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Toward Market Education: Are Vouchers or Tax Credits the Better Path?

by Andrew J. Coulson

Executive Summary

Education markets have consistently done a better job than state monopolies of serving both our individual needs and our communal goals. Yet all market-inspired education reforms are not intrinsically or uniformly effective. They can succeed only to the extent that they support the conditions for a thriving education market and ensure that all families have access to that market.

How can we decide which proposals will best serve the public in the long term? The first step is to identify those conditions necessary and sufficient for an education market to work. That done, we can compare various proposals to see which successfully create those conditions and which do not.

This paper compares voucher and tax-credit programs on the basis of how well they manifest the necessary conditions for market education and the extent to which they allow all families to participate in that market. Based on the analysis below, tax credits are the better alternative. They are more effective at putting into place the freedoms and incentives necessary to the effective operation of the market, offer greater resistance to new regulation, decrease the risk of fraud and corruption, and avoid problems that might arise from state funding of religious schools. Despite those advantages, tax credits do have their own risks and weaknesses, which can make them difficult to implement in some states.

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Introduction

Efforts to bring good educational opportunities within reach of all families have been going on for thousands of years. Though some have been more effective than others, none have worked as well as we might like.[1]

State-run public schools are only the most recent attempt at providing universal access to education, and they have proven extremely problematic. Far from diminishing the opportunity gap between rich and poor, they have exacerbated it.[2] Despite 75 years of constant reforms to the system, and a 14-fold increase in inflation-adjusted per-pupil spending,[3] literacy levels have stagnated or declined.[4] The most recent International Adult Literacy Survey found roughly a quarter of young Americans to be functionally illiterate; that is, they are unable to perform such crucial tasks as reading bus schedules, drafting resumes, or completing job applications.[5] This illiteracy, moreover, is concentrated among the poor and disenfranchised citizens whom public schooling was purportedly meant to help.[6]

Market systems have typically done a better job of serving low-income families, but the level of financial assistance available under those systems has generally been both limited and irregular. Modern tuition voucher and tax-credit plans attempt to remedy those deficiencies by combining the desirable qualities of market education with carefully designed financial assistance.

Vouchers and tax credits come in many forms. The specific plans considered in this paper are:

- Targeted vouchers
- Universal vouchers
- Education tax credits

Under voucher programs, parents are allocated a certain amount of state education funding that they can use at a state-approved school, public or private. Conditions for approval can include things such as admissions policies that do not favor any racial or ethnic group and the absence of any devotional religious instruction within the required curriculum. A variety of other restrictions have been proposed or implemented, such as the exclusion of profit-making schools, the exclusion of religious schools, and the requirement that the voucher be accepted as full payment of tuition by participating schools.

Apart from the restrictions imposed on schools, the main feature distinguishing one voucher program from the next is its eligibility criteria. The two most common variations are targeted vouchers and universal vouchers.

Targeted vouchers are typically allocated on the basis of financial, educational, or geographic need. In the case of financial need, families are deemed eligible to receive vouchers if their income is below a formula based on an official poverty-line figure. Under Milwaukee's voucher program, for instance, students qualify for a voucher only if their family income is no more than 1.75 times the poverty level. Another approach to targeted vouchers is to offer them to families whose public schools are deemed to be failing—an approach taken by Florida's A+ Plan for Education. Under this plan, the state grades public schools on a traditional A–F scale based on standardized test scores. Students qualify for vouchers if the school they attend earns a grade of F for any two years in a four-year-period.[7] A third approach to targeted vouchers is to offer them to families who live in districts without public schools. Maine and Vermont have long-standing, statewide voucher programs of this kind.[8]

Unlike targeted vouchers, universal vouchers are given to all families with school-age children, without regard to income, the quality of local public schools, or location. No universal voucher program currently exists in the United States.[9]

The tax-credit proposal under consideration in this paper is a nonrefundable, education credit composed of two parts.[10] The first part is a parental-choice credit for taxpayers with dependent school-age children.[11] Only taxpayers whose dependent children were not enrolled in public schools would be eligible for the credit.[12] The credit size would be based on the average cost of education for a child of a given age, perhaps 75 to 100 percent of the average tuition charged by private elementary or secondary schools in the given state, up to some per-family cap.[13] An income limit could also be imposed, in order to target the credit at families who truly need it, and to keep state involvement to the bare minimum.[14] Since the credit is nonrefundable, it would benefit only those families with a state tax liability. Families with little or no income, and hence little or no state tax liability, would be provided for through the credit's second component—a scholarship credit.

The scholarship component would allow businesses and individuals to write off donations made to scholarship-granting organizations on a dollar-for-dollar basis, up to some preset limit. The maximum size of the scholarship credit could be set at the larger of a fixed dollar amount or a percentage (say, 30 percent) of the taxpayer's total tax liability. The scholarship-granting organizations would then use these donations to provide tuition assistance to low-income families. In order to qualify, scholarship granters would have to demonstrate that some minimum percentage of the donations they received were actually spent on tuition scholarships for low-income families.

Arizona legislators passed a modest $500 scholarship tax credit in 1997.[15] Despite being tied up in court until late 1999,[16] the credit caused the number of scholarship-granting organizations in the state to grow from 2 to 34 in its first two years of existence. Even while the court challenge was still going on, 30,000 taxpayers used the credit prior to the 1999–2000 school year, raising $13.7 million for distribution as tuition scholarships. With the credit now on firm legal ground, those figures will most likely continue to rise, though the $500 cap on the credit size will inhibit their growth. Even with the cap, court documents suggest the program could generate $75 million for scholarships annually.[17]

Note that all of these programs operate at the state level. There are both constitutional and practical reasons for this. Neither the word *school* nor the word *education* appears in the Constitution of the United States, and responsibility over these matters therefore legally rests in the hands of the states and the people, in accordance with the 10th Amendment. Aside from the constitutional argument, there is an obvious wisdom in introducing a variety of school reforms in different states, so that their pros and cons can be more easily weighed than if the entire nation adopted a single plan.

This paper compares the voucher and tax-credit programs outlined above on the basis of how well they manifest the necessary conditions for market education (outlined below), and the extent to which they allow all families to participate in that market.

Regrettably, most work in the economics of education has dealt with the public sector monopoly, or with higher education. The operation of free education markets has received little attention from scholars, particularly at the elementary and secondary levels of schooling.[18] In the absence of an established consensus on the subject, I draw on the findings of my own research.[19] Based on modern and historical precedents, the conditions necessary for the effective operation of an education market are:

- Parental choice
- Direct parental financial responsibility
- Freedom for educators
- Competition among educators
- The profit motive for educators
- Universal access

The conditions necessary for the effective operation of an education market are parental choice, direct parental financial responsibility, freedom for educators, competition among educators, the profit motive for educators, and universal access.

I. Parental Choice

The need for parental choice in education is based on two pragmatic considerations. First, parents have consistently made better educational choices for their own children than state-appointed experts have made on their behalf. One can argue as to why this has been the case, but the evidence that it has in fact been the case is unambiguous.[20]

Consider, for example, the succession of misguided pedagogical fads imposed on U.S. public schools by putative experts. The sidelining or outright elimination of structured phonics from early reading instruction is a case in point. Horace Mann himself, godfather of U.S. public schooling, advocated dispensing with the teaching of letter/sound and syllable/sound relationships, as he made clear in his annual report of 1843,[21] and in a subsequent heated exchange with the leading schoolmasters of Boston.[22] Though Mann's efforts to marginalize structured phonics lessons were short lived, they were rekindled more successfully in the early 1920s,[23] and flourished throughout the second half of the 20th century. In 1987, California adopted a language instruction curriculum that included not a single structured, empirically tested phonics program, despite the wealth of evidence showing the effectiveness and importance of such programs. Though the then–Superintendent of Public Instruction, Bill Honig, eventually apologized for this failure in judgment, it was a grassroots movement led by parents and grandparents that finally achieved the reintroduction of tested and proven phonics lessons.[24]

Although the parental-choice credit would offer somewhat more resistance to regulatory encroachment than other policies, no system of financial assistance will be totally immune.

Second, parental choice in education is key to harmonious social relations. The fear that educational freedom would balkanize the public into warring factions is not only mistaken, it is exactly backward. Historically, it has been coercion, not diversity and choice, which has lead to social conflicts over schooling. When heterogeneous populations have been forced to pay for and/or attend a single official school system, it has inevitably led to a fierce contention to control the content of that schooling. Choice in education, much like choice in religion, has allowed diverse groups to coexist far more peacefully.[25] The record of state-run schooling is far grimmer, and the case of the United States is typical. Since its inception, U.S. public schooling has been a battle zone, as left-wing and right-wing activists have sought to wrest control of the system and bend it to their will. Public schools have, in the past, practiced racial apartheid and forced sectarian religious practices on students, both with the approval of the courts. In the process, they have fomented anger and dissension among parents, trampled on the rights of countless families, caused riots and book-burnings, and generally upset the communities they are meant to serve.[26]

Parental Choice under Tax Credits

The parental-choice credit has the potential to allow parents an unfettered choice of educational options. Since the only eligibility requirement for the credit would be that the dependent child is not enrolled in public school, both home schooling and independent school expenses would qualify.

It is likely, however, that attempts would be made to attach strings to the credit, curtailing parents' choices. No system of financial assistance will be totally immune to such regulatory encroachment, but the parental-choice credit would offer somewhat more resistance to that encroachment than other policies. One defense against creeping regulation would be that the credit is fundamentally similar to the federal income tax exemption for dependents, which has no eligibility requirements. The parental-choice credit, like the federal exemption for dependents, would be meant to make it financially less burdensome for taxpayers to discharge their duties as parents or guardians.

Since the parental-choice credit does not constitute "public money," regulations and restrictions governing state spending do not apply. In fact, the Arizona Supreme Court accepted that argument when it rejected a legal challenge (*Kotterman v. Killian*) to that state's $500 education tax-credit program.[27] The U.S. Supreme Court did not take issue with the Arizona Court's reasoning, refusing to hear an appeal of its decision. The same argument was accepted in two separate Illinois Circuit Court rulings regarding that state's 1999 education tax-credit law.[28] Since parents would not be receiving state funds under the parental-choice credit (they would be keeping more of the money they have earned), no restrictions would be needed on their educational decisions. The problem of delinquent or abusive parents would be handled by existing or new laws targeted at these exceptional cases, rather than at all parents. This would be consistent with current practice: We do not have laws stipulating what parents must feed their children, or how exactly they must care for their children, but we do have laws to protect children from parents delinquent in these duties.

The scholarship credit, though also potentially susceptible to regulatory encroachment, nevertheless offers low-income parents more freedom and control than any alternative assistance mechanism. Because the scholarships disbursed under this credit would be privately funded, parents would be somewhat more insulated from direct regulation of their educational decisions by the state than if they were receiving "public money." Scholarship-granting organizations would have to follow state guidelines to be eligible to accept donations, however.

In the past, poor parents have tended to lose freedom and control over their children's education whenever they have accepted "free" or subsidized educational services. Typically, the government or private organization footing the bill for their children's education has eventually dictated what their children would be taught. This was the case among pauper schools run by the Anglican Church in 19th century England, and among schools funded by whites for the benefit of recently emancipated African Americans after the civil war.[29] The scholarship credit mitigates that problem by fostering a network of separate and competing scholarship-granting organizations. If one organization forbade participation by a certain kind of school, or pushed parents into choosing certain schools, parents would be able to turn to other organizations that did not impose such pressures or restrictions.

Parental Choice under Vouchers

One of the most significant differences between tax-credit and voucher programs is that vouchers unarguably constitute state spending. As a result, efforts to impose a significant regulatory burden on the use of vouchers are more aggressive and have greater prospects for success. This regulatory accumulation will lead to a circumscription of the choices available to families.

From the standpoint of preserving parental choice, the Milwaukee voucher program for low-income families has thus far been reasonably successful. Though parents were initially forbidden to choose religious schools under the plan, that restriction was eventually dropped by the legislature. The expansion of the program to include religious schools was immediately challenged in court, however, by a group including the Milwaukee Teachers' Education Association (an NEA affiliate) and People for the American Way. In its June 1998 *Jackson v. Benson* decision, the Wisconsin Supreme Court rejected that challenge, allowing students to continue attending religious schools.[30]

Florida's Opportunity Scholarships voucher program, which is available to children whose public schools are deemed by the state to be failing, is somewhat more restrictive. In order to participate in the program, oversubscribed private schools must admit children based on a random lottery—bypassing a school's normal admissions process. Restricting the freedom of educators to tailor their services to students with particular needs or goals will stifle specialization, diminishing the variety of educational choices open to families. Participating schools must also administer mandatory state tests. Though testing is valuable to parents, the imposition of a particular set of official tests by the state has historically been associated with a host of problems.[31]

The problem of restricted parental choices under voucher plans cannot be properly assessed, however, by limiting our consideration to currently operating programs. When fully tax-funded state-run schooling was first introduced in the United States in the mid- to late-19th century, the rules imposed on public schools were relatively few and simple.

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Since that time, state education codes have grown with unrelenting vigor to their present exaggerated proportions. The U.S. experience with state-funded schooling has not been exceptional. In all cases, over the entire 2,500-year history of formal education, state funding of children's education has eventually been followed by pervasive state control over the schools.[32] This pattern has held true from the 11th century Islamic empire to the modern Netherlands.

In the face of this remarkably uniform case history, there is every reason to expect that vouchers will precipitate a similar problem, with each successive administration adding a few of its own clicks to the regulatory ratchet.

One specific cause for concern is the risk that families will be prohibited from choosing religious schools under voucher programs. While the Milwaukee program's inclusion of religious schools has been upheld, the legal reasoning used by the Wisconsin Supreme Court was questionable. In essence, the court sidestepped the Wisconsin Constitution's proscription against compelling taxpayers to support religious institutions.[33] Similar clauses, called "Blaine Amendments" after their 19th century proponent, exist in roughly half the states, and some states will likely interpret those clauses to prohibit voucher redemption by religious schools.

One possible solution to this weakness in voucher programs would be to give citizens the option of earmarking their education taxes exclusively for secular schooling. The state would then maintain two voucher–funding accounts, one that could disburse vouchers to parents who chose religious schools, and one that could not. Citizens opposed to religious voucher-redeeming schools would have their education taxes deposited into the secular-only voucher account, while everyone else would have their education taxes deposited into the unrestricted account. This "taxpayer choice" approach would prevent the compelled support of religious institutions that is prohibited by Blaine Amendments, thereby eliminating the legal hurdle that many state constitutions currently place in the way of voucher laws. No such taxpayer choice clause has been included in a voucher bill to date, however, and without it, voucher programs are certainly susceptible to attack on state constitutional grounds, where Blaine Amendments are present.

II. Direct Financial Responsibility for Parents

Given the great importance of parental choice, it is crucial to understand the conditions required for its preservation. Chief among those conditions is direct financial responsibility for parents. Historically, schools funded by third parties have seldom taken the needs or preferences of families as their guiding principle. Many have ignored those needs completely, preferring to deliver the sort of education favored by whoever was footing the bill.

During the mid 19th-century, English schools subsidized by religious societies were prone to teaching reading but not writing to poor children. The official reasoning behind this policy was that "reading will help to mend people's morals, but writing is not necessary."[34] Put bluntly, middle- and upper-class donors wanted poor children to become useful and God-fearing members of society, but not to be capable of challenging the political and class system that kept them at the bottom of the socio-economic ladder.

A similar disregard for the needs and preferences of poor families was exhibited by many of the schools set up for African American children by white philanthropists following emancipation. These schools often stressed manual labor rather than academic or white-collar job skills, because that is the sort of work for which many white philanthropists felt blacks were best suited. Organizations such as Georgia's Black Educational Association concluded at the time that the only reliable way for African American parents to retain control over their children's education was for them to own and fund the schools themselves.[35]

A second crucial reason for parents to pay directly for their own children's education is the beneficial effect this has on parental involvement in and expectations for that education. As with any "free" service, "free" schools engender lower expectations and less involvement than schools for which parents have to regularly pay tuition. This observation has been made throughout history, from the first-century Roman Empire,[36] to 19th-century Canada,[37] and it is borne out in contemporary U.S. statistics.[38] The responsibility for directly paying all or even part of their children's tuition forces parents to take a more active role, and gives them considerably more power over the content and direction of their children's instruction.

In addition, when parents pay directly for their children's education, they drive schools to improve and become more efficient. Schools funded by parents have only a few options if they wish to increase their net income: offer better or more comprehensive services (for which they can charge higher fees), offer quality services at competitive prices (thus allowing them to attract more clients), or lower their operating costs (thereby realizing more net income from the same amount of revenue). In all of these cases, schools must become more effective, more efficient, or both if they wish to improve their bottom line. This is categorically not the case under third-party payment systems.

When some outside agency, the state, for example, pays for a child's education, schools turn to the state in their efforts to raise their income. Instead of lobbying their clients by offering better or more cost-effective services, they lobby legislators to simply increase state spending. The results are plain: inflation-adjusted per-pupil spending by public schools is 14 times higher today than it was 75 years ago, but achievement has either stagnated or declined over the same period.[39] Parents can be assured that schools will focus on meeting their needs and demands only when they pay directly for their children's education.

Fraud is another problem that is minimized when parents pay tuition directly. All third-party payment schemes are susceptible to kickbacks, and to the creation of "phantom beneficiaries." Attempts to control these problems through the use of technology or heavy regulation have not been successful. A trial "smart-card" approach to the federal food stamp program in Texas was subverted into a kickback mechanism within a matter of weeks, and there are numerous cases of heavily regulated public school officials and districts inflating the size of their enrollments to illegally draw more public funds.[40]

Financial Responsibility under Tax Credits

By increasing the number of families who can afford to pay for their own children's education, the parental-choice credit would help spread all the benefits of direct financial responsibility described above. Among lower-income families it may be impossible to completely preserve financial responsibility, since they are likely to require some form of assistance. Nevertheless, the private scholarships encouraged by the scholarship credit have several advantages over other financial assistance programs.

In most cases, institutions granting private scholarships require recipients to make tuition co-payments or to commit some of their time, on a regular basis, to helping out at their children's schools. Both of these requirements help to enfranchise parents, giving them a personal stake in their children's education that is lacking under entirely tax-funded "free" schooling.[41] The problem of schools focusing on whoever is paying the tuition, rather than on the families they serve, is also mitigated by this plan. While schools are likely to lobby scholarship-granting organizations to arbitrarily raise the size of their scholarships, their chances of success will be far lower than they would be under state-funded vouchers. The key reason for this difference is the multiplicity of scholarship-granting institutions that would exist under this plan, compared to the single state authority under voucher plans. Instead of having to lobby only one agency to

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increase spending, schools would have to lobby every institution distributing scholarships. Similarly, no single scholarship-granting organization could unilaterally increase the size of its scholarships out of proportion with the others, or taxpayers might choose to donate their money elsewhere.

Another benefit of local private scholarship-granting organizations is that they enjoy both a greater facility and a greater incentive to avoid fraud than the monolithic and impersonal state-run alternative. They meet with and know recipients personally, making fraud more difficult. They also risk going out of business if they are found to be defrauded or to be committing fraud themselves, because other organizations are capable of taking their place.

Financial Responsibility under Vouchers

Education systems funded by individual third-parties, particularly state agencies, have a long and consistent history: they eventually lead to pervasive state control over, if not outright operation of, schools by the state. The only cases in which this trend has been mitigated have pertained to the education of young adults at the college level (e.g., the G.I. Bill). This looming threat is one of the most significant drawbacks of voucher programs.

Universal vouchers would also eliminate direct financial responsibility for all parents—a tremendous deterrent to parental involvement, as noted above. Means-testing of vouchers limits the scope of this problem, but in the absence of a program such as the parental-choice credit, means-tested vouchers would do little to increase the number of families able to pay for their own children's education. Government vouchers, furthermore, would not enjoy the advantages of interpersonal contact exhibited by private scholarship programs. They would also be significantly more susceptible to fraud and corruption than non-refundable tax-credit programs.

Under voucher programs, the schools' main avenue for increasing income would be to boost the size of the government voucher. This would lead private school lobbyists to swell the existing ranks of teachers' union lobbyists in calling for ever-higher government education spending. Schools that redeem vouchers would be able to squeeze higher funding levels from taxpayers without demonstrating better services or greater efficiency, as public schools have done for the last three-quarters of a century.

III. Freedom for Educators

Just as parents need to be free to choose their children's schools, educators need to be free to exercise their professional judgment. They must be able to cater to specific audiences, to innovate, to leverage their unique talents, and to pursue missions and philosophies of their own choosing. The absence of these freedoms leads to frustration and low morale among teachers, to inefficiency, and to pedagogical stagnation. The advantages in these areas enjoyed by educators in private practice over their colleagues in the public sector are well-documented.[42]

Educator Freedom under Tax Credits

Both the parental-choice and scholarship credits offer the possibility of keeping the regulation of educators to a minimum. Nevertheless, they are not foolproof. As already noted, opponents of Arizona's education donation tax-credit fought it all the way to that state's Supreme Court, and appealed (without success) to the U.S. Supreme Court. In Minnesota, Reps. Betty Folliard and Mindy Greiling introduced a bill to the state legislature in 1999 that would have imposed all public school admissions restrictions on any independent school enrolling even one student whose parents claimed a state education tax credit.[43] Though the specific motivation behind the Folliard/Greiling bill is not entirely clear, such measures are sometimes advocated on the grounds that it is unfair (to the state education monopoly) to ease the tax burden on parents of independent school children unless independent schools are subjected to the same crippling regulations that apply to state schools. But that argument roundly misses the point that education systems exist to serve families, and not the other way around. While their bill was not enacted, efforts to pass similar legislation will no doubt continue.

Despite these threats, state court precedents in Arizona, Minnesota,[44] and Illinois[45] demonstrate that tax-credit programs have an edge over direct state funding of education when it comes to protecting families and educators from regulatory proliferation. The record for voucher cases, particularly challenges based on individual state Blaine Amendments, is more worrisome. For while the U.S. Supreme Court allowed a lower court decision upholding the Milwaukee voucher program to stand (by refusing to hear an appeal), it also upheld a Vermont Supreme Court ruling that prohibited religious schools from participating in the state's voucher-like "tuitioning" program—thus forbidding parents from choosing religious schools.

Educator Freedom under Vouchers

Because voucher-redeeming schools receive public money directly, they are far more susceptible to suffocation by regulation. Though supporters of the Milwaukee voucher program have successfully fought off most legislative and court challenges thus far, pressure to subvert the program in one way or another has not abated in the 10 years since it was first introduced. In the fall of 2000, the program's advocates, led by professor Howard Fuller, had to threaten state education officials with court action before those officials relented in an administrative attack they had launched on schools participating in the program.[46]

As already noted, direct state funding of children's education has consistently been followed by pervasive state control over or operation of schools. Rearguard actions by voucher proponents can delay that outcome, but it seems unlikely that they can do so indefinitely. Citizen groups who object to their taxes being used to subsidize certain forms of education will lobby for regulations barring voucher-redeeming schools from engaging in them.[47] Proponents of mandatory state testing will insist that all voucher-redeeming schools participate in their programs. Associations of existing voucher-redeeming schools are likely to lobby for the erection of barriers against the entry of new competing schools.[48] Opponents of parental choice, competition, and educational diversity will seek to saddle voucher programs with a panoply of debilitating regulations, in an attempt to impede their effectiveness and thereby justify their discontinuation. These activities will mimic the regulatory ratchet effect that transformed early common school systems from thin, local, lightly regulated agencies into the bloated, centralized, bureaucratic empires they are today.

Note again that all of these forces will also be in play under tax-credit programs, but the parental-choice and scholarship credits offer an added margin of insulation from them because they do not use public money. Without the lever of public funding, arguments for subjecting the professional freedom of educators and the discretion of parents to minute state regulation are clearly weaker.

IV. Competition among Educators

In order for education markets to function properly, there must be a critical mass of service providers actively competing with one another to attract students. Two important factors are the total number of providers and the average number of providers competing to serve each individual student. A higher total number of providers increases the rate of innovation, leading to the creation of more and better methods and materials. Equally if not more important is having the maximum number of providers competing for the patronage of each student. The larger the number of competing providers families can choose from, the harder each provider must work to attract their patronage.

Historically, vigorous competition in edu-

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cation markets has been overwhelmingly concentrated in centers of high population density, simply because face-to-face instruction was the only viable medium for providing mass formal education.[49] Because the education of young children has a significant custodial component, face-to-face instruction will remain important for that age group. For older students, computer technology has dramatically broadened the field for competition, placing an enormous and ever-growing range of service providers within reach of anyone with Internet access.

The benefits of vigorous competition are numerous. Historically, competition has forced educators to focus on the avowed needs of families, kept prices down, spurred the adoption and dissemination of the most effective methods, and generated information about the pros and cons of different service providers. All of these advantages can be seen in market education systems as far back as Athens in the 5th century BCE.[50] In the absence of competition, school systems have tended to ignore or marginalize parents, increase spending without demonstrating improved services, and adopt pedagogical methods and materials without concern for their effectiveness.

Competition under Tax Credits

Both the parental-choice and scholarship credits would be statewide, and could raise demand to a level where many physical schools would be available in most areas, competing to serve students. The credits (particularly the parental-choice credit) would also make home schooling more affordable, accelerating demand for and hence the supply of on-line education services.

To the extent that scholarship-granting organizations placed restrictions on participating schools (pertaining to their curriculum, religiosity, or other characteristics), competition would be inhibited, because the competitors would have fewer ways to differentiate their services. Fortunately, the multiplicity of scholarship-granting organizations that would exist under the credit would prevent the restrictions imposed by any one organization from completely excluding various categories of providers from the market.

Government regulation of scholarship-granting organizations could also indirectly limit the variety of participating schools, thereby inhibiting competition. The effect of such regulations on the schools themselves would probably be less under tax credits, however, than if schools accepted public funds and were directly regulated by the state.

Competition under Vouchers

The ability of voucher programs to foster vigorous competition depends on their design. In its current form, the Milwaukee program caps participation at 15,000 students distributed over a large metropolitan area. This figure is small both in absolute terms and in terms of the concentration of nearby choices available to eligible families. As a result, competition is more limited than would be the case if the cap were eliminated and the program expanded to the entire state. Milwaukee's program is also means-tested, so even if it were expanded statewide, its ability to promote the creation of new competitors would be limited by the ineligibility of much of the student population. This is not to say that means-testing is necessarily inappropriate, but only that it has a negative effect on the level of competition engendered by the program. Since home schoolers cannot participate in the program, its benefits to competition in the on-line education and educational materials markets will also be somewhat circumscribed.

The design of Florida's Opportunity Scholarships program currently produces even lower participation rates and lower provider density. By limiting eligibility to students in "failing" schools across the entire state, the program does not ensure a critical minimum level of competition in any location. While the design of the Opportunity Scholarships Plan was politically astute and almost certainly advantageous in enabling its passage, the limits on eligibility will have a negative impact on its ability to promote competition between independent service providers, and hence on its overall success.

It is noteworthy that the specter of being classified as a failing school now looms large in the minds of public school educators, and has encouraged them to expand or change their services. Still, the level of improvement to be expected within the confines of the state education system is modest when compared with the benefits of a truly free and competitive education market.

Most of the limitations described above could be overcome through amendments to the enabling statutes of the voucher programs, but some are likely to be persistent. Including home schoolers in voucher programs, for example, is fraught with difficulty. Critics would insist on strict regulation of participating home schoolers, but they are well known for their resistance to such regulation. It is unlikely that any voucher law including them could pass muster with both its critics and home schoolers themselves. The ineligibility of this group would of course have a negative effect on competition, by discouraging the entry of a large category of possible service-providers: namely, parents themselves.

V. The Profit Motive for Educators

The four factors thus far described: choice and financial responsibility for parents, and freedom and competition for schools, are enough to prevent the worst educational abuses, but they are not enough to promote educational excellence on a long-term, widespread basis. For that, it is necessary to introduce the incentive of profit making.

The widespread absence of the profit motive from the field of education has had a dramatic stultifying effect. First, it has all but eliminated the incentive structure needed to overcome the risks of expansion, causing even the most popular nonprofit private schools to accumulate waiting lists of students instead of expanding to meet growing demand. This consistent failure to grow in response to pent up demand is unheard of in the for-profit sector, whether in education or in other fields. From Barnes and Noble to Starbucks, leading service providers and retailers invariably open new locations wherever and whenever a clear market for their products and services exists. The same is true in the for-profit education sector. Japan's Kumon network of tutoring schools currently enrolls over 1,700,000 students in that nation alone, and operates at 1,300 locations in the United States and Canada and another 273 in the United Kingdom. U.S.-based Sylvan Learning Systems, another for-profit supplemental education provider, operates 780 learning centers in the United States. This rapid and effective dissemination of popular educational services is unheard of in the private nonprofit (and of course the public) sector.

A second problem with the absence of the profit motive in education is that it discourages effective, results-oriented research and development. Consider the following innovations: radios, televisions, VCRs, and cell phones. What these and most other innovations have in common is that they began as expensive luxuries and became consumer goods affordable to the average citizen. Just as the first high-definition digital televisions will be priced beyond the means of the average family, so too were the first color televisions before them, and the first black-and-white televisions before them. And yet, by 1970, 95.3 percent of U.S. households could afford, and did in fact own, a television set. VCRs went from being a pricey plaything of the wealthy in 1970 (in only 1.1 percent of U.S. households) to being in four out of every five homes in America by 1994. Cellular telephones, which were initially sold for hundreds, sometimes thousands, of dollars, are now being given away free, with users required only to pay monthly service charges.[51]

The dissemination process for innovations hinges on the ability of innovators to recoup high research and development costs with high initial prices. Competition then drives prices down. What spurs this entire process on is the prospect of earning profits.

The widespread absence of the profit motive from the field of education has had a dramatic stultifying effect.

As economists Nathan Rosenberg and L.E. Birdzell have written,

> The success of Western economies in assimilating Western technology is not a consequence of unregulated markets alone but of markets in which there are productive firms that can gain much by commercializing new ideas more quickly than their rivals can.[52]

Limiting the scope of for-profit education therefore denies to children the benefits of effective, results-oriented innovation.[53]

A properly drafted scholarship credit could raise enough funding to meet the needs of all low-income families in a given state.

The Profit Motive under Tax Credits

There is nothing in the design of the parental-choice or scholarship credits that would interfere with education entrepreneurs making profits. While the scholarship clearinghouses would themselves be nonprofit, there is no reason that this requirement would have to extend to the schools.

The Profit Motive under Vouchers

Vouchers, too, can allow for-profit education service providers to flourish. Nevertheless, it is likely that under both tax credits and vouchers there will be attempts to exclude profit-making schools, either by opponents of for-profit education, such as the teachers' unions, or by associations of nonprofit schools seeking to erect barriers to the spread of for-profit competitors. The likelihood that such efforts will succeed depends on the resistance of the programs to regulation, and tax credits seem to have the advantage in that respect.

VI. Universal Access to Good Schools

Based on the preceding discussion, education tax credits have a significant advantage over vouchers in their capacity to promote direct financial responsibility for parents, one of the most crucial ingredients in effective education markets. Tax credits also have a moderate advantage over vouchers in their capacity to foster the other requirements for successful education markets, thanks to their greater resistance to regulatory encroachment. Church/state entanglement and corruption problems are also minimized under tax-credit programs. What remains to be determined is how effective vouchers and tax credits will be at providing all families with access to the educational marketplaces they create.

Universal Access under Tax Credits

There is little question that a properly drafted scholarship credit could raise enough funding to meet the needs of all low-income families in a given state, assuming that the state has a tax structure that makes credits possible. Independent schools are considerably less expensive than government schools (they cost half as much, on average) and the scholarship credit would have to raise only enough money to subsidize the independent education of families below a predetermined income cutoff. Consider that K-12 education currently makes up roughly half of the average state's total budget, roughly one fifth of families might qualify for scholarships based on financial need, and the size of the scholarships would be valued at something like one half of current per-pupil public spending. This means that the scholarship credit would have to raise the equivalent of only 5 percent of a state's current budget in order to serve all eligible families.

The issue of middle-income families is more complex. While the parental-choice credit could be set at a maximum level that would cover most or all of the average independent school tuition, the average family's state tax burden might not reach that level. This problem is exacerbated by the fact that much of the current taxation for education comes from local property taxes, particularly in states with no income tax, making it more difficult for parents to be credited against their combined state and local tax liability.

While resolving the state vs. local tax issue would not be an easy task in many states, middle-income families will enjoy some indirect benefit from the scholarship credit, in addition to whatever credit they enjoy under the parental-choice credit. This indirect benefit stems from the fact that participation in the scholarship credit will result in reduced state education spending, because of the greater efficiency of independent versus government-run schools. As additional eligible families obtain scholarships under the scholarship credit, there will be fewer students for the public school system to educate, and hence its budget can be reduced accordingly.[54] Since only low-income families will qualify for scholarships under the scholarship credit, only a small percentage of them will have children already enrolled in private schools before the start of the program. The majority of those recipients will be moving from the public sector to the private sector.

To recap, families at the lowest end of the income distribution should be well provided for by the credit, but careful planning will be required to ensure that lower-middle-income and middle-income families also benefit appropriately from the combined effect of the two tax-credit programs.

Universal Access under Vouchers

Vouchers, by their very nature, easily allow sufficient funding to be provided to eligible families. Under universal vouchers, since all families would be equally provided for, the universality of access issue is completely taken care of. With targeted vouchers based on family income, the situation is more problematic. Families who earn modestly more than the income cutoff would receive no funding under targeted voucher programs, and thus could have significant difficulty in affording independent school tuition for their children. Though the parental-choice credit is also imperfect in providing for these families, it does at least offer some financial relief, whereas targeted voucher programs do not.

Conclusion

Not all market-inspired education reforms are intrinsically or uniformly effective. They can succeed only to the extent that they support the conditions for a thriving education market and ensure that all families have access to that market. Based on a comparative international and historical study of education markets, the conditions for their success are: choice and direct financial responsibility for parents; and freedom, competition, and the profit motive for educators. When evaluated on these criteria, education tax credits represent the most promising policy option.

The single most important difference between education credits and vouchers is that tax credits do a better job of preserving direct parental financial responsibility. Parents who benefit from tax credits against their own children's educational expenses are still directly paying for those expenses, and so are encouraged to be more involved in and more demanding of their children's education. Parents who have not paid for their children's education have historically been marginalized and disenfranchised, but private scholarship programs offer a way of minimizing these problems, thanks to their use of copayments, parental time commitments, and their local, personalized character.

The second most significant advantage of tax-credit programs is that they avoid use of public money. Since all the money involved in these programs is privately and voluntarily spent, issues of church-state entanglement and necessary public oversight of public spending are rendered moot. Because of the greater resistance to regulation that follows from the absence of state funding under tax-credit programs, those programs do a better job of protecting all the criteria for effective markets from regulatory encroachment.

An effective education market is, of course, of limited benefit if the neediest families are denied access to it. Fortunately, both voucher and tax-credit programs offer the prospect of ensuring universal access to good schools. Universal voucher programs would do the best job of guaranteeing funding to all families who need it, but they dramatically increase the likelihood of government intervention in voucher-redeeming schools, undermining the essential requirements of market education

Participation in the scholarship credit will result in reduced state education spending, because of the greater efficiency of independent versus government-run schools.

The single most important difference between education tax credits and vouchers is that tax credits do a better job of preserving direct parental financial responsibility.

systems. After nearly 150 years of experience with fully tax-funded state schools, we should realize that generous spending levels are no guarantee of quality educational services. Targeted voucher programs would provide funding to the poorest families, but would leave middle- and lower-middle-income families with a strong financial disincentive to choose private schools. A program combining the parental-choice and scholarship tax-credits addresses the needs of all families, and though its implementation may be problematic in some states because of their tax codes, it is far more conducive to the effective operation of market forces.

In short, there has yet to be devised a system of financial assistance that perfectly fulfills the goal of universal access while also meshing flawlessly with the effective operation of a free education market. Nevertheless, education tax credits appear on the balance of evidence to offer the best hope for bringing educational excellence within reach of all families.

Notes

1. This conclusion, and the historical and international evidence on which it is based, is presented in Andrew J. Coulson, *Market Education: The Unknown History* (New Brunswick, N.J.: Transaction Books, 1999).

2. The achievement disparities between rich and poor students and between minority and white students are smaller in the private sector than they are in the public sector. See, for instance, Anthony Bryk, Valerie Lee, and Peter Holland, *Catholic Schools and the Common Good* (Cambridge, Mass.: Harvard University Press, 1993), pp. 246–247. Recent results from randomized experiments with private school vouchers reveal the same thing. See, for instance, Jay P. Greene, "Low-income students make academic gains," *Charlotte Observer,* September 22, 2000.

3. Coulson, *Market Education,* pp. 202–204.

4. Coulson, Market Education, pp. 178–191.

5. Organization for Economic Cooperation and Development and Statistics Canada, *Literacy, Economy and Society* (Paris: OECD Publications, 1995). This publication reported the results of the International Adult Literacy Survey, including the finding that 23.5 percent of U.S. 16- to 25-year-olds ranked at or below the lowest level of literacy measured by the survey. People with such circumscribed literacy skills are unable to perform such tasks as reading bus schedules, drafting resumes, or completing job applications. It is in this sense that they are functionally illiterate.

6. Ibid., Tables B-4a to B-4c, pp. 135–137.

7. According to Florida Statutes, Section 229.0537:

> A public school student's parent or guardian may request and receive from the state an opportunity scholarship for the child to enroll in and attend a private school in accordance with the provisions of this section if:
>
> By assigned school attendance area or by special assignment, the student has spent the prior school year in attendance at a public school that has been designated pursuant to Section 229.57 as performance grade category "F," failing to make adequate progress, and that has had two school years in a 4-year period of such low performance, and the student's attendance occurred during a school year in which such designation was in effect; or the parent or guardian of a student who has been in attendance elsewhere in the public school system or who is entering kindergarten or first grade has been notified that the student has been assigned to such school for the next school year.
>
> This statute is available on-line at http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&URL=Ch029/ch0229.htm.

8. During the 1998–99 school year, roughly 400 students in Vermont and 5,300 students in Maine attended independent schools under those voucher plans. See Nina Shokraii Rees, *School Choice 2000: What's Happening in the States?* (Washington: Heritage Foundation, 2000), pp. 71, 167.

9. A recent California ballot initiative to enact such a program was defeated at the polls in November 2000. The ballot measure in question was proposition 38, which was defeated by a margin of roughly 70 to 30.

10. A tax credit is nonrefundable if it allows taxpayers to keep more of the money they earn, but cannot result in a positive outlay from the government treasury to the taxpayer. All taxpayers, by contrast, can claim refundable tax credits, and if their tax liability is less than the value of the credit, they receive a refund from the government treasury in the amount of the difference (up to the full value of the refundable credit). Refundable credits are,

for all intents and purposes, equivalent to vouchers. For a further discussion of this issue, see Coulson, *Market Education,* pp. 333, 373–374.

11. Minnesota has had a similar if fairly limited version of this policy in place since 1997, offering a $1,000 per child credit for education expenses *other than tuition,* up to a maximum of $2,000 per family. Only families with incomes of less than $37,500 are eligible to take the credit. Minnesota also has had an income tax deduction for education expenses, including tuition, on its books since 1955.

12. Because of a precedent set in the 1973 U.S. Supreme Court case, *Mueller v. Allen* (see note 38 on that decision), most education tax-credit programs are designed to include some credit for public school expenses. The Court's reasoning at that time was that since the bulk of nonpublic schools are religiously affiliated, a credit that applies only to private schools necessarily promotes religion over nonreligion. This reasoning fails to consider state education spending as a whole. Without a tax credit or similar program to ease the financial burden on parents who seek religious schooling, the existing mandatory state spending on necessarily secular public schools promotes nonreligion over religion. To the extent that a tax credit reduces existing discrimination in favor of nonreligion, it goes some small way toward moving states off the constitutionally thin ice they currently occupy.

13. Average private school tuition hovers around half of average public school spending per pupil. In 1993–94, the last school year for which comparable figures are available from the Department of Education, average private school tuition was $3,116, while the average public school expenditure per student was $6,492. In 1998–99, the average public school expenditure per pupil was $7,896, while no up-to-date national figures for average private costs are available. Though religious private schools sometimes receive parish grants, these tend to be fairly modest in size. Elite prep schools often receive private donations from alumni, but these schools make up a tiny fraction of the private sector, and it must be noted that public schools around the country receive hundreds of millions of dollars in private donations of both cash and goods every year. Source for spending figures: Department of Education, *Digest of Education Statistics 1999* (Washington, D.C.: U.S. Department of Education, 2000). Also note that the percentage range suggested for the parental-choice tax credit represents its maximum value. The actual size of the credit claimable by a given family would depend on the amount of taxes that family owed and the method used to collect the taxes. The easiest way to implement the parental-choice credit would be as a credit on state income tax returns. Seven states have no income tax, however, and many others raise only a fraction of their revenue through their income tax. This means that in order to give taxpayers the maximum benefit of the credit, some thought would have to be given to the state's tax-collection practices.

14. If the goal of reform is to minimize state involvement in education, while also ensuring that all families are financially able to participate in the education marketplace, targeted credits may be preferable to universal credits. They represent less government involvement than do universal credits, and still ensure that all families can afford to send their children to independent schools. If credits do succumb to harmful regulation, a targeted credit means that some families would escape the effects, and so preserve at least a small kernel of truly independent schools. If the goal of the program were simply to provide tax relief, there would be no principled reason to target the credit toward the middle- and lower-classes, but the goals here are to minimize state involvement in education while ensuring universal access to the education marketplace.

15. For more information, see the Arizona Department of Revenue's helpful question-and-answer web page, http://www.revenue.state.az.us/brochure/schooltx.htm.

16. The Arizona Supreme Court upheld the constitutionality of the program in *Kotterman v. Killian,* No. CV-97-0412-SA. Available on-line in PDF format at http://www.supreme.state.az.us/opin/pdf99/cv970412.pdf, and in text (HTML) format at http://lw.bna.com/lw/19990209/ 970412.htm.

17. George Clowes, "Court Upholds Arizona School Choice Decision," *School Reform News,* November 1999, http://www.heartland.org/education/nov99/arizona.htm.

18. This is beginning to change, thanks in part to the work of professor James N. Tooley of the University of Newcastle. Tooley is the world's leading expert on independent schooling in developing nations, and his findings are most recently published in James N. Tooley, R*eclaiming Education* (London: Cassell, 2000).

19. In *Market Education,* I present an international comparative study of school governance structures dating from the origins of formal education in the 5th century BCE to the present. For a brief explanation of the three-pronged comparative strategy employed in *Market Education,* and a summary of the book's findings, see "Delivering Education," Andrew J. Coulson, chapter in forthcoming book by the Hoover Institution.

20. Coulson, *Market Education,* pp. 294–296.

21. Horace Mann, "Report for 1843," in *Annual Reports on Education by Horace Mann* (Boston: Horace B. Fuller, 1868), pp. 310–312.

22. B. Field et. al. *Remarks on the Seventh Annual Report of the Hon. Horace Mann* (Boston: Charles C. Little and James Brown, 1844).

23. Nila B. Smith, *American Reading Instruction: Its Development and Its Significance in Gaining a Perspective on Current Practices in Reading* (New York: Silver, Burdett and Company, 1934).

24. Coulson, *Market Education*, pp. 162–166.

25. Coulson, *Market Education*, pp. 296–297.

26. Ibid.

27. Consider this excerpt from *Kotterman v. Killian*, Arizona Supreme Court, No. CV-97-0412-SA (available on-line at http://www.supreme.state.az.us/opin/pdf99/cv970412.pdf.):

> ¶30 Petitioners argue that this tax credit channels public money to private and sectarian schools in violation of the state constitution. Specifically, they charge that the law offends article II, § 12 and article IX, § 10 (the "religion clauses"), as well as article IX, § 7 (the "anti-gift clause"). . .
>
> ¶32 Article II, § 12 states in part: "No public money or property shall be appropriated for or applied to any religious worship, exercise, or instruction, or to the support of any religious establishment." Article IX, § 10 says, "No tax shall be laid or appropriation of public money made in aid of any church, or private or sectarian school, or any public service corporation. . . ."
>
> ¶33 The parties are in considerable disagreement over the meaning of "public money or property." No definition of these words appears in the Arizona Constitution or in our statutes. We must therefore look to their "natural, obvious and ordinary meaning. . . ."
>
> [Author's note: *Paragraphs 34 and 35 of the decision list numerous court cases that define the term public money. By these definitions, the tax-credit in question did not constitute public money. The court then continued:]*
>
> ¶36 According to *Black's Law Dictionary*, "public money" is "[r]evenue received from federal, state, and local governments from taxes, fees, fines, etc." *Black's Law Dictionary* 1005 (6th ed. 1990). As respondents note, however, no money ever enters the state's control as a result of this tax credit. Nothing is deposited in the state treasury or other accounts under the management or possession of governmental agencies or public officials. Thus, under any common understanding of the words, we are not here dealing with "public money."

28. The two rulings were in December of 1999 (Judge Loren P. Lewis presiding) and April of 2000 (Judge Thomas Appleton presiding). The first suit was brought by the Illinois Teachers Federation, and the second by the Illinois Education Association, each being the state affiliate of one of the nation's two large public school teachers' unions. See George A. Clowes, "Challenge to Illinois Tax Credit Dismissed," *School Reform News*, June 2000, http://www. heartland.org/education/ jun00/credit.htm.

29. Coulson, *Market Education*, pp. 88, 132.

30. *Jackson v. Benson*, Wisconsin Supreme Ct., 97-0270.

31. See Coulson, *Market Education*, pp. 356–365.

32. This statement is based on my own admittedly imperfect knowledge of the history of education, accumulated during research on *Market Education*. If any reader knows of an exception to this pattern, she or he is encouraged to contact me at A_Coulson@msn.com.

33. Coulson, *Market Education*, pp. 329–331.

34. Frank Smith, *A History of English Elementary Education 1760–1902* (London: University of London Press, 1931), p. 53.

35. James D. Anderson, *The Education of Blacks in the South, 1860–1880* (Chapel Hill, N.C.: The University of North Carolina Press, 1988), pp. 5, 11.

36. Consider this excerpt from a letter written by Pliny the Younger in the 1st century CE, describing his plan to open a school in his hometown and his decision to pay only a third of the necessary funds:

> I would promise the whole amount were I not afraid that someday my gift might be abused for someone's selfish purposes, as I see happen in many places where teachers' salaries are paid from public funds. There is only one remedy to meet this evil: if the appointment of teachers is left entirely to the parents, and they are conscientious about making a wise choice through their obligation to contribute to the cost. People who may be careless about another person's money are sure to be careful about their own, and they will see that only a suitable recipient shall be found for my money if he is also to have their own. . . . I am leaving everything open for the parents: the decision and choice are to be theirs—all I want is to make the arrangements and pay my share.

Pliny The Younger, *Letters and Panegyricus [of] Pliny; with an English translation by Bett Radish* (London: William Heinemann, 1969), pp. 277–283.

37. In 1847 in Upper Canada (now the province of Ontario), the Hon. Robert Spence was "certain that the granting of free schools would undermine parental responsibility in educational matters. Once the parent ceased to pay for the schooling of his children, the crucial link between himself and the teachers was severed, and a gradual decline in family interest in the schools would take place." See Alison Prentice, *The School Promoters: Education and Social Class in Mid-Nineteenth Century Upper Canada* (Toronto: McClelland and Stewart, 1988), p. 178.

38. Coulson, *Market Education*, pp. 266–267.

39. Coulson, *Market Education*, Chapter 6.

40. Coulson, *Market Education*, Chapter 10.

41. Coulson, *Market Education*, pp. 376–377.

42. Coulson, *Market Education*, pp. 269–272.

43. The Minnesota Education Credit is Section 290.0674 of that state's statutes. It is similar in many ways to the parental-choice credit described in this paper, but differs in that it is refundable and does not apply to tuition. According to the Heartland Institute (www.heartland.org), roughly half of eligible taxpayers were taking advantage of the credit in early 1999, despite the lack of publicity about the credit. The full text of Section 290.0674 can be read on-line at http://www.revisor.leg.state.mn.us/stats/290/0674.html. The proposed amending bill was H.F. 31, introduced on January 7, 1999, during the 81st session of the legislature, and available on-line at http://www.revisor.leg. state.mn.us/cgi-bin/bldbill.pl?bill=H0031.0&session=ls81. H.F. 31 read, in part: "the nonpublic school . . . may not limit a student's admission to an education-related course, program, or activity based on the student's race, academic qualifications or achievement, religion, gender, athletic or other extracurricular ability, disabling condition, proficiency in the English language, or previous disciplinary proceeding."

44. *Mueller v. Allen*, 463 U.S. 388 (1983). Note that this case pertained to Minnesota's long-standing education tax deduction, not its more recent tax credit.

45. George A. Clowes, "Challenge to Illinois Tax Credit Dismissed," *School Reform News*, June 2000, http://www.heartland.org/education/jun00/credit. htm.

46. Letter dated September 27, 2000, from professor Howard Fuller (President, Black Alliance for Educational Options) to Governor Tommy G. Thompson; Members, Wisconsin Senate; and Members, Wisconsin Assembly. Also, written statement by professor Fuller dated October 18, 2000, and titled "The Incredible Disappearing School Scandal." Request copies from www.schoolchoiceInfo. org or the Black Alliance for Educational Options (www.baeoonline.org).

47. We have seen this most notably in the case of religion, both in modern times and during the late 19th and early 20th century, during the proliferation of "Blaine Amendments" aimed at excluding Catholic schools from becoming part of, or being funded by, the then Protestant public school system. See Lloyd P. Jorgenson, *The State and the Non-Public School 1825–1925* (Columbia, Mo.: University of Missouri Press, 1987).

48. This behavior would not only be consistent with public choice theory (See, for instance, Dennis C. Mueller, *Public Choice* (Cambridge, Mass.: Cambridge University Press, 1979), but has already taken place in the field of education. Consider, for example, the successful efforts of the public school teachers' unions (and the teachers' associations that preceded them) to erect a certification process that restricts entry into their profession.

49. Correspondence courses undertaken through the mail have existed for many decades, but have never attracted a mass clientele.

50. Coulson, *Market Education*, Chapter 2.

51. U.S. Bureau of the Census, 1995, Table 897.

52. Nathan Rosenberg and Larry E. Birdzell, Jr., "Science, Technology and the Western Miracle," *Scientific American* 263, no. 5 (November 1990), 42–55.

53. None of this is to say that public schools have not come up with new materials and techniques, but rather that those materials and techniques have generally not been the result of empirical research and field testing. Instead, public schools have implemented a succession of fads at the instigation of education philosophers and theorists, while fastidiously avoiding any systematic evaluation of their effectiveness.

54. In order to maximize the savings to be realized from shrinking public school enrollments, careful accounting will have to be made of state and local spending on public schools. There will naturally be a tendency for public school officials to attempt to retain as much of their existing funding as possible, despite the fact that they will no longer be serving many of the children for whom that funding was raised.

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