Characteristics of Creatively Gifted Students

Creativity and Intelligence: The Threshold Concept

• High intelligence is not the same as high creativity.
• Highly intelligent students may or may not be highly creative.

http://thepotvinreport.files.wordpress.com/2008/01/bobby-fischer-3.jpg
Creativity and Intelligence: The Threshold Concept

- However, creativity and intelligence are related in the sense that there is a base level of intelligence required for someone to show a lot of creative productivity.
- The threshold is about IQ 120.
Creativity and Intelligence: The Threshold Concept

- Research shows teachers prefer to work with the intellectually gifted, although both intellectually and creatively gifted students do equally well in school.

http://www.columbiamissourian.com/media/multimedia/2009/07/14/media/070909_dt_montessori1_t_w600_h600.jpg
Normal Curve for IQ
Normal Curve for IQ

- **Average IQ**: 68% of Population
- **Low Normal**: 13%
- **Mild Retardation**: 2%
- **Moderate Retardation**: 1%
- **Moderate Gifted**: 2%
- **Highly Gifted**: 1%
- **Severe**: 1%
- **Very Superior**: 2%
- **Profound**: 1%
Eminent Creative People

- High intelligence is less related to adult creative eminence than other psychological traits and conditions.
- Perseverance
- Stimulation
- Luck

Eminence = High rank and reputation.
Eminent Creative People

• Traits:
  – Independent and confident
  – Motivation and energy
  – Daring to make changes and challenge traditions
  – Making waves bending rules
  – Moving through failures


http://www.artquotes.net/masters/picasso/picasso_selfportrait1907.jpg

http://wahooart.com/A55A04/wnsf/OPRA/BRUE-5ZKDC7/$File/Pablo%20Picasso%20Dryad.JPG
Important Issue

- Many creative producers have IQ’s in the 120-130 range.
- If students are selected on the basis of IQ and only the top 1-5% are chosen,
- Many very creative individuals will not be in gifted programs.
- Therefore: Need to have a way for more creative people to be admitted.
Another Issue: Teacher Pleasers

• Teachers nominate students that “please”:
  • Well-behaved, neat, conforming, dutiful.
  • Often highly creative students are less well behaved and non-conforming.
Creative Students Not Always Noticed

• In a direct-instruction worksheet setting, the gifts of creative students may not surface and they will not be seen.

• Highly creative people make larger contributions to society than highly intelligent people who are not creative.
Traits of the Creative Person

- High energy and motivation:
  - Impulsive, overactive
  - Enthusiastic, excitable
  - Spontaneous, persistent
  - Persevering, adventurous
  - Willing to work beyond assigned tasks
  - High drive for accomplishment and recognition.
Another Important Trait

- Risk-taking:
  - Not being afraid to try something new
  - Not minding the consequences of being different
  - Having courage, exposing oneself to hostility
  - Rejecting limits imposed by others
  - Gambling on failure
  - Being willing to make a fool of oneself.
Emotional Barriers to Creative thinking

• Fear of failure
• Fear of rejection

• If you try a lot of new things, you are bound to fail at some.
• IBM Founder Thomas J. Watson: “The way to succeed is to double your failure rate.”
Other Common Traits of Creative Persons
• Imaginative, resourceful, flexible, unconventional
• Thinks metaphorically
• Challenges assumptions
• Asks, “What if?”
• Irritated and bored by the obvious
• Avoids perceptual set.
Georgia O’Keefe: This is just a beautiful line. It was painted from a real line: the road visible from the back of O'Keefe's house.
Richard Feynman resisted the Nobel Prize in Physics because he didn’t like the hoopla that went with it. He painted his van with Feynman diagrams of nuclear reactions.
Bob Dylan

Risk-Taking

• Not afraid to be different or to try something new.
• Willing to cope with hostility.
• Willing to cope with failure.

When Bob Dylan switched from acoustic guitar to electric guitar, his audiences booed him. He persisted.
Hillary Clinton

Motivated

• Energetic, adventurous, sensation-seeking
• Enthusiastic, excitable, spontaneous
• Impulsive, intrinsically motivated
• Perseveres, works beyond assigned tasks.

Hillary Clinton tried to implement a national health (creative policy) plan under President Bill Clinton. She persevered in her presidential campaign after it seemed that O’Bama had won the nomination.
Steve Jobs is Curious:

- Question norms and assumptions
- Experiments, inquisitive
- Wide interests
- Asks why?

Steve Jobs invented a whole new way to sell and play music through iTunes and iPod. Started in computers, then went to software, music, movies, and phones.
Phyllis Diller

Sense of Humor

• Playful, plays with ideas
• Childlike freshness in thinking.

Comedian Phyllis Diller

http://www.papermag.com/blogs/dillerface.jpg
http://www.daylife.com/photo/06QM0eNgym5Uo
http://www.gasolinealleyantiques.com/celebrity/movie.htm
Attracted to Complexity

• Attracted to novelty, asymmetry, the mysterious.
• Attracted to theoretical and abstract problems.
• Is a complex person.
• Tolerant of ambiguity, disorder, incongruity.

http://www.paulfriedlander.com/gallery/paulklee.html
http://fionalynne.wordpress.com/2008/03/30/paul-klee/
http://www.worldgallery.co.uk/art-print/With-Two-Dromedaries-and-a-Donkey-207088.html
http://www.paulfriedlander.com/gallery/paulklee.html
Artistic

• Artistic and aesthetic interests
• Attracted to beauty and order.

Artist Mary Cassat

http://profile.myspace.com/index.cfm?fuseaction=user.viewprofile&friendid=33672923


http://oilpaintingdiscount.com/

http://artscenecal.com/ArtistsFiles/CassatM/CassatMFile/CassatMPics/CassatM1.html
The Beatles

Open-minded

• Receptive to new ideas and other viewpoints.
• Receptive to new experiences and growth.
• Liberal, altruistic.

The Beatles with their Indian guru, Maharishi Mahesh Yogi

http://www.paulaltobelli.com/uploaded_images/beatles-india-727343.jpg

http://astralwicks.wordpress.com/2008/02/06/
Needs Alone Time

- Reflective, introspective, internally preoccupied
- Sensitive
- May be withdrawn
- Likes to work alone

http://www.artofheartweb.com/starry_night.htm
Intuitive

- Perceptive, sees relationships, finds order in chaos.
- Uses all senses in observing.

"When a mantis has crunched up the last shred of its victim, it cleans its smooth green face like a cat."

http://www.all-creatures.org/works/gif-mantis-27b.html
Oprah Winfrey

Intelligent

• Verbally fluent, articulate, logical
• Good decision-maker
• Detects gaps in knowledge
• Visualizes


http://sweetaddict.wordpress.com/2008/05/04/oprah-winfrey/

http://www.thesun.co.uk/sol/homepage/showbiz/bizarre/online/article71327.ece
Negative Characteristics

• Overactive physically and mentally.

• Often observed in young children who sleep very little.
Negative Characteristics

• Temperamental, emotional.
• Indifferent to conventions and courtesies.

Singer/ Performer
Britney Spears
Negative Traits?

- Questions rules, laws, and authority
- Stubborn
- Resists domination
- Rebellious, uncooperative

Civil Rights protester Rosa Parks who refused to move to the back of the bus.
Negative Traits

• Egocentric, intolerant, tactless
• Capricious, careless, disorderly

Writer Norman Mailer is considered an innovator of narrative nonfiction, a genre sometimes called New Journalism but which covers the essay to the nonfiction novel. He was awarded the Pulitzer Prize twice and the National Book Award once.

Arrested for Vietnam protests, helped get a killer paroled who killed again, ran for mayor of NYC.

Negative Traits

- Absent-minded, forgetful, mind wanders.
- Sloppy and disorganized with details and unimportant matters.

Called the phone company to ask his own address because he had forgotten where he lived.
Used to wash his socks by boiling them with potatoes for lunch.
In later life, didn’t bother wearing socks at all.

Scientist Albert Einstein

http://www.bluestatecoffee.com/blog/2008/02/
Ralph Nader

Negative Traits?

• Impatient, demanding,
• Argumentative, argues that everyone else is wrong.

Campaigned against excessive ornamentation and protruding bumpers hurt pedestrians in accidents.

1965 book about car manufacturers not putting in safety features or seat belts.

http://en.wikipedia.org/wiki/Unsafe_at_Any_Speed
Eminence

prominent, distinguished, reputed
Herbert J. Walberg

- Distinguished visiting fellow at the Hoover Institution, a think tank on the campus of Stanford University, dedicated to research in domestic policy and international affairs.

Walberg conducted research on characteristics of eminent persons.
Some of Walberg’s Work

• Factors influencing student learning.
• Smaller school districts and smaller schools are more efficient at enhancing educational outcomes.
• Cooperative partnerships between school and parents promote student achievement.
Walberg’s Work related to Gifted Education

Studies of Eminence
Personality Traits of Eminent People

- Eminent: prominent, distinguished, reputed.
- 14\textsuperscript{th} – 20\textsuperscript{th} centuries
- Very common traits:
  - Versatility
  - Concentration
  - Perseverance
  - Superior communication skills
  - At least moderately high intelligence.
Additional Traits of Eminent Adults

- Ethical
- Sensitive
- Optimistic
- Magnetic and popular
Childhood Characteristics

• Exposed to stimulating family, educational, cultural conditions.
• 80% successful in school and liked it.
• 90% given considerable autonomy in their school years.
• 70% guided by clear parental expectations.
• Outstanding early accomplishments.

http://media1.suntimes.com/multimedia/obama-toddler_cst_feed_20070907_19_15_02_1246-400-282.imageContent

http://www.jewsonfirst.org/images/obama8.jpg
High School Students Study

• 771 high school students
• 3 groups;
  – Won competitive awards in science
  – Won awards in the arts
  – Average classmates

http://www.transitionsabroad.com/listings/work/teachingk12university/articles/leading_student_group_in_tanzania.jpg
Findings of High School Study

• Scientist and artist groups both:
  – Visited libraries for nonschool reading
  – Had great numbers of books at home.
  – Found books more interesting than people.
Findings of High School Study

• Scientist and artist groups both:
  – Exhibited early strong interests in mechanical and scientific objects as well as the arts.
  – Were interested in work with fine detail.
  – Were persistent in carrying things through.
More Findings of High School Study

• Scientist and artist groups both:
  – Liked school, studied hard, completed their work faster than classmates.
  – Felt more creative, curious, and expressive than others.
More Findings of High School Study

• Scientist and artist groups both:
  – Believed it is important to be creative.
  –Selected creativity, rather than wealth and power, as the best characteristic to develop in life.
More Findings of High School Study

• Scientist and artist groups both:
  – Indicated they were brighter and quicker to understand than their friends.
  – Attached great importance to money.
  – Expected to earn higher salaries than average.
  – Expected to earn graduate degrees.

Differences in High School Study

• Scientists more likely to:
• Be more concerned with things and ideas.
• More difficulty making friends after changing schools.
• Did not date much.
• More persistent.
• More bookish.
• Valued intelligence most.
• Worried about job security.

• Artists more likely to:
• Be concerned with people and feelings.
• More involved in school activities.
• More social.
• Valued creativity most.
• Let fate take its course.

http://farm1.static.flickr.com/55/130684243_c0ec7ebd41.jpg
<table>
<thead>
<tr>
<th>Artists</th>
<th>Scientists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative, versatile, vital, energetic, sensitive, and enjoyed their work.</td>
<td>precocious and hard working. Childhood: more concentrated on science and engaged in scientific activities; Childhood: more bookish and scholarly. Many lived in rural areas and pursued nature study, reading, and writing.</td>
</tr>
<tr>
<td>Early art work to the exclusion of other activities.</td>
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Catharine Cox

- Identified 282 eminent persons.
- Examined their biographical and personal records.
- Estimated IQ ranged from 100 to 200 with an average of 159.

Those who attain eminence:
- Born of intelligent parents and raised in advantageous circumstances;
- Show precocious childhood traits and behaviors;
- Show intelligence, persistence, confidence, strength of character.

http://www.indiana.edu/~intell/cox.shtml
• Terman’s students (IQ 140+) should have become eminent adults, but some were “misfits and failures.”

• Many of Catharine Cox’s people would not have been included in Terman’s study.
Dean Simonton’s Work

- IQ can be too high. A brilliant person can talk over the heads of others. May be dismissed as too “high brow” or “eccentric.”
- Intelligences other than those tested for in IQ can come into play.

Professor, University of California, Davis
Research on biographical, historical, and content analytical data about eminent creators and leaders
Dean Simonton’s Work

• Drive and determination are important and can make up for a lower IQ.
• Some mental disorder is common in many creative artists, actors, and writers.
• Terman’s group was very mentally healthy.
Genius is Born and Made

• First-born children overrepresented in Terman’s sample and other studies of eminent adults.

• Later borns are more likely to become great artists and writers.
Genius is Born and Made

- Traumatic childhood events characterize many eminent people: loss of parent, poverty, illness.
- Too much formal education and too high academic performance can be bad for eminence.
Necessary Supports

- Bloom and Sosniak studied the home environment and early training of exceptional:
  - Pianists, sculptors, swimmers, tennis players, mathematicians, and neurologists.

http://learning-to-swim.co.uk/images/child_swimmer.jpg
Necessary Supports

• These represent artistic, motoric and cognitive skill areas.
• Home environments and parents responsible for nurturing and developing children’s skills.
Helpful Conditions

• One or both parents had an interest in the particular talent and they were fairly good at it.
• Parents encouraged and rewarded children’s interests.
• Parents served as role models.
• Parents showed personality and lifestyle of a talented person.
Sequence of Events in Development

• Initially parents provided the necessary training.
• Then child switched to a professional instructor.
• Sometimes families moved so that the child could work with the best.
• Student’s dedication to talent area grew strong.
Important Learning

• Handling failure constructively.
• Failures used to pinpoint where new skills need to be learned.
• Dropouts, in contrast, allowed failure to make them feel inadequate.
Comparison to Regular Schooling

• At first, talent development is informal and similar to play.
• Then, talent development is totally individualized with praise and rewards based on individual objectives.
• Focus is on accomplishment and growth in one specialized area.
• Purpose and meaning are clear, inspiring dedication.
Exceptional Abilities

- Development takes time.
- 17 years for concert pianist.
- 15 Years for swimmers to be on Olympic team.
Communities of Practice

- Groups of people who share a particular focus on the talent, work in that area, and are anxious to support aspiring youth.
- The talent must be valued in the home of the child.
- Clubs, music/sports teachers, friends, science kits, performances, competitions, summer camps, books, magazines.
Sosniak’s Idea

• “We are quite confident that extraordinary levels of accomplishment are possible for individuals who do not necessarily show early promise.”
Examples of Some Exceptional Child Prodigies in Art
Child Prodigies

• A young person who performs at the level of a highly-trained adult.
• Usually show high IQ’s but not extraordinarily high IQ’s.
• Usually, this special ability is limited to one domain.

Akiane Kramarik on Oprah. Akiane painted the self-portrait.

http://www.artnewsblog.com/2006/01/child-prodigies.htm
Akiane Kramarik
Spiritual Young Artist

Painted at age 10

http://www.youtube.com/watch?v=TZSGK5lvYMY

Painted at age 9

http://journals.aol.com/rebuketheworld/RebukeTheWorld/entries/2007/02/06/akiane-kramarik-parents-were-atheists-but-god-showed-up-with-a-vision./1660

Paintings of Akiane Kramarik

Akiane with her painting of Jesus.

http://www.unftrd.com/blog/simply-remarkable

Where Does the Talent Come From?

- Individual genetics that allow giftedness in a particular domain.
- Environmental factors: a highly-organized field of knowledge that can be taught to the young person.
- Historical factors: The value society places upon the domain of achievement.
Paintings of Jordan Cook

Jordan Cook with her mom on a talk show


Marla Olmstead, Abstract Painter

Trailer of Movie
http://www.imdb.com/video/screenplay/vi3281715481/

http://i.telegraph.co.uk/telegraph/multimedia/archive/01182/arts-graphics-2007_1182444a.jpg
Two Paintings of Marla Olmstead


http://www.moreproof.com/jackie/?p=55