

# *Toward School-College Collaboration*

*By Ernest L. Boyer*

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**EDITOR'S NOTE:** In this article from our fall 1987 issue, the late Ernest Boyer notes that our students live in an economically, politically, and ecologically connected world. This condition, he asserts, must be reflected in the college curriculum because learning is really about making connections.

Today, it is even more abundantly clear that survival requires a new ecology of knowledge. The usually unquestioned virtues of specialization need to be re-examined in a much broader context. Can faculty transcend the compartmentalization that has come to characterize our institutions of learning? Certainly, this critical question should occupy an important position on any agenda of transformation. As Boyer reminds us, while we want our students to be competent, the most essential question is: competent to what end?

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*The following article was adapted from a speech Dr. Boyer delivered at the NEA's national higher education conference in the spring of 1987.*

**F**or more than a century the National Education Association has been the voice of educational leadership in this nation, performing excellently in its role. I commend you for the aggressive leadership you provide for both the nation's colleges and

schools. I wish also to say a word about Mary Futrell. Mary joined us at the Carnegie Foundation when we were preparing our report on secondary education. She brought both vision and conviction to that task. I was enormously pleased when Mary assumed the presidency of this distinguished organization. In my judgment, this nation is deeply in debt to Mary Futrell for the clarity of her voice and for her commitment to both equity and excellence for our children.

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*At this article's publication, Ernest L. Boyer was president of the Carnegie Foundation for the Advancement of Teaching and a fellow of the Woodrow Wilson School at Princeton University. Before joining the Carnegie Foundation in 1980, Dr. Boyer served as the twenty-third United States commissioner of education. From 1970-1977, Dr. Boyer was chancellor of the State University of New York. In 1987, Dr. Boyer was presented with NEA's Friend of Education Award, the Association's highest honor.*

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I'm also delighted that you have threaded through this conference the theme of collaboration between colleges and schools. I have, for years, had the deep conviction that all levels of education are interlocked and that the quality of American higher education can be no greater than the quality of the nation's schools. We will surely stand or fall together.

It's been almost four years since the National Commission on Excellence in Education declared the nation is at risk and observed that, in matters academic, we had unilaterally disarmed. The Commission concluded that America is falling behind in the international "high-tech" race and argued that the United States should, once again, reestablish its competitive advantage.

It's hard to argue with that message. International and economic competition have become an incontrovertible fact of life. And the nation's colleges and schools do have an obligation to help America maintain its economic and military strength.

But there's another reality that cannot be ignored and it shall be the central theme of my remarks today. Although our world is ideologically divided, our students also need to understand that we are living in a global village and that, in the end, with all of our separations

and divisions, we are deeply dependent on each other.

In 1972, I was sitting in my office in Albany, New York. It was a dreary Monday morning and to avoid the pressures of the day I turned instinctively to the stack of third class mail that I kept on the corner of my desk. It was a typical administrative move to create the illusion that I was very, very busy. On top of the heap was the newspaper from Stanford University.

The headline announced that the faculty at Stanford had reintroduced a required course in Western Civilization. The students were offended. And in a front page editorial they declared that a required course is an "an illiberal act." The editors concluded with this blockbuster question: How dare they impose uniform standards on nonuniform people?

At first I was slightly amused and then deeply troubled by this statement. I recognized that frequently Western Civilization courses neglected other cultures and the role of minorities and women. Still, I was troubled that some of America's most gifted students, after 14 years or more of formal education, still had not learned that while we are not uniform we still have much in common. They had not discovered the fundamental fact that while we are

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all autonomous human beings with our own aptitudes and interests we still are deeply dependent on each other.

This experience led me to conclude that education has two essential goals. The first goal is to help students become personally empowered and discover their own aptitudes and interests. Indeed, one of the distinctive features of American education is diversity. This must remain a centerpiece of our works so that we do not drive students toward a false conformity. Individuality is central to our quest.

At the same time, there is another purpose to be pursued. The second goal of education is to help students go beyond their private interests and put their own lives in historical, social, and ethical perspective. Individuality *and* community remain the tension points of education just as, inevitably, they remain the tension points of life.

During the 1960s I was shouted down by students, locked in and out of my office, condemned for running a "corrupt" system and for being over 30. Students repeatedly would say we have nothing in common. I'd have to ask: Is our separation so great that we have lost sight of the agenda to be commonly pursued?

At one level, we're all divided, but at another level we must search

for our connections. Let me cite five examples to illustrate the point.

*First, we must help students understand that we are all connected through the exquisite use of symbols.* Language, the most essential human function, and our own capacity to communicate carefully with each other, sets us apart from all other forms of life. Language is not just another subject. It's the means through which all other subjects are pursued.

**K**ay, my wife, who is a certified nurse-midwife and delivers many babies, including five grandchildren of her own, insists that language begins *in utero* as the unborn infant monitors the mother's voice. There are, in fact, data to support that brash assumption. We know an unborn infant responds with startled reflex to noise outside the mother's body. We know that if you hold your ears and speak, you can monitor your own voice through the vibrating tissue of your body. We also know that the three middle ear bones—the hammer, anvil, and stirrup—are the only bones that are fully formed at birth. So I think that Kay is right.

But for skeptics we surely can agree that language begins with the first breath at birth. First with gurgles, then with phonemes that are crudely formed, then with words, and finally with complicated

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syntax. And children learn, very early, both the majesty and the weaponry of language. When I was a boy we used to say “sticks and stones may break my bones, but names will never hurt me.” What nonsense I would say those words with tears running down my cheeks, thinking all the time—for goodness sake, hit me with a rock, but stop those words that penetrate so deeply and inflict so much pain.

**I**n an earlier incarnation I worked with children who were deaf. I used to watch these beautiful little people experience anguish because of their frustration at not being able to make connections through the use of symbols. Language is the key to human interaction, and the first task of formal education is to help students become empowered in the written and the spoken word.

This task calls for close collaboration between colleges and schools. We found during our study of college that one of the greatest frustrations among faculty is the inadequate preparation of the students—and most especially their lack of proficiency in language. More than half the faculty we surveyed rated the academic preparation of their students as only fair or poor. (This negative rating increased eight percentage points since the Foundation conducted a

similar survey in 1976.) Eighty-three percent of the faculty said that today's high school students should be academically better prepared, and two-thirds agreed that their institutions spend too much time teaching students what they should have already learned in high school.

Several months ago, the National Assessment of Educational Progress released a report on adult illiteracy in the United States. Based on UNESCO's standards of literacy, almost all Americans—about 95 percent—can read and write. But the NAEP report revealed that a large percentage of Americans—over 40 percent—could not comprehend simple written passages. There was recognition of words, but there was limited understanding of the content. I'm suggesting that language is the centerpiece of learning and in our report *High School* we stress writing because through clear writing clear thinking can be taught.

Lewis Thomas said on one occasion that “childhood is for language,” and in our dangerous and interdependent world, with its bellicose language of political confrontation, in such a climate it's urgently important that we teach students not just the parts of speech but also the need to speak and listen carefully to each other—and communicate with *integrity* as well.

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Several centuries ago the Quakers would risk imprisonment and even death because in court they would not swear to “tell the truth, the whole truth, and nothing but the truth, so help me God.” The problem was not that they were against swearing. The larger problem was their unwillingness to swear that they would tell the truth *in court*, suggesting that outside it might be an option. After all, wasn’t truth something that one should just assume, not something that one would swear to do only under oath? So the Quakers would respond by saying, “Your Honor, I speak truth.”

**W**ell, that is perhaps an exotic point to make, especially when your head is on the block, but the larger point should not be denied. When we teach language, we are not teaching parts of speech. We’re teaching the most elegant obligation of the human experience, to handle reverentially and respectfully the messages we send. Integrity is the key.

Students also must discover that we communicate, not just verbally but nonverbally as well. Several months ago, I was reading a *New York Times* interview with Victor Weisskopf, the world-renowned physicist. Weisskopf was saying that if you wish to understand the

big bang theory you should listen to the works of Haydn. I was stunned. I thought the *New York Times* had dropped a line. But there it was. Weisskopf was saying that some ideas are so profound, so subtle and exquisite, that words cannot convey them. We need the power of music and dance and the visual arts.

This leads to a second priority for education. I suggest that *all students should, through science, begin to understand the eloquent underlying patterns of the natural world and learn that we are connected through the ecology of the planet*. I find it significant that, during 1983, in addition to the National Commission report on education, three other major reports were released. These studies did not receive as much notoriety, but, in my view, they were also reports on education.

One, by the National Academy of Sciences, warned about the so called greenhouse effect, the gradual warming of the earth’s atmosphere by excessive carbon dioxide in the air. Another report by a group of equally distinguished scholars predicted that a nuclear holocaust could leave half the earth in frozen darkness. Finally, a group of outstanding biologists reported that the tropical rain forests, which harbor at least two-thirds of all the earth’s animals, plants, birds, and insects, are being destroyed at the

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rate of about 100,000 square kilometers every year. I'm told that's an area about the size of the state of Missouri.

The simple truth is that all forms of life are interlocked, yet students remain woefully ignorant about the natural world in which we all are embedded as working parts. When I was commissioner of education, Joan Ganz Cooney, that creative leader of the Children's Television Workshop, came to ask if we would help fund a new TV project on science for junior high school students. In the program we called "3-2-1 Contact," Joan Cooney reported that when researchers, doing the background work, asked junior high school students, "Where does water come from?," a significant percentage of the students said, "the faucet." When they were asked, "Where does light come from?," they said "the switch." And when they were asked, "Where does garbage go?," "down the chute," they said.

Are we raising a generation of students who see no connectedness beyond the things that they can feel and touch, students who do not understand their interdependent relationship with energy, with ecology, and with other forms of life?

Lewis Thomas, in his Phi Beta Kappa oration at Harvard, spoke eloquently about our interdependent world when he observed that "there are no solitary, free-living

creatures. Every form of life is dependent on all other forms, and we should go warily into the future watching our step and having an eye out for our partners, wherever they may be." Through the study of science, students must learn about the elegant underlying patterns of the natural world. They must discover the connections.

**T**his brings me to priority number three. *It's urgently important that all students also learn about our social and civic institutions and become familiar with cultures other than their own.* As far as we know, the human species is the only form of life that has the unique capacity to recall the past and anticipate the future. And in an age when planned obsolescence makes everything but the moment seem irrelevant, it is exceedingly important that students put the human story in perspective.

During the past five years, we at the Carnegie Foundation have been studying colleges and schools. And the signs of isolation are to me enormously discouraging. We found, for example, that a large group of community college students could not locate either Iran or El Salvador on a map. During our study of the American high school, we discovered that only two states required students to complete a

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course in non-Western studies. And in a survey of 5,000 college students, 30 percent said they had nothing in common with people from underdeveloped countries. Nothing in common with those less fortunate than themselves?

The University of Notre Dame campus minister William Toohey wrote that the trouble with many colleges is that they encourage the nesting instinct by building protective little communities inside their great and learned walls. I'm convinced that one of our most urgent obligations is to help students become less parochial and develop a perspective that is not just national, but global.

Henry Steele Commager recently described the 18<sup>th</sup> century as an era that was, in some respects, more enlightened than our own. Commager said that the 18th century was an age when the United States and France could decree immunity for Captain Cook and his men during wartime because "they were common friends of mankind." It was a time when Rousseau could pay tribute to those great political cosmopolitan minds who "embrace all mankind within the scope of their benevolence." It was a time when Tom Paine declared himself "a citizen of the world."

Today the world's more than 160 independent nations and 60-odd political units are inextricably

interlocked. Interest rates in the United States impact Common Market countries; bad harvests in the Soviet Union help farmers on the Western plains; Middle Eastern oil gluts produce recession in Oklahoma; unemployment in Germany sends ripples to Spain and Yugoslavia; and a robotics breakthrough in Tokyo makes a dramatic difference in Detroit. The world may not be a global village, but surely our sense of neighborhood must include more people and more cultures than our own.

Several years ago, at the breakfast table, I opened the *Christian Science Monitor* and was intrigued by a front page story describing an organization called the International Council on Monuments and Sites. That organization had selected 165 very special places on the planet earth that it said were of universal value to mankind. These sites and monuments included the pyramids of Egypt, the palace of Versailles, the city of Cuzco in Peru, the Ganges Valley in India, and the old walls of Jerusalem, to name a few. As I read the list, it occurred to me that these priceless treasures might provide a marvelous curriculum for our colleges and schools.

Very often we remember only confrontations and destruction. What if we also were to celebrate

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the achievements of the human spirit, to rejoice in the fact that we are creators too? I wondered if it would be possible for all students, throughout their years of formal learning, to study these magnificent monuments and sites that are found on every continent on the globe. I wondered, would it be possible for students to study the people, the history, and the traditions behind them? I wondered, would it be possible for every student to understand that we had a sacred obligation not to desecrate monuments and sites that mark so exquisitely the human passage?

I had another brief fantasy before running off to work. It occurred to me that these international sites and monuments would provide a marvelous international university. In addition to putting hardware into space, would it be possible to build an international university here on earth—a place for students from many countries to assemble and learn from one another?

One further concern about the undergraduate experience. *As we prepare students for the world it is also important that we build connections between general and specialized education.* We now typically require two years of general education that students say they want to “get out of the way” so they can move on to their specialization.

And while we want students to be competent, we are not asking the essential question: Competence to what end?

During my days in Washington, I’d often be seated at a table where experts would try to prove how technically “competent” they were. But almost all of the really tough questions we encountered had less to do with specialized knowledge than with insights, wisdom, even compassion. What we worried about were such questions as these: Should HEW fund gene-splicing research that might introduce mutations on the planet earth? How can we keep human subjects from being harmed during experiments in the lab? How can the city of Chicago desegregate its schools in a way that serves all children and avoids white flight to the suburbs? On topics such as these there are no experts, there are only human beings trying to solve new and complicated problems.

In the Carnegie book titled *College*, we propose something called the “Enriched Major.” Instead of assuming that general education is something for a student to “get out of the way,” why not extend it from the freshman to the senior year and build it into the major so that the student’s special field of study is put into a historical, social, and ethical perspective. We say that general and specialized education should

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be blended during college just as, inevitably, they must be blended during life. If a college cannot blend the liberal and the useful arts, why not turn the effort over to a proprietary school or a corporate classroom where students can get on with technical competence unhindered by the burden of collegiate education?

Eric Ashby, a noted British educator, wrote that the path to culture should be through a man's and woman's specialization, not by bypassing it. He said, "A student who can weave his technology into the fabric of society can claim to have a liberal education; a student who cannot weave his technology into the fabric of society cannot claim even to be a good technologist."

**I** have one final observation. *In the end, the discovery of connections is not only accomplished through a good curriculum, but through the teacher in the classroom.* It's the teacher who helps students gain insights, and I'm convinced that if this nation is to achieve better education we must find ways to give greater status to our teachers.

I hear a lot of talk these days about Japanese education. I've had grandchildren in the Japanese schools, and I'm convinced it is not a system we should import to the United States. Still there are elements to

be noted. First, Japanese homes and schools are connected institutions. But perhaps the key to Japanese education is the status of teacher. The word *sensai* carries with it a position of great honor. To be a *sensai* is to be revered. The teacher is viewed as one who shapes the coming generation and is looked to with high regard, even reverence, by students and their families.

In this country, we say, "Oh, he or she is just a teacher." If you look at *sensai* in Japan and just teacher here at home, you begin to understand the central issue of the differences in our systems. I'm suggesting that we will have excellence in education as we give more respect to teachers.

Several years ago I couldn't sleep, and instead of counting sheep, I counted all the teachers I had. I remembered rather vividly 15 or more. There were a few nightmares in the bunch. But then I remembered several outstanding teachers who truly changed my life. I remembered my first grade teacher, who on the first day of school said, "Good morning class, today we learn to read."

I remember Mr. Whittlinger, our high school history teacher, who one day said, "Ernest, will you see me after class?" I almost had cardiac arrest. I was sure it was going to be a catastrophic encounter. As it turned out, Mr. Whittlinger said,

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“Ernest, you’re doing very well in history. If you keep this up, you just might be a student.” You might think that was a put down, but that teacher’s comment was the greatest academic accolade I had received. I walked home that night ten feet tall. I started to rethink who I was and what I might become.

I also remembered Dr. Joseph Smith, my university literature professor, who used to read Shakespeare aloud in class although he had read *King Lear* and *Macbeth* a hundred times before. It was his love affair with language that somehow caused me to understand the dignity and the sacredness of the written and the spoken word.

I then wondered to myself, what made these teachers truly great? Why did they stand out from all the rest? I thought of three characteristics that were the centerpiece of outstanding teaching. First, they all had knowledge to convey—there was something there to teach.

Knowledge, however, is not enough. The great teacher also communicates at a level students understand. During our high school study, I moved unannounced into a sixth grade classroom in New Haven. I saw a teacher who was being pressed against a wall, or so it seemed, as 30 or 40 sixth graders crowded around the desk. At first I worried that they were denying him

oxygen, but I stayed and discovered they were reading Charles Dickens’ *Oliver Twist*. The language is 19th century English, but even so I discovered a miracle had occurred. The students were debating whether *Oliver Twist* could survive in New Haven. They knew the good guys and the bad guys. It was not 19th century literature they were reading, but 20th century urban life, and they were cheering for little Oliver because it was a life they lived every day. This teacher had the brilliance to connect great literature with their lives.

**T**he third characteristic of good teaching is more elusive. The great teachers I had were not only well-informed, not only able to communicate with students, but they were authentic, believable human beings. They were three-dimensional and were competent enough to be vulnerable as well.

This brings me back to language. Secretary of Education William Bennett talks occasionally about teaching values in the schools. I’m not sure what a “course” in values would include. I am convinced that values are taught by teachers every single day in the integrity of their language and the quality of their lives. I’m suggesting that the values taught in school are the ones found intuitively and

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sometimes explicitly in the judgments of professors and teachers, who not only give knowledge but help students shape conclusions.

I worry that through intimidation or the threat of censorship we may impose upon the classroom a timidity and fear so that the creative act of exploring alternatives will be rejected. If we do not trust our teachers, and if we deny children the opportunities to move from absorbing information to the actual application of what they learn, we will have a generation that remains ignorant and unable to meet its social and civic obligations.

Here then is my conclusion: Our students increasingly are going to discover that they live in a world that is economically, politically, and

ecologically connected. This must be reflected in the curriculum we provide, in the sense of community we build, and, in the end, in the quality of teaching that helps students become not only well-informed but wise and compassionate as well. The connectedness to things is what the educator contemplates to the limit of his capacity. No human capacity is great enough to permit a vision of the world as simple, but if the educator does not aim at the vision no one else will, and the consequences are dire when no one does. . . . The student who can begin early in life to think of things as connected, even if he revises his view with every succeeding year, has begun the life of learning.

Thank you very much. ■

