Center for Gifted Education
College of William and Mary

Curriculum as Profound Engagement with the World

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In *Comprehensive Curriculum for Gifted Learners,* (1988) Joyce VanTassel-Baska has written that "Curriculum experiences for gifted learners need to be carefully planned, written down, and implemented in order to maximize their potential effect" (xiv). This, in contrast to the idea of curriculum as "an evolving process in the context of the classroom." Surely, this is right. It is the difference between planning it and winging it. It is the difference between careful and careless.

Curriculum writing involves many fundamentals that must be addressed. VanTassel-Baska provides detailed information about planning and development, about curriculum design, about developing scope and sequence, and about developing units of instruction. In every case, these fundamentals are fundamental; they must be incorporated if the foundation of the curriculum is to be firm.

But though these things are important to me, they are not the things I have been thinking about. Having spent the last several decades of my life writing curriculum and writing about curriculum, I am thinking about my curriculum colleagues and wondering what we would say to each other if we were to talk shop. What would a group of experienced, advanced curriculum writers discuss?

I think that each of us has, in addition to the fundamental curriculum elements, a set of intentions and goals that are more individual, and are perhaps even tacit or implicit. And so, as Walt Whitman wrote in *Leaves of Grass*:

> This hour I tell things in confidence,
> I might not tell everybody, but I will tell you.

Here is what I have found: for me, curriculum is predicated on the notion that education should be a profound engagement with the world.

In his book *The Blue Swallows* (1967), American poet Howard Nemerov wrote:

> O swallows, swallows, poems are not
> The point. Finding again the world,
> That is the point, where loveliness
> Adorns intelligible things
> Because the mind's eye lit the sun.

Poems are not the point. Finding again the world, that is the point.

In too many classrooms, children sit endlessly in a kind of Orwellian isolation, filling out meaningless forms, and repeating things again and again. Already, they have lost the world, and the educational instructions they obey lead them farther and farther from the world as the looming walls of the classroom close in. Like the drones in Plato's cave whose backs are to the daylight, they only get to see dim shadows on the classroom walls.

As Hamlet said to his father's ghost, "Horrible, horrible, most horrible."

What drives me to write curriculum is the image of a classroom as a kind of helicopter, that lets a kid zoom around and see everything. New things.

What drives me to write curriculum is the image of a child, arriving at a new awareness of the world, arriving-for the first time-at Einstein's beautiful face, or Cervantes's brave old man, or at Rachel Carson's personal crusade, or Frederick Douglass's brilliant narrative. In finding the world, the child may be encountering something living or literary, something human or not, something ancient or modern, abstract or concrete. But at its best, it is a fresh engagement with the world, and it changes the child's understanding of the truth.

Finding again the world, that is the point.

I often eat lunch with the preschool kids at Sycamore School, and I ask them what they learned today. The answer is always amazing. Recently, they learned about manatees. For several lunches, I have slaved to persuade them that a manatee is a fish. I argue that a manatee has two eyes, flippers, lives in the water, has a tail, and swims, so it's a fish. NO, they cry, a manatee is a MAMMAL! A manatee has NOSTRILS and fish have GILLS! A manatee has no SCALES like a fish! A manatee breathes AIR, and a fish breathes WATER! A manatee has BABIES and a fish has EGGS! A manatee is an ENDANGERED SPECIES! Their argument beats my argument, and they know it. Each day the hopeless debate goes on an on, until I fall in ignominious defeat.

Pre-K.

When learning is this authentic and meaningful, when it is an exciting arrival, when it is a profound personal engagement with the world, then the mundane details of grades, credits, and self-esteem tend to fall in place. Students who are more excited about the world than the grade tend to have higher grades and self esteem than students who are more excited about the grade than the world.

When academic life is at its best, this is the nature of the experience: profound engagement with the world. I would call it the paradox of academic quality: the more academic learning is, the less academic it seems.

I want to tell you a story...

In the autumn of 333 B.C., Alexander of Macedon was invading western Asia Minor, and at the Battle of Issus in what today is Turkey, Darius III, the King of Persia, came to meet him with an army ten times his strength. So confident was Darius that he brought along his family to enjoy the victory. In the fury of battle, Alexander, perhaps the most dangerous military genius in history, spotted Darius and his bodyguard on a hilltop, and charged right at the startled Persian King, who fled the field in his golden chariot, leaving his helpless family behind. After Alexander's victory, attendants rushed to Alexander to say that Darius's wife, Stateira, and mother, Sisygambis, had been captured in the Persian royal tent. Alexander ordered that they be protected and hurried to see them. When he and his friend Hephaestion arrived, Darius's mother Sisygambis mistook the taller Hephaestion for Alexander, and threw herself at his feet! Then she cowered, terrified that this insult would cost her life. Alexander gently helped her up, saying, "Don't worry mother, he is Alexander too." Alexander ordered that the family should receive every comfort and courtesy. From the beginning, he called Sisygambis "mother."

During the siege of Tyre, Darius sent a letter to Alexander saying, Give me back my mother, and I will give you all my land west of the Euphrates, ten thousand golden talents, and my daughter in marriage. General Parmenio stood by, and urged Alexander to accept the offer: "I would accept, if I were Alexander" he said. "I would too, if I were Parmenio," Alexander replied. Alexander then sent his answer to Darius: "I already have your land, I have more money than you, and I'll marry your daughter if I wish."

Despite Darius's pleas, Alexander kept Sisygambis for the rest of his life, and she refused to return to her son.

At the Battle of Gaugemela in 331 B.C. Alexander again destroyed Darius's vast army with his own 40,000 troops. A year later, pursuing Darius, he found Darius's body, and solemnly covered it with his own cloak. He had not wanted to kill Darius, but to lead him.

When Alexander died in 323 B.C. at the age of 33, the grieving Sisygambis--Alexander's enemy's mother-sat down facing a wall, and fasted to death.

As we watch the grief-stricken Sisygambis sit down to face the wall, we find ourselves in profound engagement with the world.

What gives this story such energy and immediacy? What accounts for the feeling of meaning and importance that we have when we hear this story? Is it the great age of the story? The respect and love of enemies? The feeling of exhilaration at learning something very pure and special? The fascination of wondering how much of it is true and how much legend? The sheer nobility of Alexander's decisions? The feeling of transport that we get, as though we were there?

How can we bring these qualities to all of our curricula, and lift what might have been a closed classroom experience to the realm of profound engagement with the world?

The Thrill of Arrival

One characteristic of strong curriculum is the feeling of arrival it creates in the student, the thrill of arrival at something new.

In contrast, the boredom that bright students suffer in school is a function of one particular word, a base and heinous word that their higher natures like not to endure: AGAIN. This word again is so abject that it usually appears with its symbiotic adverb of negation, not. O no, we plead, not again.

When schools do not provide appropriate curriculum for gifted children, education is the again-curriculum. Almost everything assigned is already known, pulled forward from last year's course, revisited for reinforcement. As a student arrives at the unknown, and experiences the internal impact of new knowledge, there is a shifting of self forward, a letting go of the previous self and merging ahead with the new experience. Finally, the student feels, I'm learning something.

This is a view of student as hero, not just willing to enter an unknown world, but willing to become an unknown self. Joseph Campbell wrote that the hero of myth hears a call, leaves the ordinary world, suffers trials, discovers a new consciousness, returns to the world, and tries to hang on to the vision. When curriculum is a profound engagement with the world, this almost mythological process occurs. The student is not doing a same thing again, but is moving away into something new, to see for the first time things that he or she has not seen before and does not understand.

True learning involves this adventure, this arrival at the unknown; there is a sense of cognitive dissonance, a fracturing of complacency, a quake in the strata of assumptions, a disturbing sense that one had been wrong, or had known only a part, or had mistaken hypothesis for knowledge. There is confusion, perplexity, an awareness that I don't understand this.

This off-balance element creates a pedagogical tension in which the curriculum to be encountered does not begin in the comforting proximity of the student's current education, but is somewhere ahead, unknowable without intellectual motion and alteration. Students are forced to stir and become alert, and to undertake a profound engagement with the world as they learn for the first time things that they did not know before.

Let's do this now. Here are words that will force you somewhere you have not been before. Whose words are these:

There is an ecstasy that marks the summit of life, and beyond which life cannot rise. And such is the paradox of living, this ecstasy comes when one is most alive, and it comes as a complete forgetfulness that one is alive. This ecstasy, this forgetfulness of living, comes to the artist, caught up and out of himself in a sheet of flame...

Whose words are these? Picasso? Vincent Van Gogh? Are these words from an ancient religion, or from Aristotle's theory of tragedy? What is meant by the phrase, "forgetfulness of living"? Is that the paradox? How could forgetfulness be an ecstasy? What genre is this? Is it philosophy?

Whose words are these? If you need a hint, here are some more words from the same work:

He plunged into the swimming tank or went hunting with the Judge's sons; he escorted Mollie and Alice, the Judge's daughters, on long twilight or early morning rambles...Among the terriers he stalked imperiously, and Toots and Ysabel he utterly ignored...

What? Can these two quotes possibly be from the same work? Can you feel the cognitive dissonance? The advanced, intellectual language of the first quotation, with the erudite vocabulary, seems so distant from the cute dogs and children of the second, and yet both come from one of the greatest children's classics, Jack London's The Call of the Wild. We have suddenly experienced a profound engagement with the world, which proves once again to be other than what we have assumed. It never occurred to us that the first quote came from a children's animal book; those books don't have advanced intellectual writing like that, do they?

Here, we feel the quake of disturbance beneath the assumptions-grade level assumptions. We are so immured in the culture of grade-level, that we no longer remember it to be an artifact. In Optimizing Learning, Barbara Clark wrote that:

Our current educational system is built on solutions to problems that existed in the early 1900s. Its goal was to educate the masses since a strong democracy could exist only if the

electorate was an educated one. The very core of our chosen cultural system, even our approach to civilization, rested on how well we could educate our citizens. In the early 1900s, Horace Mann, a New Englander, reacted to the problem of mass education by devising the grade level curriculum, an orderly and progressive approach he believed would assure students basic information and skills. All children age six would cover the first grade curriculum, all seven-year-olds the second grade curriculum, eight-year-olds the third grade and so on through a twelve year progressive sequence. Mann's solution to one simple problem, however, has been allowed to become educational dogma, and for nearly a century educators have attempted to adjust children to this inadequate system.

In thinking of the grade level catastrophe, I always remember what Francoys Gagne said in an address to this very conference: that some first grade students have ninth grade reading levels, and some ninth grade students have first grade reading levels. It is one of our jobs to ask, what do we do then?

It is interesting to note that the Jack London quotes do not confront us with new bodies of knowledge; this is content we thought we knew. Sometimes, the arrival at the unknown involves a completely new understanding of something thought to be known.

Here is another sample of what it feels like to learn. In this quotation from Daniel Boorstinís book, The Creators, I have removed the name, and we must decide who Boorstin is talking about:

Not only had he created a novel, he had created the Western novel. Which gave him a role among creators of our modern world comparable to that of Copernicus in the world of discoverers. But while Copernicus shifted our focus outward from the earth to the sun, [he] shifted our focus from the outer world inward to man. And just as the physicist Dalton would reveal many more kinds of matter than had been imagined, so [he] pointed literati inward to unsuspected and unexamined varieties of people. While the gatherers of statistics were finding new uniformities among groups of people, [he] pioneered in revealing the variety of the individual, leading the effort of modern literature to translate all experience into the novel.

Who was Boorstin writing about?

Cervantes?

Why was this question challenging?

Gradually, we realize that there are deep truths all around, even in things that were in front of us all the time. This sheds more light on the idea of curriculum as profound engagement

with the world. Some curriculum does engage with the world, but it is not profound. It lacks depth. It is mired in what philosophers call naive realism, or commonplace assumptions, or trite interpretation.

As curriculum writers, how do we avoid this trap? How do we direct our curriculum out of the shallows and into profound areas of new learning? Perhaps the straightest path to the profound-and it is a mantra of the College of William and Mary-is the path of meaning. In an educational
culture where many value knowledge mostly for practical purposes, the fact that great fields of thought are thrillingly meaningful is itself revolutionary.

By confronting students with meaningful new content that is not suppressed by grade level assumptions or based on review strategies that
bore and depress them, we allow students to feel the thrill of arrival--their minds are in a new place, and all their senses are alert for exploration.

The World as Socratic Object

We want curriculum to take kids to the world.
We want kids to have an exciting sense of arrival.
We want kids to encounter things they don't know.
But there are different kinds of unknowns.

If our intent is to arrange a profound engagement with the world, then we must face a truth: the world is adept at resisting our attempts to know it. Almost always, our learning paths lead, eventually, to terrains of perplexity, where certainty slips from our hands, and our ability to call thought knowledge evaporates.

Notice that no matter how much we read about something, its perfect presence stands still apart. After we read twenty-five books about Napoleon, the Napoleon of our mind can not be confirmed to be identical to the Napoleon of the past. We do not hear the real sound of the Emperor's voice, or see the real sight of his scenes, or feel the real feeling of his presence. We can not get final about the meaning, about the lessons we are supposed to learn from Napoleon's story. Our knowledge is a continually closing approximation, like Xeno's Paradox, in which we move closer to the absolute Napoleon with each succeeding book, and yet we never cross the last gap.

If the perplexity of the world is frustrating, it also creates a profound source of wonder. Knowledge is, in the primary meaning, wonder-ful, and the fact that it eludes our final triumph only adds to our wonder and to our ability to keep an open mind.

For this reason, great curricula must incorporate the Socratic Wisdom, which descended to western civilization in the form of a paradox: I only know that I know nothing. In these words of Socrates, as reported by Plato, we see an authentic expression of the challenge of knowledge, deemed so important to subsequent thought that Alfred North Whitehead wrote "The entire history of western thought consists of a series of footnotes to Plato."

What I would say is that in our effort to have a profound engagement with the world, we must remember that the world-and even knowledge itself as a part of the world-is a Socratic Object, an inherently perplexing phenomenon.

Although this is not the place for a full discussion of Socratic teaching and learning, it is necessary to embed this wisdom in our curricula, and a few observations may be made:

- The exceptional curiosity of gifted children reveals that giftedness is a Socratic state of being that requires a Socratic form of learning.
- The effect of certainty is to stop thought.
- Not all knowledge is declarative. Some knowledge is interrogative.

In every great field of inquiry, the great questions are part of the content, are what inspire and motivate the foremost thinkers. This interrogative knowledge, Socratic content, must be included in our curricula.

In practice, interrogative knowledge can mean that every discussion does not converge through outstanding critical thinking to a demonstrably best answer. It can mean that the truest answer to some of the best questions is, We do not know. It can impose longer thinking time in a fast-thought society as teachers wait for answers while students think about authentic questions.

Invisibility

The excitement of arrival at the unknown, the Socratic sense of wonder at the perplexity of the world...another curriculum element that I worry about is invisibility. If curriculum is to effect a profound engagement with the world, then the student's attention must be on the world, and not on the classroom. At crucial moments, the curriculum must be designed to draw aside, so as not to obstruct the student's view of the world. When Howard Nemerov said that poems are not the point, he meant the same thing; a successful poem is an arrow that points your attention to a thing, and if you get stuck looking at the arrow, the hope of the poem fails.

Another way of saying this is that we must not break the spell of learning, the student's involvement with the world. Our intention is to get students thinking about what philosophers call the thing-in-itself. We want students to be in rapt fascination with Alexander, or why

equations equate, or the problem of gravitation, or a poem by Borges, or the danger of asteroids, or the genius of Emily Dickinson. We want to avoid breaking the spell by reminding them that they are in a classroom, or looking at a book, or filling in blanks.

We must always remember that even though the content of high academics is real, learning is an imaginary act. Cognition without imagination is shallow. Students do not lock on to their content unless their minds pass through the paragraphs of the text and on to vivid imaginary experiences of what it was like at the Constitutional Convention, of what it is like in Jupiter's giant gravity field, of how Atticus Finch spoke to his daughter Scout, of what it sounded like at the Battle of Gettysburg, of what it was like to challenge the segregation laws in the Civil Rights movement. Not having a chance to experience these things personally, we must experience them through our imaginations, aimed and refined by correct knowledge. Curriculum must enhance the imaginary act of learning. It must call the students' imaginations to the thing in the world, and not to itself.

The poet Marianne Moore, who died in 1972, said that we must be literalists of the imagination, and defined poems as Imaginary Gardens with Real Toads in them. Good curriculum is like that.

In wanting curriculum to be invisible, we are focusing on the art and design of curriculum writing. We are trying to engineer the distractions out of the lessons. We are like industrial designers, who color televisions flat black so that viewers will watch the show and not the set. We are probing the gestalt problem of figure and ground.

When we see an image of two colors, we tend to identify one as the figure, the thing we are looking at, and the other as the ground, the shapeless space that surrounds the figure. The famous face-vase illustration is interesting because the figure and ground switch back and forth, replacing each other alternately.

In a painting such as Matisse's "Blue Nude," the apprehension of the painting depends upon the perception of the figure as blue. If we get stuck trying to interpret the white, we are lost.

Curriculum is like that. We want the world to be the figure, and the curriculum to be the ground. We don't want kids looking at the book, or the classroom fixtures, or the blanks in the worksheet. We want them face to face with Dostoevsky, terrified of Dante's torments, and horrified by Mary Shelley's monster. Much later, they awake to find that school was responsible.

This is the importance of Coleridge's dictum of the suspension of disbelief. Our specious idea, Coleridge realized, that fiction "isn't true," undermines our profound engagement with a work of literature, and obscures the truth of its meaning. In order for the fiction to take effect, we

must disable our idea that it is "only" fiction. Coleridge wrote that in his collaboration with Wordsworth,

> ...it was agreed that my endeavors should be directed to persons and characters supernatural, or at least romantic; yet so as to transfer from our inward nature a human interest and a semblance of truth sufficient to procure for these shadows of imagination that *willing suspension of disbelief* for the moment, which constitutes poetic faith. [italics added]

In reading *Frankenstein*, we must not resist the story; we must make Coleridge's willing suspension of disbelief, so that during our reading, there is a guy made of pieces of corpses. During *Dracula*, vampires are real. And while we descend into the Inferno with Dante, the tortured souls really are burning in red-hot coffins. Later, we can intellectualize, but the moment to live the reality of the story must not be lost.

In practice, how do we make curriculum invisible?

- By classic content selection that lets the importance and meaning of the knowledge draw the students' attention
- By world-centered presentation that includes strategies such as hands-on learning, literature-based lesson and quiz design, and the suspension of disbelief
- By phasing engagement and scholarship so that kids can first lose themselves in the book or thing they are studying, and later acquire the scholarly facts
- By involving all domains of learning so that the kids' whole minds are engaged
- And by disclosing the motivational content of knowledge, which is an often-neglected part of academic fields

By such means, we get the curriculum behind the kids, and put them face to face with the world they are learning. In this curriculum, kids would read Thoreau, not an anthology paragraph about Thoreau followed by a one-page excerpt. In this curriculum, the pedagogical impedimenta would be minimized, and Thoreau would appear forth, like Hamletís ghost, his words ringing in the kids' ears.

Mies van der Rohe, the architect famous for his dictum that less is more, also said that God is in the details. This is no less true in curriculum than it is in architecture. If we want to summon the phenomena of the world to the student's minds, we must control the ten thousand details of presentation, just as a composer deliberately composes every note for every instrument

in a composition. This means that we speak in content language, in the language of the thing, not the language of the classroom. Even though we give students a sheet with blanks, we do not have to say, fill in the blanks. We say, "What were Einstein's reasons?" We divert as much language as possible to the content, trying not to remind the student that she is not with Einstein, but in a classroom filling out a form.

In constructing literature assignments, we can use text-based design to reduce the visibility of the curriculum and increase the visibility of the content. A perfect example is the daily quiz during the reading of a Shakespearean play. Rather than five questions, written in our words, that check if a student did the reading, it is more invisible to use five short quotations from the play, and let the students name the characters who spoke the lines. This way, even when being quizzed, the students continue to encounter the play. Which of these questions about Calpurnia's plea to Caesar in Shakespeare's *Julius Caesar* is more engaging, and which one calls least attention to itself and most attention to the Shakespeare:

A. What is the name of the character who pleads with Caesar not to go to the Senate today? _____

B. Alas my lord!
Your wisdom is consumed in confidence.
Do not go forth today. Call it my fear
That keeps you in the house and not your own.
We'll send Mark Antony to the Senate House,
And he shall say you are not well today.
Let me upon my knee prevail in this.

How is this effect enhanced if the first quiz is written but the second quiz is read aloud to the students, with dramatic emphasis? Notice that the second form continues to be instructive, blurring the distinction between evaluation and presentation, and making maximum use of class time.

When my tenth grade honors English class finished reading John Ciardi's translation of Dante's Inferno, the final test was thirty-four short quotes, each one a description of an infernal torment. The students had to engage this panorama of pandemonium, understand what fiendish thing was being inflicted on each group of souls, and identify what group that was, because each torment was a symbolic retribution that fit the sinner's sin. In this process, the students had to imagine each torture vividly, suspend disbelief, and vicariously suffer the torments of the damned. It became an imaginary Inferno with real souls in it. Preparing for the test was a powerful experience, involving the students' emotional being, not just the cognitive side. By using only quotations to probe the power of Dante's symbolic retribution, we locate the test itself within the book.

An example of an Inferno test question:

The uneven tombs cover the even plain--such fields I saw here, spread in all directions, except that here the tombs were chests of pain: for, in a ring around each tomb, great fires raised every wall to a red heat. No smith works hotter iron in his forge. The biers stood with their lids upraised, and from their pits an anguished moaning rose on the dead air from the desolation of tormented spirits. THE HERETICS

It is important for us to remember the Paradox of Academic Quality: high academics is like this--fully human. It is not just cognitive, but affective and intuitive also. All of the domains are involved. Carl Sagan wrote that,

Mere critical thinking, without creative and intuitive insights, without the search for new patterns, is sterile and doomed. To solve complex problems in changing circumstances requires the activity of both cerebral hemispheres: the path to the future lies through the corpus callosum.

A comment on the affective domain: In writing curriculum that provokes a profound engagement with the world, we must remember that the affective domain forms the human framework for the cognitive domain. The purpose of ethics, for example, is not to become logical; it is to
become kind. In the process, logic is required. Approaching the content both cognitively and affectively helps to make the curriculum invisible, and to lead the student's curiosity and emotions directly to the content.

Furthermore, comprehension is not merely cognitive. If a student read about the slaughter of the Civil War, and could name dates and generals but was unmoved by the tragedy, how would we compare that student's comprehension to one who knew the facts and was terribly moved by them?

Harvard biologist Stephen J. Gould speaks in tremulous voice about his life's passion, the obsession with one particular species of small snail, that only a handful of other people on the planet even know about, but his excitement is such that he can hardly speak about it calmly.

Intuition, too, is important. James Watson and Francis Crick worked feverishly to solve the structure of the DNA molecule, but guided their work with the unproven intuition that the molecule of life would be beautiful, and so they only considered beautiful molecules like spirals, not ugly, amorphous molecules. After their success, they showed their double helix model to their formidable colleague, Rosalind Franklin, who had been dubious that such a structure would be the answer. In The Double Helix, Watson described the scene:

> Rosy's instant acceptance of our model at first amazed me. I had feared that her sharp, stubborn mind, caught in her self-made antihelical trap, might dig up irrelevant results that would foster uncertainty about the correctness of the double helix. Nonetheless, like almost everyone else, she saw the appeal of the base pairs and accepted the fact that the structure was *too pretty not to be true*. [emphasis added]

The chemistry of life, too pretty not to be true. For these Nobel Prize researchers, their engagement with the world is profound to the verge of being absolute.

A Classic, Different Education

In the field of gifted education, there are two terms: gifted, and education. In recent decades, our work has focused intensely on what it means to be gifted, but less intensely on what it means to be educated.

And yet, it is being educated that is the goal. Being gifted is not the goal; it is the condition that makes high education possible.

For personal and national reasons, we want gifted children to become learned adults, with the knowledge and capacity of mind to enjoy rewarding lives and to guide the country through a rapidly shifting and possibly perilous future.

This requires a different education, not the same education had by all, with different emphases.
A true gifted education would be appropriate for and designed specifically for gifted students. As such, much of it would be wrong-highly inappropriate-for other students, who would be swamped and miserable in such an environment.

And some of this different education for children of the very highest ability is not attainable, at all, to other students, however hard they may work. Consider that highly gifted students sometimes reach levels of mathematics in middle school that most students never reach, even in high school or college. A middle school student who makes an 800 on the SAT is doing something that very few students can do, regardless of age or effort.

The kind of high mathematical mind and instant intuitive understanding that gifted math students demonstrate can not be taught. It is an internal function of their abilities. It is already visible when they are still in the early elementary grades, and it calls for a full educational response from us. As a society, we owe every child-not excluding the gifted child-an education that fits. And if we do not exclude gifted kids from the dream of education, they will go places that are unknown in the normal context.

We are perfectly comfortable with this standard of achievement in the athletic arena.

Content matters. If curriculum is to be a profound engagement with the world, it is essential that it really be the world with which one is engaged. To waste critical education hours on content that is thin, shallow, common knowledge, or false is a tragedy. The words of A Nation at Risk, the report of the 1983 U.S. Department of Education's National Commission on Excellence in Education, are still relevant:

History is not kind to idlers. The time is long past when America's destiny was assured simply by an abundance of natural resources and inexhaustible human enthusiasm, and by our relative isolation from the malignant problems of older civilizations. The world is indeed one global village. We live among determined, well-educated, and strongly motivated competitors.

Curriculum for gifted children must focus on quality content. Even though the affective domain is crucial and must be involved, the affective domain is not its own curriculum. There are more magnificent truths to learn about the world than we could ever have time to learn, and so our curriculum should be designed to maximize class time for high educational goals.

It is appalling that American colleges are offering junk courses such as "Vampires: The Undead" (University of Pennsylvania) and "The Biology of ER" (Purdue University). Other prominent schools have courses on juggling, witchcraft and UFOs. There are junk courses and junk units. I remember a high school teacher who assigned his gifted history class a research paper on the Bermuda Triangle.

If a paper on ER or the Bermuda Triangle does not constitute profound engagement with the world, what does? Listen to the words of James Gallagher, in the winter 2000 edition of GCQ; the title of his article is "Unthinkable Thoughts: Education of Gifted Students":

The critiques leveled against the triviality and irrelevance of some of our "differentiated" programs for gifted students need to be taken seriously. General education teachers and teachers of gifted students both need models of differentiated units that stress advanced content and mastery of thinking processes, such as those developed by VanTassel-Baska (1997) in science and Gallagher and Stepien (1998) in social studies to help them challenge their students.

Gallagher adds,

> "This does not mean that there should not also be continued attention given to special efforts at enhancing creativity, problem solving, problem-based learning, and the like, but that the mastery of these skills has to relate to significant and relevant content in order to be meaningful and useful to the student."

What questions should we ask when we choose significant and relevant content:

1. Is it knowledge? Does the lesson teach anything that is actually knowledge? Will the students know something afterward that they do not know now? Would it be regarded as knowledge by others? One way of testing this question is to ask, Could a student's answer be wrong? If the answer is no, then there may not be enough knowledge in the lesson. Not all activities teach!
2. Is it academically necessary? Much knowledge is prerequisite for advanced study. Algebra is valuable in its own right, but it is also a requirement for subsequent mathematics and science. Traditional grammar, the orthodontia of the mind, enables students to use language correctly in every other context. Foreign language is more necessary than ever. A Latin-based vocabulary is essential to all English-speaking students who pursue advanced academics. These thoughts remind us that we must beware of educational trends, such as the suppression of ability grouping or the dogma that schools should not teach grammar or vocabulary. American education is just now emerging from its whole language winter, and little peeps of language study are beginning to be heard in the land.
3. Will it educate THESE students? Does the lesson contain things that these students do not know? Will it change the state of their education? Will they feel that they have learned something? If the lesson involves review, remember the statistic that some students require thirty or more repetitions in order to learn, average students require ten to fifteen repetitions, and gifted students require zero to three repetitions.
4. Is it global? In a rapidly increasing global environment, students need as much knowledge as possible that connects them with the rest of the world. Is what we propose to teach global--known as knowledge around the world? Are there references to it in the culture? Will students encounter it when they travel? Will they find it in a museum? By this standard, mathematics, science, world history, and foreign language have great meaning to students.
5. Is it at international grade level? Forget the categories and stereotypes we use to age-grade our content in the United States. Are we writing a curriculum that the rest of the world teaches a year or two earlier? Do we have a valid reason for waiting? Are we underestimating what students can learn? Let's take another look at results from the 1998 TIMSS Report: On the math/science test, the general math scores of our students were lower than those of fourteen other countries. The advanced math scores were lower than eleven other countries. The general science scores were lower than those of eleven other countries. In physics, the U.S. students were last. The TIMSS report noted that our 11th grade curriculum is regarded, internationally as 9th grade level. When the TIMSS Report came out, Peter Rosenstein wrote, in NAGC *Communique*:

> In recent weeks, Microsoft and other high-tech companies have asked Congress to lift visa restrictions on foreign nationals to permit them to work for U.S.

companies because they cannot find qualified American students to fill the positions.

Under the effects of Horace Mann's grade level notion, we have succumbed to the idea that big words are high school or college level, and yet earlier authors routinely used them in children's animal books, which with no ill effect have continued to enthrall children of all ages ever since. Age-graded vocabulary is an illusion. Very young children routinely learn the species names of the dinosaurs, and any little child who can say and understand *San Francisco Forty-Niner* or *Tyrannosaurus Rex* can say and understand the word serene. Let's compare our curricula to international grade level.

6. Is it enlightening? Does the lesson enlighten students' minds with truths about honor, justice, fairness, democracy, multiculturalism, equality, or a altruism? Will it increase their sympathy? Will it ennoble their tolerance? Books such as *The Narrative of Frederick Douglas* or Martin Luther King's *Why We Can't Wait* have the powerful combination of being written by some of history's most famous individuals, being brilliant accounts of important events, and being enlightening stories that infuse readers with a sense of universal human value.
7. Is it counter-ignorant? Will studying the lesson protect students from fraud, deceit, or swindle? Will it refute popular myths and stereotypes? Our culture is rife with commercial distortions of science and history. The so-called Bermuda Triangle was made up by a hack author in a fiction article for Argosy men's magazine. Carl Sagan tells us that the British crop circles were a hoax by Doug Bower and Dave Chorley, two blokes from Southampton, who in 1991 announced they had been making crop figures for fifteen years. It is good if our curriculum protects students from mercenary authors who exploit youthful credulity by presenting science fiction as science.
8. Is it permanent? Will it still be valid when the students grow up? Will they be able to help their children learn it? There are many things to learn that are only temporarily true, and some of them must be taught, but there are others that will be valid for as long as the students live. There is a popular notion that knowledge is accumulating so rapidly and becoming obsolete so immediately that it is bootless for gifted students to spend time memorizing facts. We must not be lulled by this simplification. It is still possible today to spend one's educational life in the disciplined study of permanent knowledge. Students who concentrate on world and national history, foreign language, geography, mathematics, science, grammar, vocabulary, and famous literature and poetry will benefit from it all of their lives.
9. Does it require a teacher? We want to use our talents where they are most needed. When it comes to educating gifted students, we should ask, Is the content really a necessary use of school time? Is this something that students would probably learn on their own? Is it soft or popular content that the world will teach them anyway? Or is it the kind of content where the students really need us?

It is one of our greatest experiences, as educators, to teach the motivational content of our subjects--the great stories, the beauties. It is the special opportunity for grammar teachers to show students why grammar is beautiful and fun, and it is the special privilege of the calculus teacher to show why calculus is exciting. If we do not do these things, there is no one left in society to do it. When we write curriculum, we must think long and hard about its motivational content, and write it in motivational words that will communicate with both students and colleagues.

Conclusion

If we view all of these curricular goals from the students' perspective, we realize that...

When curriculum propels students into a profound engagement with the world, they lose their classroom claustrophobia and their despondency over having to hear things AGAIN. Suddenly their attention is on something new, and puzzling.

They feel a thrill of arrival at something they have never learned before. The strangeness and unfamiliarity are exciting. Students are wide awake.

As they begin to question and explore, the Socratic strata of the content become clearer. Some questions get answered clearly, some get only possible answers, and some get no answers at all. The students become awed and fascinated by the great unanswered questions.

To the students' delight, the curriculum has a curious invisibility; it keeps their minds always on the thing they are learning. Sometimes the effect of concentration is so strong, they are startled by the bell and don't want to stop.

One of the reasons for this powerful engagement is the sheer quality of the content itself. The students know they are learning something that is really important, that is worth their time, that they need to know.

Let us now, as T.S. Eliot said, find our end in our beginning: if the effect we seek is the students' profound engagement with the world, then we must know that the things I have mentioned do not happen by accident:

Curriculum experiences for gifted learners need to be carefully planned, written down, and implemented in order to maximize their potential effect.