Using Technology to Engage the Gifted Learner

In the General Education Classroom

MTSS Teacher Symposium 2018

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VISION
To create a world-class educational system that gives students the knowledge and skills to be successful in college and the workforce, and to flourish as parents and citizens

MISSION
To provide leadership through the development of policy and accountability systems so that all students are prepared to compete in the global community
# State Board of Education Goals

**FIVE-YEAR STRATEGIC PLAN FOR 2016-2020**

1. All Students Proficient and Showing Growth in All Assessed Areas
2. Every Student Graduates from High School and is Ready for College and Career
3. Every Child Has Access to a High-Quality Early Childhood Program
4. Every School Has Effective Teachers and Leaders
5. Every Community Effectively Uses a World-Class Data System to Improve Student Outcomes
6. Every School and District is Rated “C” or Higher

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*If a child’s brain has developed differently than the norm, would you assume they required educational supports?*
Asynchronous Development

Typical Child Development

Areas of Development

- Academic - Math
- Motor (fine or gross)
- Academic - Verbal
- Social
- Special talent
- Emotional

Imagine the rings of a tree’s trunk. The outer-most ring tells us the chronological age of the tree. Using similar imagery, this circle, with its pie shaped sections, is a simplified depiction of typical child development. Typical children develop at a typical rate, achieving developmental milestones and grade level learning within a typical age range.

Asynchronous Development

Asynchronous = uneven development. Gifted children in their development are out of step with their same-age peers. Also, each gifted child is different in their asynchronous development. For example, imagine a lever on the end of each pie shape which would pull or push the area of development according to the individual child. ASYNCHRONOUS development is the HALLMARK of giftedness.
The Gifted Brain

- Remarkably intense
- Diffuse metabolizers (fuel for the brain) efficiently
- Brain activity is planned and complex
- Requires coordination for diverse visual, spatial, verbal, and sensory areas of the brain

Brains on Fire
Brains on Fire

• Enhanced activation
• Enhanced awareness
• Strong initial impressions
• Intense and vivid recollections
• Increased memory capacity and efficiency

Brains on Fire

Gifted thinkers make connections in ways other people do not:

• Associations
• Analytical
• Organizational
Brains on Fire

- Vivid sensing
- Prodigious memory
- Greater fund of knowledge
- Frequent and varied associations
- Greater analytic ability
- Sensory, emotional, and memory overload
- Hypersensitivity
- Disorganization
- Distractibility
- Delayed processing (analysis paralysis)
- Mental fatigue

Characteristics of Gifted Learners
Characteristics of Gifted Learners

- Attentive
- Works Hard
- Memorizes
- Receptive
- Pleased with Self
- Absorbs
- Completes Tasks
- Understands

The Expert

The Expert

Academic Thinker
High Achiever
Characteristics of Gifted Learners

- Asks Unforeseen Questions
- Guesses Well
- Selects Focus
- Intense

- Self Critical
- Manipulates
- Chooses Tasks
- Knows

The Executive
Characteristics of Gifted Learners

- Daydreams
- Unconventional
- Overflows with Ideas
- Improvises
- Works Alone
- Improves
- Never Finished
- Inventor

The Inventor

Creative Thinker
Gifted Learner
Characteristics of Gifted Learners

Cognitive

- Early reader
- Curious
- Self critical
- Skeptic
- Persistent

Creative

- Ability for fantasy
- Intuitive
- Open attitude and social behavior
- Radical
- Social unicorn

Affective

- Emotional depth & intensity
- High expectations of self and others
- Heightened self-awareness
- Easily wounded
- Idealistic
- Strong sense of justice
- Advanced levels of moral judgement

Behavioral

- Spontaneous
- Boundless enthusiasm
- Needs little sleep or downtime
- Insatiable curiosity
- Impulsive
- Easily frustrated
- Volatile temper (related to failure)
- Nonstop talking & chattering
Characteristics of Gifted Learners

Acquires and retains information quickly

Impatient with others; dislikes basic routine

Source: ERIC Digest #E527; Adapted from Clark (1992) and Seagoe (1974)

Characteristics of Gifted Learners

Inquisitive; searches for significance

Asks embarrassing questions; excessive in interests

Source: ERIC Digest #E527; Adapted from Clark (1992) and Seagoe (1974)
Characteristics of Gifted Learners

Emphasizes truth, equity, and fairness

Worries about humanitarian concerns

Source: ERIC Digest #E527; Adapted from Clark (1992) and Seagoe (1974)

Seeks to organize people and things

Constructs complicated rules; often seen as bossy

Source: ERIC Digest #E527; Adapted from Clark (1992) and Seagoe (1974)
Characteristics of Gifted Learners

Large vocabulary; advanced broad information | Manipulates with words; bored with school and age peers

High expectations of self and others | Intolerant, perfectionistic; may become depressed

Source: ERIC Digest #E527; Adapted from Clark (1992) and Seagoe (1974)
Characteristics of Gifted Learners

Creative, inventive; likes new ways of doing things

May be seen as disruptive and out of step

Source: ERIC Digest #E527; Adapted from Clark (1992) and Seagoe (1974)

Characteristics of Gifted Learners

Intense concentration; long attention span and persistence in areas of interest

Neglects duties or people during periods of focus; resists interruption; stubborn

Source: ERIC Digest #E527; Adapted from Clark (1992) and Seagoe (1974)
Characteristics of Gifted Learners

Sensitivity, empathy; desire to be accepted by others

Sensitivity to criticism or peer rejection

Source: ERIC Digest #E527; Adapted from Clark (1992) and Seagoe (1974)

Characteristics of Gifted Learners

High energy, alertness, eagerness

Frustration with inactivity; may be seen as overactive

Source: ERIC Digest #E527; Adapted from Clark (1992) and Seagoe (1974)
Characteristics of Gifted Learners

Independent; prefers individualized work; reliant on self

May reject parent or peer input; nonconformity

Source: ERIC Digest #E527; Adapted from Clark (1992) and Seago (1974)

Characteristics of Gifted Learners

Diverse interests and abilities; versatility

May appear disorganized or scattered; frustrated over lack of time

Source: ERIC Digest #E527; Adapted from Clark (1992) and Seago (1974)
Characteristics of Gifted Learners

Seeks cause and effects relationships
Discomfort with the unclear or “illogical” such as traditions or emotions

Source: ERIC Digest #E527; Adapted from Clark (1992) and Seagoe (1974)

Characteristics of Gifted Learners

Imposter Syndrome

• Children discount success and abilities; luck
• They fear being found out
• The greater the success, the greater the stress
• Fear not meeting expectations
Characteristics of Gifted Learners

Dabrowski’s Over-excitabilities

- Psychomotor: lots of movement, trouble settling down and sleeping, nervous tics
- Sensitivity: touch (labels), smells, sounds, lights; can’t tune things out
- Emotional: Happiness is elation, sadness is depression, angry is fury

How Gifted Thinkers Learn
How Gifted Thinkers Learn

Review

• Hyperactivation

• Hyperawareness

• Hypersensitivity

How Gifted Thinkers Learn

Distractibility

Is it a tool of the gifted mind?

Is it a problem that hinders learning?
How Gifted Thinkers Learn

Acquire knowledge through incidental learning:

- Overheard
- Glimpsed
- Observed

For gifted thinkers, learning is not the acquisition of information, it is utilizing information to become an expert and a problem solver.
Gifted Thinkers in the Classroom

- Do not respond to repetitive work
- Choice and control
- Supported risk
- Gifted students will not risk low grades for challenging work
Gifted Thinkers in the Classroom

- Easy success = underestimation of one’s own abilities
- Pressure to be effortless = lower standards
- Effective praise must be specific and personal

Avoid

You are so smart!
You are so wonderful!
You are the smartest student I know!

Apply

I noticed how carefully you thought through the problem. You obviously worked very hard to get the outcome you wanted.
Gifted Thinkers in the Classroom

- Avoid worksheets
- Meaningful homework (less is more)
- Pre-Test, Pre-Test, Pre-Test
- Establish relevancy to real-life situations
- Encourage investigation and research
- Original and creative thinking

Gifted Thinkers in the Classroom

- Complex thinking
- Interdisciplinary connections
- Accelerated pace of learning (less review)
- Advanced, sophisticated content
- Abstract concepts
- Critical evaluation
Gifted Thinkers in the Classroom

• Analyze the degree of challenge and variety in your current lesson plans

• Innovate: Modify, adapt, or design new approaches to instruction in response to students’ needs, interests, and learning preferences

Gifted Thinkers in the Classroom

• Accelerate pacing

• Eliminate repetition or busy work

• Flexible timelines (to go beyond/deeper)

• Open-ended tasks

• Consider student interests
Strategies for Gifted Learners

1. Most Difficult First
2. Tic-Tac-Toe
3. Learning Contract
4. Independent Study Contract

5. Thematic Unit Plan
6. Bloom’s Taxonomy of Thinking
7. Student Made Learning Centers
8. Flexible Grouping
Using Technology to Engage Gifted Students

Find the SPARK

Discover what your students get excited about.

- Student interest inventory
- Talk with gifted teacher
Local school districts have discretion over which technology partners and products are utilized in their districts. For legal advice regarding technology services, please contact your local school board attorney.

IGNITE the Learning

Create an independent study contract.

- Students independently study a topic and are held accountable for their learning
- Students can then work on content selected by the teacher
- Honored by both parties
IGNITE the Learning

Allow students to learn at their own pace.

- Choose specific content according to their interests
- Avoid open-ended Google or YouTube searches
- Be aware the content level may not match the maturity level (age appropriateness)

IGNITE the Learning

https://www.khanacademy.org/  https://mpb.pbslearningmedia.org/
IGNITE the Learning

http://www.nbclearn.com/portal/site/learn/resources

https://ed.ted.com/

IGNITE the Learning

Brains On
But Why
The Past and the Curious
Wow in the World

Resource: https://www.commonsensemedia.org/blog/20-podcasts-for-kids
IGNITE the Learning

**braingenie**

[https://braingenie.ck12.org/](https://braingenie.ck12.org/)

- Learn, practice, and take quizzes on 5,000 math and science skills
- Win badges and earn a spot on the leaderboard

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IGNITE the Learning

**Front Row**

[https://www.frontrowed.com/](https://www.frontrowed.com/)

- Lessons and student activities covering Math, ELA, Social Studies, and Science
- Teacher assigns lessons, students completes at their own pace
- Teacher dashboard shows students’ progress
IGNITE the Learning

newsela

https://newsela.com/

- Nonfiction texts at different reading levels
- Primary sources, biographies, speeches, careers, and myths & legends

IGNITE the Learning

nightzookeeper.com

https://www.nightzookeeper.com/

- Writing prompts and lessons for students
- Student writing competitions
- Share with parents
IGNITE the Learning

**Tynker™**
CODING FOR KIDS

https://www.tynker.com/

- Teaches students basic coding skills
- Students play games to master coding
- Teacher dashboard to track progress

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IGNITE the Learning

**Code for Life**

https://www.codeforlife.education/

- Teaches students basic coding skills
- Students play games to master coding
- Teacher dashboard to track progress
Let them SHINE

Hold students accountable for their learning.

• Work does not have to be graded
• Work does not have to be presented to the class
• Teacher should provide timely feedback

Let them SHINE

How can students demonstrate their learning?

• Website monitors student activity
• PowerPoint or other presentation
• Video
• Infographic or poster
• Multimedia timelines
• Short story or journal entry
• Flash cards
• Reflection
Let them SHINE

**https://spark.adobe.com/**
Post, Page or Video
- Create posts, webpages, or videos
- Creative Commons images and sounds
- Download or share link

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Let them SHINE

**https://piktochart.com/**
- Design infographics, posters, and presentations
- Easily create charts and graphs
- Download or share link
Let them SHINE

Sutori

https://www.sutori.com/
- Create a multimedia timeline
- Include images, text, and links
- Students can collaborate

Let them SHINE

https://storybird.com/
- Book Creator
- Use provided high-quality images
- Share link with parents
Let them SHINE

Quizlet

https://quizlet.com/

• Students can create study aids
• Study sets can include text, images, and voice recordings

Let them SHINE

FLIPGRID

https://flipgrid.com/

• 60-90 second video responses to posed questions
• Can include links
• https://flipgrid.com/nit8ljf
Let them SHINE

**Seesaw**

https://web.seesaw.me/

- Digital portfolio
- Students can contribute text, images, drawings, or voice recordings
- Parent communication

Let them SHINE

**ClassDojo**

https://www.classdojo.com/homepage6/

- Digital portfolio
- Students can contribute text, images, drawings, or voice recordings
- Parent communication
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