

First Thoughts on Sustainability and Productivity

One of our assertions is that K-12 as traditionally arranged might not be sustainable economically even in the fairly near term; the rate of increase in costs running ahead of the rate at which it is possible politically to increase revenue. In preparation for Wingspread we've done some thinking in an effort to develop our understanding about this.

Several things push costs upward in this highly labor-intensive enterprise. The prices of things-bought rise: fuel for the buses, medical-hospital insurance, salaries for the staff, the construction and operation of facilities. Volume -- enrollment -- can grow. Costly new programs are sometimes added, as for special education or for equal extracurricular opportunities for girls. In many areas of the private economy new methods and efficiencies partly offset these increases, reducing what needs to be spent for goods and services. These productivity-improvements are less available in the public sector and in K-12 education. Boards and superintendents feel unable to resist the rise of salaries; wanting not to risk a strike they feel they cannot win. So the effort is always to 'solve' the budget crisis with an effort to raise revenue: at the district level, with the threat to close popular programs and at the state level with 'equity' efforts and 'adequacy' efforts in the legislatures and in the courts. When these efforts fall short the districts then reduce the service package in one way or another to fit the revenue available. (See Appendix) This deterioration performs roughly the function, in K-12 that productivity-gains perform in private business, reducing to some degree the rise in expenditure that would otherwise occur.

We have not yet found good data describing, on a national basis, these complex economics of public education. But the picture emerging is of an institution (a) hard pressed by its traditional labor-intensive technology and severely limited by the absence of any significant program for productivity-improvement, and (b) heavily constrained by the requirement to raise its revenues politically, made more difficult now by the growing competition for resources with medical/hospital services, energy and other private and public needs.

The service-deterioration is difficult to describe in concept and difficult to measure. We're hearing some persons assert that curricular and other offerings are 'narrowing' significantly; hearing others insist this is unproven. On the other side there are of course some changes that qualify as improvements: more days of school, more computers for the students. Clearly there can be reductions in quantity: fewer teachers relative to the student enrollment; fewer courses offered; the elimination of band or art and music or other programs. There can also be deterioration in quality: the deferred maintenance on buildings, a longer cycle in replacing texts or other materials,

and a decline in the quality of staff. Eric Hanushek thinks the visible lag of teacher salaries behind those for other occupations shows the districts reaching deeper into the talent pool for teachers; hiring those whose talents and experience let them command only lower prices for their work.

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In thinking about productivity we quickly encounter Professor Baumol's assertion that productivity is inherently impossible in labor-intensive service enterprises; so that their spending increases are bound to exceed the CPI. What is the concept of improving productivity, he famously asked, for a Beethoven string quartet: To drop the second violin as superfluous? For the musicians to play the quartet twice as fast? A common reaction is: That would be absurd; Baumol must be right. Yet this analysis does not feel quite true to common experience. And on reflection his assertion about the impossibility of productivity might be true only by virtue of the way it is stated.

It is stated in terms of the players; their number and their work as performers. What if we thought instead about the listeners and about their experience?

Then surely we would contrast the cost and quality of a trip to the concert hall -- the money-costs and time-costs of the drive and of the parking and of the tickets (one for each listener) to hear what might or might not be a world-class performance -- with the cost and quality of putting on a CD, which can play and replay a world-class performance for multiple listeners without additional charge, in one's own living room, with nothing spent for driving or for parking and quite possibly with no people rattling programs or talking in the next seat. Consider what it would cost to have had top-class musicians perform Mozart's piano concerto No. 21 for as many people as now listen to it in a year, recorded? It seems impossible not to regard the shift from live to recorded music as a productivity improvement *for the listener* . . . simultaneously improving quality and reducing cost. The option remains, of course, for those who prefer that experience, to go to the concert hall for a live performance.

Fascinating questions arise when we turn this analysis to education. Here, too, the traditional analysis has focused on the 'performer', has assumed the technology of teacher-instruction. And the essential Baumol questions arise. What would you have the teacher do: Skip every other chapter? Talk twice as fast? If instead we focused on the 'listener', if we thought about connecting the student directly with information through digital electronic technology, would that necessarily degrade the quality of the *learning* experience? Or might that disintermediation, the shift of work to the student, actually enhance it?

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E|E's Web site describes—generally approves, and advocates—
the quite radical changes now appearing in K-12 education. But, be
aware that its perspectives do depart somewhat from conventional thinking.