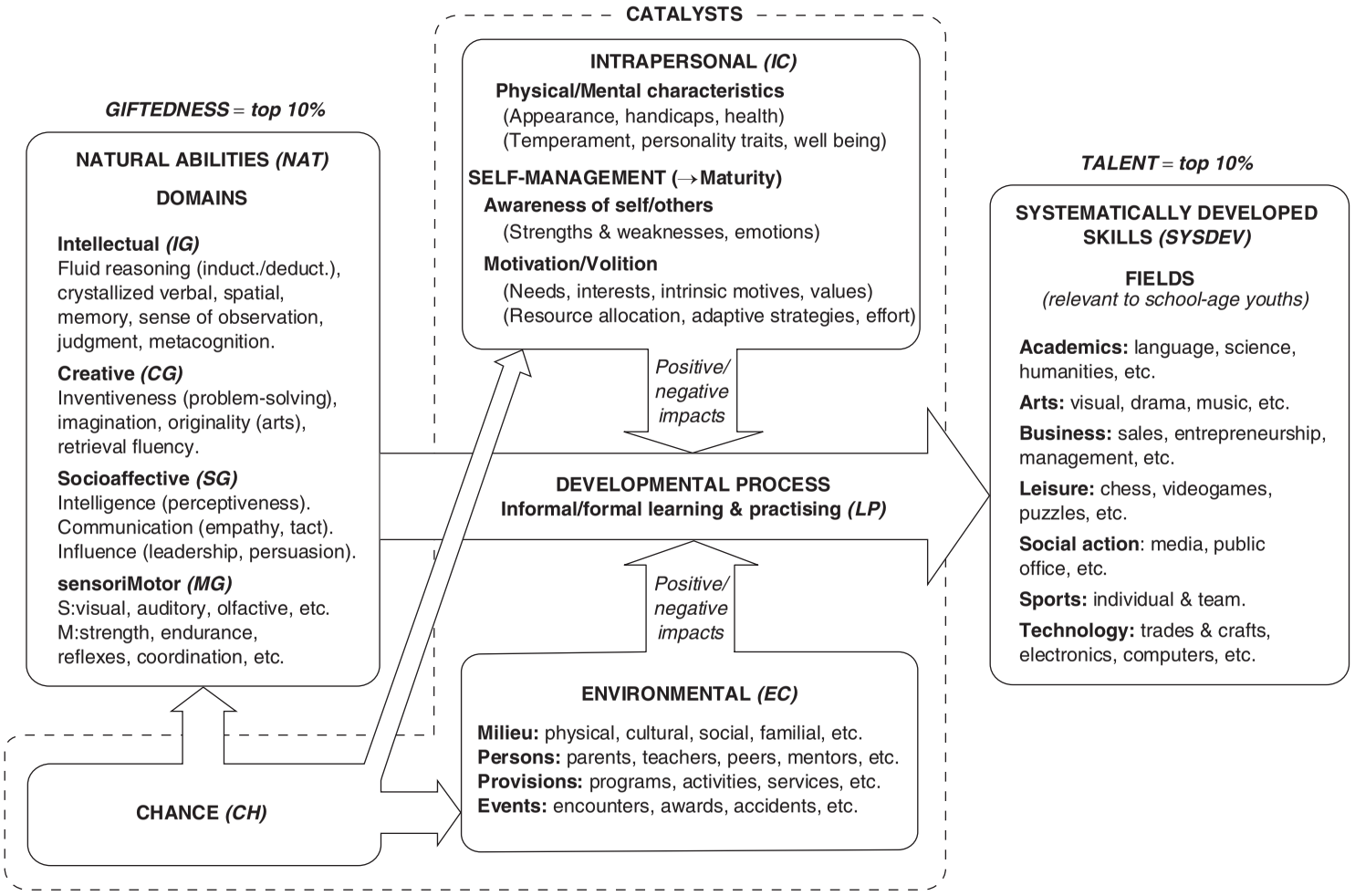

Figure 1.1 Gagne's Differentiated Model of Giftedness and Talent (DGMT, US, 2003)

develop and improve their skills, while practice is undertaken by pupils themselves and linked to motivation and environmental circumstances, though supported by teachers through the provision of resources. Teachers can provide a motivating classroom environment by creating conditions that sustain, guide and enhance a pupil's inherent motivation to learn; they can stimulate pupils' interests and create a climate that promotes achievement by helping pupils accept and value their gifts; and they can provide resources that do not place limits on individual pupils' attainments.

SCHOOL-BASED DEFINITION

Gifted educational provision in school may be a systematic form of intervention designed to foster the process of talent development in pupils. Such intervention does not depend on teachers' adherence to any particular definition of giftedness, but is built on the awareness that some pupils are gifted and that the teacher's role is to support their development.

Schools need to develop a definition of giftedness that:

- allows the recognition of both performance and potential;
- recognises that pupils may be gifted in one or more areas;
- reflects a 'multiple intelligences' approach that includes a range of special abilities;
- acknowledges that gifted and talented pupils demonstrate exceptionality in relation to their age-peers of similar backgrounds;
- provides for differentiated educational opportunities for gifted and talented pupils, including social and emotional support.

No matter what definition of 'gifted' is accepted, teachers need to see their own role in working with gifted pupils, and this may sometimes be obscured by the multiplicity of definitions.

The search for an absolute definition of giftedness to apply to pupils in the secondary school may be rooted in the fact that many gifted pupils have abilities that are not evident within the context of the school curriculum, so teachers are not in a position to create opportunities and offer experiences that promote a developmental process to enable these pupils to develop their skills. Some pupils allow the teacher only glimpses of their potential or ability, suggesting that appropriate educational provision for all in an inclusive setting might be necessary to encourage the most able to reveal themselves (Wallace, 2000).

🕮 FURTHER READING

Colangelo, N. and Davis, G.A. (eds) (2003), *Handbook of Gifted Education*, 3rd edn. Boston, MD: Allyn and Bacon

Gross, M.U.M., MacLeod, B. and Pretorius, M. (2001) *Gifted Students in Secondary Schools Differentiating the Curriculum,* 2nd edn. Sydney, Australia: Gerric

Renzulli, J.S. (1999) What is this thing called giftedness, and how do we develop it? A twenty-five year perspective', *Journal for the Education of the Gifted*, 23 (1): 3–54

Sternberg, R.J. and Davidson, J. (eds) (1986) *Conceptions of Giftedness*. New York: Cambridge University Press

Chapter 7

Differentiation

This chapter looks at:

- Qualitative differentiation for gifted and talented pupils
- Strategies for subject curriculum differentiation
- Differentiation by homework
- Differentiation by e-learning
- Differentiation by challenge
- A language homework programme
- Web portals for e-learning
- Heriot-Watt University, Edinburgh: SCHOLAR Programme
- The Pushkin Prizes

Curriculum differentiation for gifted pupils involves making changes in the depth, breadth and pace of pupils' learning (McClure, 2001) that may be enhanced with the use of appropriate classroom management strategies, varied teaching styles, flexible grouping and support, and the availability of a wide range of resources. Curriculum organisation should be flexible, with provision for enrichment and subject choice, while offering opportunities to pupils that will enable them to work beyond their age and/or stage according to their aptitudes and interests.

QUALITATIVE DIFFERENTIATION FOR GIFTED AND TALENTED PUPILS

Qualitative differentiation (Renzulli, 1997a; Riley, 2004) is a term used by educators to describe teaching and learning experiences that are tailored to the needs of gifted and talented pupils. The strengths, interests and learning styles of these

pupils underpin the introduction of strategies for individualising the curriculum and creating opportunities to design and implement programmes that meet their needs. For pupils to move through a subject curriculum at their own pace using more challenging material, teachers must determine what they already know, identify what they still need to learn, then replace the usual curriculum with new streamlined lessons, and provide acceleration and enrichment options.

Qualitative differentiation for gifted pupils will embody enrichment and acceleration together with curriculum compacting and flexible pacing. Enrichment generally refers to learning activities permitting broadening and deepening of the subject curriculum according to the abilities and needs of individual pupils, while acceleration refers to a more rapid pace of delivery and progress or the early introduction of content and skills. Both have potential advantages and disadvantages, and it is widely recognised that both should be used as complementary approaches to a qualitatively differentiated education.

STRATEGIES FOR SUBJECT CURRICULUM DIFFERENTIATION

Differentiation should not be viewed in simplistic terms as extra worksheets or one-off lessons. *Quantitative* differentiation (more of the same) should not be teachers' response to gifted pupils learning faster than their classmates. Renzulli, (1988). Established ways of differentiating the secondary subject curriculum that ensure its relevance and complexity to all pupils include:

- Use of tiered assignments (core and extension activities) that are designed to meet the needs of a group of learners functioning at a range of levels in the same class. Although all pupils work on broadly similar content, they may be asked different questions or provided with different tasks according to their known subject ability. Teachers employing this strategy must ensure that they provide appropriately challenging activities for gifted pupils, and not just the use of more complex materials.
- Creation of a flexible learning environment that encourages pupils to engage with the subject curriculum, build knowledge and skills and take risks.
- Introduction of workstations allowing pupils to move around, engage in activities designed to extend their understanding, introduce new processes and develop originality and creativity. Pupils complete all activities rapidly or work intensely on a single task, enabling the teacher to take account of pupils' different learning styles.
- Collaborative group work where pupils interact with one another and contribute a variety of expertise rather than all working on the same aspect of a project. Gifted pupils need opportunities for both individual and collaborative work, but they may be isolated within groups because of their ability level. Wallace and Bentley's (2002) TASC can facilitate a truly collaborative approach to inquiry-based open-ended tasks.

Most secondary teachers are accustomed to considering differentiation of the subject curriculum in terms of modification of content, process, product and the learning environment in order to enable gifted pupils to realise their potential. Several useful matrices in Gross et al. (2001) are based on research into differentiation and provide subject-specific examples of how the secondary

curriculum can be modified to ensure appropriate challenge for gifted pupils, and Renzulli's (1988: et al., 2000) multiple menu model suggests several routes towards achieving a differentiated curriculum for the gifted. No matter which strategy is selected, subject teachers must endeavour to create a learning environment that provides appropriate challenge and support for all pupils, including those identified as gifted and talented.

Differentiation options include co-operative programmes designed to help teachers address the needs of advanced high-school pupils who undertake college-level coursework while still attending school. The International Baccalaureate (IB) is an international qualification taught in more than 100 countries around the world, involving intellectual rigour and high academic standards, with a strong emphasis on the ideals of international understanding and responsible citizenship. The IB Diploma Programme is available for pupils aged 16–18 who intend to go on to university and is a broad-based qualification that demonstrates the all-round academic ability of its graduates with the advantage of being an international qualification recognised in many countries.

DIFFERENTIATION BY HOMEWORK

One aim of differentiation for gifted pupils is to remove the ceiling on what is learned, and use pupils' abilities to build a more diverse and efficiently organised knowledge base. While it is virtually impossible for a single teacher to provide fully effective differentiation of content for gifted pupils within the mixed ability classroom, this can be supported by the development of homework programmes for gifted pupils. These might be devised by teachers for one or two gifted pupils, or developed by a subject department; materials might be used from more advanced levels of study, from commercially produced packages (for example, Teare, 1999, 2001) or specially written. Many teacher-designed homework tasks are produced in response to specific needs of individual pupils, but may grow into articulated programmes to meet needs that appear often in a subject area. Examples from one such programme, developed in response to an identified lack of grammatical rigour and pupils' lack of knowledge of etymology, are given on pages 65–7.

DIFFERENTIATION BY E-LEARNING

Appropriate information and communications technology (ICT) use facilitates the progress of gifted and talented pupils, allowing them to move through lower-order thinking rapidly and access higher-order thinking tasks involving cognitive challenge, critical thinking and problem solving. It is possible for individual pupils to participate in collaborative group work with others who are similarly gifted, providing them with an appropriate peer group electronically. Brainstorming and other techniques that encourage the use of intuitive, imaginative approaches and risk-taking are also possible using ICT, since software is non-judgemental, providing a safe environment that allows pupils to fail. Many ICT activities add acceleration and enrichment to differentiation of the subject curriculum, and the range of available resources is vast and easily enables effective curriculum differentiation for gifted pupils.