

A Glossary of Gifted Education

By [Steven M. Nordby](#) © 1997-2004

A

Ability grouping - Placing students of similar ability in the same class or group for purposes of instruction. Research shows higher academic achievement gains for all students when grouped by ability and taught at a pace that matches their learning rates.

Acceleration - Faster presentation of content to more closely match the speed at which gifted students learn.

Achievement - Accomplishment or performance; the realization of potential.

Affective education - Study of emotions, identifying and dealing with them.

Aptitude - Undeveloped potential or ability.

Assessment - Assignment of value. Academically, this usually means grades. In psychology, it means comparing the tested measures of a subject's mental characteristics to a [norm](#), or average.

Asynchronous development - Differing rates for physical, cognitive, and emotional development, also known as dyssynchronous development. For example, a gifted child may be chronologically 13 years old, intellectually 18, emotionally 8, and physically 11. The discrepancies are greatest for everyone at the chronological age of about 13, but the extremes displayed by gifted children have led some experts to define giftedness itself as asynchronous development. If you tell a gifted child to "Act your age!" s/he could legitimately respond: "Which one?"

Authentic assessment - (1) In classroom testing, tests which cover the material actually taught. (2) In psychology, testing under natural, actual conditions rather than in a clinical or artificial environment.

B

Battery - Multiple tests to assess functioning in a variety of psychological areas such as [intelligence](#), [achievement](#), personality, and self-esteem.

Brain based teaching - Application of research from neurology and clinical and cognitive psychology to design and orchestrate lifelike learning experiences that exercise

- the ability to detect patterns and make approximations,
- the capacity for various types of memory,
- the ability to self-correct and learn from experience through analysis of data and self-reflection, and
- the inexhaustible capacity to create,

So as to optimize the extraction of meaning for the individual learner. Brain based teaching incorporates [integrated curriculum](#), and is built on these principles:

1. The brain is a parallel processor.
2. Learning engages the entire physiology.
3. The search for meaning is innate in human nature.
4. The search for meaning occurs through patterning.
5. Emotions are critical to patterning.
6. The brain processes parts and wholes simultaneously.
7. Learning involves both focused attention and peripheral perception.
8. Learning always involves conscious and unconscious processes.
9. We have at least two different types of memory: a spatial memory system and a set of systems for rote learning.
10. We understand and remember best when facts and skills are embedded in natural, spatial memory.
11. Learning is enhanced by challenge and inhibited by threat.
12. Each brain is unique.

Brain lateralization - Specialization of the brain hemispheres. In right handed people, the right brain hemisphere is more involved with spatial relations, imagery, and non-verbal, non-sequential processing, while the left brain hemisphere is more involved in verbal and sequential processing.

C

Ceiling effect - Compression of top scores on a test. For example, if a group IQ test can only measure reliably to 130, then a student with an IQ of 160 (if measured by some other test) may only score 130 due to the ceiling effect of the group test.

Compacting - Eliminating repetition, minimizing drill, and [accelerating](#) instruction in basic skills or lower level classes so that gifted students can move to more challenging material.

Constructivism - The theory that new knowledge is an active product of the learner integrating new information and perceptions with prior knowledge. It is based on the work of John Dewey, Jean Piaget, and Lev Vygotsky, and complementary with [interactionism](#).

Convergent thinking - Thinking which results in conventional solutions and answers or [conformity](#).

Counseling the gifted - Gifted students can benefit from talking with counselors educated in the [characteristics](#) of the gifted.

Creativity - Artistic or intellectual inventiveness. Creativity depends on [divergent thinking](#).

Criterion-referenced - Measurement is compared to an acceptable standard, such as a test of [mastery](#).

Critical thinking skills - The [higher order thinking skill](#) of applying logic in order to reduce ambiguity and lead to understanding of complex problems or ideas. Educators may use [task analysis](#) to develop step by step methods to teach critical thinking skills, but critical thinking itself cannot be reduced to step by step thinking.

D

Depression - There is some research evidence and considerable anecdotal evidence that the gifted are at a significantly higher risk for depression and suicide than the general population. This may be due to [characteristics](#), such as keen insight into the inequities of life, and [asynchronous development](#), which make the gifted individual feel out of place in the social structure. [Counseling](#) with someone fluent in the issues surrounding giftedness can be helpful. .

Diagnostic test - An [assessment](#) prompted by a perceived problem in order to determine current level of functioning. Test results are then used to prescribe a solution.

Discovery method - A variety of student-centered approaches to teaching, including the [Socratic Method](#), in which the teacher acts as a guide and/or resource. Unlike [programmed instruction](#), the emphasis is not on efficiency in mastering a predetermined body of knowledge, but in developing students' abilities to learn how to learn.

Divergent thinking - Thinking which results in novel, unique, or creative solutions or answers.

E

Elitist - A criticism of [gifted education programs](#). If students in gifted programs act as if they are socially or morally superior, or if the program supports the social order rather than identifying and serving all gifted students, then charges of elitism have merit. Gifted programs which serve gifted students from all social classes and ethnic groups, whether achievers, [underachievers](#) or handicapped, are not elitist.

Emotional shutdown - A psychological defense mechanism characterized by withdrawal. A gifted student in a hostile or anti-intellectual environment may react this way.

Enrichment - Deeper coverage of [content](#) often provided for gifted students.

Estimated true score - A calculation to move the score a student gets on a test closer to average based on the [reliability](#) of the test.

Exceptional learners - Students with an [IQ](#) in the bottom or top three percent of the population, or those with other physical or mental differences which affect learning.

Extrinsic motivation -reinforces rewards, or incentives used by one person to bring about desired behavior in another person.

F

Frustration tolerance - Ability to continue working to solve a problem even when setbacks are encountered or little progress is made.

G

Generalization - (1) In [behaviorism](#), applying skills learned in one situation to other situations. (2) In research, applying the results of one study to the general population.

Gifted - Having superior mental ability or [intelligence](#). A label of potential. The intellect and emotions of gifted students are both quantitatively and qualitatively different.

Gifted programs - Special academic and social opportunities which try to meet the needs of gifted students.

Grade skipping - Promotion to a higher grade. Often confused with [acceleration](#). A grade-skipped gifted child can still learn at an accelerated rate and may eventually outperform students at a higher grade placement.

H

Higher order thinking skills - Abstract reasoning, critical thinking, and problem solving abilities.

I

Identification - The selecting and [labeling process](#). Requirements to be identified as gifted vary between school districts.

Independent study - Self-education, often using self-selected resources and driven by student interest.

Individualized instruction - [Content](#) and [pacing](#) of instruction geared toward the individual's unique learning styles, abilities, [needs](#), and [goals](#).

Individual referenced - One's score is compared to one's previous score on a test covering the same material in order to show that [learning](#) has occurred.

Integrated curriculum - Combination of content from two or more subjects to enhance meaning through interconnectedness of knowledge.

Intrinsic motivation - The desire to satisfy natural needs and interests, which includes a desire to understand and make sense of the world.

JKL

Javits Act - Federal legislation originally passed in 1988 to provide grant money for gifted and talented programs and research. 1997 appropriations were less than one-hundredth of one-percent of total federal special education dollars, less than, for example, literacy programs for prison inmates.

Learning disability - A deficit in a specific area, such as word decoding or arithmetic computation, which is out of line with overall intellectual ability.

M

Multiple intelligences - Constructs of [intelligence](#) that include more aspects of mental ability than the conventional concept of intelligence. Howard Gardner proposed seven intelligences: musical, bodily-kinesthetic, logical-mathematical, linguistic, spatial, interpersonal, and intrapersonal. He recently added an eighth: naturalist.

Multipotentiality - The idea that gifted children have the ability to succeed in virtually any career. Use of interest inventories and ability tests with higher [ceilings](#) can help differentiate between areas in which students are merely competent and those in which they truly excel and are highly motivated toward.

N

Non-production - Unrealized ability in which the student knows s/he is capable, but chooses not to do the assigned work.

Norm - (1) In sociology, a culturally relative guideline for social behavior. (2) In testing, a statistical measure of central tendency, as a [mean](#), [median](#), or [mode](#).

Norm-referenced - Measurement is compared to a [norm](#) or average. [IQ](#) tests are norm-referenced tests.

O

Outcome based education - Teaching designed to lead student to demonstrate a specific level of mastery.

Over excitabilities - A term originated by Kazimierz Dabrowski to describe excessive response to stimuli in five psychic domains (psychomotor, sensual, intellectual, imaginal, and emotional) which may occur singly or in combination. Over excitabilities are often used to describe certain [characteristics of the gifted](#). “It is often recognized that gifted and talented people are energetic, enthusiastic, intensely absorbed in their pursuits, endowed with vivid imagination, sensuality, moral sensitivity and emotional vulnerability. . . . [They are] experiencing in a higher key.” - Michael Piechowski. Extreme over excitabilities or a strong imbalance between them may reduce the individual's ability to function in society.

P

Pacing - The speed at which [content](#) is presented and instruction delivered. Pacing which matches the student's rate of learning is optimal. Because gifted students are usually able to learn faster, they often prefer [accelerated](#) pacing.

Peer group - People with which one feels equal. Due to gifted students' [asynchronous development](#), they may have very different intellectual, social, and emotional peer groups.

Perfectionism - The desire to execute tasks flawlessly. Gifted children may develop perfectionism after entering school, as they perform better than their classmates. Later, such perfectionism may lead to avoiding challenges so as not to appear imperfect.

Portfolio - A collection of student work that demonstrates [achievement](#) for purposes of [assessment](#).

Precocity - Development significantly earlier than [normal](#). Most gifted children show precocious intelligence, but not all who develop skills early are [gifted](#): they may reach a plateau, allowing those of average ability to catch up.

Prodigy - A child (usually under age 10) who is able to perform at an adult level in a specific skill. Unlike [savants](#), prodigies often have high intelligence and are aware of their thinking strategies.

Programmed instruction - Teaching a predetermined body of knowledge in a predetermined sequence, often also at a predetermined [pace](#).

Psychometrics - The quantitative measurement of mental characteristics, as in [IQ](#).

Q R S

Reliability - The accuracy and repeatability of a measurement.

Savant - A person with exceptional ability in a specific skill, often artistic, mathematical or musical, who seems intuitively to "know" but is unaware of thinking strategies. Savants often display flattened emotions and little [creativity](#).

Socratic Method - Dialogue and discussion to expose logic and meaning - in which the teacher acts as a guide and/or resource. The emphasis is to develop students' abilities to learn how to learn.

T

Task analysis - Breaking down complex skills into a highly structured series of simpler, smaller, sequential sub skills, and omitting [higher order thinking skills](#).

Tracking - Full-time, often permanent assignment to achievement groups. Compare with [ability grouping](#), where students may be temporarily grouped and regrouped for immediate instructional needs.

Twice special - A student both gifted and handicapped, for example, gifted and [learning disabled](#).

U

Underachievement - A significant difference between ability and performance. A gifted underachiever is often defined as having superior intelligence, yet working below grade level. Some underachievers may withdraw, others may become disruptive. Factors that can contribute to underachievement include:

- Lack of respect for the individual.
- An overly competitive environment.
- Inflexible and rigid structure.
- Stress on external evaluation and criticism.
- Authoritarian control.
- Unrewarding curriculum.
- Family conflicts, such as divorce.

Underachievement shows up often in the most stressful grades: fourth, when students stop learning how to read and start reading to learn; and ninth, with adolescence and the transition to high school.

V W X Y Z

Validity - (1) In testing or [assessment](#) - A measurement's ability to measure what it purports to measure. (2) The truthfulness of an argument, i.e., how well the hypothesis is supported by the evidence.
