EDUCATION

ABSTRACT

United States schools are better than ever, but they are not assuring competitive advantage. Unequal access to quality education leaves millions ill equipped for today's workplace. The "No Child Left Behind Act" is an effective point of departure, yet it too fails to adequately address the myriad issues affecting quality education. Effective teachers hold the key to fully developing the potential of all students. However, absent substantive additional resources in the near-term, efficiency and effectiveness are unlikely to improve enough for every child to obtain the education essential to long-term national security.

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The Catholic Archdiocese of Detroit, Detroit, MI
EDUCAUSE, Washington, DC
Educational Testing Service, Washington, DC
Focus HOPE, Detroit, MI
Francis Parker Charter School, Devens, MA
General Motors University, Detroit, MI
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US Department of Education, Washington, DC
US Department of Labor, Washington, DC
US House of Representatives, Committee on Education and the Workforce, Washington, DC
World Bank Human Development Network, Washington, DC
Defense Logistics Agency, Corporate Planning (J-1), Ft Belvoir, VA

International:
Department for Education and Skills, London, England
Deutsche Bank, Frankfurt, Germany
European Aeronautic Defense Systems, Ulm, Germany
Enfield County School, Enfield, England
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Ministry of Science, Research, and Art, Stuttgart, Germany
Morgan Stanley, London, England
Qualifications and Curriculum Authority, London, England
Teacher Training Agency, London, England
Institute of Education, University of London, London, England
University of Maryland University College, Heidelberg, Germany

Team members also interviewed a number of distinguished experts in the fields of education including Ms Anne C. Lewis, Dr. Gerald Bracey, and Dr. Ted Sizer. We wish to express our sincere appreciation to these distinguished individuals and organizations.

INTRODUCTION

Schools must do far more than teach children how to learn and how to look things up; they must teach them what knowledge has most value, how to use that knowledge, how to organize what they know; how to understand the relationship between past and present, how to tell the difference between accurate information and propaganda, and how to turn information into understanding.[1]

--Diane Ravitch

Education in the United States (US) reflects society's values and priorities. These include a dedication to democratic ideals, a commitment to individual freedom, and a respect for diversity. In general, the US education system has as its goal access to a quality education so that each child might achieve his or her highest potential and serve effectively as a citizen of a free society. An educated and well-trained citizenry is of vital importance if the US is to successfully compete in an increasingly global marketplace.

This study sought to better understand the US education system, to identify potential national security implications, and to determine the extent to which our education system serves the nation. Insight into the industry was gleaned through interactions with representatives of a number of constituencies, as well as through individual research conducted on topics of particular interest. The most significant action affecting education this year was the January 2002 passage of the "No Child Left Behind Act" (NCLBA). Since the primary challenge facing the educational community in the near term is implementation of the NCLBA, our inquiry focused on the impact of this legislation.

To structure our analysis, we employed "Porter's Diamond,"[2] an analytical tool used to assess the attributes of a nation that promote or impede the creation of competitive advantage and shape the environment within which firms compete. We found that:

- A broad, yet often divergent, constituency shapes Factor Conditions, influencing all aspects of the US education system in an effort to improve student achievement, enhance national competitive advantage, and promote national security.
- Demand for education continues to grow as the US transitions from an industrial to a knowledge-based society. To meet the need for better-educated, highly skilled workers, job seekers and employees are increasingly availing themselves of post-secondary education and training opportunities.
- Related and Supporting Industries include world-class post-secondary educational institutions, which contribute to our national security by providing public and private sectors with much of the skilled human capital essential for innovation and adaptation.
- Competition for public funding prompts changes in Strategy and Structure and induces Rivalry (competition) in education. Calls for improved outcomes linked to public funding, e.g., the NCLBA, prompt increased responsiveness within the public education sector, making schools increasingly viable as a source of national competitive advantage.

Taken together, Porter's determinants of national advantage describe a dynamic environment, generally conducive to the development of a world-class education system.

However, goal attainment will not be easy or quick. This report addresses what we found to be the most critical challenges facing the education industry, i.e., Early Childhood Education, Teachers, Information Technology, Accountability, School Choice, Transition, and Workplace Issues. It further includes two related essays: (1) "Refocusing Schools on Their Fundamental Mission: Educating All Children to Their Fullest Potential" and (2) "Leave No Child Behind—Except For the One Whose Family Moved Last Week."

Although we found no evidence that the weaknesses in our current Kindergarten-12th grade system constitute an immediate threat to national security, the failure of our schools to educate each child to his/her fullest potential may compromise our nation's ability to compete globally and could threaten our long-term national security.

THE INDUSTRY DEFINED

The US education industry is made up of Kindergarten-12th grade education, post-secondary education, workplace training, and related support industries. Approximately 76 million people are involved, directly or indirectly, in providing or receiving formal education in the US. An estimated $700 billion is expended annually for education and training.[3] Education accounts for approximately 10% of the gross domestic product, but less than 0.2% of market capitalization of the stock markets.[4]

Local control has been the defining characteristic of American education since the construction of the first one-room schoolhouse. Within the US, there are 16,000 school districts, each of which is administered and financed by a local community, and 50 state departments of education. The federal government does not determine what students should know and be able to do in any subject, at any level of schooling. Rather, implementation of standards for students' performance has been left to state and local authorities.

CURRENT CONDITION

In examining trends in the condition of American education, some encouraging signs emerge. There have been improvements in mathematics and science performance, a greater number of students are taking advanced courses in secondary school, and an increasing percentage of high school graduates are going on to college. But, wide variations in student proficiency from state to state, disturbing gaps in academic performance and educational participation among different racial/ethnic and socioeconomic groups, and mediocre mathematics scores of American students in international assessments, pose challenges.

With human capital constituting our most critical national resource, a world-class education system is vital to our nation's security. Unfortunately, our educational

processes have failed to keep pace in an increasingly competitive global economy. A recent Educational Testing Service (ETS) study found "that the literacy of American adults ranks 10th out of 17 industrialized countries. More troubling, the US has the largest gap between highly and poorly educated adults, with immigrants and minorities making up the largest chunk of those at the bottom." The study concludes, "the US will drop even further behind unless adult training and education improve sharply."[5]

Unequal access to quality education is a root cause of these disturbing trends. Failing schools constitute one of the most vexing problems facing US education. Many of these schools are hamstrung by constraints exacerbated by their environment: resource inequities, quality teacher shortfalls, and pervasive societal issues. Unless access issues are resolved, the National Alliance of Business predicts a growing gap between the need for a more technically educated workforce and the product of our education system.

Growth in higher education has been uneven. Approximately 3.3 million students enter post-secondary schools each year, and, during 2001, 15 million students were enrolled in more than 6,600 US institutions of higher learning. While community colleges constitute one of the industry's fastest-growing segments, the most extraordinary growth has occurred in E-learning. This market is projected to grow by 25% per year, with 84% of colleges and universities already offering more than 6,000 on-line courses."[6]

Industry is accepting increasing responsibility for education and training, in large measure, because today's job applicants are not always equipped with the skills required to maintain a competitive workplace.[7] Approximately one-fifth of American companies spend a combined total of over $70 billion each year on training.[8] Some of this is spent for remedial skills training that employees should have learned in primary or secondary school, such as mathematics, reading, and communication.

As technology requires job-skill changes in the workplace at an ever-faster pace, lifelong learning has also taken on an increasingly important role. The American Society for Training and Development's Annual State of the Industry Report for 2002 "finds that total training expenditures increased both on a per employee basis ($677 in 1999 to $704 in 2000) and as a percentage of annual payroll (1.8% in 1999 to 2.0% in 2000)." The Report also states, "E-learning reached new heights as firms began using learning technologies to deliver training (8.8% in 2000 versus 8.4% in 1999)."[9]

CHALLENGES

Many bemoan the state of education in the US and question whether our schools are adequately preparing students for life and work in the 21st century. In response to these concerns, Congress enacted the NCLBA, mandating early reading intervention strategies, strengthening teacher quality, creating greater flexibility at state and local levels in exchange for greater accountability, and expanding options for parents of children from disadvantaged backgrounds. In sum, the NCLBA requires states to establish standards, improve performance, assess progress, and demand accountability; furthermore, it links results to a series of rewards, punishments, and alternatives in order to promote

compliance. The greatest challenge in implementing the NCLBA is funding, for many argue that the federal budget provides little more than "seed money" for this purpose. While implementation of the NCLBA will address many of the challenges faced in the education industry, the complexity of the issues demand immediate attention to a wider range of problems to ensure the industry continues to support national security. The most compelling issues based on our analysis are addressed below.

Early Childhood Education

Early childhood programs significantly enhance a child's preparedness for school. Children who attend a preschool have higher academic and social skills in kindergarten than those who did not attend a preschool program.[10] Children in high-quality settings are also less likely to be school dropouts, repeat grades, need special education, and get into trouble with the law.[11] Investments in early childhood education are also cost effective, for the benefits of such programs exceed costs by nearly four times.[12]

The NCLBA does not go far enough in improving early childhood education. While it implements an Early Reading First program, designed for pre-school aged children at the low-income level to enhance their early language, literacy, and pre-reading development, it overlooks children whose family incomes are just above the poverty line, leaving them at a disadvantage and diminishing their ability to realize their full potential.

While there is obvious value in assuring that all children are prepared for school, absent national will and financial incentives, many children who need such support will not receive it. They will continue to trail their peers in social, pre-literacy and pre-math skills; a few will catch up; yet the vast majority will remain at a disadvantage.[13]

Teachers

The US Department of Education estimates that the demand for additional teachers will exceed two million over the next ten years.[14] Absent near term intervention, this demand is unlikely to be met because America's teachers are departing the classroom to retire or change careers at a much faster rate than the system can generate qualified replacements. The problem is most pressing in inner-city schools and remote rural areas. Although frequently referred to as an impending teacher shortage, the problem is not so much a shortage as an imbalance, for communities in which teachers are respected, parents are involved, and school buildings are in good shape, there is a surplus rather than a shortage of qualified applicants.[15] Although there is general agreement that every child deserves a competent, qualified teacher, the primary mechanism currently employed to balance supply and demand is to relax qualification requirements.[16]

Relaxing qualifications is untenable as a long-term strategy if the graduates of our education system are to serve as a means of competitive advantage. Quantitative analyses indicate that measures of teacher preparation and certification are by far the strongest correlates of student achievement in reading and mathematics (40%) versus

background factors, i.e., poverty, language, and family characteristics (26%), parent education (24%), or class size (10%).[17]

Recognizing the need to invest in teachers in order to maximize the quality of each child's education, however, is not enough. Policy makers need to make quality teaching and the recruitment of well-prepared teachers their number one education priority.[18] It is possible to both require more extensive training and to encourage enough people to enter and remain in teaching, especially at a time of growing demand.[19] Connecticut's 1986 Education Enhancement Act, for example, created a minimum beginning teacher salary level and offered state funds to districts on an equalizing basis while concurrently strengthening standards for licensing. Within three years, Connecticut's cities overcame their teacher deficit and realized a teacher surplus, and the quality of teacher preparation and practice rose steadily, along with levels of student achievement.[20]

Information Technology

Technology can change the way students think and learn, and thus, revolutionize education. However, to truly transform educational delivery, technology must be available, mobile, flexible, intuitive, reliable, user-friendly, seamless, and nearly invisible.[21] Arguably, today's educational technology satisfies none of these criteria. More importantly, today's technology is not transformational because in most cases it simply automates the same classroom-management and instructional-delivery tasks that were being done before.

Developing teachers who are comfortable with technology is important because a growing body of evidence suggests that learning outcomes are dramatically enhanced through the effective employment of technology. What matters most are not the machines and the wiring, but what teachers and students do with them. Research indicates that benefits increase as the use of the technology becomes more sophisticated.[22]

Although computers and related information technologies were introduced to educators as educational tools more than three decades ago, one can find little evidence that these enabling technologies have materially altered the classroom. This disparity exists because little has been done to overcome cultural barriers, prepare teachers to effectively integrate technology with pedagogy, or prepare students to learn in a more collaborative and self-directed environment.

The transformation of classroom technology into tools for teaching and learning will not occur absent knowledgeable and enthusiastic teachers. However, it is not clear that superintendents and principals are effectively motivating them to embrace technology within the construct of the classroom. For, while virtually all schools are connected to the Internet, only 63% of classrooms are connected.[23] Nor are teachers effectively utilizing available technology to achieve high standards. Most have not changed the way they teach despite Internet access, nor are they under pressure to do so.[24]

Educational technology has made incredible progress since its inception. Yet, in many ways, our schools are still in the digital Dark Ages. Transformation is possible, but not without significant investments in leadership, training, and technical support.

Accountability

Recent statistics tell a sobering tale about the quality of American schools. According to the National Alliance of Business (NAB), 700,000 students--1 in 10--graduate from high school in the US each year without the ability to read their diplomas. The Bureau of Labor Statistics estimates that 50% of workers are unable to read and translate diagrams and flow charts.

The remedy is to demand that performance-based standards (standards of learning) be developed to gauge the progress of students, teachers, schools, school districts, and states. Education policy makers and administrators have chosen testing as the means to ensure accountability and make certain that standards are implemented. While a number of assessment tools exist, the key is to align curriculum, teaching, and testing with standards. The National Alliance of Business concluded that the US "has a fragmented curriculum and teaching is not focused on challenging content, nor is it executed in a way that promotes problem-solving skills."[25]

Unfortunately, to date, only 13 states and the District of Columbia appear to meet NCLBA testing criteria. National education policy writer Anne Lewis concluded, "Current testing in a majority of the states … frames knowledge and skills very narrowly."[26] The American Federation of Teachers concluded that 44% of the tests used are not aligned with standards, adequate curricula supported fewer than one-third of the tests, and only one-third of the tests used to determine promotion and graduation were aligned with standards.[27] Thus, much work remains.

School Choice

One of the most controversial issues in education reform concerns school choice. Examples of school choice include tuition vouchers, certificates, tax credits, open enrollment policies and alternative schools such as charter and magnet schools.

Charter schools represent the fastest-growing reform movement in public education today.[28] Charter schools receive public funding, but are self-governing. The basic purpose of charter schools is to create competition within the public education arena. There are now over 2,000 charter schools enrolling over half a million students. According to the National Center for Policy Analysis, by "avoiding the bureaucracy of the education establishment and following a back-to-basics approach, many of the charter schools operating nationwide are achieving their fundamental objective: raising student performance."[29]

Supporters of charter schools believe that they provide alternatives to traditional public education, are more likely to reach dropouts and other at-risk students; might replace

failing schools, and may even prompt innovation in traditional public schools.[30] Opponents warn that charter schools increase the potential for use of public funds for private or home schooling, increase competition for scarce dollars, have shown neither a logical nor a demonstrated relationship to higher achievement, and are less accountable.[31]

Charter schools have not been in existence long enough to garner conclusive results. Some are clearly outperforming traditional public schools in their competitive arena, while in other cases traditional public schools are outperforming them. Competition appears to be the driving force and may prove critical in returning our public schools to a source of competitive advantage. As such, this trend bears continued watching.

School vouchers are the most controversial form of school choice. Vouchers provide parents with cash certificates, from public funds (privately funded voucher programs exist in 31 cities and serve over 12,000 students,[32] but these programs generate little debate), that allow their children to attend the school of their choice, public or private. The best-known, publicly-financed voucher programs are the Milwaukee Parental Choice Program, in place since 1990, and the Cleveland Scholarship and Tutoring Grant Program, initiated in 1996.

Supporters argue that school choice will force substandard public schools to improve. On the other side of this debate are teacher unions and education advocacy groups who claim that vouchers will lead to inferior education for children remaining in public schools. The Government Accounting Office (GAO) looked at the research on voucher effectiveness and on 1 Oct 01, reported that prior studies are inconclusive, and that more research is needed.[33] Voucher programs bear more watching as they too are but another means of introducing market competition into the public education arena.

Post-Secondary Education

High school diplomas no longer provide the knowledge, skills, and abilities expected of entry-level employees in a rapidly changing, highly technical, work environment. As a result, the market for post-secondary education is growing. "The percentage of 25- to 29-year-olds who completed high school rose from 78% in 1971 to 88% in 2000. Over the same period, the percentage of high school completers in this age group who also completed at least some college increased from 44 to 66%, and the percentage who obtained a bachelor's degree or higher rose from 22 to 33%."[34]

Although these figures appear to be moving in the right direction, they mask a growing problem that may bar many potential candidates from fulfilling their career aspirations—the escalating cost of tuition, room and board. For the 1999-2000 academic year, average annual undergraduate tuition, room, and board were approximately $8,265 at public schools and $20,805 at private ones.[35] While limited "need-based" financial aid is available, potential first generation students and those from low-income families may not know how to access it and it may not be available for those from middle-income families. Such barriers must be addressed if businesses are to be provided with skilled workers.

OUTLOOK

The call for improvement in our education system is not new. Issues of equity and access, in particular, have been at the forefront of reform initiatives since early in the nineteenth century. Over the past century, educational questions primarily focused on who to educate and what they should learn. Such questions resonated with both parents and public officials for as the stakes attached to education grew higher, parents' anxiety about their children's schooling grew, and as the cost of education escalated, public officials called for evidence that schools were effective. However, because we have yet to adequately address these questions, the US educational system continues to be criticized for its failure to satisfy the evolving, sometimes competing, expectations of its diverse constituency.

Workplace demands are already requiring more advanced mathematical, science, and information systems skills than that acquired by the average high school graduate. Furthermore, even though the educational standard in the US is a high school degree, this expectation is rapidly becoming outdated. By 2028, the demand for workers with at least some postsecondary education will leave as many as 18 million skilled positions unfilled.[36] The majority of these vacancies will be in fields requiring a strong foundation in mathematics, science, and/or information systems. However, because US students are not doing as well as many of their peers in mathematics and science and they are not pursuing postsecondary educational opportunities in mathematics, engineering, and computer science, the US is at risk of losing many highly skilled technical positions to global competitors.[37]

Quantum improvement in efficiency and effectiveness is unlikely to occur unless all stakeholders work together to better align the needs of businesses with our education system and garner the support needed to address the resource gaps which now prevent our education system from efficiently and effectively educating all children to their fullest potential.

GOVERNMENT: GOALS AND ROLE

Even though education is primarily a state and local responsibility, federal support is important and growing. Moreover, only at the federal level can politicians bring issues to the national stage, and authorize and appropriate federal monies. The US Department of Education seeks to ensure equal access to education and to promote educational excellence throughout the nation. It does this through a variety of leadership, facilitation, and management activities. It plays a leadership role in the ongoing national dialogue concerning our education system. This involves raising awareness of education challenges, disseminating best practices, and helping communities work out solutions to difficult educational issues. The US Department of Education also administers a wide range of programs that cover every area of education, from preschool education to post-doctoral research.

The federal government's role in education has been, and continues to be, to serve as a kind of "emergency response system", i.e., as a means of filling gaps in state and local support for education when critical national needs arise. As such, of the roughly $650 billion spent nationwide on education at all levels, 91% comes from State, local, and private sources; 3% comes from the Department of Health and Human Services' Head Start program and the Department of Agriculture's School Lunch program; and the remaining 6%, roughly $42 billion a year, comes from the Department of Education.[38]

However, if all children are to be provided with the opportunity to access a world-class quality education, the Department of Education will have to assume a more assertive role in facilitating dialogue among all stakeholders. The overwhelming challenges facing our education system cannot be overcome without a much greater commitment to a common vision, sustained national will, and adequate public funding. To address the specific challenges addressed above, we recommend that policy makers:

- Expand access to quality pre-school programs: To adequately prepare all children to learn, expand the coverage of the NCBLA to include children of families who are above the poverty line but cannot reasonably afford to send their child to pre-school.

- Provide all children access to effective teachers:
    - To enhance teacher effectiveness, align licensure requirements with the skills needed to teach effectively and incentivize effective teaching.
    - To improve access, encourage districts to hire certified teachers and place qualified teachers; but when this is not feasible, provide them with the means to implement robust training strategies to quickly address deficiencies in teacher training/performance.
    - To mitigate teacher imbalances, establish nation-wide licensing reciprocity and pension portability, 33% of teachers who leave the profession in their first year do so because they are moving, not because they want to stop teaching;[39] incentivize candidates to pursue degrees in high-demand academic specialties and/or teach in high-demand geographic areas; and establish proven alternative routes to professional certification.
    - To address teacher retention, implement proven systems for mentoring teachers and provide them with professional working environments that respect their expertise, nurture professional development, and provide them multiple decision-making and leadership opportunities.

- Transform the learning environment: To change the way students think and learn, inculcate enabling technology into the educational paradigm, encourage industry to make technology ubiquitous, and encourage schools to become learning organizations.

- Improve the quality of public education: To create a world-class education system, encourage states to align standards, curriculum, and assessment, measure progress against international benchmarks; increase the mathematics, science, and information technology skills of all students; and assure that sufficient resources are provided to schools responsible for educating a disproportionate number of poor and minority children.

- Align post-secondary education programs with the needs of businesses: To increase access, publicize need-based financial assistance, expand the community college system, and encourage colleges and universities to embrace E-learning. To address projected skilled workforce shortages, incentivize students to pursue technical degrees.

CONCLUSION

Our analysis of the education industry, based on an assessment of Porter's determinants of national advantage, multiple interviews with representatives from a wide range of domestic constituencies and the education system in England and Germany, and scholarly research within specific areas of interest, confirmed that the outputs of this industry, i.e., an educated populous, form the most critical input to US industry performance and thereby materially contribute not only to the creation of competitive advantage but most importantly to our national security.

Although the US Kindergarten-12th grade school system today is arguably better now than it has ever been, our increasingly technically oriented economy demands more than these schools are currently providing. This is evidenced by the fact that the percentage of businesses that viewed lack of skills as a barrier to growth increased from 27% in 1993 to nearly 70% in 1998.[40] However, it is because our education system remains essentially sound, that restructuring initiatives fail to resonate across its disparate constituencies.

Over the past quarter century, computers and associated information technologies, public school choice, tuition tax credits, vouchers, charter schools, standards, assessments, and school-based management have all been advanced as ways to increase achievement. Interestingly, none have materially altered the delivery of public education. The reason is that while well-designed, market-based initiatives can provide the impetus for change, they are too far removed from the public classroom to materially affect them. Unfortunately, the relentless search for a "silver bullet" has often detracted from the real work, e.g., developing and retaining effective teachers, that successful change entails.

More so than perhaps ever before, an educated populace is the key to maintaining competitive advantage and assuring national security. Because public primary and secondary schools provide the means through which the US develops the preponderance of its human capital, it is essential that they refocus their energies on their fundamental mission: educating all children to their fullest potential. But experience has made it clear that they cannot do it alone. All of us must share the responsibility of educating America's children; however, fundamental restructuring of the education system to reestablish it as a source of competitive advantage will also require "significant social, financial, and political investments to provide teachers with professional-level preparation, professional development, pay, career opportunities, performance accountability, decision-making flexibility, and portability of credentials and pensions."[41]

Implementation of the "No Child Left Behind Act" is a step in the right direction, but much more work remains if the education industry is to continue to effectively serve the needs of not only an increasingly global economy but also the nation.

ESSAYS ON MAJOR ISSUES

ESSAY #1: REFOCUSING SCHOOLS ON THEIR FUNDAMENTAL MISSION: EDUCATING ALL CHILDREN TO THEIR FULLEST POTENTIAL

A fundamental obligation of a democratic society is to provide its citizenry with the knowledge, skills, and values needed for effective participation in that society.[42] Although the US educational system has been largely successful in providing a quality education to a great number of children, it has not always provided equal access to all, nor are all, even today, afforded equal opportunities to learn. The call for improvement is not new. Issues of access and equity, in particular, have been at the forefront of reform initiatives since early in the nineteenth century. However, it is because our decentralized educational delivery system remains essentially sound that restructuring proposals fail to resonate across the disparate constituencies of our public education system.

In the closing years of the nineteenth century, schools were expected to make social equality a reality by giving students the opportunity to develop to their fullest potential.[43] However, as the US evolved from an agrarian to an industrial to an information age society, the need to more fully develop its citizenry became increasingly more paramount which, in turn, placed ever-increasing demands on the public school system. Unfortunately, agility was not one of its hallmarks and as such, it evolved at a rate much slower than the economy. Furthermore, because it was, and continues to be, so decentralized, significant differences in the quality of instruction and learning outcomes even within individual school districts are commonplace. Yet, because the majority of Americans (79%) believe that all students are afforded like educational opportunities[44] and 91% of them rate their local public schools above average,[45] it is difficult to amass the requisite support needed to effect substantive change in the schools charged with educating a disproportionate number of poor and minority students.

Throughout the twentieth century, educational questions focused on who to educate and what they should learn. These questions resonated with both parents and public officials for as the stakes attached to education grew higher, parents' anxiety about their children's schooling grew and as the cost of education escalated, public officials called for evidence that schools were effective. However, because we have yet to adequately address these questions, the US education system is frequently criticized for its failure to satisfy the evolving, sometimes competing, expectations of a diverse constituency, e.g., politicians, regulators, educators, parents, and students.

How did this happen? Early in the twentieth century, two opposing schools of thought emerged. Some believed that a liberal education should be provided to all children while others wanted it limited to only those children bound for college. The second view, later identified as the progressive education movement, dominated the education profession in its formative years, pushing many children, mainly the poor, minorities, and immigrants, into undemanding vocational, industrial, or general programs predominantly because adherents to this view believed that such children were incapable of learning much more.

This was extremely unfortunate because progressive education, packaged in rhetoric about democracy and "meeting the needs of the individual child," ultimately exacerbated racial and social stratification in schools, an outcome that has proven not only undemocratic but also harmful, both to the children involved and to American society.[46]

While there was and continues to be general agreement on the need to provide college-bound students with a liberally oriented primary and secondary educational experience, designed to inculcate knowledge, skills, aesthetic imagination, and critical thinking, such consensus still does not exist for those who do not plan to attend college. While the public (81%) is firmly convinced that most students achieve only a small part of their potential in school, only 52% believe all children can learn at high levels.[47]

Why does this perception matter? Because history has shown that every time academic curriculum has been diluted or minimized, not only are a great number of children pushed through the school system without benefit of a genuine education, but schools lose sight of their mission and moral commitment to the intellectual development of every child.[48] Perhaps more so than ever before, schools "must do far more than teach children "how to learn" and "how to look things up"; they must teach them what knowledge has most value, how to use that knowledge, how to organize what they know, how to understand the relationship between past and present, how to tell the difference between past and present, how to tell the difference between accurate information and propaganda, and how to turn information into understanding."[49]

By the end of the twentieth century, the dream of universal education had become a reality; however, few still believed "that schools alone could remedy the great ills of social and economic life or eliminate poverty." And while it was obvious that the quality of schooling was not yet meeting all expectations, was society's best hope for passing on the knowledge and skills the next generation would require to fully participate in a democratic society.[50] Not surprisingly, a strong base of public support (72%) exists for reform efforts that try to rebuild and strengthen our schools.[51] As data became more available to the public, the debate over who to teach and what to teach them became more focused. The thesis that children could rise to the expectations inherent in a liberal education if expectations of them were high and if they were taught by effective teachers in an orderly atmosphere was now backed by a growing body of research. Public expectations were also finally beginning to converge, demanding increased emphasis on both standards and accountability.[52]

As we begin yet another century, we do well to consider the lessons learned from our experience thus far: (1) all children can learn, given high expectations and well-educated teachers who are eclectic in their methods and willing to use different strategies depending on what works best for each child; (2) schools cannot do it alone, adults must take responsibility for children and help them develop into good persons with worthy ideals; (3) educational institutions should base substantive changes to curricula and pedagogy on solid research and careful field-tested demonstration before they are broadly implemented; and (4) schools must have the flexibility to try new instruction methods and organizational patterns, and intelligent enough to gauge their effectiveness in

accomplishing their primary mission, i.e. educating children.[53] Given that universal education is no longer the contentious issue that it once was, that the public agrees, at least in principle, with the concept of providing the opportunity for a liberal education to all children, and that the public school system will continue as the primary means through which to accomplish this, the question for the twenty-first century is: How do we refocus schools on their fundamental mission: educating all children to their fullest potential?

Although the US school system today is arguably better now than it has ever been, our information age economy demands more than it is currently providing. Over the past quarter century, computers and information technology, school choice, standards, assessments, and school-based management have all been advanced as ways to increase student achievement. Interestingly, each of these initiatives has proven successful under limited conditions, yet none have materially altered the delivery of public education. The reason is that while well-designed, market-based initiatives can provide the impetus for change, they are too far removed from the public classroom to materially affect them. Unfortunately, the relentless search for a "silver bullet" has often detracted from the real work, e.g., developing and retaining effective teachers, that successful change entails.[54]

Despite conventional wisdom that school inputs make little difference in student learning, a growing body of research suggests that schools can make a difference, and that a substantial portion of that difference is attributable to teachers. Quantitative analyses indicate that measures of teacher preparation and certification are by far the strongest correlates of student achievement in reading and mathematics, both before and after controlling for student poverty, English language proficiency and minority status, while the strongest, consistently negative predictors of student achievement, are the proportions of new teachers who are uncertified and the proportions of teachers who hold less than a minor in the field they teach.[55]

Minnesota, North Dakota, and Iowa, states that have made longstanding investments in the quality of teaching and have among the most qualified teachers in the country, repeatedly lead the US in student achievement in mathematics and reading. Conversely, learning outcomes in North Carolina and Connecticut were among the worst of all 50 states in the early 1980s. To remedy this, both undertook substantial and systemic investments in teaching beginning in the mid-1980s. Each state pursued a similar strategy, i.e., coupling increased teacher salaries, with intensive recruitment efforts and initiatives to improve pre-service teacher education, licensing, beginning teacher mentoring, and ongoing professional development. Since then, North Carolina has posted the largest student achievement gains in mathematics and reading of any state in the US, now scoring well above the national average in 4th grade reading and mathematics, although it entered the 1990s near the bottom of the state rankings. Connecticut has also posted significant gains, becoming one of the top-scoring states in the nation in reading and mathematics, despite an increase in the proportion of low-income and limited English proficient students during that time.[56]

Effective teachers generally have a major or minor in the subject they teach and have been afforded opportunities for professional development; in teaching, they tend to

nurture the development of higher-order thinking skills, effectively integrate appropriate information technologies into their lessons, frequently use hands-on learning techniques, and adapt their teaching methods based on feedback provided through frequent tests.[57] Such teachers have been proven to dramatically impact student achievement. Students with the most effective teachers showed greater gains in reading (5.6%) and math (14.6%) than those assigned to the least effective teachers (reading, 0.3%) and math (-0.6%) over a one-year period.[58] Cumulative effects after three years of very effective teachers resulted in an increase from 60% to 76% in student percentile scores for reading and math while the cumulative effects after three years of very ineffective teachers resulted in a decrease from 60% to 42% for reading and from 60% to 27% for math.[59]

Recognizing the need to invest in teachers in order to enhance every child's opportunity to learn, however, is not enough. Parents need to demand that their children be assigned to only well-prepared, well-qualified teachers. Teachers and administrators need to actively support lifelong learning for all members of the education profession. Policy makers need to make quality teaching and the recruitment of well-prepared teachers their number one education priority. And business leaders need to demand that schools invest in teacher development.[60]

The establishment of more rigorous professional standards for teachers is a step in the right direction. However, while new teaching standards hold great possibilities for raising the quality of teacher preparation, these advances will have little import for students, especially those at greatest risk, unless school districts stop hiring teachers who are unprepared and assigning teachers outside of their field of expertise. Policy makers must raise entry standards and create incentives to attract teachers to the positions where they are needed. As documented by Michael Sedlak and Steven Schlosman, it is possible to both require more extensive training and to encourage enough people to enter and remain in teaching, especially at a time of growing demand.[61] As an example, Connecticut's 1986 Education Enhancement Act created a minimum beginning teacher salary level and offered state funds to districts on an equalizing basis while concurrently strengthening standards for licensing. Within three years, Connecticut's cities went from having shortages to having a surplus of teachers, and the quality of teacher preparation and practice rose steadily, along with levels of student achievement.[62]

But to assure all children access to such teachers, even more is required. Urban and rural school districts, in particular, struggle to attract and retain effective teachers. Such districts must be afforded the opportunity to provide bonuses, loan forgiveness, and/or scholarships to encourage candidates to pursue degrees in high-demand academic areas and to teach in their schools. To retain new teachers in particular, initiating effective mentoring programs is imperative. One of the most effective is the program established by Michigan's State Board of Education (Public Act 335, 1993).[63] Mandated requirements include the assignment of a master teacher as a mentor, an Individualized Development Plan for each teacher, and a yearly formal evaluation. They also recommended specialized preparation for mentors and intensive professional development for new teachers. Additionally, given that traditional teacher training programs do not yet attract a sufficient number of candidates who are willing to teach

urban and rural student populations, alternative routes to certification should also be considered. A proven alternative is the Paraeducator Career Ladder developed by the Los Angeles Unified School District seven years ago. It has placed over 1,900 qualified teachers in hard-to-fill positions, attaining an unprecedented five-year retention rate of 92%.[64]

Recognizing the need to nurture lifelong learning as a means of comparative advantage is a relatively new concept within the educational arena, yet it more than any other reform holds the potential to close the achievement gap in the near term. Administrators must recognize the value of human capital development and take steps to provide opportunities for meaningful classroom-based professional development. They must also reward teachers who become more proficient in their subject matter and teaching methods and thereby become more competent in the classroom. Better-prepared and better-trained teachers do improve student performance, as evidenced by the fact that students in math and science consistently score higher on the NAEP relative to the average grade-level score when they learn from effective teachers.[65]

Administrators should also consider encouraging teachers to pursue national certification. This might be done through a program that would reimburse the cost upon award of national board certification. They should also reward them for their tremendous effort through public recognition, greater autonomy, and perhaps even a monetary award. National certification is much more than a personal accomplishment, National Board Certified Teachers score significantly higher on 11 of 13 measures of effective teaching and students of such teachers demonstrate greater learning.[66]

Concurrently, administrators and policy makers must address teacher retention. About 33% of teachers leave the field within the first three years.[67] Surprisingly, although 10.3% of them cite poor salary, far more significant is their perceived lack of recognition and support (31%).[68] Recognition that teaching is a profession, not just a job, is a critical first step. Providing greater opportunities for collaborative learning and planning, and implementing some form of pay-for-performance that recognizes the contributions of highly effective teachers is the next step. Already, 69% of teachers support raising the salaries of teachers who are highly effective in raising student achievement.[69]

Finally, schools should be encouraged to benchmark their effectiveness and efficiency against world-class standards. To assist in this endeavor, a growing number of state and local leaders are using the "Malcolm Baldrige Criteria for Performance Excellence" to measure and improve learning outcomes. In "North Carolina, student achievement gains on SAT and NAEP are rising faster than anywhere else in the country. From 1997 to 1999, reading and math proficiency increased in all 30 school districts that had used a Baldrige-based improvement strategy for three years or more."[70]

More so than perhaps ever before, an educated populous is the key to maintaining the US' comparative advantage. Because public schools provide the means through which the US develops the preponderance of its human capital, it is essential that they refocus their energies on educating all children to their fullest potential.

ESSAY #2: LEAVE NO CHILD BEHIND— EXCEPT THE ONE WHOSE FAMILY MOVED LAST WEEK

As a fifth-grader at Oak View Elementary in Silver Spring, Maryland, 11-year old Roberto…would sit in class and loudly click his tongue. Other times he'd drop things on the floor or pretend to fall asleep. Roberto talked in class, often using vulgar language, and interrupted other students. Roberto's parents were divorced. Sometimes he lived with his mother, sometimes with his father. When Roberto switched parents, he also switched schools. As a result, he's attended four schools in just the last five years.[71]

--Thad Hall, The Century Foundation

Mobile Society = Mobile Students

A major change for public schools after WWII was student mobility. The migration of blacks out of the South to urban centers in the North had begun before the war, but with the return of veterans and their new opportunities for education and better jobs not necessarily in hometowns, we became a nation of nomads.[72] With the renaissance of urban residential properties, people are willing to try living in cities again. Some suburbs are becoming the addresses for minorities now able to leave the central cities and many rural areas are now closer to the city limits. Three types of family mobility stand out today:

- Inner-city mobility prompted by fluctuations in the job market
- Intra-city mobility caused by upward mobility
- Intra-city mobility caused by negative social factors such as poverty, homelessness, immigration, divorce, child custody and foster care issues[73]

These demographic changes affect our schools as administrators scramble to keep up with the flow of students and teachers attempt to accommodate revolving door students.[74]

Many students transfer because of some problem at the school itself. Rumberger surveyed parents of secondary students and found that social isolation and feeling unsafe were some of the reasons adolescents wanted to change schools.[75] In Chicago, Kerbow's research revealed that 40% of transfers at the elementary level were for reasons other than a residential move.[76]

There are consequences to this mobility. In 1994, the GAO reported that one of every six 3rd graders has attended three or more schools since entering the 1st grade. Mobile students are less likely to receive federally funded special education services, twice as likely to repeat a grade, and at all income levels test below grade level in reading and math.[77]

Student mobility must be addressed since it touches every controversial topic in American education today. As a nation, we must take as much interest in student mobility as in race, income, and gender. Hiding problems that we can't see due to antiquated record keeping practices will result in "shadow children" that move from the

shadows of one school into the shadows of another and, in spite of President Bush's "No Child Left Behind" Act, really do get "left behind."

Accountability and Student Performance

With the growing demands to hold schools accountable for student performance, researchers and educators say the need to address the problems with student mobility has never been greater. Although moving once or twice during the public school years may not be harmful, most research shows that high mobility lowers student achievement. Literature and research in this area is extensive, but two specific studies are illustrative:[78]

- Children who had changed schools at least six times between the 1st and 12th grade were 35% more likely to fail a grade than children who didn't move or had just moved a couple of times. This study isolated mobility from other risk factors, such as poverty or living in a single family home and found that frequent moving alone was an important predictor of a child's academic performance.[79]
- Mobile students in Chicago were an average of four months behind their more stable classmates on standardized tests by the 4th grade. By the 6th grade, students who were highly mobile lagged behind their classmates by as much as a full year.[80]

High student mobility puts enormous stress on schools. Educators generally agree that providing quality education becomes difficult with turnover rates of more than 20% and causes serious problems for the entire school over 30%.[81]

National Curriculum and National Record-Keeping

Innovative teaching programs are being introduced to local districts at a very fast pace and with the plethora of new programs comes additional diversity between schools. For example, a phonics-based reading program in one school may contrast with a whole-language approach in another. If these two schools are part of a "dense network of student exchanges," the stress on the separate programs (as well as the students) may be problematic.[82]

An initial response to federal, state or local mobility concerns may be to consider a standardized curriculum. Students would be (at least formally) at the same point of instruction when they changed schools, and teachers could assume they had been exposed to specific topics. In practice, uniformity between schools may be difficult to ensure.[83] Suburban and urban districts serve diverse populations and it is unclear whether a "standard" curriculum would meet their range of needs.

Making the picture even hazier is the lack of a nation-wide record keeping system for public school children—indeed, many states do not have uniform systems. The primary administrative problem with mobile students is the failure to transfer records promptly. Students may be given inappropriate placement and even held back while their receiving school waits months for their records.[84]

Standards Based Assessments

Schools' fates hinge on student performance on standardized tests—tests that include the scores of transient students who may not have been at that school last year. A study in Los Angeles estimated that in one elementary school, 33% of students who start in grade one would receive a full six years of instruction at that same elementary school, but that for the nearby private school 75% would stick around the full six years. From an instructional evaluation viewpoint, any quantitative comparison between the quality of programs in these two schools would be highly questionable.[85]

ESEA requires disaggregating scores on annual tests for certain groups—minorities, poor, migrants, farm workers and disabled—so that schools can't ignore them. But ESEA does not mandate statistics for mobile students. Without measuring a school's mobility rate, standardized tests cannot possibly offer an accurate snapshot of student's learning progress.[86] A recent survey conducted by *The Principal's Center* at the Harvard Graduate School of Education found that few state departments of education report student mobility rates.[87]

Since many of the schools ESEA targets for reform don't teach the same students from month to month, much less from year to year, an otherwise competent school could be shut down forcing already mobile students to move one more time. Further, ESEA induces a disincentive to keep highly mobile students in the classroom because they are not likely to raise a school's test scores.

Parental and Community Involvement

Strong relationships between schools and parents can be the greatest prevention against the emotional and academic costs of high mobility. With strong ties, parents will try and keep their kids in the same school even if they move often. Students who lived with their mother and father during the 8th grade were less likely to have changed schools two or more times between 1st grade and the middle of 8th grade than were students living in other types of families.[88]

Military families provide a stark contrast to mobile students with little parental and community support. The nature of military assignments results in a 35% transience rate for Department of Defense Education Activity (DoDEA) schools, similar to inner city schools. Minority students account for 40% of DoDEA enrollment, about the same ratio found in the public schools of New York state. Approximately 50% of all DoDEA students qualify for free and reduced-price lunch, indicating children from low-income households.[89]

In spite of these demographics, the performance of DoDEA students on the 1998 National Assessment of Educational Progress was impressively high.

- In 8th grade writing, 38% of domestic DoDEA students scored at the level of proficient or higher. This was second only to Connecticut and above the national average of 24%.[90]

- In 8th grade reading, 37% of domestic DoDEA students were at the proficient level or higher. These results were third highest in the nation, trailing only Connecticut and Maine and above the national average of 30%.[91]

In addition, African-American and Hispanic students in DoDEA schools performed at high levels.[92]

DoDEA schools reflect an elevated "corporate commitment" including an expectation of parental involvement in school activities.[93] A strong sense of school community is forged in base neighborhoods that join military families in a cohesive net of discipline, routine, accountability, and commitment—factors necessary to helping transient students succeed.

Vouchers and School Choice

School choice and voucher programs will only exacerbate the already overwhelming amount of student mobility. These programs add to the problems of transience by bringing into play the mobility of students in private schools as well as public schools. Choice and voucher programs may dilute the good that private and well-performing public schools can do, precisely because they do not currently have to deal with as much mobility.

Charter schools with different educational strategies can cause educational chaos with student mobility added to the mix. What happens when a 6th grader who attends a self-paced charter school in Boston, moves to a very structured charter school in New York, or even to another charter school in the same city?[94] School choice will complicate the transience in American schools and increase the risk that the needs of an individual student will not be met.

Teachers Influences and Impacts

It is ultimately the teachers of these highly mobile students who have the most impact on their acclimation to a new school and their performance in the new classroom. High expectations are critical, since there is evidence that when students enter the classroom mid-year, teachers tend to prejudice them unfavorably.[95]

The influx and exit of students places significant constraints on the instructional approach of teachers in several ways. First, long-term instructional planning becomes more difficult. Second, an unstable classroom makes adoption of new practices or innovations difficult.[96] Finally, teachers become more review-oriented in their lesson plans since new students have missed specific instruction. The introduction of new students, especially those who are weak academically, may be disruptive to the flow of instruction for all students.

Transient students take a toll on teachers. Teachers feel a lack of control with regard to managing student progress when the faces in their classrooms change so often. It should not be surprising that schools with high turnover rates for students have high turnover

rates for teachers.[97] In light of the emphasis on standardized tests to measure adequate yearly progress, it is worrisome that these annualized tests will measure different students *and* different teachers each year.

Proactive Approaches

Underlying Causes of Moving

☑ Policymakers at all levels must advocate programs to avoid school moves through information to parents, additional transportation, and assistance with housing arrangements.[98]

☑ Mobility is tied to factors within a community, so solutions must come from outside the education arena. For example, frequently mobile families list unaffordable energy bills as a very important factor in their most recent move. Colton argues that "Public policy would be well-served by seeking to break the circle of causation that leads to the mobility, and thus the educational problem in the first instance."[99]

☑ For homeless children, educators should provide a nonjudgmental reception for parents and address their questions and concerns. Workshops at shelters and a homeless liaison in a district can play a key role in linking education agencies to community resources.[100]

☑ States and districts must make innovative attempts to stabilize students. Examples of such programs are: Staying Put (Chicago), One Child, One School, One Year (Victoria, Texas), Kid's Mobility Project (Family Housing Fund). [101]

What to Do When a Child Moves

☑ Schools need to be configured to accept the mobile student. For example, at Holbrook Elementary, Houston, the mobility rate is 50%, but the multi-track campus operates year-round so students can take remedial classes anytime, to avoid disruption in classrooms.[102]

☑ When a child arrives at a new school, computerized student audits administered by educational support personnel can help with placement and identify learning deficiencies before the teacher tries to integrate the new student into the classroom.

☑ The exiting school can take a proactive approach during a move, for example, children can compile a portfolio of "My Best Work" to take with them to show their new teachers.

How to Correct the System to Account for Mobility

☑ States and schools districts should be required to report and be held accountable for the performance of transient students so that policymakers will have more incentive to help these kids perform better. Direct funding should be increased for schools with high mobility rates.

☑ Nation-wide standards for student record keeping must be developed. "When credit card information is instantly available online, there's no reason that Roberto's report card should arrive at his new school months after he does."[103]

☑ The push for standard curriculums within districts must continue.

For states to help mobile students, the federal government must take the first step. Lawmakers missed an opportunity with the recent reauthorization of ESEA to address this serious issue. Research shows convincingly that at all income levels, mobility is at least as great a predictor of sub par performance as race, poverty, or disability. Educators and policymakers must take as much interest in mobility as they do these other factors. Unless someone in the education industry gives these children a voice, they will most surely be left behind.

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Porter's four determinants of national advantage: (1) Factor conditions - The nation's position in factors of production, such as skilled labor or infrastructure, necessary to compete in a given industry. (2) Demand conditions – The nature of home demand for the industry's product or service. (3) Related and supporting industries - The presence or absence in the nation of supplier industries and related industries that are internationally competitive. (4) Firm strategy, structure, and rivalry - Conditions governing how companies are created, organized, and managed, and the nature of domestic rivalry. These determinants, individually and as a system (commonly referred to as Porter's Diamond), create the context in which a nation's firms are born and compete. The effect of one determinant is contingent on the state of others. Favorable demand conditions, for example, will not lead to competitive advantage unless the state of rivalry is sufficient to cause firms to respond to them. Advantages in one determinant can also create or upgrade advantages in others.

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[72] Anne C. Lewis, "Children on the Move," *Phi Delta Kappan* 81, no. 4 (1999): 259.

[73] Carol Asher, "Highly Mobile Students: Educational Problems and Possible Solutions," *ERIC Clearinghouse on Urban Education* 73, 1991; ERIC EDO-UD-91-3.

[74] Lewis, "Children on the Move," 259.

[75] Linda Jacobson, "Moving Targets," *Education Week* 20, no. 29 (2001): 32-34.

[76] Ibid.

[77] US General Accounting Office, *Elementary School Children: Many Change Schools Frequently, Harming Their Education*, February 1994; GAO/HEHS-94-45.

[78] In addition to the studies referenced, the following data is offered as further evidence:

Rumberger and Larson from the University of California used the 1988-94 National Educational Longitudinal Study to show that students who changed schools once during their high school years were less likely to graduate than those who remained in the same high school.
Russell W. Rumberger and Katherine A. Larson, "Student Mobility and the Increased Risk of High School Dropout," *American Journal of Education* 107, no. 1 (1998): 1-35.

The National Center for Education Statistics offers the following:

- Thirty-one percent of the eighth-grade class of 1988 changed schools two or more times after entering first grade and before the middle of eighth grade, and 10 percent changed schools two or more times between the middle of eighth grade and spring 1992.
- White students were less likely to move two or more times after entering first grade and before the middle of eighth grade than were Asians. Between the middle of eighth grade and spring 1992, white students changed schools less frequently than did either Hispanics or blacks.
- Students who lived with their mother and father during the eighth grade were less likely to have changed schools two or more times either between first grade and the middle of eighth grade or between the middle of eighth grade and spring 1992 than were students living in other types of families.
- Students in low income families (under $10,000) were more likely to change schools two or more times after entering first grade and before the middle of eighth grade than were students whose annual family income equaled or exceeded $20,000.

US Department of Education, National Center for Education Statistics, "National Education Longitudinal Study of 1988, Base Year (1988) and Second Follow-up (1992) Surveys," *The Condition of Education Indicator 46, Student Mobility*, 1995.

[79] Jacobson, "Moving Targets."

[80] David Kerbow, "Patterns of Urban Student Mobility and Local School Reform," *Journal of Education for Students Placed at Risk* 1, no. 2 (1996): 147-169.

[81] Statement by Patti J. Pawling, President New Jersey School Boards Association as quoted in:
Patti J. Pawling, "School Boards Call on State to Address Student Turnover," *New Jersey School Board Association Press Releases*, 2 August 2001; available at <http://www.njsba.org>.

Not even the measure of mobility is well defined across school districts and different formulas and timeframes are used. Very different phenomena may be at work in schools with the same mobility rate. Schools with high mobility rates do not receive funding to offset the costs of testing, support services or specialized materials often required for mobile students. Most schools only offer a one-shot orientation program—nevertheless they must be held accountable for student performance.
G. Ligon and V. Paredes, "Student Mobility Rate: A Moving Target," American Education Research Association Annual Meeting held in San Francisco, CA, 1992.

[82] Kerbow, "Patterns of Urban Student Mobility and Local School Reform."

[83] Ibid.

Coordinating such an initiative over a large set of schools is not straightforward. Schools are "loosely coupled" organizations and directives from higher levels do not always make their way down to the classroom.

[84] These record-keeping problems are most obvious with migrant students. In 1968, Title I legislation instituted the Migrant Student Transfer System (MSTS), a computer based record system for migrant secondary students. Unfortunately, MSTS and other programs like it are underutilized.
Gay Callaway Villarreal, *Migrant Education, Interstate Secondary Credit Accrual and Acceptance Manual: Practical Guidelines for School Personnel Serving Migrant Secondary Students* (Tallahassee, FL: Florida State Department of Education, 31 August 1989).

Additionally, there are test programs on-going such as a passport-like systems for Puerto Rican students moving within New York or Connecticut.
Carol Asher, "Highly Mobile Students."

[85] James E. Bruno and Jo Ann Isken, "Inter- and Intra-School Site Student Transiency: Practical and Theoretical Implications for Instructional Continuity at Inner City Schools," *Journal of Research and Development in Education* 29 (1996): 239-252.

[86] Hall, "Student Movement."

[87] Jane Gibson Natt, "School Districts Need to Analyze Mobility Sources, Make Policy Adjustments," *American Association of School Administrators Publications*, 15 May 2000; available at <http://www.aasa.org/publications>.

[88] U.S. Department of Education, National Center for Education Statistics, "National Education Longitudinal Study."

[89] A recent study examined the factors that contribute to the achievement of the 112,000 students in Department of Defense Education Activity (DoDEA) schools.
Claire Smrekar, James W. Guthrie, Debra E. Owens and Pearl G. Sims, "March Toward Excellence: School Success and Minority Student Achievement in Department of Defense Schools," *Report to the National Education Goals Panel*, Peabody Center for Education Policy, Peabody College, September 2001.

[90] Ibid.

[91] Ibid.

[92] Ibid.

[93] For example, military members are instructed that their "place of duty" is at their child's school on parent-teacher conference day, and are relieved of work responsibilities to volunteer at schools. These characteristics associated with "communally organized" schools are found in Catholic and in some magnet schools.
A.S. Bryk,V. E. Lee, and P.B. Holland, *Catholic Schools and the Common Good* (Cambridge, MA: Harvard University Press, 1993).

[94] Albert Shanker, "Charter Schools Aren't Necessarily Good Schools," *The Washington Post*, 27 December 1994.

[95] Sandra Kirkpatrick and Andrea Lash, "A Classroom Perspective on Student Mobility," *The Elementary School Journal* 91, no. 2 (1990): 175.

[96] A recent report on Chicago teachers found that in unstable schools, teachers report lower levels of collaboration with their peers, less collective focus on student learning, and a lower orientation to innovation in instruction.
P.B. Sebring, et al., "Charting Reform: Chicago Teachers Take Stock." Chicago: Consortium on Chicago School Research, 1995.

[97] Hall, "Student Movement."

[98] Spry Elementary School in Chicago cut its mobility rate from 35 to 15% in three years by relieving overcrowding, day care, English classes, a full-time social worker, and meetings on critical thinking and responsibility. While parents continue to move, more are staying within the boundaries of Spry to avoid changing schools
David Holstrom "Mobile Kids Daunt Urban Schools: Educators Work to Slow a Revolving Door that Disrupts Learning," *The Christian Science Monitor*, 26 March 1996, 1.

A landlord in Rochester N.Y. began working in the late 1980s with his local apartment owners' association to discourage families from moving during the school year. The group's efforts helped cut mobility in the district by 38% in just a year. "When we told parents this would hurt their children, we got a massive response" from landlords, banking institutions, and welfare agencies. Under the 1996 welfare-reform law, states can offer one-time payments to families close to the poverty line to pay rent, thereby avoiding eviction and resulting school transfer
Jacobson, "Moving Targets," 34.

[99] Jacobson, "Moving Targets."

[100] Yvonne Rafferty, "Meeting the Educational Needs of Homeless Children," *Educational Leadership* 55, no. 4 (1998): 48.

[101] Del Stover, "The Mobility Mess of Students Who Move," *The Education Digest* 66, no. 3 (2000): 63.

[102] David Holstrom, "Mobile Kids Daunt Urban Schools."

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