

The Number of Functionally Illiterate Adults in U.S. Is Growing

***2003 National Literacy Survey Likely to Show
More Adults Lacking Basic Reading and Writing Skills***

Introduction

This address is intended to lay the groundwork for an annual State of Literacy Report in which ProLiteracy Worldwide will bring new facts and perspectives forward to draw public attention to issues and problems related to adult literacy. As a global organization supporting international partner literacy training programs in 48 developing countries in Africa, Asia, the Middle East, Latin America and the Caribbean, ProLiteracy Worldwide provides customized community-based literacy training programs that enable adults and their families to obtain the skills and practices necessary improve their lives in terms of health, education, peace, justice, human rights and economic self-reliance. We are an active contributor to the UNESCO Decade of Literacy program intended to reduce the number of illiterate adults in the world by 2012. Many of the issues addressed here are similar to the literacy realities worldwide. Also, literacy realities outside the U.S. have an impact on the U.S. situation. However, this year's report assesses how we are doing at home here in the U.S. and offers a prediction on what we should expect when the next National Assessment of Adult Literacy findings are released in 2004.

This report also uses research and facts to show how literacy solutions for children and adults are inextricably connected. Curiously, although all of this research is readily available and comes largely from work outside the literacy field itself, very few social commentators or public policymakers have yet embraced the comprehensive approach our national literacy crisis requires, namely one that balances both the children's and adult sides of the literacy equation.

As a child of the 1940s and 50s I cannot ever recall asking my parents to assist me with my homework. Yet, I was aware of the importance they placed on education since they had had little opportunity to attend school beyond the early grades. What I do remember is the array of coping skills they had mastered in order to raise a family of six with no school dropouts. My dad, for example, had a remarkable memory. He could go through the supermarket filling two baskets and know the total bill within 50 cents. Raised on a farm, he had acquired the basic skills of a mechanic, carpenter, electrician, and plumber. He taught me how to read the sports page to keep me from pestering him about my favorite baseball players.

Although my mother had more schooling, she still struggled with some of the tasks of managing an apartment house that she jointly owned with two siblings. She never used recipes when she cooked, and she sometimes had to ask for assistance in reading directions on prescriptions. As an apartment house manager my mother solved problems almost daily. Through her relationships with tenants, I gained insights into human behavior, the intricacies of business and real-estate ownership, and when she had to take on jobs outside the home, the challenges of self-employment. Most importantly, from her example I grew up expecting to be a good neighbor.

A researcher with the Consumer Literacy Project at the College of Business, University of Illinois at Urbana-Champaign, assessed these coping skills well when he wrote: “the functionally illiterate provide awe-inspiring examples of overcoming the most fundamental constraints in day-to-day life. They challenge the conventional assumptions of literate decision-makers in business and government.”¹

My parents’ story of coping and success shaped my own life story, too. My dad’s job was six blocks from our house and I used to walk with him sometimes. I was proud that he was a foreman and managed a crew of twelve. My dad worked in a specialty printing plant where he and his men were responsible for clearing the presses and preparing them for the next days’ operations. His job as foreman required its own set of technical skills, and he dealt with many of the same management issues I have had to

handle throughout my professional life. Most importantly, I learned volumes from him about the world of work and opportunity.

It was a simpler world then, of course. But my parents' experiences are remarkably similar to those experienced today by adults with limited literacy skills. The point I am making here as I draw upon my own childhood experiences is that children learn extremely important things from their parents about the world and how it works. A parent's horizon of experience—the kinds of work she does, what she knows about keeping healthy, maximizing her resources, planning for the future, and leveraging assets—is fully imparted to her children. So as consumers, employees, patients, immigrants, citizens, and voters, adults provide their children with important role models and experiences that extend what they learn in school to real-life examples.

But an adult with low literacy skills who cannot effectively negotiate the health care system, who is an uninformed consumer, who cannot steward her assets, and most importantly, who cannot obtain and keep steady employment that gives her and her family security, is much less able to provide this kind of preparation or world-readiness for her children. Research continues to show that more often than not, children of functionally illiterate adults share the legacy of their parents' educational, economic, and social limitations. Tom Sticht sums it up this way,

“...the most important, long term, educational intervention “program” for a child is a well educated, financially comfortable parent (or major caregiver). Better educated parents produce better educated children.”²

Both parents and children are equally important parts of the learning equation. Low literacy skills are a crosscutting barrier to effective performance in all of the important arenas of life for adults and their children. That is why it is so important that adult literacy and basic education skills become a national priority that matches our commitment to better schools for our children.

A Literacy Prediction

For the last ten years or so, literacy advocates, policymakers, and other stakeholders have cited results from the 1993 National Adult Literacy Survey (NALS) to describe the magnitude of our country's adult literacy crisis.³ Many educators, elected representatives, and members of the public could not (and still do not) believe that between 40 to 44 million Americans or one in five adults in the U.S. functions at the lowest literacy level. In fact, many social commentators continue to dispute the NALS data, and as recently as a year ago a debate about the NALS' research methodology found its way into the Washington Post.⁴

We are now on the eve of a new National Assessment of Adult Literacy report, scheduled for release in 2004.⁵ What has changed? What can we expect from the new NAALS? I predict that the NAALS estimate of functionally illiterate Americans will be larger and we will have a much grimmer picture of the state of adult literacy than we do now. This time around, however, I believe that there will be broad support for the NAALS findings by America's health care providers, business and industry leaders, and correctional reform advocates who have conducted their own research into what adult functional illiteracy is costing the U.S. socially and economically.

Factors Contributing to Functional Illiteracy Rates Among U.S. Adults: Immigration, Student Mobility, and School Drop Outs

One of the primary engines behind our nation's growing literacy problem is immigration. Today, immigration has become the determining factor in U.S. population growth. The 31.1 million immigrants identified in the 2000 Census are "unparalleled in American history. It is more than triple the 9.6 million in 1970 and more than double the 14.1 million in 1980."⁶ A dramatic increase in the U.S. foreign-born population took place between 1970 and 1998 as a result of legislation passed in 1965 that relaxed immigration barriers and the foreign-born population increased from 9.6 million to 24.4 million. About a third of the current foreign-born population has arrived in the United

States since 1990.⁷ Now, children of immigrants are the fastest growing segment of the U.S. population under age 18. One in five children is the child of an immigrant.⁸

Here are some of the things we know about U.S immigrants:

- 64% of the second-language foreign-born ages 16-65 are at Level 1 of the NALS...meaning that they have difficulty reading and using even simple, clearly formatted print information in English.⁹
- The poverty rate for immigrants and their U.S.-born children (under 18) is two-thirds higher than that of other Americans and their children, 17.6 percent versus 10.6 percent. In fact, immigrants and their minor children now account for almost one in four persons living in poverty.¹⁰

The educational profile of U.S. immigrants makes it clear how much they are contributing to the nation's literacy challenge. As a group, they tend to have less education, and as speakers of languages other than English, many struggle with speaking, reading, and writing English. On the whole, immigrants are also disadvantaged educationally compared to native-born Americans. Thirty percent of immigrants lack a high-school diploma—that is 3.5 times the rate for natives. And since 1990, immigration has increased the number of high school dropouts in the labor force by 21 percent, while increasing the supply of all other workers by 5 percent.¹¹

These statistics paint a tough picture of the educational challenge that we face with our immigrants who contribute so richly to our nation's resources and power. The good news is that record numbers of immigrants are turning to adult literacy programs for help in learning to speak, read, and write English; to prepare for citizenship; to get their GEDs; to improve their job prospects; and to strengthen their parenting skills and ability to help their children to succeed in school. Currently, over 87 percent of ProLiteracy America's community-based literacy programs provide English-as-a-second-language (ESL) instruction.¹² Enrollment for state-administered adult ESL programs also continues to grow; from 1994-1998 ESL enrollment increased 58 percent.¹³

To the extent that our nation fails to meet the challenge and support the adult education and literacy system, it compromises its effectiveness in integrating immigrants into the social fabric and economic system. Adult literacy programs, both publicly-funded and community-based, provide the critical “front door” for immigrants and provide a service of incalculable value, but adult education programs have faced funding cuts in almost every state. ProLiteracy’s affiliate programs have also been affected by funding cuts; nearly 77 percent now report waiting lists of adults wanting to improve their English literacy skills. ¹⁴

Student Mobility and School “Push-Outs”

Student mobility is another demographic factor that appears to be contributing to the growing numbers of adults with low literacy skills. It is estimated that approximately 60 percent of students in the United States make unscheduled school changes between grades 1 and 12; in California that rate jumps to 75 percent. ¹⁵ According to a 1991 U.S. Department of Education study, the student who moves a lot is typically from a low-income family and/or attends an inner city school. ¹⁶ In areas of high rents, poor housing, and economic hardship “schools whose populations change as much as 100 percent a year are an increasing phenomenon.” ¹⁷

What happens when kids are moved from school to school? Studies consistently find that mobile students “have lower achievement on average than non-mobile or stable students.” ¹⁸ Whether mobility is a symptom or a cause of poor school performance, it is clear that mobile students drop out at much higher rates than their more stable peers. ¹⁹ This will not be news to literacy practitioners who work with so many adult learners who have spent much of their early schooling years moving from school to school.

In New York City, young people who have left high school are turning to GED providers in record numbers. That would not be the worst news if these students were ready to prepare for the GED, but this is rarely the case. Most, in fact, lack the basic literacy and numeracy skills they need to succeed in a GED program. Of those that enroll, half are

two, and even three years away from being able to pass. Some community-based adult education programs are even seeing kids as young as 16.²⁰ As one adult literacy provider describes it,

“These are kids who have gone back and forth, and have fallen behind...Schools don’t know what to do with that. Those kids are the least appropriate for the G.E.D. program. If they need brushing up, we can certainly help them. But that’s not what most of these kids need. They need years of basic learning.”²¹

And from a University of North Carolina at Chapel Hill study,

“The links between literacy problems in early adolescence and dropping out at a later age are only now just beginning to be realized. ...The more difficult it becomes for students to achieve - or believe they will achieve - in school, the more likely it is for them to decide to drop out...Lack of literacy skills is not the only reason students drop out of school, but poor skills in reading and writing are inextricably linked with dropping out.”²²

Although America’s high school drop out rates have actually not changed much in recent years, there is growing evidence that more and more poor performing students are being “let go” by schools that need to reduce their failure rates in the face of school reform standards.²³ According to a report by Advocates for Children, these “push outs” from the New York City school system are classified under bureaucratic categories that hide their failure to graduate (hence, they are not technically “drop outs.”)²⁴ During 2000-01, for example, New York City’s schools discharged more than 55,000 high school students—a number far higher than that year’s graduating class of fewer than 34,000.²⁵ Last August, *The New York Times* reported that the Houston school district that President Bush and Education Secretary Rod Paige touted as the national showcase for accountability and the model for the federal No Child Left Behind Law mis-represented its dropout figures.²⁶

What is happening? Are more kids in this country doing more poorly in school than ever before? New research on student mobility rates and their impacts certainly points in that direction. Whether mobility is a symptom or a cause, though, there are strong indications that growing numbers of students—most of them struggling academically—are leaving school in record numbers. Dropping out or getting pushed out, many of these young people want and need the assistance of the adult education and literacy

system to get their lives and their educations back on track. Along with immigrants and immigrants' children, young adults leaving the school system are fueling the growth of the adult literacy challenge nationwide.

A Parent's Legacy

So far, I've noted three demographic trends, immigration, student mobility, and school push-outs that underlie my prediction that the next NAALS estimate of functionally illiterate adults will be higher than what was reported a decade ago. A fourth factor contributing to the increased rate is that if Level I and II readers have not taken part in adult literacy or basic education, they will have passed their legacy of low literacy on to their children, many of whom will now be joining the ranks of adults with low literacy skills in the U.S. Here is some of what we now know about the intergenerational transfer of literacy skills and the role adult literacy programs can have in changing that pattern:

1. **Parents' Low Literacy Directly Affects Their Children's Performance in School.** Studies show that the children of parents who have less than a high school education tend to do poorest on reading tests. Children of high school graduates do considerably better, and children of parents who have education beyond high school do considerably better than that. These differences in test scores have held constant since 1971, and the same differences show up in the scores of third, eighth, and 11th graders.²⁷
2. **Adults pass on to children their own expectations about education and achievement.** A review of 67 research studies on literacy programs found that as parents spend time in adult literacy programs, their attitudes toward education change: The more literate they become, the more value they perceive in education. The more they support their children's learning, the more they become involved in their children's schools. The result is that their children's school achievement jumps.²⁸ The same report found that as parents continue to

spend time in literacy programs, their children attend school more regularly, achieve higher IQ scores, and are more likely to complete their educations.²⁹

3. As Parents Become More Literate, Their Children’s School Performance Improves. One of the most intriguing impacts of improved adult literacy is the impact on children. According to a report by the U.S. Department of Education, “The single most significant predictor of children’s literacy is their mother’s literacy level.”³⁰ In short, the best way to ensure that children become successful in school is to address the literacy needs of the adults in their lives. By becoming more literate, caregivers become role models for children. When children see their parents reading, they want to read. In their study of family literacy programs, Mikulecky and Lloyd discovered that, after six months, older children’s book and magazine reading increased by about 40 percent.³¹

4. When adults improve their literacy skills, studies show that children’s long-term gains are also impressive. Overall, children have fewer nutrition and health problems, drop out of school less, and have fewer teen pregnancies, less joblessness, and less social alienation.³² In other words, children’s long term gains are predicated on life changes—better jobs, improved family financial and health security, etc. that their parents are able to make because of improved literacy skills.

Children’s and adults’ success are intrinsically linked. To place the entire burden of children’s academic success on schools that cannot possibly counter factors outside their reach is a public policy seriously out of balance with the parameters of the problem. In fact, we actually compromise school reform and accountability when we do not factor in parents’ contribution to school success. That is what balancing both sides of the education equation is all about.

A Literacy Prediction Revisited:

Still other evidence supporting the prediction that the NAAL estimates will increase is that since the original survey was completed, researchers in prison reform, health, and business and industry have corroborated the NAAL findings and have broadened our understanding of the impact of adult low literacy on society and the economy. Here is a brief overview of what we have learned about prison literacy, the impacts of low literacy on health care, and finally, what lack of basic skills is costing U.S. business and industry.

Rates of Incarceration Are Up

Russia and the U.S. are now the world leaders in incarceration, with imprisonment rates 6 to 10 times that of most industrialized nations.³³ Nationwide, nearly 70 percent of all people entering state correctional facilities have not completed high school, 47 percent have had some high school education, and 14 percent have had no high school education at all.³⁴ According to the report “Literacy Behind Prison Walls” 70 percent of all prison inmates are functionally illiterate or read below a fourth grade level.³⁵ Other studies have found that the same percentage cannot write a brief letter explaining a billing error, read a map, or understand a bus schedule.³⁶

It is not surprising that inmates’ post-prison prospects are poor. Released inmates most typically re-join their pre-imprisonment peers who read at very low levels and who therefore are unemployed.³⁷ There are, however, numerous studies demonstrating that re-incarceration rates for inmates who have participated in prison education programs are significantly lower than for those prisoners who have not. A Virginia study that looked at a sample of 3,000 inmates reported that only 20 percent who had been in education classes were re-incarcerated, whereas 49 percent of those who had not been in education programs were re-incarcerated.³⁸ Another study of released inmates in Ohio, Minnesota, and Maryland found a similar re-incarceration rate for education program participants (e.g. 21 percent) and reported a 31 percent rate for non-participants.³⁹

Inmates who have been in prison education programs are also much more successful than non-participants at finding gainful employment upon release and consequently earn more.^{40, 41} The Virginia study cited above found that 78 percent of paroled inmates who had completed an educational program in prison were employed for more than 90 days compared to 54 percent who had not taken part in educational programming.⁴²

As voters and politicians increasingly emphasize punishment over rehabilitation, fewer and fewer low-literate inmates in the nation get the literacy education they need. Currently, only about nine percent of inmates with low literacy skills ever receive literacy training while in prison.⁴³

In 1999, only 25 percent of jail jurisdictions offered a basic education program.⁴⁴ As Barton and Coley, in their study of prisons and education state it,

“Without training and education, even if they [the prisoners] are trying, they’re not going to make it when they get out. This is where a whole lot of our youth are these days, especially minority youth. And for many of them, it’s their last chance for education.”⁴⁵

As with other forms of investment in literacy, investments in prison literacy programs pay off both for the students and for society as a whole. Re-incarceration rates are lower, inmates who have participated in prison education programs are more successful than non-participants in securing gainful employment upon release and their earnings are higher.⁴⁶ Finally, research shows that prison education systems pay for themselves. Steuer and Tracy looked at year 2000 data for Maryland and, taking into account reductions in recidivism related to prison education, concluded “...[the] \$11,700,000 annual state budget for correctional education returned at least \$23,280,000 to the state.”⁴⁷

In sum: a cross cutting solution to our national adult literacy crisis must involve our local, state, and federal prison systems.

Health Literacy Is Now a Priority

A new report released this year by the Institutes of Medicine titled *Priority Areas for National Action: Transforming Health Care Quality* identifies health literacy as “one of

the country's top priorities for improving the quality and delivery of health care.”⁴⁸ The report states that an estimated 46 percent of Americans struggle with understanding basic health care communications such as preventive health care information, physician's instructions, prescriptions, and insurance forms, resulting in poor health outcomes.⁴⁹

Here are some of the things we know about people with low health literacy,

- They are five times more likely to misinterpret their prescriptions than patients with adequate literacy skills⁵⁰
- They average two more physician visits per year than their literate peers⁵¹
- They are likely to be low income or elderly⁵²
- Forty-five percent do not have anyone in their household who can read medical instructions to them⁵³

Interestingly enough, the researchers do not conclude that the adult education and literacy system must own the solution to this massive health literacy problem. Rather, they recommend that the

“...system and policy changes to achieve improvement ...would involve most health care organizations and practitioners, could impact all types of conditions, and could provide a means of dramatically improving health care for all Americans.”⁵⁴

The researchers further recommend that steps be taken to ensure that

“the sharing of knowledge between clinicians and patients and their families is maximized, that the patient is recognized as the source of control, and that the tools and system supports that make self management tenable are available ...that use of both written and verbal communication [is] the most effective way of increasing patient understanding and compliance.”⁵⁵

Once again, it is important to emphasize that our health care colleagues have put their own numbers on the magnitude of the adult literacy problem and their estimates corroborate the magnitude 1993 National Adult Literacy Survey findings. For example, The Journal of the American Medical Association reported in 1999 that 46 percent of American adults are functionally illiterate in dealing with the health care system.⁵⁶ Even identifying the problem is a challenge because patients with low literacy are frequently

ashamed and hide it. A 1996 study of patients had never told anyone about their reading problem.⁵⁷ People with low literacy skills have to rely on remembering what health professionals tell them. Recall of medical instructions is often poor; one study showed that people remember only 14 percent of spoken instructions for managing fever or sore throat.⁵⁸

In sum, about \$73 billion in additional health care expenditures (with employers financing as much as 17 percent of those costs) can be attributed to low health literacy skills.⁵⁹ *A crosscutting solution to our national adult literacy crisis that involves the health care system will pay off for adult learners in better health for themselves and their families and for the economy as a whole.*

Low Literacy Is Costly for Business and Industry

A 2001 American Management Association survey of member and client companies found that 34.1 percent of job applicants lack the literacy skills needed to do the job they seek. Of these “skills-deficient” applicants, about 90 percent are not hired.⁶⁰ Not surprisingly, there is high unemployment among adults who lack basic skills. For example, workers who score at NALS Level 1 (the lowest level) of quantitative literacy have an unemployment rate of nearly 20 percent. Those at Level 2 have a 12 percent unemployment rate.⁶¹

Some businesses are upgrading employee basic skills training to remedy the shortage of skilled workers. Fifty percent of Fortune 500 companies now underwrite basic skills education for their employees at an annual cost of \$300 million per year.⁶² There are also strong indicators that workers’ lack of basic skills is holding back business development in some industries. According to a National Association of Manufacturers survey report, 40 percent of manufacturers cite workers’ insufficient reading, writing, math, and communication skills as a principal reason they cannot implement new productivity improvements.⁶³ All totaled, limited literacy skills of employees is costing U.S. business and taxpayers and estimated \$20 billion annually in lost wages, profits,

and productivity. ⁶⁴ *Here again, a cross-cutting solution to our national adult literacy crisis must involve business and industry.*

Conclusion

Attaining and maintaining high literacy levels among adults is an ongoing process, especially in the U.S. where immigration and family mobility rates are high. Our current national focus on the children's side of the educational and literacy equation puts enormous pressure on school systems to succeed with children whose parents lack the educational or cultural resources they need to support their children or the school. Balancing the equation requires cross-cutting strategies from our policy-makers, our health, education, labor and welfare system, our prison system and last but not least, business and industry.

To begin this process we urge immediate action by the Congress to reauthorize the Workforce Investment Act (WIA Reauthorization H.R.1161). However, longer term we suggest a more comprehensive approach.

Building on the Action Agenda of the National Literacy Summit 2000 ⁶⁵, and consistent with the intent of the UNESCO Decade of Literacy program, ProLiteracy Worldwide proposes that the Congress develop and pass a new Adult Education and Literacy Act that:

- creates an awareness of and recognizes the existence of the network of agencies and non-profit organizations that form the Adult Education and Literacy System (AELS) of the U.S
- provides performance standards for AELS
- provides funding that will assist new or existing agencies and organizations in meeting the performance standards
- creates a referral system that encourages social service agencies, hospitals, labor unions, employers and prisons to identify low literate adults at federal literacy levels I or II and above age 18 who can be referred to AELS for training

- provides funding to support each qualified low literate adult who enrolls in an AELS program
- Provides a tax credit for volunteers who devote at least ten hours each month as a teacher or tutor in the AELS.
- Provides a tax credit to employers who hire graduates of the AELS.
- Appropriates at least \$1 billion annually for the next ten years with a 50% matching provision for states to be eligible to receive the funds.

The release of the 2004 National Adult Literacy Survey findings will be an opportunity to redirect our efforts toward an all-out effort to sharply reduce functional illiteracy in the U.S. We are long overdue for a public policy that ensures the opportunity for adults in the U.S. to overcome functional illiteracy thereby becoming better parents, better workers, and active contributors to a democratic society.

Resources:

- 1 Viswanathan, Madhubalan, et. Al., "Towards Understanding Functionally Illiterate Consumers." University of Illinois, Champaign-Urbana , Working Paper. N.D.
- 2 Sticht, T. *Literacy and Human Resources Development at Work: Investing in the Education of Adults to Improve the Educability of Children*. Professional Paper 2-83. Alexandria, VA: Human Resources Research Organization. (ERIC No, ED 262 201). 1983
- 3 Kirsch, I., et al., *Adult Literacy in America*, Washington, D.C.: U.S. Dept. of Education, National Center for Education Statistics, 1993.
- 4 Milloy, Courtland. "It's Not Easy To Exaggerate D.C. Illiteracy." *Washington Post*, August 28, 2002.
- 5 *The 2003 National Assessment of Adult Literacy (NAAL)*. Brochure. March 2003.
- 6 Camarota, Steven A., "Immigrants in the United States—2002." *Center for Immigration Studies*, November 2002.
- 7 *Population Reference Bureau*. <http://prb.org>.
- 8 Reardon-Anderson, Janet, et. al. "The Health and Well-Being of Children in Immigrant Families." *New Federalism National Survey of America's Families*. The Urban Institute, Series B., No. B-52, November 2002.
- 9 Tuijnman, Albert, *Benchmarking Adult Literacy in America: An International Comparative Study: International Adult Literacy Survey*, Department of Education, OVAE, Washington, .D.C. 2000.
- 10 Camarota, Steven A., "Immigrants in the United States—2002." *Center for Immigration Studies*, 2002.
- 11 Ibid.
- 12 *ProLiteracy America Annual Statistical Report, 2001-02*. ProLiteracy Worldwide.
- 13 *Adult Education: Human Investment Impact 1994-1998*, Enrollment Table. United States Department of Education. Online resource.
- 14 *ProLiteracy America Annual Statistical Report, 2001-02*. ProLiteracy Worldwide.
- 15 Rumberger, Russell W.; Larson, Katherine A.; Ream, Robert K.; Palardy, Gregory J., *The Educational Consequence of Mobility for California Students and Schools*. Research Series. Clearinghouse on Elementary and Early Childhood Education. Report No:PACE-99-2. March 1999
- 16 U.S. Department of Education study and Government Accounting Office Report, 1991, cited in Natt, Jane Gibson, "School Districts Need to Analyze Mobility Sources, Make Policy Adjustments," *American Association of School Administrators –Leadership News*. May 15, 2000. Online Resource.
- 17 Schuler, D. *Effects of Family Mobility on Student Achievement*. ERS Spectrum, 8 (4). Fall, 1990.
- 18 Rumberger, Russell W., *Student Mobility and Academic Achievement*. ERIC Digest. No: ED466314. 2002.
- 19 Natt, Jane Gibson, "School Districts Need to Analyze Mobility Sources, Make Policy Adjustments," *American Association of School Administrators –Leadership News*. May 15, 2000. Online Resource.

- 20 Lewin, Tamara and Medina, Jennifer, "To Cut Failure Rate, Schools Shed Students," *New York Times*, August 31, 2003.
- 21 Ibid.
- 22 *Adolescent Literacy: What Works and Why*. Center for Early Adolescence. University of North Carolina at Chapel Hill. C. 1993
- 23 Vernon, Lisa Jo.; Baytops, Joy; McMahon, Patricia, *The Reality of Increased Graduation Requirements*. NASSP Bulletin v. 87 (June 2003).
<http://www.principals.org/>.
- 24 Lewin, Taman and Medina, Jennifer, "To Cut Failure Rate, Schools Shed Students," *New York Times*, August 31, 2003.
- 25 Ibid.
- 26 Winerip, Michael, "The 'Zero Dropout' Miracle: Alas! Alack! A Texas Tall Tale. *The New York Times*, August 13, 2003.
- 27 Hayes, A., "High-Quality Family Literacy Programs: Child Outcomes and Impacts," in *FLA Connecting: The World of Family Literacy*, #4, Louisville, KY: Family Literacy Alliance, 2002.
- 28 Padak, N. & Rasinski, T., *Family Literacy Programs: Who Benefits?* Kent, OH: Ohio Literacy Resource Center, 1997.
- 29 Ibid.
- 30 *America Reads: Start Early, Finish Strong, Raising Readers: The Tremendous Potential of Families*, Washington, DC: U.S. Dept. of Education, 1999.
- 31 Mikulecky, L. & Lloyd, P., "Parent-child Interactions in Family Literacy Programs. (Paper presented at NCFL conference), Louisville, KY: Natl. Center for Family Literacy, 1995.
- 32 Padak, N. & Rasinski, T., *Family Literacy Programs: Who Benefits?* Kent, OH: Ohio Literacy Resource Center, 1997.
- 33 Mauer, Marc, "Comparative International Rates of Incarceration: An Examination of Causes and Trends," *The Sentencing Project Report Presented to the U.S. Commission on Civil Rights*, June 20, 2003
- 34 *U.S. Department of Justice Statistics*. 2000.
- 35 "Literacy Behind Prison Walls," *Profiles of the Prison Population from the National Adult Literacy Survey*, 1994.
- 36 Barton, P. & Coley, R., *Captive Students: Education and Training in America's Prisons*, Princeton, NJ: Educational Testing Service, 1996.
- 37 Kirsch, I. et al., *Adult Literacy in America*, Washington, D.C.: U.S. Dept. of Education, National Center for Education Statistics, 1993.
- 38 Hull, K., et al., "Analysis of Recidivism Rates for Participants of the Academic/Correctional/Transition Programs Offered by the Virginia Department of Correctional Education," in *Journal of Correctional Education*, Vol. 51, No. 2, Lanham, MD: Correctional Education Association, 2000.
- 39 Steurer, S., Smith, L., & Tracy, A., *The Three State Recidivism Study*, Lanham, MD: Correctional Education Association, 2001.
- 40 *National Institute for Literacy, Fact Sheet: Corrections Education*, Washington, DC: Natl. Institute for Literacy, 2001.
- 41 Steurer, S., Smith, L., & Tracy, A., *The Three State Recidivism Study*, Lanham, MD: Correctional Education Association, 2001.

- 42 Hull, K., et al., "Analysis of Recidivism Rates for Participants of the Academic/Correctional/Transition Programs Offered by the Virginia Department of Correctional Education," in *Journal of Correctional Education*, Vol. 51, No. 2, Lanham, MD: Correctional Education Association, 2000.
- 43 Langley, P., "Corrections Education," in *Learning Profiles*, Salt Lake City, UT: Utah State Office of Education, 1999.
- 44 *National Institute for Literacy, Correctional Education Facts*, Washington, D.C.: National Institute for Literacy, 2002.
- 45 Barton, P. & Coley, R., *Captive Students: Education and Training in America's Prisons*, Princeton, NJ: Educational Testing Service, 1996.
- 46 Manning, Dr. Allen, U.S. *Adult Literacy Programs: Making a Difference*, ProLiteracy America, 2003.
- 47 Steurer, S., Smith, L., & Tracy, A., *The Three State Recidivism Study*, Lanham, MD: Correctional Education Association, 2001.
- 48 *Priority Areas for National Action: Transforming Health Care Quality*. The National Academy of Sciences. 2003.
- 49 Ibid.
- 50 Ibid.
- 51 Ibid.
- 52 Ibid.
- 53 Ibid.
- 54 Ibid.
- 55 Ibid.
- 56 Ibid.
- 57 Ibid.
- 58 Ibid.
- 59 Ibid.
- 60 American Management Association, *2001 AMA Survey on Workplace Testing: Basic Skills, Job Skills, Psychological Measurement: Summary of Key Findings*, New York, NY: American Management Association, 2001.
- 61 Decker, P., *Findings from Education and the Economy: An Indicators Report*. Washington, DC: U.S. Dept. of Education, 1997.
- 62 The Ohio Literacy Resource Center, *Adult Literacy Fact Sheet: The Economics of Literacy*, 1999.
- 63 *The Skills Gap 2001*, The Natl. Assn. of Manufacturers, Andersen, & Center for Workforce Success, 2001.
- 64 The Ohio Literacy Resource Center, *Adult Literacy Fact Sheet: The Economics of Literacy*, 1999.
- 65 Sticht, T., *The Adult Education and Literacy System (AELS) in the United States: Moving from the Margins to the Mainstream of Education*, Fredericton, New Brunswick, Canada: Natl. Adult Literacy Database, 2000.