Five major trends are shaping curricula in two-year colleges today, including clear shifts in emphasis from teaching to learning; from the college degree as a terminal point to learning as a lifelong activity; from solitary instruction to learning communities; from management to leadership; and from a national economy to a global economy. The importance of this last trend cannot be overstated. Nationally, the transformation from a high-volume production economy to a service-oriented economy has meant the loss of a comfortable life-style for millions of Americans. Today, one of the fastest growing segments of the American workforce is what Robert Reich calls the "symbol analyst." The symbol analyst identifies, solves, and brokers problems. The four skills required of symbol analysts, which have implications for curricular development, are abstraction, systems thinking, experimentation, and collaboration. Abstraction is the very essence of symbolic analysis. In seeking causes, the whole becomes the focus, not the parts. Systems thinking calls on students to understand how problems arise, and not to merely seek solutions. Experimentation equips a learner to become independent, while collaboration is a requisite to the teamwork of symbol analysts. While these four basic skills make it possible to carry learning forward from the collegiate setting to the workplace, a sense of values will be essential to prevent symbol analysts from seceding from society and forming enclaves of privilege. (PAA)
SHAPING THE CURRICULUM:
VALUES, COMMUNITY, AND A GLOBAL ECONOMY

Submitted
by
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INTRODUCTION

I am pleased to be here and to be able to participate in this important discussion of curriculum amid change and conflict. Especially to my community college colleagues, I want to observe that it has been almost four years since I retired as state director. At that time I told you that you would be in my thoughts often and in my heart always. In the interval, the issues we are discussing today have become increasingly important. The consequences have become more significant, in fact, absolutely vital. Our social, political, and economic institutions are at stake. As a nation we have succeeded in providing higher education opportunity to virtually everyone who seeks it. Now our task is to provide an education for each.

As I survey the contemporary landscape of higher education, I am confused. I cannot decide whether I am optimistically pessimistic or pessimistically optimistic. Sometimes I agree with Matthew Arnold's description of "ignorant armies clashing by night." At other times I agree with T.S. Eliot's description of "ancient women gathering fuel in vacant lots."

I am unabashedly a Jeffersonian. Education is essential to growing and sustaining the oldest experiment in democracy in the modern world. Community is important. Self-determination must be predicated on values which center around all individuals, not some. As Jefferson's grave marker illustrates (Jefferson wrote it), what matters is not the positions one held but rather the achievements in one's life. The greatest achievements are those which lift the human spirit. Beyond question, the greatest force in this process is education. As William James observed, we live in an unfinished universe.

I have given you enough clues to leave you with a
perspective on my values. What I propose to do today is to discuss five megatrends shaping the curriculum and then to examine some of the ramifications of the global economy for their curricular impact.

FIVE MEGATRENDS

The first and most significant trend is that there has been a clear shift in emphasis from teaching to learning. Implicit in this shift is the focus which is now on the student rather than on the teacher. Similarly the focus is on strategies for learning rather than mastery of a discipline. The goal is to develop an independent learner. As John Dewey once remarked "the aim of education is to enable individuals to continue their education." Faculty, under this trend, become architects, not carpenters.

The second trend is implicit in the first. There is a shift from the degree as a terminal point to learning as a lifelong activity.

The third trend is the shift from solitary instruction to learning communities. Faculty in growing numbers are coming to view themselves as fellow learners with students. They design learning communities through linked courses, clusters, freshman interests groups, federated learning courses, and coordinated studies. For example, at the Evergreen State College, the entire curriculum is built around the coordinated studies model. It is defined as:

A multidisciplinary program of study involving a cohort of students and a team of faculty drawn from different disciplines; taught in intensive block mode to a central theme: teaching is done in a variety of formats (lectures, labs, workshops, and seminars) and all faculty attend all parts of the program.

For the faculty member, the coordinated studies is the entire teaching load. The student-teacher ratio is 20:1; therefore, if there are 80 students, there are four faculty. But, the actual teaching takes place in the third year of course
development. The first year is the concept year in which the faculty to be involved self-select themselves and the central theme. Upon approval, they move to the next step in the second year: the structural stage where the theme is developed, including the basic skills, the sequence, the readings, and the instructional formats. The third year is the year of implementation. After the implementation, the course disappears.

The fourth shaping trend is the shift in the executive suite from management to leadership. From 1950 to 1980, the emphasis by presidents was on management. The model was the industrial model. After the publication of the book Leadership by James MacGregor Burns in 1978, leadership, especially transformational leadership, became the vogue. Vision became the key. The shift put the focus on the right things. With modest exaggeration one writer declared that "managers do things right; leaders do the right things." The "right things" became students and learning. The resources - human and financial - were utilized to advance the vision. In the management mode (1950 - 1980) the focus was on the "five B's - budgets, business, buildings, bonds, and bids. Faculty was viewed as labor. Administration was viewed as management. The relationship - which had little to do with learning - was confrontational. In the leadership mode, values center around the human dimensions of intellect and growth, of quality and learning, of power being diversified, and of decision-making being decentralized. Faculty became empowered so that a shared vision could become a reality. The familiar pyramid is being replaced by a web of high skills with insights united around a common focus, viz., quality learning through the conscious shifting from the tactics of discipline-centered teaching to the strategies of interdisciplinary learning. Coordination and decision-making are becoming horizontal rather than vertical. Teamwork inhabits every juncture of the web of high skills. Authority is based on skills, not power.

The last of the major shaping trends is the shift from a national economy to a global economy. This is the trend which receives the major attention in this presentation. Its importance cannot be overstated. It is the future in the present, yet, the mind continues to perceive a national model which is obsolete. The danger is that important policy decisions
will be (are being) made based on an archaic model. Even perceiving clearly the emerging global economy with all of its far-reaching ramifications for policy and curriculum is not without its dangers. The economy is important. There can be no argument over the fact that in the policy realm it is the major driver today. But, in the end, the economy is a means, not an end. There are values of greater importance to the community and the nation and to the citizens than the economy.

MULTICULTURALISM

Before turning to a fuller discussion of the implications resulting from the shift to a global economy, it is necessary to comment briefly on multiculturalism. There is no question about it, this nation is a multicultural nation. Our centers of learning must reflect and shape this reality. However, while multiculturalism is a reality, it is also controversial both on the campus and throughout the nation. The campus, in most cases, is far ahead of the general public. As Time said: "In U.S. classrooms, battles are flaring over values that are almost a reverse image of the American mainstream. As a result, a new intolerance is on the rise." And that intolerance, fueled from fear and ignorance, is ugly and cruel. The Time article (April 1, 1991) continues:

For most of American history, the educational system has reflected and reinforced bedrock beliefs of the larger society. Now a troubling number of teachers at all levels regard the bulk of American history and heritage as racist, sexist and classist and believe their purpose is to bring about social changes - or, on many campuses, to enforce social changes already achieved.

In the larger society the issues of quotas and diversity have become political issues. Note, for example, President Bush's veto of the Civil Rights Act of 1990 and the current efforts by John Sununu's to obstruct any agreement between business and civil rights leaders. Quotas are good politics even though they are bad policy. Witness the debate over diversity in the President's new education initiative. Witness Secretary
Lamar Alexander's challenge of the Middle States Association of Colleges and Schools on the grounds of its use of cultural diversity as one standard in evaluating colleges and universities.

The campus issues, quite obviously, go far beyond a liberal gown and a conservative town. The issue of multiculturalism pervades the campus itself. The consequences are having - and will have - profound, powerful, and far-reaching curricular implications. Few things are more central on a campus than what should be taught and by whom to whom. The fierce struggles now current on many campuses over canonical issues relating to curricular content and perspective are being reported widely in magazine and books. Duke University is almost as famous for its commitment and implementation of multiculturalism as it is for basketball! Allan Bloom's tract - The Closing of the American Mind - has been superseded by Dinesh D'Souza's book - Illiberal Education. The proponents of multiculturalism are now being challenged by the newly organized National Association of Scholars. A campus civil war is underway. Unfortunately, it appears to be a zero sum struggle. While the historic grip of white males on campus power needs to be challenged by all, especially be women and ethnic minorities, the challenge should not be between Shakespeare and Alice Walker.

FROM A NATIONAL TO A GLOBAL ECONOMY

According to Peter Drucker the 21st Century was born in 1973 when the OPEC nations transformed the economic status quo into a global economy. The economy, not political ideologies, is driving decisions on a worldwide basis. Global decisions are centered in New York, Tokyo, London, and Bonn - in the financial centers of the world, not in the political capitals. The remarkable events of Eastern Europe have economic, not political origins. In the 1970s the high-production, low-skilled national economy died. The Information Age or the Knowledge Society was born. The consequences of this transformation are not fully comprehended by the nation - not even on the campus. Although the campus has become a greater factor than ever before in shaping economic prosperity.
I want to emphasize here that the transformation from a national economy to a global economy is not the creation of a brave, new world. It is the destruction—in human terms—of a comfortable life style, especially for those millions of Americans whose livelihood was earned from the once powerful engines of high-volume production. The middle and lower-middle classes are shrinking. The affluent members of the high-quality, symbol-centered groups is in secession from the larger community. Incomes are becoming more divergent. Working conditions are changing for the better if you are on the winning side, and they are changing for the worse if you are on the losing side in this cataclysmic economic and social upheaval.

Because this is so important and so basic I need to belabor the point. I will illustrate the shift with two illustrations and then examine the educational implications. My first illustration is about three generations of Ford employees who, in their working lives composed an amazing story of success with a sad ending. The grandfather went to work for Ford at the age of 18 without any special training. He worked six days a week, had no paid vacations, no health insurance, and no job security, no retirement plan, no Social Security. He made $250 per year. If he could have saved all his earnings, in three years he would have earned enough to purchase one Model-T (black) that he helped to build.

His son at age 18 went to work for the Ford Motor Company without any special training. He and his fellow workers went through bitter times to win the recognition of the United Auto Workers which, in turn, succeeded in reducing the length of the work week, increasing the wages, and providing a modest paid vacation.

In time his son at age 18, without any special training, joined the UAW and went to work for the Ford Motor Company. In his working life he gained higher wages, shorter hours, sick leave, retirement benefits, Social Security, health insurance, job security. If he could have saved all his wages and his fringe benefits for one year, he could have purchased outright seven Ford Escorts!
There is no comparable story in history to equal the remarkable gains of this family in three generations. And they did it without any special training. But, the success ended. In the next generation (circa 1980), there was no job for the son. He went to a community college and learned to be a data entry clerk in the Computer Age at less money, with no union, no health insurance, no retirement. This is the downside of the transformation from a high-volume production economy to a service-oriented economy. For millions of people, the transformation has been painful, often tragic.

The zenith of the mass production era came in the 1950s. At its core stood about 500 major corporations which produced half of the nation's industrial output (about a quarter of the industrial output of the free world), owned roughly three-quarters of the nation's industrial assets, accounted for about 40 percent of the nation's corporate profits, and employed more than one out of eight of the nation's non-farm workers. General Motors, the biggest manufacturing company on earth, was single-handedly responsible for 3 percent of America's gross national product in 1955, equivalent to almost the entire GNP of Italy.

The 500 largest industrial firms have not added a single net new worker to their payrolls in a decade. In fact, the number of people on the payroll has shrunk. Their share of the civilian labor force dropped from 17 percent to 10 percent.

My second illustration also comes from the automobile industry. In 1920, more than 80 percent of the cost of an automobile went to pay routine laborers and investors. Neither was being paid for brains. By 1990, these groups received less than 60 percent of the cost of an automobile. The remainder went to people with highly specialized skills - designers, engineers, stylists, planners, strategists, financial specialists, lawyers, executive officers, advertisers, and marketers. The shift went to highly skilled people, not to factories. Some gained, some lost.

Assume that today you bought today a Pontiac Le Mans from General Motors for $20,000 plus taxes. Of the $20,000 paid to GM about $6,000 will go to South Korea for routine labor and
assembly operations, $3,500 to Japan for advanced components (engine, transaxles, and electronics), $1,500 to West Germany for styling and design engineering, $800 to Taiwan, Singapore, and Japan for small components, $500 to Britain for advertising and marketing services, and about $100 to Ireland and Barbados for data processing. The rest - less than $8,000 - goes to strategists in Detroit, lawyers and bankers in New York, lobbyists in Washington, D.C., insurance and health-care workers all over the country, and, finally, there is something for the shareholders who may or may not be American citizens. There are two conclusions to be drawn. First, brains, not unskilled labor, represent the costs. Second, the car you bought is a global venture. It was sold by an American firm. Its parts were imported thereby inflating the nation's trade deficit. So much for the "Buy American" slogan. If you want to "Buy American" buy a Honda Accord manufactured in this country by American workers. Fifty thousand American built Accords are annually being exported to Japan thereby reducing America's trade deficit.

I must make a quantum leap from a national economy paradigm to a global, high-value economy paradigm in order to illustrate the shift in education. By way of nomenclature, I must first briefly re-define the American workforce. According to Robert Reich, the workforce in the aftermath of the high-production paradigm, is coalescing by function into three major classifications: routine producers, in-person servers, and symbolic analysts.

Routine producers must have a fundamental education - be able to read and to perform simple computations. They must be reliable and loyal; they must be able to follow directions. Their fortunes are on the decline. Competition, especially from developing countries, is keen. They comprise about 25 percent of the workforce. Their future is not bright. Males have suffered the most.

The second classification is in-person servers. Most of these people perform simple, repetitive tasks. The big difference between the in-person server and the routine producer is that the services of the former are provided person-to-person. Unlike the routine producer, these people are not directly
impacted by the global economy. We cannot send our heads to Ireland to have our hair cut! Most of the people in this classification work for near minimum wages. In-person servers perform about 30 percent of the jobs, and their number is growing rapidly. Of the 2.98 million routine producers (manufacturing) who lost their jobs in the 1980s, one third were rehired in service jobs at 20 percent less pay. Most new entrants to the job market will be in the service sector, and they will be black or Hispanic men or women.

The third classification is the rising tide of symbolic-analytic servers. Their services are traded worldwide in competition with foreign providers at home and abroad. They trade the manipulation of symbols—data, words, oral and visual representations. Symbolic analysts identify, solve, and broker problems. They are engineers, public relations executives, investment bankers, lawyers, real estate developers, consultants of all types, planners, and systems analysts. They are art directors, journalists, musicians, film producers, and professors.

They rarely come into direct contact with the ultimate beneficiaries of their work. They work with associates or partners, not bosses or supervisors. Their careers are not linear or hierarchical. Teamwork is critical. The bulk of their time is spent conceptualizing the problem, devising a solution, and planning its execution. They account presently for about 20 percent of the American jobs—and are increasing rapidly.

IBM is a good illustration of the modern corporation which utilizes all three classifications but is dominated by the symbol analyst. IBM does not export many machines. Big Blue makes the machines and services them all over the globe. Its prime exports are symbolic and analytic in the form of brokering and redeveloping products. A few years ago 80 percent of the cost of computer operations was in hardware. Today 80 percent of the costs are in software.

One of the surprising factors is that with all the uncertainties which go hand-in-hand with symbolic-analytical work
these workers enjoy their work.

CURRICULAR IMPLICATIONS

What kind of curriculum fosters the growth of those skills which the symbolic-analyst needs? Remember that their stock-in-trade are problem identification, problem solving, and solution brokering of symbols. Four basic skills are essential: abstraction, systems thinking, experimentation, and collaboration.

Abstraction is the very essence of symbolic analysis. The vastness of reality is a series of masses, noises, colors, shapes, smells, and textures which are largely meaningless until the mind imposes some order to them. Order is achieved through equations, formulae, analogies, models, constructs, categories, taxonomies, and metaphors. The epitome of the process is discovering new ways to represent reality which are more revealing than the old ways. Teaching often imposes meaning; learning requires the construction of meaning by learners. The learner is taught to get behind the data, to seek new relationships through induction and deduction. The symbolic-analytic mind is taught to be skeptical, curious, and creative. In seeking causes, consequences, and relationships the whole becomes the focus, not the snapshots of the parts which are revealed through dates, isolated events, and people.

Systems thinking is emphasized. Instead of merely solving the problem which is presented, the student is taught to get behind the problem - how does it arise and how is it related/connected to other problems.

Experimentation is an essential extension of abstraction and systems thinking. The habits of experimentation are essential in a world of flux, where tastes, technologies, and markets are plastic and mutable. Experimentation has obvious benefits, but it also has subtle benefits. Experimentation as a process equips the learner to become independent and thereby to accept responsibility for his/her own learning.

Finally, collaboration requires teamwork which, in turn,
requires communication through oral and written means in reports, designs, memoranda, layouts, scripts, projections. Collaboration provides the consensus imperative in moving the plan forward. The focus is on group learning rather than competition. Learning to seek and to accept criticism from peers, to solicit help, and to give credit to others are logical outcomes.

These four basic skills makes it possible to carry learning forward from the collegiate setting to the workplace where learning comes from doing. In unison the process becomes one of networking.

AMERICA'S CHOICE

America has a clear choice - high skills or low wages. Low wages will not attract investments because even with low wages those wages will not compete with those in the developing nations. High skills and an adequate infrastructure attract investments. The return on human capital is rising relative to that on financial capital. The greatest danger in this complex, changing world is that the symbolic analysts whom we have been extolling are not generally applying their skills to the essential work of humanizing society, of building communities, of extending opportunity for others. They are quietly seceding from society and establishing homogeneous enclaves of privilege. They enhance their own lives while letting the unfortunate suffer. The politics of secession are not cordial. On the important national issues, the symbolic analysts are living detached lives without compassion or understanding of others who are less fortunate. What are those large issues which are being systematically ignored by those best prepared to solve them?

- The widening divergence of income,
- The growing differences in working conditions,
- The regressive shift of tax burdens,
- The difference in the quality of public education,
- The growing disparity in access to higher education, and
- The increasing difference in recreational facilities, in security, and in other local amenities

We cannot survive by becoming a nation divided - one rich
and affluent and the other poor and impoverished. Civic illiteracy must not be the consequence of an education which provides opportunity and growth in a global and competitive society and economy. For the symbolic analyst, sending his/her children to expensive private schools is not an acceptable answer. Improving the quality of education for all is not an ideal, it is the only practical solution. Altruism should not be sacrificed in order to provide a quality education for the best. The economy, even under ideal circumstances, is at best a means, not an end. The ends at best are expressed in human terms, especially when the results enlarge the human spirit.
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