

# Reading is HOT

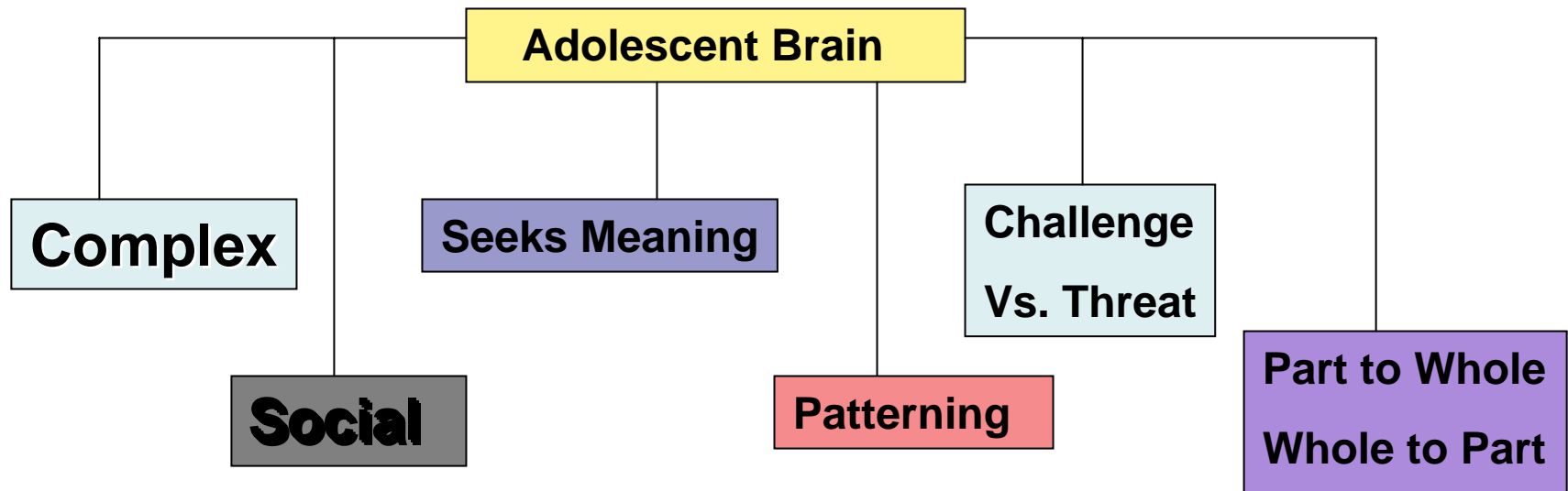
MEGT Conference  
February 8, 2010

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"Every day thinking, like ordinary walking, is a natural performance we all pick up. But good thinking, like running the 100-yard dash, is a technical performance... Sprinters have to be taught how to run the 100-yard dash; good thinking is the result of good teaching, which includes much practice."

-David Perkins, Howard University

# The Adolescent Brain



Sousa, 2005

- The purpose of reading is understanding and making spontaneous connections
- “True comprehension goes beyond literal understanding and involved the reader’s interaction with text. If students are to become thoughtful, insightful readers, they must extend their thinking beyond a superficial understanding of text.”

-Harvey and Goudvis (2007)

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## Critical Reading v. Critical Thinking

- Critical *reading* is a technique for **discovering** information and ideas within a text.
- Critical *thinking* is a technique for **evaluating** information and ideas, for deciding what to accept and believe.

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## Critical Thinking Skills

- Inductive thinking
  - Deductive thinking
  - Determining reality and fantasy
  - Determining benefits and drawbacks
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## Critical Thinking Skills

- Identifying value statements
  - Identifying points of view
  - Determining bias
  - Identifying fact and opinion
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## Critical Thinking Skills

- Determining the accuracy of presented information
  - Judging essential and incidental evidence
  - Determining relevance
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## You may be a critical thinking teacher if...

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- Learners are active and in a continuous dialogue with the teacher
  - Learning is constructing, not feeding
  - Truth is discovered, not delivered
  - Teacher functions as a facilitator/mentor instead of lecturer (guide on the side)
  - Pertinent discussions on related issues often break out
  - Debate is common and exchange of ideas encouraged
  - Learner and teacher satisfaction increases
  - Teachers often face questions for which they have no answers
  - Social interaction and acceptance in the class is generally high
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## Realigning your curriculum to improve student achievement at the college-preparatory level

- “HOT” curriculum focuses on Higher Order Thinking and Technology
- “HOT” courses utilize Hands-On Technology
- “HOT” instruction promotes Cognitive Development
- “HOT” classroom environments reflect Active Interactions

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## Decide what's important

“Thoughtful readers grasp essential ideas and important information when reading. Readers must differentiate between less important ideas and key ideas that are central to the meaning of the text.”

-Harvey and Goudvis (2007)

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- Moving thinking forward:

“Questioning is the strategy that keeps readers engaged. When readers ask questions, they clarify understanding and forge ahead to make meaning. Asking questions is at the heart of thoughtful reading.”

-Harvey and Goudvis (2000)

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# Summarize and Synthesize

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“Synthesizing is putting together separate parts into a new whole...a process akin to working a jigsaw puzzle.”

-Harvey and Goudvis (2007)

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*Its better to ask some of the questions  
than to know all the answers.*

-James Thurber

## Some Questioning Strategies

- Heuristic: attribute listing- use questions to generate ideas to improve something
- Morphological: creating a new product by combining components in a new way
- Interpretive: understanding and analyzing the consequences of information

adapted from *Questioning Strategies for Teaching the Gifted*  
(pp 14-18) by Elizabeth Shaunessy, 2005: Prufrock Press

## Questioning Strategies

- Reflective: encourages students to consider their thinking processes, i.e. metacognition

adapted from *Questioning Strategies for Teaching the Gifted*  
(pp 14-18) by Elizabeth Shaunessy, 2005: Prufrock Press

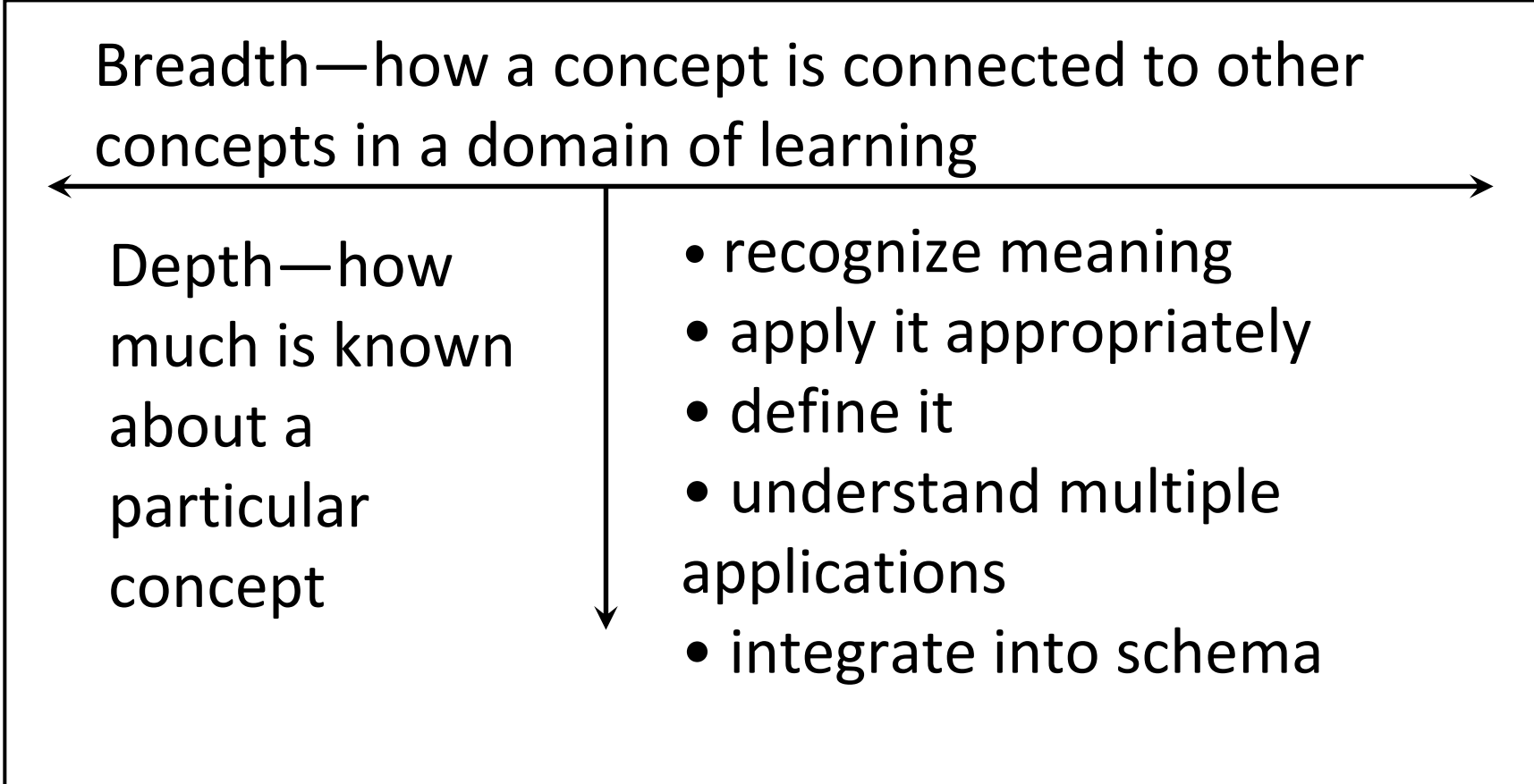
## Callahan's Questioning

- Adaption
  - Modification
  - Magnification
  - Minification
  - Substitution
  - Rearrangement
  - Reversibility
  - Combination
  - Transformation
- What else is it?
  - What new twist could be made?
  - What can be added?
  - What could be omitted?
  - What else can do it?
  - Is a different sequence possible?
  - Can you do the opposite?
  - Can the items be blended?
  - Can you change its form?

adapted from *Developing Creativity in the Gifted and Talented*  
(pp. 30-31), by Carolyn Callahan 1978, Reston, VA: CEC

# Breadth and Depth

Breadth—how a concept is connected to other concepts in a domain of learning



Depth—how much is known about a particular concept

- recognize meaning
- apply it appropriately
- define it
- understand multiple applications
- integrate into schema

## Follow-up Questions

### Student Behavior

- Offers an opinion w/out evidence
- Vague explanation
- Provides long explanation
- Misses the point
- Circular thinking
- Makes generalization

### Teacher Response

- Where in the text can you find support for your opinion?
- What do you mean by...?
- Are you saying that [put idea into a concise statement]?
- How can you support that with evidence from the text?
- Can you rethink your ideas and offer a point?
- Why do you say that?

adapted from *Socratic Seminars in the Block*, by W. Ball & P. Brewer, 2000, Larchmont, NY: Eye on Education.

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## Strategic Reading

- **Why** do you want students to read strategically?
  - **When** do you want students to read strategically?
  - **How** do you want students to read strategically?
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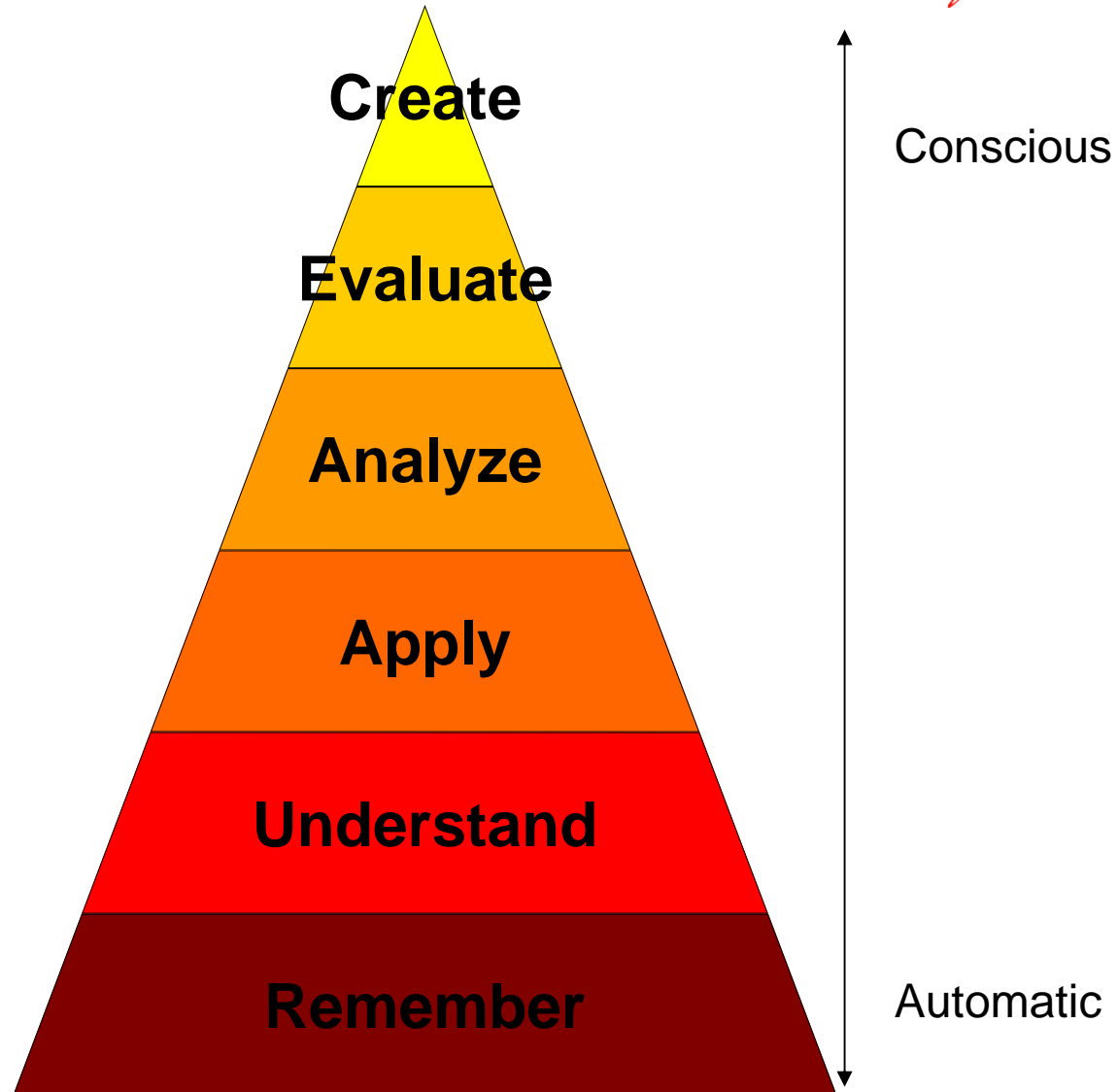
"Adolescents entering the adult world in the 21st century will read and write more than at any other time in human history. They will need advanced levels of literacy to perform their jobs, run their households, act as citizens, and conduct their personal lives. They will need literacy to cope with the flood of information they will find everywhere they turn. They will need literacy to feed their imaginations so they can create the world of the future. In a complex and sometimes even dangerous world, their ability to read will be crucial. Continual instruction beyond the early grades is needed."

(Moore, Bean, Birdyshaw, & Rycik, 1999, p. 99).

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# New Taxonomies

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Krathwohl and  
Anderson 2000

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## Quality Instruction

“The literature on instruction suggests that students whose teachers develop and regularly integrate inquiry-based, hands-on learning activities, critical thinking skills, and assessments into daily lessons consistently out-perform their peers.”

Qualities of Effective Teachers, ASCD

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# How do I foster higher-order thinking in my classroom?

- 1. Set up a classroom environment which is conducive to high-level thinking.
    - A. Multi-level materials
    - B. Flexible grouping
    - C. Accept and celebrate diversity
    - D. Print-rich environment
    - E. High expectations
    - F. Teacher as co-learner
    - G. Nurture risk-taking
  - 2. Engage students in activities which foster high-level thinking.
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## A student learning academic computer literacy is developing the skills to:

- Locate information by using search engines and links
- Skim for main ideas
- Scan for specific facts
- Use multiple resources
- Interpret graphs and nonprint layouts
- Organize data: where to access and evaluate validity and applicability of sources
- Present information in a pleasing and targeted way

*Adapted from Differentiated Instruction Using Technology A Guide for Middle and High School Teachers* by Amy Benjamin 2005, (p. 13), Larchmont, NY: Eye on Education

**How are *you* using technology  
in your classroom to promote  
higher level thinking skills?**

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## Teaching reading in K-3 is not enough...

It is clear that getting third graders to read at grade level is an important and challenging task, and one that needs ongoing attention. But, many excellent third-grade readers will falter or fail in later-grade academic tasks if the teaching of reading is neglected in middle and secondary schools. NCTE.org

## Resources

- <http://coe.sdsu.edu/eet/Articles/metacognition/start.htm>
- S. Harvey and A. Goudvis (2007) *Strategies That Work*, New York, NY
- [www.nationalreadingpanel.org](http://www.nationalreadingpanel.org)
- Afflerbach, Pearson, and Paris (2008) “Clarifying Differences Between Reading Skills and Reading Strategies”, *The Reading Teacher*, 61(5) pp. 364-373

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## Resources

- [www.mnreading.org](http://www.mnreading.org)
  - [www.readwritethink.org](http://www.readwritethink.org)
  - [www.reading.org](http://www.reading.org)
  - [www.ascd.org](http://www.ascd.org)
  - <http://www.greece.k12.ny.us/instruction/ela/6-12/Tools/Index.htm>
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## For further study...

- Benjamin, Amy. (2002) Differentiated Instruction: A Guide for Middle and High School Teachers. Larchmont, NY: Eye on Education.
  - Copeland, Matt. (2005) Socratic Circles in Middle and High School. Portland, Maine: Stenhouse Publishers.
  - Halsted, Judith (2009) Some of My Best Friends are Books: Guiding Gifted Readers, 3<sup>rd</sup> Edition. New York, NY: Great Potential Press
  - Harnadek, Anita. (2002) Mind Benders Deductive Thinking Skills Grades 7-12. Seaside, CA: Critical Thinking Co.
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- Heacox, Diane. (2009) Making Differentiation a Habit. Minneapolis, MN: Free Spirit Publishing.
- Koechlin, Carol & Zwaan, Sandi. (2006) Q Tasks. Markham, Ontario, Canada: Pembroke Publishers
- Parks, Sandra & Black, Howard. (2007) Building Thinking Skills: Critical Thinking Skills for Reading, Writing, Math and Science. Seaside, CA: Critical Thinking Co.

- Piirto, Jane. (2004) Understanding Creativity. Scottsdale, AZ: Great Potential Press.
- Weber, Christine (10-13-2006) Promoting reading: Using eBooks with Gifted and Advanced Readers. Gifted Children Today.
- Shaunessy, Elizabeth. (2005) Questioning Strategies. Waco, TX: Prufrock Press.
- Udall, Anne J & Daniels, Joan E. (1991) Creating Active Thinkers 9 Strategies for a Thoughtful Classroom. Chicago, IL: Zephyr Press.

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