

“All children deserve to learn something new every day.”

DR. JULIAN C. STANLEY

Acceleration Works

Academic acceleration can be divided into two broad categories:

CONTENT-BASED ACCELERATION. This is when gifted students are accelerated by subject area, often in only one subject. They stay in their assigned grade with children their own age but are given more difficult material. Or they might move to another classroom for part of the day. A gifted second grader, for example, takes math with third or fourth graders and then returns to the second-grade classroom for the remainder of the day. A third-grade gifted reader spends time with a fourth-grade reading group before returning to the third-grade class. Acceleration is in a specific subject, and the advanced content is delivered to an identified group of gifted students.

In middle school, gifted students may be bused to math and science classes in a nearby high school in the morning, then returned to middle school for afternoon classes or to pursue advanced material in a certain subject. The main point: The gifted students remain with their age peers but receive advanced instruction in the area, or areas, where they excel. In high school, gifted students take Advanced Placement or International Baccalaureate® classes, often earlier than other students. They might be taking some online classes or courses at a nearby community college.

“Content-based acceleration is the most flexible form of acceleration for schools to employ since it can be applied to individual learners or to groups,” notes Dr. Joyce VanTassel-Baska.

GRADE-BASED ACCELERATION. This is when highly able, highly motivated children are placed in higher grade levels than typical for their age. This is commonly called “grade-skipping,” though it also can apply to children who enter kindergarten or first grade early, or to students who enter college early. This form of acceleration puts bright students with students older than they are but who are their intellectual peers.

“That’s the heart and soul of acceleration. It’s not to take children out of step but to put them in step with what they’re ready for,” says Dr. Nicholas Colangelo of the University of Iowa.

A recent review by Dr. Karen Rogers of research involving more than fifty thousand students in accelerated learning programs came to a very clear conclusion: Gifted students in accelerated programs make notable academic gains. Given a chance, they flourish, regardless of the type of acceleration provided.

The other inescapable finding: Students in almost all acceleration programs also advance socially and emotionally, especially those who are mentored.

“When students are closely matched with what they’re ready to learn—and it never has to be perfect—the odds are that they will achieve more,” Dr. Colangelo notes. “One of the main causes of underachievement isn’t that the work is too difficult, it’s that the work is below what the student is ready to learn. And when a student becomes disengaged because he or she is bored, you see considerably less achievement.”

People who worry about accelerating a gifted student often forget how commonplace acceleration once was in American schools. Gifted learners—Martin Luther King Jr. and Sandra Day O’Connor are two examples—graduated from high school early and went on to college.

“It was not considered remarkable,” says Dr. Jonathan Plucker from the University of Connecticut. “When you were ready, you moved on. I think setting the context—helping people realize that acceleration is something we’ve used for generations in this country and that it has served us exceptionally well—will help people become more comfortable with it.”

Dr. VanTassel-Baska notes that people accept tutorials as “a legitimate way to challenge gifted children at home and school. Yet good tutorials were one of the first forms of acceleration ever used, a mechanism that allowed students to move at an appropriate rate through their school subjects, based on readiness.”

Types of Acceleration

1. Early Admission to Kindergarten
2. Early Admission to First Grade
3. Grade-Skipping
4. Continuous Progress
5. Self-Paced Instruction
6. Subject-Matter Acceleration/Partial Acceleration
7. Combined Classes
8. Curriculum Compacting
9. Telescoping Curriculum
10. Mentoring
11. Extracurricular Programs
12. Distance Learning Courses
13. Concurrent/Dual Enrollment
14. Advanced Placement
15. International Baccalaureate Program
16. Accelerated/Honors High School or STEM Residential High School
17. Credit by Examination
18. Early Entrance into Middle School, High School, or College
19. Early Graduation from High School or College
20. Acceleration in College

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EMPOWERED

Madeline Bernstein: Find people who challenge you



Madeline Bernstein participates in a discussion during her 2014 summer internship at Fermilab. (Photo: Fermilab)

Madeline Bernstein has some insights into being a smart kid.

First of all, the high school senior from La Grange, Illinois, is one herself. Bright students, she believes, have to be able to navigate middle school social pressures. They have to find people—students and teachers—in high school who will push them to excel. And, at some point, they have to personally resolve to be the best they can be.

Madeline found her calling in math and science, accelerating through algebra and calculus, moving on to Advanced Placement chemistry and physics in high school. As a sophomore, she attended Saturday lectures at the nearby Fermilab, the national physics research lab in Batavia, Illinois. She went on to land a prestigious summer internship at the lab, where she was paired with a scientist and helped conduct research.

When she was a junior, she started a club at her high school—Girls in Engineering, Math, and Science, or GEMS—to encourage young women to pursue education and careers in math and science.

She's thought about why so few young women consider careers in those areas. Part of it, she believes, is a lack of role models, especially in the so-called “hard” sciences.

“It starts at a very early age,” she says. “There’s not the same level of role models as in other fields. Then you run into tradition and instilled prejudices, carried by both men and women and perpetuated over time, that are harder to pinpoint and overcome.”

When Madeline started high school, she found a role model—and a friend—on her cross-country team. The other girl was “a high-achieving senior with four years perspective on high school and what you need to focus on.” That young woman, now a bioengineering student at Purdue University, “is a big reason I’ve had a lot of success.”

Like life, school is a journey, Madeline allows. While it’s a point of pride to be the smart kid in your class in grade school, social pressures can emerge in middle school. That’s when so many students lose their interest in science and math, when it “becomes kind of cool not to care about school.”

But that can change in high school, she says, if you find people “who will challenge and stimulate you. I learned to surround myself with people who were positive influences, a solid base. You begin to feel comfortable being yourself, be it in robotics or writing or in something else.”

Highlights of Accelerative Options

Acceleration is a coat of many colors and sizes. One size, one color, does not suit all bright students. But the variety and proven effectiveness of the many forms of acceleration pretty much guarantee the gifted learner will find a style that just fits.

Among the choices:

Advanced Placement classes

It's not a popularity contest, but if it were, Advanced Placement courses would wear the acceleration crown. Part of this has to do with the comfort level educators and parents have with this acceleration option, which often results in saving tuition costs for college classes.

Advanced Placement (AP) classes are challenging, college-level courses offered to high-ability students while they're in high school. Students are tested over the material at year's end. If they score high enough on the year-end exam, it can mean college credit. Even if they don't score that highly, they're still better prepared for college-level coursework. Researchers are now looking at ways for more students to better access AP courses while simultaneously ensuring student success in AP courses—based on readiness, personality, interest, ability, and motivation.

In 2014, more than 4.2 million AP exams were taken by more than 2.3 million students. This is double the number reported ten years ago in the *Nation Deceived* report. Around fourteen thousand public high schools now offer AP classes. More than one million members of the Class of 2013 took at least one AP exam. That's about 33 percent of those graduating, up from 20 percent a decade earlier.

Another accelerated program for high school students—the prestigious, two-year International Baccalaureate diploma program—also is growing and is now offered in about six hundred and fifty schools in North America.

“The International Baccalaureate diploma program provides students the equivalent of undergraduate work at a selective liberal arts college,” Dr. VanTassel-Baska explains. “It also is widely accepted at universities abroad, allowing students to receive advanced credit and placement for their high school work in the program.”

Talent Searches

“Talent searches have done more for acceleration in the modern era than any other approach to giftedness,” says Dr. Paula Olszewski-Kubilius, Director of Northwestern University's Center for Talent Development.

Basically, talent searches identify highly gifted students by giving standardized exams designed for older students to younger students. The first application of the Talent Search Model occurred when middle-school students took the SAT, a college-entrance exam. It's a low-cost, efficient way of identifying academically gifted students in elementary and middle school. It typically starts with students scoring at the 95th percentile on a grade-level exam; they are then given the ACT or SAT college-entrance exam to give explicit information on what they already know—and most importantly—what they're ready to learn. A middle school student with high math and science scores, for example, may be ready for high school physics. A seventh grader might be ready for ninth-grade work in all areas.

“High test scores have become synonymous with the need for accelerated programming,” Dr. Assouline notes. “The needs for those with high, above-level test scores are simply not going to be met by any means except acceleration.”

Talent search results also are used to identify children ready for faster-paced classes offered after school, on the weekends, or during the summer. In the process, participants often meet other highly able students—a side benefit many say is the best part of the experience.

Researchers find little to no evidence of burnout, superficial learning, or additional social problems among talent search participants. As adults, talent search students who accelerated themselves report it as a positive experience.

Dr. VanTassel-Baska, who was founding director of the Center for Talent Development at Northwestern University, says, “I have found nothing better for the social-emotional adjustment of gifted children than having students of similar ability and interest meet and engage in an advanced and challenging summer academic experience. For some students, it is the first time they have made a friend.”

The Talent Search Model is used throughout the United States, where more than one hundred and fifty thousand middle school students took college-entrance exams in 2012-13. The model also is used in Canada, Australia, China, Ireland, and Spain. Also, elementary school students are increasingly being tested to identify high-ability learners earlier.

Grade-Based Acceleration

Whole-grade acceleration, commonly called grade-skipping, is still an infrequently used accelerative option, despite years of research showing its effectiveness. Less than 1.5 percent of U.S. students are accelerated a full grade or enter school early, and the percentage may actually be declining.

The effect is circular. Whole-grade acceleration is seldom used, leading to a lack of awareness and the lack of a systematic approach to identify children who would benefit . . . which leads to even less whole-grade acceleration.

The *Iowa Acceleration Scale* (IAS) provides the organizational tool—the systematic approach—that schools and parents can use to assess a child’s readiness for acceleration. It involves testing, interviews, observations, and review of records. But often the impetus for acceleration still comes from parents of a gifted student who see their child needs additional academic challenges.

The IAS provides validation of that perception and also can help educators understand that whole-grade acceleration is the right option for a gifted child.

Interestingly, new research has found that teachers, for the most part, are supportive of accelerating high-ability students but believe school administrators and parents would not support acceleration. The conclusion? Show school administrators and policymakers that many parents and teachers support acceleration. Put the accelerated students with self-confident and challenging, but supportive, teachers—then stand back and witness new learning, engagements, and achievement.

Early Entrance to Kindergarten or First Grade

Sending children to kindergarten or first grade a year early is the least disruptive form of acceleration, both academically and socially, assuming the child is ready for school. And yet sixteen states prohibit early entrance, apparently fearing a younger child won’t be ready to focus or write or cut or draw. By way of contrast, other states—Colorado and Ohio are two examples—have well-developed plans allowing early entry to gifted students.

As with grade-skipping, research delivers the good news: Early-entry children—those who started school early because they were ready to learn—perform as well as or better than their older classmates in a wide range of tests and evaluations. Research also shows the children are well-adjusted socially and suggests early-entry is a positive experience for the gifted child.

How do we know if a child is ready to enter school early? As it turns out, parents are often good judges, witnessing a child’s early speaking, reading, or mathematical abilities, long attention span, extraordinary memory, and an early interest in time. Testing—general ability, aptitude, and achievement—also can help determine a youngster’s readiness.

Highlights of Accelerative Options (continued)

The Ohio Department of Education uses the *Iowa Acceleration Scale* to help parents and educators weigh the facts in deciding early-school entry. The state's Office for Exceptional Children produced an elegant flow chart, called Pathways to Acceleration, to help educators with acceleration options. (View the chart on Page 67 in Volume 2.)

Additional assistance for parents and educators is available at www.accelerationinstitute.org, the website for the Acceleration Institute. This website offers success stories, questions and answers, and other helpful information.

The bottom line, according to Dr. VanTassel-Baska: "Given a choice, a child's readiness for advanced-level work should be the determining factor in acceleration, not unfounded worries about potential social-emotional impact."

Early Entrance to College

Having bright students enter college early is not a new idea. What is fairly new is having universities find ways to mentor and support those students.

A number of research studies show the vast majority of gifted students entering college early succeed academically and present "a fairly compelling picture of high achievement and success." As a group, the early entrants are not hampered by social or emotional issues. High performance in classes is the norm. Later in life, researchers also find the early entrants are achieving at high levels, are highly productive, and are earning above-average incomes, while having satisfying social relationships.

This form of acceleration has a fairly long history, with the University of Chicago allowing early-entry in 1937. In the 1950s, the Ford Foundation paid to establish early-entry programs at twelve colleges and universities. The

University of Washington, after seeing the success of some early entrants at Johns Hopkins, began a program in 1977 that admitted students as young as 15. A number of other well-established programs are found in California, Massachusetts, New York, Iowa, Texas, Alabama, Missouri, Georgia, North Carolina, and other states.

The students in many of these early-entry college programs have been monitored and followed over the years, creating a large pool of research to show what works. It's found that the students who succeed bring important intangibles—focus, perseverance, and motivation—and tangibles—good study skills and work habits—to college with them.

And while early college entry was, at one time, one of the few options open to gifted learners, public high schools now offer more accelerated learning opportunities, such as Advanced Placement classes and dual enrollment. Twenty-nine states, in fact, now offer dual enrollment opportunities, allowing students to take college classes and earn college credits while in high school. A few high schools, usually those near university campuses, offer a college curriculum to highly able high school students, with the students continuing to live at home or in a residential setting.

Specialized STEM Schools

The United States has 165 public schools where admission is competitive and the curriculum accelerated, most often in math and science.

Of those schools, sixteen are residential, admitting highly able students focused on accelerated learning in STEM subjects—science, technology, engineering, and mathematics. The schools—in fifteen states, mostly in the Midwest and South—are highly selective, choosing students with high aptitude. Most also seek a balance in gender, race, and income in the student body.

The residential schools offer intense learning environments, research opportunities, and mentorships. They also provide precocious young adults the opportunity to socialize with youths as bright as they are. The schools, because they are residential, make it a point to involve the young scholars in a variety of clubs, sports programs, academic competitions, guest lectures, field trips, and volunteer opportunities.

“Gifted students in these fifteen states have been fortunate in receiving a high-powered education during their high school years, with many benefits accruing to them even into college,” Dr. VanTassel-Baska says. “Students also benefit from having access to national laboratory and university scientists who can be mentors to them.”

Radical Acceleration

Radical acceleration allows highly gifted students—those with very advanced academic ability—to graduate from high school two or three (or more) years early. Researchers find such profoundly gifted students generally succeed academically and socially in college, despite being much younger than their classmates. In fact, the majority do better academically and continue at the top of their fields.

Where such highly gifted students run into trouble—and when they underachieve—is when they’re forced to remain in a traditional educational setting. In most cases, parents have to lobby to have a gifted child radically accelerated. Follow-up studies with such students have found they appreciated being accelerated and said that it added to their motivation and confidence. More than half of radically accelerated students pursued graduate degrees and entered high-status careers.

The Evidence

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