

QAGTC Conference

Theme: Critical & Creative Thinking

Saturday, 25th May, 2024

Factors Associated with the Creatively Gifted

Michele Juratowitch

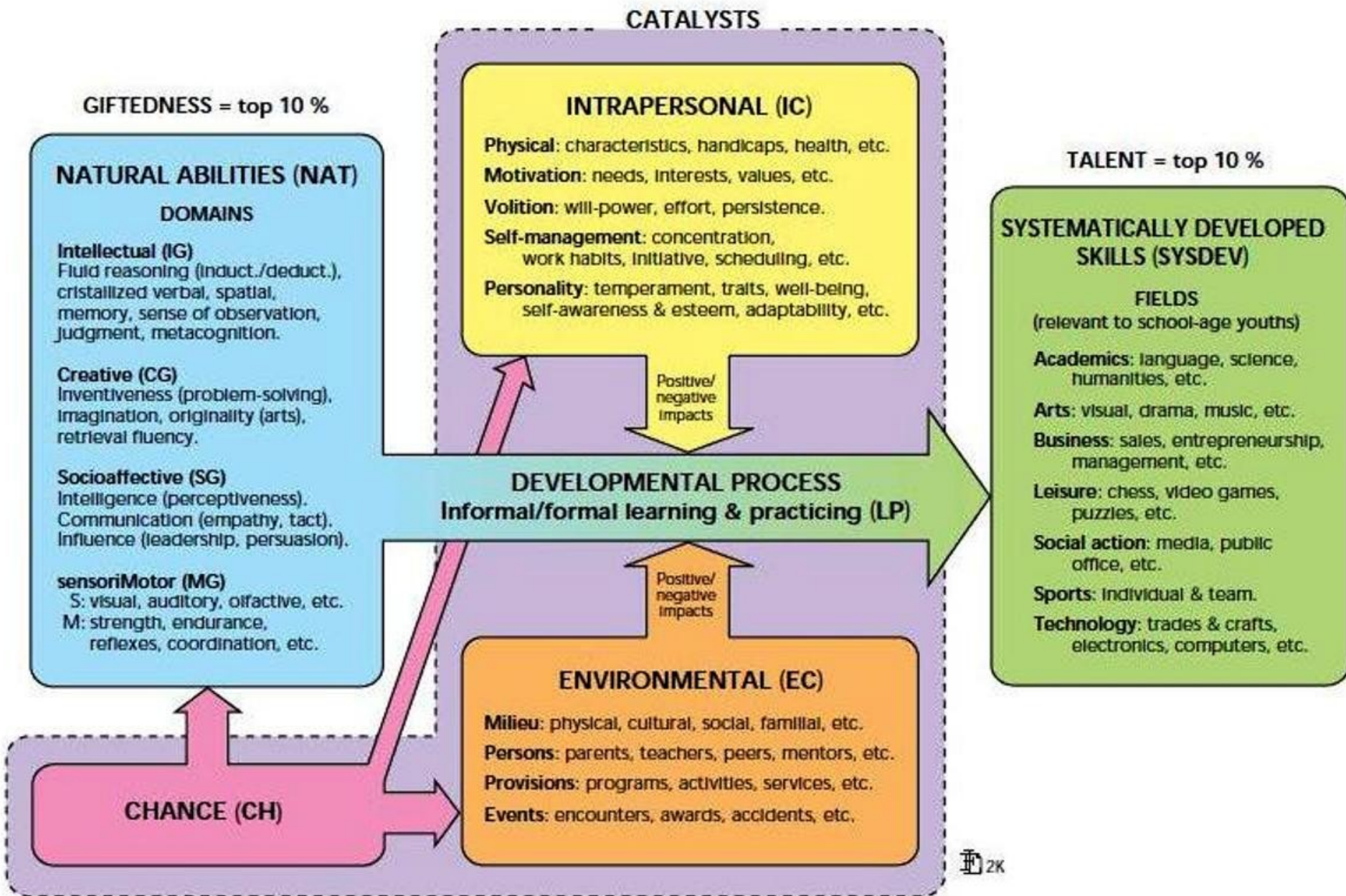




Creativity is any act, idea or product that changes an existing domain, or that transforms an existing domain into a new one.

Mihaly Csikszentmihalyi
Creativity, 1996





Gagné's Differentiated Model of Giftedness and Talent (DMGT. EN.2K)

DMGT proposes 4 aptitude domains:

- *intellectual (IG)
- *creative (CG)
- *socioaffective (SG)
- *sensorimotor (MG)

François Gagné

Does the Level of Intelligence Matter?

❖ Minimum intellectual competence

Jane Piirto, 2004

❖ Threshold of general intelligence

Abe Tannenbaum, 1983

Benjamin Bloom, 1985

❖ Creative cognition

Thomas Ward, 2001

❖ Spatial visualization ability

❖ 'Mathematical cast of mind'

V. Krutetskii, 1976



Creativity is the ability to:

See structure in chaos

Avoidance of mental sets &
Perceptual sets

Think critically

Anticipate consequences

Make good decisions

Understand complex issues

Independence

Risk-taking

Humour

Curiosity

Reflectiveness

Perceptiveness

Tolerance for ambiguity/disorder

Spontaneity

Be artistic

Open-minded

Adventurous

Creative Giftedness is a distinct type of giftedness

... that stems from a confluence of six resources:

1. Intellectual processes
2. Knowledge
3. Thinking styles
4. Personality
5. Motivation
6. Environment

**BIG 'C' or little 'c'
creativity?**



Creatively Gifted or Creatively Productive?



Characteristics of Creatively Gifted

Regarded Positively

Above-average IQ

Creative

Liked by the class
teacher

Persistent

Patient

Regarded Negatively

Might be Intellectually
gifted

Not liked by teacher

Perceived as having a
behavioral problem

Emotional Aspect: Personality Attributes



- ❖ Androgyny
- ❖ Creativity
- ❖ Imagination
- ❖ Insight
- ❖ Introversion
- ❖ Intuition
- ❖ Naiveté or openness
- ❖ Overexcitabilities
- ❖ Passion for work in a domain
- ❖ Perceptiveness
- ❖ Perfectionism
- ❖ Persistence
- ❖ Preference for complexity
- ❖ Resilience
- ❖ Risk-taking
- ❖ Self-discipline
- ❖ Self-efficacy
- ❖ Tolerance for ambiguity
- ❖ Volition or will

Creativity: Self-actualization for all

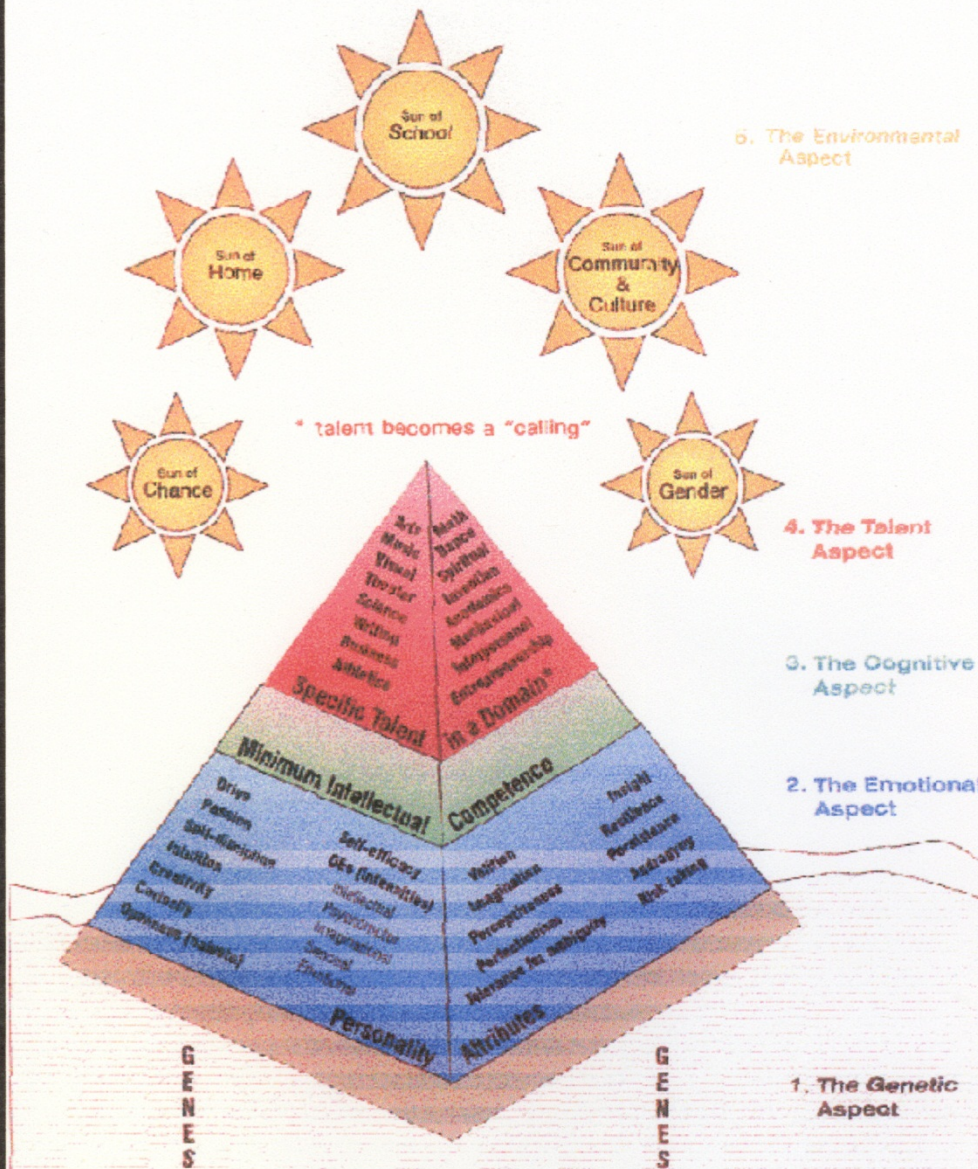
Enhancing creativity is an important issue worldwide, but it is perceived and addressed differently from one population to another. Creativity is considered as an essential life skill, a major component of human intelligence, and the most important topic in the education of the gifted and talented students.

Nations rely upon their youth to use their skills at the highest level possible to contribute at the highest level possible to contribute to improving all life aspects including solving problems creatively, developing genuine innovations, and leading communities to productivity.

Literature indicates that creativity should be nurtured in all students to become successful continued learners & in gifted students to facilitate their talent development & extend their growth in optimal ways.

Majed Rabhan Wadaani, 2015

Pyramid of Talent Development



Piirto Pyramid of Talent Development

5. Environmental Aspect

4. Talent Aspect

3. Cognitive Aspect

2. Emotional Aspect

1. Genetic Aspect

Piirto Pyramid of Talent Development. (Revised 2/08 for 1909 ed Prentice Hall / Macmillan / Merrill College Text, *Talented Children and Adults: Their Development and Education*, (1994). By Jane Piirto * * * talent becomes a "calling"

Jane Piirto, 2004

The 'Creative Chemical'



Rex Jung, a neuropsychologist at the University of New Mexico, has identified a specific neurochemical that has an important role to play in activating the neural circuits that are used in creative thought processes.

Referred to as the 'creative chemical', N-acetyl-aspartate (also known as NAA), has a different impact on the brain, depending upon the individuals' intellectual level. When this neurochemical is produced in individuals of average intellectual ability, it appears to initiate roaming and imaginative thinking.

Alternatively, when NAA is produced in individuals with high intellectual ability, it acts upon the brain to initiate more focused, analytical thinking that is used to evaluate or fine-tune creative ideas.

“Cradles of Eminence”

‘Creative Children as School Problems’

- ❖ Teacher-harassing
- ❖ Plays around
- ❖ Manipulative
- ❖ Explorative activities
- ❖ Enjoy learning
- ❖ Have vital energy
- ❖ Highly creative
- ❖ Has wild, silly ideas
- ❖ Is naughty
- ❖ Makes discipline hard



- ❖ Not perceived as serious, dependable or promising
- ❖ Perceived as underachieving
- ❖ Distracting influence
- ❖ Achieve well on tests
- ❖ Range of intellectual ability-
- ❖ Median IQ is 127
- ❖ Mental hospitalizations
- ❖ Alcoholic or bipolar
- ❖ Class clown

Is Creativity Genetically Determined?

Genes are important but ...

Genes are not the whole story – environment plays a key role.

What happens to the brain during the creative process?

1. Deconstruct to abstract sensations, to challenge dogma
2. Unusual associations
3. To have validity, it must have significance and meaning, and will therefore drive other connections in the brain.

Susan Greenfield, 2012

The creative personality has some combination of the following:

Curiosity

Autonomy

Flexibility

Preference for complexity

Openness to experience

Sensitivity

Playfulness

Risk taking or tolerance

Tolerance of ambiguity

Intrinsic motivation

Psychological Androgyny

Self-efficacy

Wide interests

“Teacher is likely to prefer the child who has a high intelligence and low creative ability.”

E. Paul Torrance



Clearing Skies

Creative Person: Motivation, Personality & Abilities

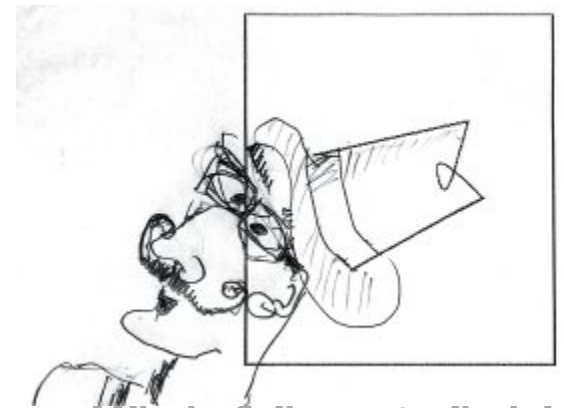
- ❖ Curiosity
- ❖ Flexibility
- ❖ Risk-taking
- ❖ Independence
- ❖ Goal-directedness
- ❖ Fascination for an area
- ❖ Preference for asymmetry
- ❖ Preference for complexity
- ❖ Tolerance for ambiguity
- ❖ Trust in own senses
- ❖ Active imagination



Mihaly Csikszentmihalyi
Creativity, 1996

Creative Person: Motivation, Personality & Abilities 2

- ❖ Ability to structure problems
- ❖ Resistance to premature closure
- ❖ Openness to subconscious material
- ❖ Ability to work on several ideas simultaneously
- ❖ Willingness to ask many unusual questions
- ❖ Desire to go beyond the conventional
- ❖ Ability to abstract from the concrete
- ❖ Willingness to consult other people
- ❖ Acceptance of own difference
- ❖ Willingness to display results



Mihaly Csikszentmihalyi
Creativity, 1996



Different cognitive processes may underlie creativity in people with different levels of intellectual ability.

“ This backs up the evidence for a threshold in IQ, beyond which the relationship with creativity changes.”

Paul Howard-Jones

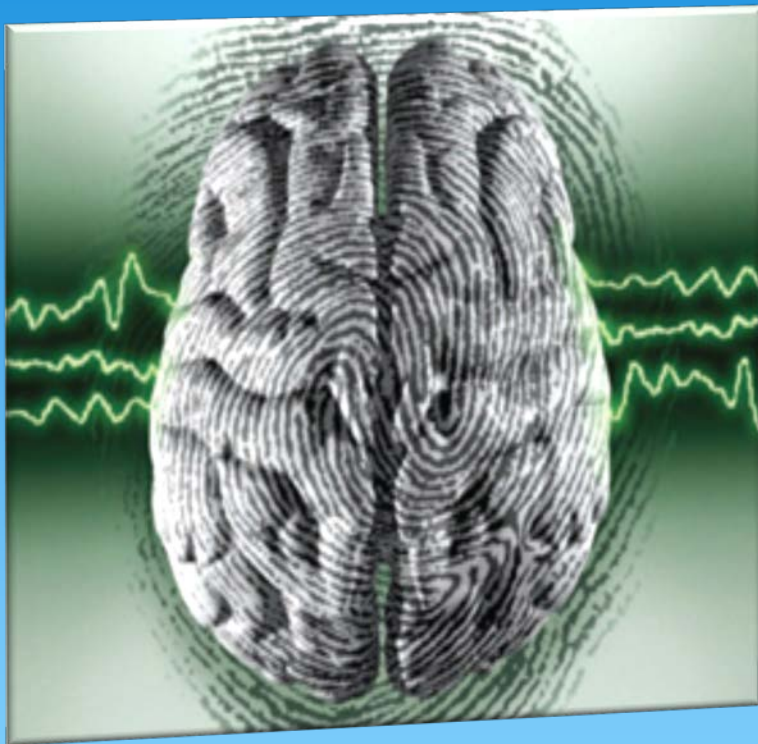
Autotelic Personality

- ❖ Autotelic:
self-directing or self-rewarding
- ❖ The ability to manage a rewarding balance between the “play” of challenge and the “work” of skill building.

Csikszentmihalyi, Rathunde & Whalen, 1997

- Expertise is not achieved without:
- * Supportive environment
 - * Long, intensive period of training





“I suppose creativity is a part of intellect, but there are many abilities involved in intellect. For the full development of creativity in children and adults, I am convinced they have a better chance in life if their best abilities are identified and encouraged.”



Clearing Skies

E. Paul Torrance

Equity Versus Equality


Clearing Skies

Equality



Equity





*“Treatment is not just fixing
what is broken; it is
nurturing what is best.”*

M. Seligman & M. Csikszentmihalyi, 2000

*Creativity is
intelligence
having fun.*

Albert Einstein

Who believes that creative minds can't excel in Maths?

High school students with higher levels of curiosity performed better in the latest round of international PISA mathematics assessments, according to analysis of Australian data.

PISA Reporting Australia's Results. Volume II, 2022
ACER

Curriculum Differentiation



**One size does
not fit all**

**Curriculum must
be tailored to fit
the specific needs
of gifted learners.**



**Balls bounce and
rockets soar**



DO WHAT YOU LOVE & CAN DO WELL

learn
the
skills
of

I
N
T
D E P E N D E N C E
R

and
gladly
share
your
infinite
creativity.

E. Paul Torrance, 1999

Learn to free yourself

from the expectations of others

and to

walk away

from the games they IMPOSE on you.

Free yourself to play your own game.

K N O W
u n d e r s t a n d .

T A K E P R I D E I N .

p r a c t i c e , p r a c t i c e , p r a c t i c e .

D E V E L O P
e x p l o i t .

Gunny
your greatest strengths.

Don't be afraid to

fall
in
love

with something and

pursue it with

intensity.

Find a **great teacher** or mentor
who will help you.

MANIFESTO
for

c h i l d r e n

Designed by Gretchen Marie Mendoza
for Torrance Center for Creative Studies
©Copyright 1999, All Rights Reserved

For information, please contact:
Torrance Center for Creative Studies
323 Aderhold Hall
University of Georgia
Athens, GA 30602
(706) 542-5104

Don't waste energy trying to be well-rounded.

Education of Creatively Gifted

- a. Encourage students to find, define problems
- b. Teach flexible use of knowledge
- c. Encourage rule-making & global styles of thought rather than rule-executing & local styles
- d. Teach students to tolerate ambiguity
- e. Teach children to focus on tasks rather than rewards
- f. Change classroom environments to encourage students' creative work

Robert J. Sternberg & Todd I. Lubart, 2007

What parents can do



- ❖ Focus on child's strengths and interests.
- ❖ Provide lessons to develop the child's skills.
- ❖ Teach children to focus on tasks rather than rewards
- ❖ Learn about the field of interest.
- ❖ Identify competitions in the field that are available.
- ❖ Encourage child to enter these competitions.
- ❖ Facilitate access to a mentor.
- ❖ Expose child to lots of exceptional production.
- ❖ Be patient while child gets established in the field.



Michele Juratowitch

michele@clearingskies.com.au

Ph: 0438 744 994



Need to get in touch?

michele@clearingskies.com.au





Need to get in touch?

michele@clearingskies.com.au

