Making a Difference for and with Gifted Students

Templeton International Fellowship

18 May 2008

Most kids start off skipping to school. Where do we make the transition from that kind of enthusiasm to something else? I refuse to believe that the idea of learning complex material isn't exciting, isn’t skipping in one's mind, because I've seen enough of these kids who love learning.

~ Nicholas Colangelo

Graphic Organizer: K-W-L

Know?	Want to Know?	What did you Learn?

Who Are These Children?
Gagné's DMGT

- ✓Gifts
  - ☒ Intellectual
  - ☒ Creative
  - ☒ Socioaffective
  - ☒ Sensorimotor
- ✓Talents
  - ☒ Academic
  - ☒ Technical
  - ☒ Interpersonal
  - ☒ Athletic

1991. "Toward a Differentiated Model of Giftedness and Talent"

Gagné's DMGT

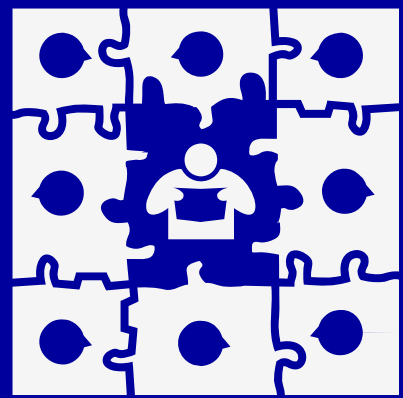
- Environmental
  - Identification
  - Curriculum
  - Methods of Presentation
- Intrapersonal
  - Motivation

Gifted . . .

- **. . . students demonstrate pronounced educational needs that can only be met by the provision of a special or modified curriculum (*differentiation*).**

Differentiation

- is a broad concept referring to the need to tailor teaching environments and practices to create appropriately different learning experiences for different students.



Nonlinguistic Representation?

- What is your “image” of “differentiation”?

- Why am I asking you to draw a picture?

Differentiation

- ✓delete already mastered material from existing curriculum,
- ✓add new content, process, or product expectations to existing curriculum,
- ✓ extend existing curriculum to provide enrichment activities,
- ✓provide coursework for able students at an earlier age than usual, and writing new units or courses that meet the needs of gifted students (acceleration).

June Maker differentiates

- Content (differentiated from other classes by abstractness, complexity, variety, inter- or multidisciplinary focus on people, and nature of the field)
- Process (higher-level and creative thinking, open-ended, homogeneous grouping, pacing, variety, choice)

Maker, continued

- Product (authenticity, deadlines to develop time management and planning skills, transformation, appropriate grading)
- Environment (student centered, supporting independence, open, accepting, complex, mobile)
- Think about what your teachers can do.

The Basics

- ***Enrichment:***

  Rounding out and deepening the material to be learned. These activities, which can take place either in or out of school, cannot be evaluated in the same way as curricular activities. It is usually intended to broaden horizons, and ideally to extend the basic curriculum.

Enrichment Triad Model

- ✓ Renzulli and Reis: National Research Center (NRC/GT)
- ✓ Type I Enrichment: teacher-designed experiences to bring learners into contact with new topics.
- ✓ Type II Enrichment: Materials, methods and instructional techniques focusing on high-level thinking.

Type III Enrichment Activities

- Student becomes an actual researcher of a real problem or topic of interest by using methods of inquiry appropriate to the discipline.
- Student needs to prepare an action plan and request assistance from a mentor.

Differentiation with Type IIIs

- **Content**: based on student passion (ownership) and expertise
- **Process**: requires development of skill in high-level (creative and critical) thinking and in professional research skills
- **Product**: student-centered, yet predicated on the disciplinary field
- **Environment**: varies as appropriate

Orbitals

- ✓ **Independent investigations, "orbiting" around some facet of curriculum.**
- ✓ **Students select topics and work with guidance and coaching from the teacher to develop greater expertise in topic and in research techniques.**

Differentiation with Orbitals

- **Content**: students select topics and materials (readiness)
- **Process**: based on learning profile through selection of working conditions and intelligence preference
- **Product**: independence and decisions about wide range of expressions of mastery
- **Environment**: widely varying

Habits of Mind

- **Cultivate modes of thinking that resemble those of professionals in various fields with respect to skills, pre-dispositions, and attitudes.**

Disciplinary Cultures

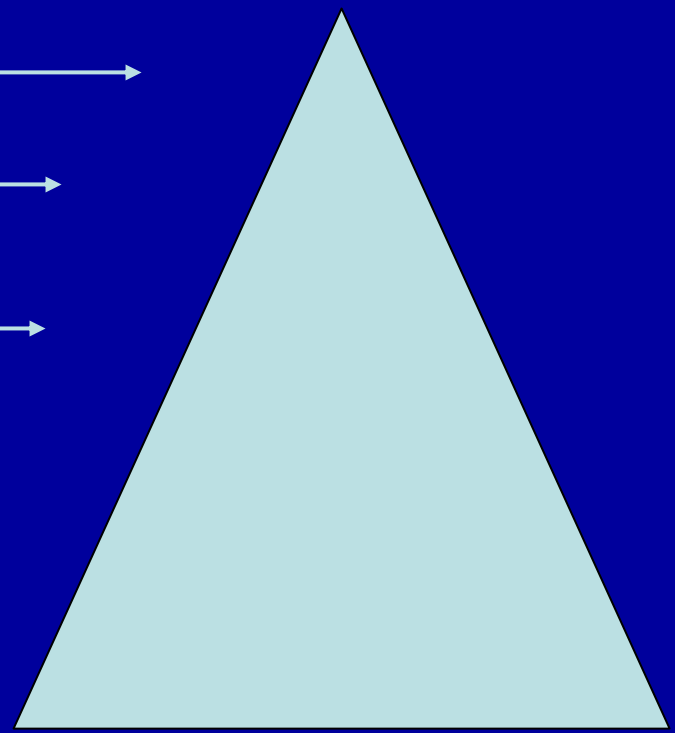
"Each discipline (like physics or history) …exhibits its own particular practices and approaches….One cannot begin to master a [discipline], or to understand it, unless one is willing to enter into its world and to accept the *disciplinary* and *epistemological* constraints that have come to operate within it over the years."

Gardner. (1991). ***The Unschooled Mind***, p. 8.

With Bloom's *Taxonomy*

For Learning, Teaching, and Assessing
(new, version in 2000)

- Creating
- Evaluating
- Analyzing
- Applying
- Understanding
- Remembering



Use Higher-Level Processes

- With **factual knowledge** (of your discipline)
- With **conceptual knowledge** (principles, generalizations, theories associated with your discipline)
- With **procedural knowledge** (things needed to do or learn things in the discipline)
- With **metacognitive knowledge** (reflecting on best practices in learning, becoming)

Cluster Grouping

- ✓High-ability learners consistently benefit from homogeneous grouping:
  - ✓Pace
  - ✓Discussion
  - ✓Teacher expectations
  - ✓Materials

Grouping

- How: schoolwide *or* throughout one discipline *or* within any class
- Benefits: appropriate modifications for small group
- Elitism? (compare to athletics?)
- Loss of “role models” for less able students? (NOT true role models….)

Acceleration

- ***Acceleration:***

  "Educational provisions whereby students meet curricular goals at an earlier age or at a faster pace than is typical. Well-known forms of acceleration include grade skipping; early entrance … college; and special classes, in which a class of students completes, for example, three years worth of work in two years."

  James H. Borland

What do we know?

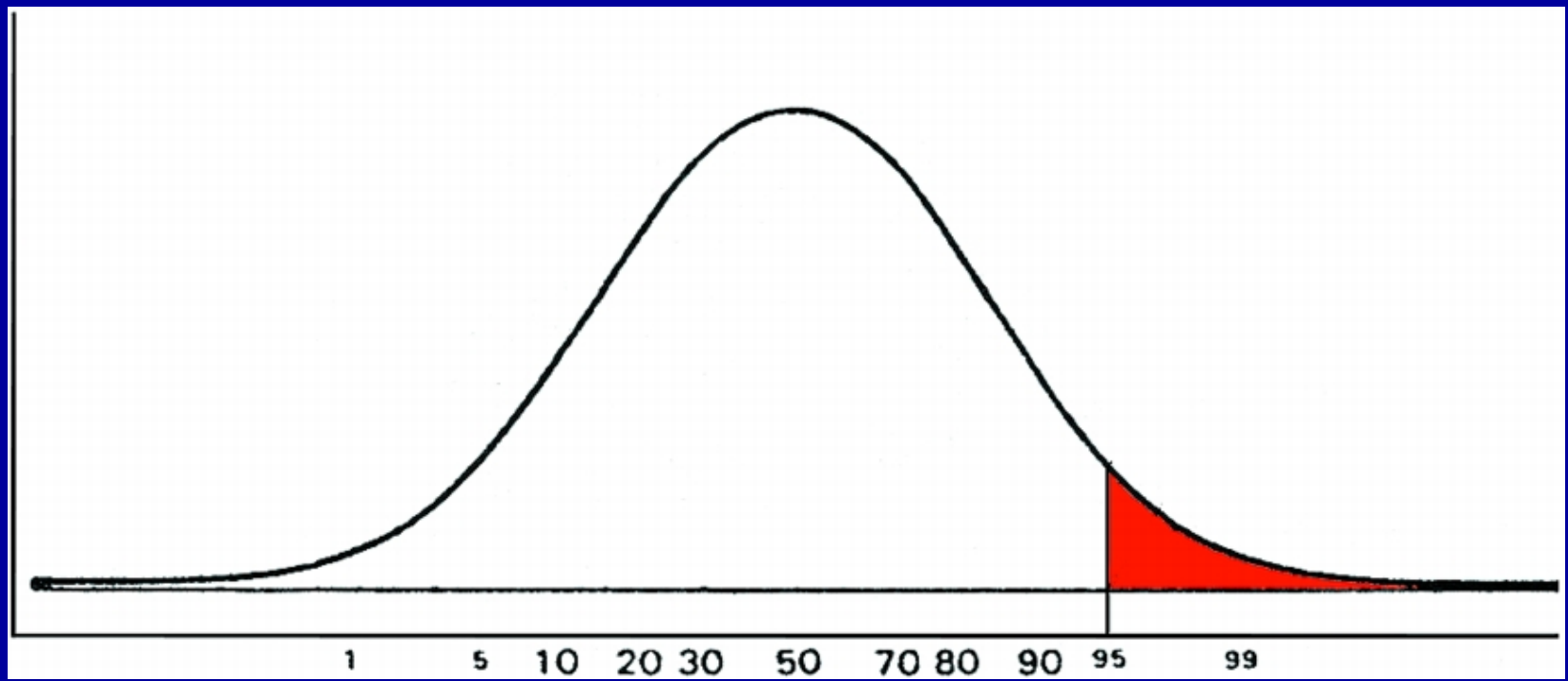
Acceleration
is the **most effective**
curriculum intervention
for gifted students.

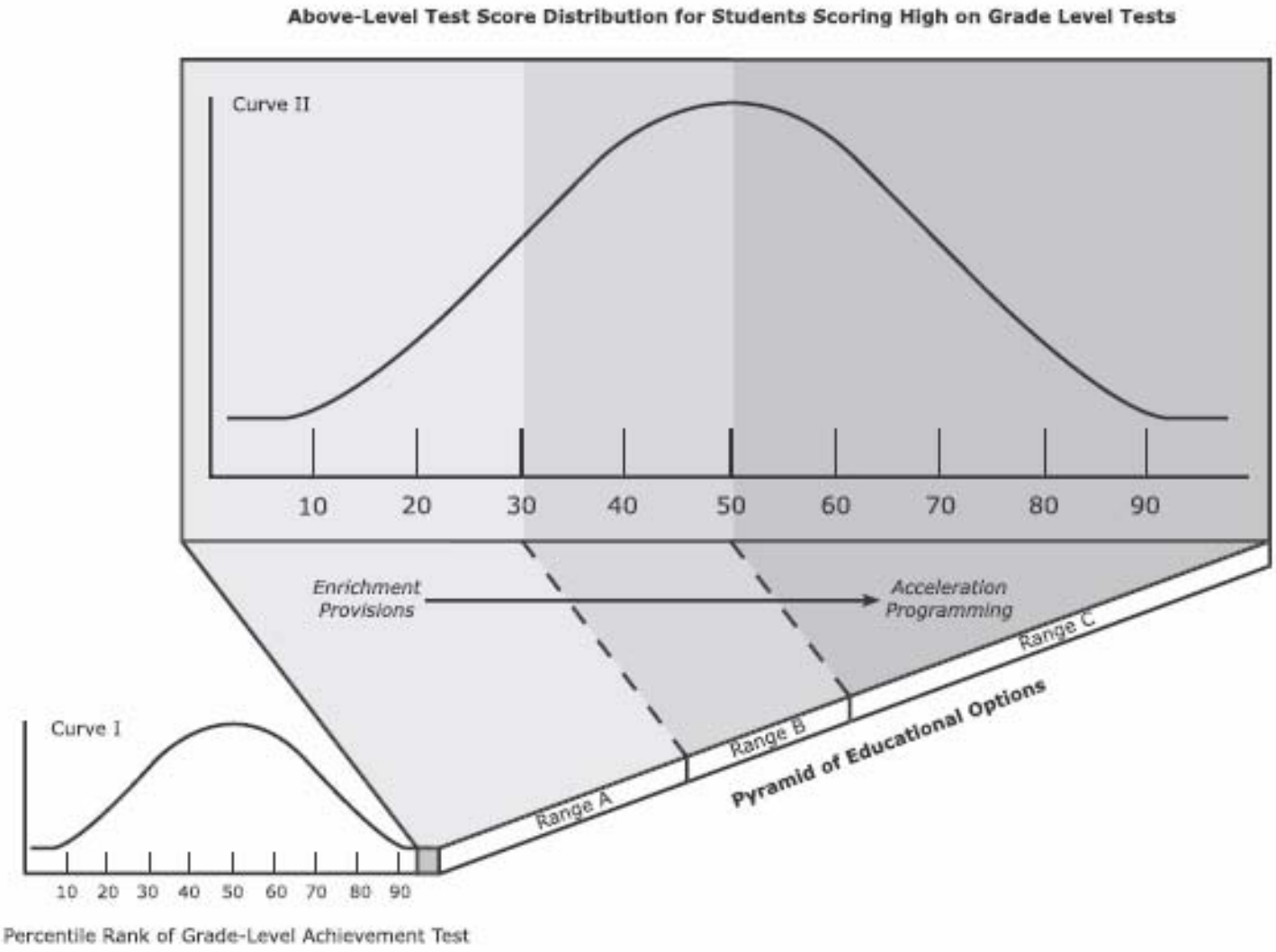
What do we know?

"The key question for educators is not *whether* to accelerate a gifted learner but rather *how*."

***A Nation Deceived: How Schools Hold Back America's Brightest Students, Vol I*, 2.**

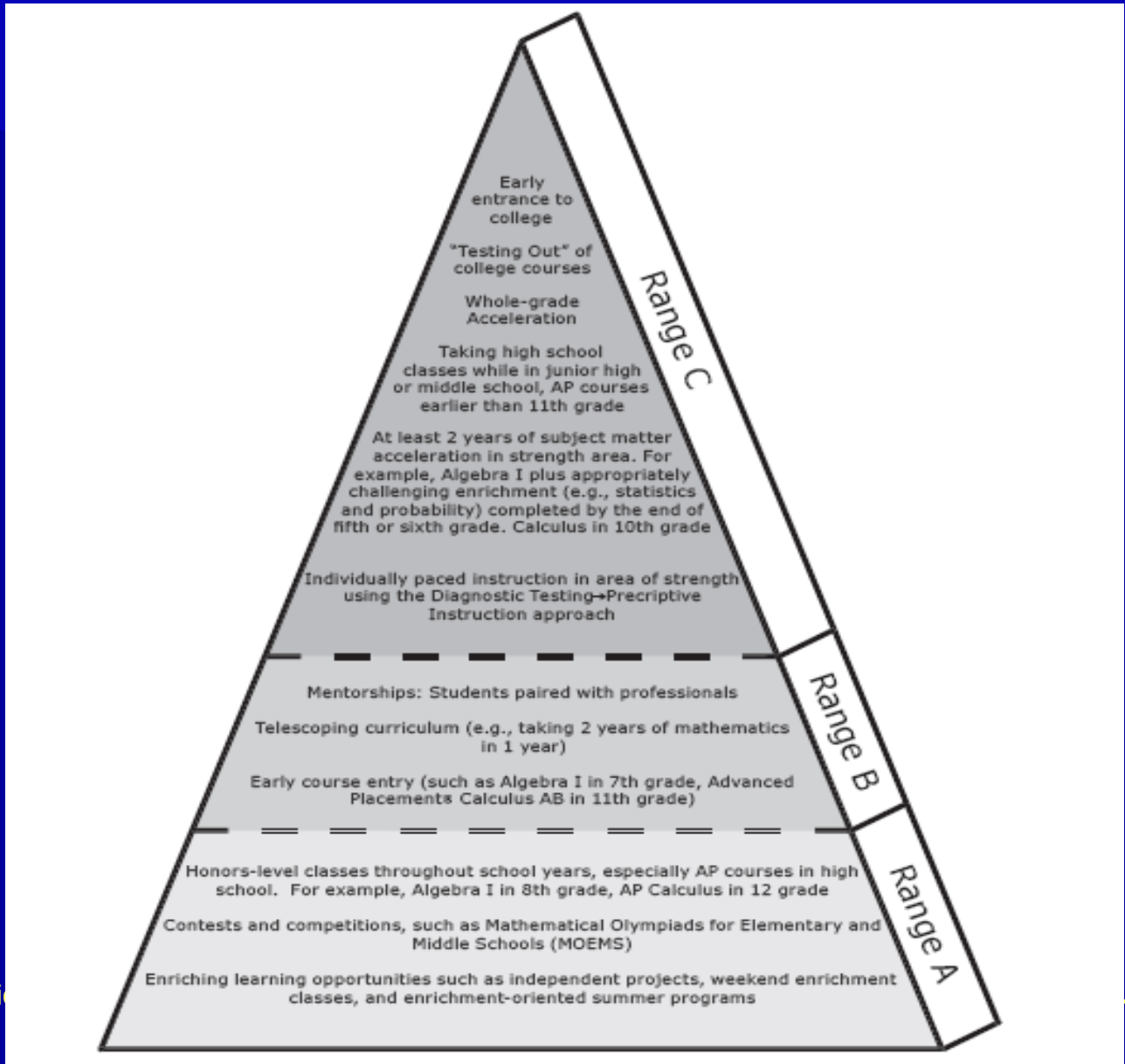
Results of grade-level tests




Above-Level Test Score Distribution for Students Scoring High on Grade Level Tests
Curve II
10 20 30 40 50 60 70 80 90
Enrichment Provisions
Acceleration Programming
Range C
Range B
Range A
Pyramid of Educational Options
Curve I
10 20 30 40 50 60 70 80 90
Percentile Rank of Grade-Level Achievement Test

cqueline

Pyramid of Educational Options



Educational Acceleration

…of those who are eager to move ahead "seems to enhance their academic ability, motivation, career aspiration, social awareness, self-concept, and creative potential"

(George, 1979, Acceleration and the excellent mathematical reasoner. In W.C. George, S.J. Cohn, & J.C. Stanley (Eds.). ***Educating the gifted: Acceleration and enrichment***, 210).

Program Options

- Unlike enrichment, acceleration usually requires some level of administrative support
- Enrichment can be limited to one lesson, one classroom, one teacher, one subject, one academic year
- Acceleration is an educational **process**

We Need to Understand

- Acceleration is virtually cost free
- Students benefit, both academically AND socially
- From the wide range of acceleration options, schools can adopt strategies that will succeed in local contexts

Curricular Acceleration

- Curricular acceleration actually increases the pace of instruction, allowing students to move ahead at a pace commensurate with their ability levels
- Curricular acceleration is an active intervention, departing from the norm in the level of demand, performance, and interaction with others

- The principal goal of education is to create men and women who are capable of doing new things, not simply repeating what other generations have done.

  - Jean Piaget

Differentiation through

- Problem-Based Learning
  - Important because of authenticity
- Present the problem statement ("**ill-structured**" problem)
- List what is known.
- Develop a problem statement.
- List what is needed.

- List possible actions, recommendations, solutions, or hypotheses. ("What should we do?")
- Present and support the solution.
- Published programs:
  - Creative Problem Solving
  - elements of Talents Unlimited

Service Learning

- Apply problem-solving skills to their communities
- Build on academic skills
- Empower students to “give back”
- Move them beyond “comfort zones”
- Develop young and effective “ideal” leaders

- Students identify community needs
- Research in the subject
- students identify community organizations (NGOs, supportive state offices)
- Service learning may be individual or small group endeavors.

- Encourage guided self-reflection (journaling: success / failures). Group discussions. Ask students to consider personal strengths / weaknesses; consider personal styles of leadership.
- Guide students in further research, from theory to published applications.
- Allow students to develop proposals for service projects. Have students identify community mentors who can assist them in their projects.

- Discuss the feasibility of projects; have students offer suggestions for improvement.
- Continue self-reflection as students begin their projects.
- Upon completion of projects, students write a final report on successes and failures. These reports can help guide other students; they may be reports to outside organizations, as well.

- http://www.miniature-earth.com/me_english.htm