A board of education member in a school district that was exploring the adoption of a gifted program model raised the following question:

*How does an enrichment-based model compare to offering advanced level classes in middle and high school, acceleration in elementary school, or using ability grouping?*

As we will see later in this Commentary, this school board member had some self-serving concerns that seriously affect the direction guiding many of the decisions influencing American education.

Enrichment-based models focus on what we do instructionally to develop the thinking skills, creativity, and the ability to *apply* knowledge within any school’s organizational pattern rather than the ways we simply cover prescribed content or group students and move them around. Everyone has heard the old cliché about the futility of moving around the deck chairs on the Titanic, and that is exactly what happens if grouping patterns and the use of prescribed content are used *without* making changes in the learning process itself. Enrichment experiences can be infused into any standards-driven curricular topic through appropriate training for teachers and a license to do so and enrichment activities can be used in regular classrooms, advanced or accelerated classes, or any other organizational pattern. Take, for example, a physics teacher who assigns opportunities for interest-based small group research projects to students at the beginning of his Advanced Placement Physics course. At the conclusion of each unit, students are asked how they can apply material they have learned to their research projects. One group of students used weather balloons to launch an electronically guided photographic platform into the atmosphere that allowed them to map physical landscape patterns in their geographic area. Opportunities such as this hands-on project illustrate how content, analytic and problem solving skills, and creativity work together to make learning more engaging, relevant, and enjoyable. Content only has relevancy when students can see how it relates to a real and present problem.
All learning exists on a continuum ranging from deductive, didactic, and prescriptive to inductive, investigative, and inquiry oriented. The most effective kind of advanced level learning takes place when students blend together three types of knowledge. The first type is received knowledge, and it represents what most traditional classroom learning is all about. Lectures, textbooks, worksheets, and various forms of media are used to convey received knowledge. The effectiveness with which we convey received knowledge and determine how well it has been assimilated by students is usually determined by teacher made or standardized tests. Received knowledge is an absolutely essential part of learning but it has no practical value for higher forms of learning unless it is combined with opportunities to use it in analytic, applied, and creative learning situations.

The second type of knowledge is analytic knowledge and it consists of a broad range of thinking skills popularized by Bloom’s Taxonomy and the current 21st Century thinking skills movement. This type of knowledge is gained through classroom activities such as discussion, debate, open-ended problems, critical thinking activities, and projects and problems for which there is no single, predetermined correct answer or formulaic way of solving a problem or reaching a conclusion. It is at this point that we first begin to see the importance of received knowledge in the learning process. A person can’t conduct higher levels of analysis on limited background information about the topic being discussed and advanced vocabulary is necessary for effective writing, debate and discussion about a topic under consideration.

The third and what might be considered the highest level is applied and created knowledge. This level reflects knowledge gained by blending together those two previously mentioned types of knowledge and it is approached by designing and carrying out an investigative research project, producing an original piece of writing, performance, artistic product or community action project. It is at this stage that the young person begins to think, act, and feel like a practicing professional, even if operating at a more junior level than an MIT physicist or a filmmaker in Hollywood. Involvement at this level also provides young people with the self-efficacy and mindset necessary for addressing larger and more complex challenges and with the first inklings of what might be a future college major or career choice. American productivity comes from people with ideas and the willingness and task commitment to follow through on their ideas with tangible products designed to have an impact on a target audience other than, or in addition to the teacher.

There is one other thing that young people learn through school experiences that combine the three forms of blended knowledge described here; and that is the difference between two sources of knowledge. The first source, and the one most commonly used in traditional schooling is to-be-presented knowledge. But when students pursue applied or created knowledge they also learn what epistemologists call “just-in-time knowledge”—knowledge that should only be sought when necessary for the problem is being addressed. This is the type of knowledge most used by practicing professionals and, thanks to the Internet, it is now available to young people who have the technology skills to find and use advanced information sources relevant to the problems they are addressing.

When I asked the board of education member who raised the question above why he felt so strongly about advanced courses he simply said: “Property values! I’m a realtor and one of the
first questions clients ask me is how the test scores in our district compare with surrounding districts.” Simply offering “advanced level classes” with more received knowledge covered at a faster pace may improve memory and test scores but it doesn’t develop the thinking skills and creativity necessary for higher level cognitive development. And if we want our schools to produce the inventors, designers, artists, entrepreneurs, scientists, business and political leaders, and action oriented people necessary for success in competitive higher education institutions and a global economy we also need teaching strategies that develop the analytic, applied and creative skills that result from a curriculum that is based on blended knowledge. The goals of a blended knowledge approach are both traditional and enhanced. They focus on increasing traditional academic performance but they also incorporate the capacity to develop visual, written, oral, and constructed products and performances. The ultimate payoff of a blended knowledge approach to learning is to promote a mindset in young people for continuous matriculation toward four-year colleges and universities and graduate and professional schools.

Accelerated learning without analytic, applied, and creative knowledge produces good lesson learners and test takers but not necessarily the creative and productive individuals who will promote our culture, economy, and even increase property values! Our nation can only be a leaner in the world through this kind of scholarship and it should begin at early grade levels and continue throughout high school, college, and graduate school. A challenging academic course load is the bedrock of good scholarship; however, we should be enhancing the received knowledge of advanced academics by infusing enrichment activities into all traditional curriculum experiences. Enrichment experiences are the spice that arouses interest and passion and an action oriented mindset in our students—people who want to change the world. Otherwise, we’re just shifting around the deck chairs on the Titanic.