A Differentiated Model of Giftedness and Talent (DMGT)

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(personal notes)

Gagné's Differentiated Model of Giftedness and Talent (DMGT) proposes a clear distinction between the two most basic concepts in the field of gifted education.

GIFTEDNESS designates the possession and use of untrained and spontaneously expressed superior natural abilities (called aptitudes or gifts), in at least one ability domain, to a degree that places an individual at least among the top 10% of his or her age peers.

TALENT designates the superior mastery of systematically developed abilities (or skills) and knowledge in at least one field of human activity to a degree that places an individual within at least the upper 10% of age peers who are or have been active in that field or fields.

GIFTS *(G)*

The DMGT proposes four aptitude domains (see Figure 1): intellectual (IG), creative (CG), socioaffective (SG), and sensorimotor (MG). These natural abilities, whose development and level of expression is partially controlled by the individual's genetic endowment, can be observed in every task children are confronted with in the course of their schooling: for instance, the intellectual abilities needed to learn to read, speak a foreign language, or understand new mathematical concepts, the creative abilities needed to solve many different kinds of problems and produce original work in science, literature and art, the physical abilities involved in sport, music or woodwork, or the social abilities that children use daily in interactions with classmates, teachers, and parents.

High aptitudes or gifts can be observed more easily and directly in young children because environmental influences and systematic learning have exerted their moderating influence in a limited way only. However, they still show themselves in older children and even in adults through the facility and speed with which individuals acquire new skills in any given field of human activity. The easier or faster the learning process, the greater the natural abilities. It is these high natural abilities that some laypersons call "talent" or, more appropriately, "natural talent."

TALENTS *(T)*

As defined in the DMGT, talents progressively emerge from the transformation of these high aptitudes into the well-trained and systematically developed skills characteristic of a particular field of human activity or performance. These fields can be extremely diverse. Figure 1

shows some of the many talent fields relevant to school-aged youth. A given natural ability can express itself in many different ways, depending on the field of activity adopted by the individual. For example, manual dexterity, as a natural physical ability, can be modeled into the particular skills of a pianist, a painter, or a video-game player. Similarly, intelligence as a natural ability can be modeled into the scientific reasoning of a chemist, the game analysis of a chess player, or the strategic planning of an athlete.

DEVELOPMENTAL PROCESS *(LP)*

In this model, natural abilities or aptitudes act as the "raw material" or the constituent elements of talents. It follows from this relationship that talent necessarily implies the presence of well above average natural abilities; one cannot be talented without first being gifted. The reverse is not true, however. It is possible for well above average natural abilities to remain simply as gifts, and not to be translated into talents, as is witnessed by the well-known phenomenon of academic underachievement among intellectually gifted children. The process of talent development manifests itself when the child or adolescent engages in systematic *learning and practicing*; the higher the level of talent sought, the more intensive these three activities will be.

INTRAPERSONAL CATALYSTS *(IC)*

This process is facilitated (or hindered) by the action of two types of catalysts; *intrapersonal* and *environmental*. The intrapersonal catalysts are subdivided into physical and psychological factors, all of them under the partial influence of the genetic endowment. Among the psychological catalysts, motivation and volition play a crucial role in initiating the process of talent development, guiding it and sustaining it through obstacles, boredom, and occasional failure. Self-management gives structure and efficiency to the talent development process, and to other daily activities. Hereditary predispositions to behave in certain ways (temperament), as well as acquired styles of behavior (e.g., traits and disorders), also contribute significantly to support and stimulate, or slow down and even block, talent development.

ENVIRONMENTAL CATALYSTS *(EC)*

The environment manifests its significant impact in many different ways. The *milieu* exerts its influence both at a macroscopic level (e.g., geographic, demographic, sociological) and in a more microscopic framework (size of family, personality and parenting style of caregivers, socioeconomic status, and so forth). Many different *persons*, not only parents and teachers but also siblings and peers, may exert positive or negative influence on the process of talent development. Gifted education programs within or outside the school belong to the category of *provisions*; they are a more systematic form of intervention to foster or hinder the process of talent development. Finally, significant *events* (the death of a parent, winning a prize or award, suffering

a major accident or illness) can influence markedly the course of talent development.

CHANCE *(CH)*

Chance could be added as a fifth causal factor associated with the environment, But, strictly speaking, it is a characteristic of some of the elements placed in any of the other four categories (e.g., the "chance" of being born in a particular family; the "chance" of the school in which the child is enrolled developing a program for talented students). Chance is also a major causal factor in the determination of the genetic endowment.

PREVALENCE AND LEVELS

Any definition of normative concepts must specify how subjects differ from the norm and what it means in terms of the prevalence of the population subsumed under the label. In the DMGT, the threshold for both the giftedness and talent concepts is placed at the 90th percentile (approximately 1.3 standard deviations above the mean). In other words, those who belong to approximately the top 10% of the relevant reference group in terms of natural ability (for giftedness) or achievement (for talent) may receive the relevant label.

This generous choice of threshold is counterbalanced by a recognition of levels or degrees of giftedness or talent. These comprise five groups. Within the top 10% of "mildly" gifted or talented persons, the DMGT recognizes four progressively more selective subgroups. They are labeled "moderately" (top 1%), "highly" (top 1:1,000), "exceptionally" (top 1:10,00), and "extremely" (top 1:100,000). As in other fields of special education, the nature of the intervention program that a school develops for gifted or talented students should be influenced by the level of the student's giftedness or talent as well as the domains or fields in which it is sited.

Suggested Readings

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