SOLVING THE MEGA-CRISIS IN EDUCATION: CONCRETE, COST-EFFECTIVE SOLUTIONS

By

HERSHEY H. FRIEDMAN * WILLIAM HAMPTON-SOSA ** LINDA WEISER FRIEDMAN ***

* Professor of Business, Department of Finance and Business Management, Brooklyn College, CUNY.
** Assistant Professor of Business and Management, Department of Finance and Business Management, Brooklyn College, CUNY.
*** Professor of Statistics and Computer Information Systems, Baruch College, CUNY.

ABSTRACT

The United States will lose its ability to compete in the global knowledge economy if its educational system is not significantly improved. It now ranks 13th in college graduation rates. In a recent 24-country Survey of Adult Skills, the U.S. ranked 16th in literary proficiency and 21st in numeracy proficiency. Without an intervention, the United States will continue to lose its ability to compete in the global knowledge economy. The objective of this paper was to examine the problem and various potential solutions. The research methodology employed was a search of the scholarly and professional literature. The authors discuss cost-effective solutions that include expanding early childhood education programs, changing the school calendar, home schooling, and online learning options.

Keywords: Crisis In Education, Online Education, Graduation Rate, Home Schooling, Early Childhood Education, Flipped Classes.

INTRODUCTION

There is no question that the United States will lose its ability to compete in the global knowledge economy if its educational system is not significantly improved. For those who believe that the solution involves spending more on education, underspending is definitely not the source of the problem. Actually, the United States is ranked 4th in the world on per-capital spending on primary and secondary education and is ranked 1st in spending on higher education (Council on Foreign Relations, 2013).

The federal government may be concerned with efficiency and ways of reducing tuition costs but they are partially responsible for the overspending on education. The government is responsible for administrative bloat – the problem of too many administrators – which has resulted in a great deal of waste in higher education (Green, Kisida, and Mills, 2010). Between 1993 and 2007, the ratio of number of administrators per 100 students grew by 39%; amount spent on administration per student (inflation adjusted) grew by 61%. Green, Kisida, and Mills (2010) attribute administrative bloat to the fact that tuition accounts for a relatively small share of a university's revenues; most of the revenue comes from government and private gifts. They feel that the best way to reduce administrative bloat is to get government to reduce the subsidies going to higher education.

Another problem is that funds spent on education are not distributed equitably. The United States spends more on students in high-income districts than on students in low-income districts. This can be attributed to the fact that the revenues for K-12 Education mainly come from local property taxes. It is exactly the opposite in most countries that more is spent on students in poor districts than in rich districts (Council on Foreign Relations, 2013). The Report concludes that "The United States is in an era of austerity, the challenge will be to expand higher-quality education for all Americans."

How are they Doing?

They are definitely spending a great deal on education, but how are they doing when compared to other countries? According to the latest report from the Council on Foreign Relations (2013), the United States is now in 10th place (three decades ago, it was in 1st place) when it comes to high school graduation rates, and 13th place (three decades ago, it was in 3rd place) in college graduation rates. This is not a small matter. According to

Rachel Strauss, Associate Director for the Council of Foreign Relations' Renewing American Publications:

Human capital is perhaps the single most important long-term driver of an economy; smarter workers are more productive and innovative. It is an economist's rule that an increase of one year in a country's average schooling level corresponds to an increase of 3 to 4 percent in long-term economic growth. Most of the value added in the modern global economy is now knowledge based (Council of Foreign Relations, 2013).

Further underscoring poor student outcomes are the scores for the 2012 PISA (Program for International Student Assessment) test results. The 2012 PISA scores, which assessed teenagers in 64 countries and economies on reading, math, and science, demonstrated that little has changed in the United States since 2000; 15-year olds in the U.S. scored 17th in reading, 21st in science, and 26th in math. This, is despite a decade of all kinds of educational reforms based "test-based schooling" to a large degree onand a top-down management approach resulting from "No Child Left Behind" and "Race to the Top." (Layton, 2013). The PISA scores are available at the OECD website (http://www.oecd.org/pisa/). American teenagers are average in reading and science and below average in math when compared to the 64 countries (Layton, 2013).

Some key findings of the PISA Report (OECD, 2012):

- Mathematics scores for the top-performer, Shanghai-China, indicate a performance that is the equivalent of over two years of formal schooling ahead of those observed in Massachusetts.
- While the U.S. spends more on per student than most countries, this does not translate into better performance.
- Students in the United States have particular weaknesses in performing mathematical tasks with higher cognitive demands, such as taking real-world situations, translating them into mathematical terms, and interpreting mathematical aspects in real-world problems.
- Socio-economic background has a significant impact on student performance in the United States, with some 15% of the variation in student performance explained by this, similar to the OECD average. Although this impact has weakened over time, disadvantaged students show less engagement, drive, motivation and self-beliefs.

Arne Duncan, Secretary of Education, said the following regarding our poor performance on the PISA exams as a "brutal truth" and that must "serve as a wake-up call":

The United States should also take several actions simultaneously. The country must invest in early education, raise academic standards, make college affordable, and do more to recruit and retain top-notch educators (Layton, 2013).

There is additional evidence that our educational system needs to be greatly improved. The Organization for Economic Cooperation and Development (OECD) recently completed a Survey of Adult Skills in 24 countries (Rogers, 2013). Three skill sets were assessed among individuals ranging in age from 16 to 65 years old as follows,

- Literacy - decoding written words and sentences and comprehending, interpreting and evaluating complex texts
- Numeracy - solving problems about math context presented in multiple ways
- Problem solving in technology-rich environments - solving personal, civic or work problems by using a computer

The results do not bode well for the United States: "The U.S. ranked 16th out of 23 countries in literacy proficiency, 21st in numeracy proficiency, and 14th in problem solving in technology-rich environments." Mary A. McCarthy, a senior policy analyst, remarked: "It's a worrisome result and it's another reminder that we are not doing our job when it comes to education here, particularly with adults." When it came to literacy skills, one-sixth of American adults scored below level two of five possible levels; only 12% were at the highest level. With respect to numeracy skills, one-third of American adults scored low-proficiency levels; only 8% were at the highest level. With respect to problem solving in technology-rich environments, approximately one-third of adults scored the lowest level of proficiency (Rogers, 2013).

Gordon (2013) believes that early childhood education is a way to "counteract the negative consequences of growing up in disadvantaged households, especially for children who grow up with only one parent." Children from low-income households often have no books at home and have no one to read to them, So instead of learning, they watch television or play video games. Only 25% of 4-year olds in the United States participate in early childhood education (Gordon, 2013). Thousands of doctors and nurses have joined the Reach Out and Read program and urge low-income women who come in for pediatric checkups to read for their children (Gordon, 2013).

For students, the long-term negative impact of growing up in a low-income home is further revealed in a provocative study that examined early language proficiency. Fernald et al. (2013) found that significant disparities in vocabulary and language processing efficiency were already evident at 18 months between infants from higher- and lower-socioeconomic status families. This is consistent with the studies done by Hart and Risley (2009) who assert the following:

In professional families, children hear an average of 2,153 words per hour, while children in working class families hear an average of 1,251 words per hour and children in welfare-recipient families hear an average of 616 words per hour. Extrapolated out, this means that in a year children in professional families hear an average of 11 million words, while children in working class families hear an average of 6 million words and children in welfare families hear an average of 3 million words. By age four, a child from a welfare-recipient family could have heard 32 million words fewer than a classmate from a professional family (Hart and Risley, 2009).

Hirsch (2012) states that "there is strong evidence that increasing the general knowledge and vocabulary of a child before age six is the single highest correlate with later success." Given that children learn the vast majority of their early vocabulary from their parents, the link between socio economic status and educational outcomes of children is clear.

Therefore, many of people's problems are partially due to the fact that 21.8% of American children are raised in poverty (Strauss, 2013). Innovative solutions are needed to address this problem if the United States wants to continue as a world leader. Moreover, spending more money on the same approach to teaching, whether in public or charter schools, may be throwing good money after bad. Ravitch (2013) feels that the belief that moving to a market solution and switching from public schools to charter schools is not a solution. In fact, she refers to this view as a hoax. She is also against obsessively focusing on standardized tests. This results in teaching to the test, which tends to narrow the curriculum to subjects that can be easily tested. For example, it is easier to test math than creativity.

Ravitch (2011) warns about the danger of relying too heavily on test scores. Often, the improvements are fleeting and scores return to "normal" after a year or two. Ravitch (2011) emphasizes that there are no miraculous solutions to make schools better. Coming from a stable, middle class family that encourages learning is probably more important when it comes to education than quick fixes involving firing principals and teachers and / or shutting down schools.

Public officials are complaining about the length of time that it takes students to graduate from college. The typical college student takes six years and seven months to complete an undergraduate degree (Alexander, 2009). Bowen, Chingos, and McPherson (2009) found that less than 40% of students completed college in 4 years or less in the four state educational systems they examined. (Incidentally, one could argue that four years for high school may be too long for many students.) Only 29.2% of full-time students who start at community colleges graduate with an associate degree in three years (http://www.completecollege.org/completion_shortfall/).

President of United States has expressed great concern about the cost of higher education and recently released a proposal that would reward colleges (using financial aid provided by the federal government) that provide "good value" for the education they provide. Colleges would be rated on various factors that include affordability, graduation rates, earnings of graduates, and advanced degrees they eventually obtain (Parke, 2013). Several states are demanding that colleges prove that students are

actually learning something. Two states use standardized tests (e.g., the Proficiency Profile, which measures math, reading, and writing skills) to determine whether any learning has taken place and tie financial rewards to the outcome. Richard M. Freeland, Commissioner of Higher Education in Massachusetts, stated: "We are a publicly supported set of institutions; we need to be accountable to the state for our outcomes" (Berrett, 2013).

Schools of education are under attack. Back in 2005, Arthur Levine, President of Teachers College at Columbia University, complained about teacher preparation programs describing them as ranging from "inadequate to appalling" (Keller, 2013). Recently, the Governor of North Carolina signed a bill that ended the automatic 10% pay increase to teachers who complete a Master's degree. These automatic salary increases were attacked by education reformers as well as fiscal conservatives (Troop, 2013).

Arne Duncan said that, doing more with less will likely require reshaping teacher compensation to do more to develop, support, and reward excellence and effectiveness, and less to pay people based on paper credentials (Troop, 2013).

The National Council on Teacher Quality described schools of education as "an industry of mediocrity." One of the big problems is that less approximately 23% of American teachers (in schools located in high poverty areas, the ratio is 14%) graduate from the top third of the class (Keller, 2013). A problem that has been highlighted is that degree programs in schools of education provide too little practical, classroom experience while being mentored by professionals. There is a movement to assess the quality of schools of education (Keller, 2013).

Parents with means have found a solution to the low quality of public schools and they send their children to private schools instead. Nationally, 10% of children attend private schools. Approximately, one-third of white students attend private schools vs. 10% of black students (Cook, 2012). Some people believe that, the only way to fix the public schools is to ban private schools and make all schools public (Cook, 2012). This is not a solution, and it certainly would not be politically feasible.

Possible Solutions

Changing the School Calendar

Recently, Governor Christie of New Jersey, proposed lengthening the school day and extending the calendar for public schools in New Jersey (Delli Santi, 2014). There is a question arisen as, 'what does the evidence suggest?' Because this certainly can be quite expensive and should not be done unless it is cost-effective.

Alexander (2009) believes that the "idea of the fall-to-spring 'school year' hasn't changed much since before the American Revolution, when people were a nation of farmers." Back then, students helped their families to work in their farms during summer. There is an enormous waste of resources to operate K-12 and college facilities for approximately half the calendar year and allow facilities to sit idle for so much time (Alexander, 2009). Furthermore, it does not benefit students intellectually.

There is evidence that IQs actually drop during summer vacation when children are not in school (Nisbett, 2009). More continuous schooling, enrichment programs, and other forms of intellectual engagement can help maintain and even increase the IQ of students. It makes no sense to allow students to waste an entire summer. Instead of a 10-week summer vacation, it would be more beneficial to spread the 10 weeks of vacation over the entire school year, say, five week vacations or four vacations of about 18 days. It would be feasible to try this on an experimental basis in some schools and then examine outcomes.

There are other potential benefits to eliminate the traditional long summer break. There are evidence that indicate taking several short vacations rather than one long, extended vacation leads to a greater feeling of happiness and well-being (Fritsky, 2012). Others have found that shorter vacations tend to be more enjoyable and memorable (Belsky and Gilovich, 2012).

Changing the school calendar may have some costs. It may need to upgrade classrooms with air-conditioning and will likely need to have support staff. You would probably need additional security staff. Parents will have to contend with logistical issues and childcare issues. If it proves to be too difficult to change the school calendar in some districts, online courses can be offered during the summer even for high school students. So that students can earn credits and still have a long vacation. This could also

allow motivated students to complete high school in less time and start college earlier.

Investing in Early Childhood Programs

One of the important findings from the PISA (Program for International Student Assessment) test discussed above was the substantial impact of preschool education. Regardless of country, students who were enrolled in preschool programs consistently performed significantly better on the PISA (Layton, 2013).

Investing in preschools (pre-K) has significant short-term costs, but can save the country a great deal of money in the long run. Early education programs, according to Arne Duncan as well as many scholars, are the ideal way to "address American economic inequality, poverty and crime" (Kristof, 2013a). A Stanford University study establishes that "achievement gaps begin as early as 18 months. Then at 2 years old, there's a six-month achievement gap. By age 5, it can be a two-year gap" (Kristof, 2013a). As noted above, children from relatively affluent homes speak considerably more to their children than parents from low-income homes. Hart and Risley (1995, 2009), found that "By age four, a child from a welfare-recipient family could have heard 32 million words fewer than his/her classmate from a professional family." This results in significant differences in the cumulative vocabularies of 3-year old children from professional homes (1100 words), working class homes (750 words), and welfare-receiving homes (about 500 words) (Hart and Risley, 2009). Early childhood programs provide children from impoverished homes a chance to hear more words and thus improve their vocabularies. This is why Young feels very strongly that children should start school at the age of 2 as a way of "duplicating the kind of experience enjoyed by children of professional families." Young believes that this could reduce the word gap between professional children and children from welfare-receiving homes by as much as 50% (Young, 2013).

The value of early education has been documented in other countries.

French social scientists completed longitudinal studies of nearly four thousand children on long-term effects of écoles maternelles on the more than 30 per cent of French two-year-olds who now attend preschools. The results are striking. Those who attend school at a younger age are more effective academically and, by all indirect measures, better adjusted and happier for having early exposure to challenging and stimulating early academic experiences (Young, 2013).

Today, parents are heeding the advice of child-development experts who stress the importance of reading to babies. Some parents feel that exposing babies to classical literature will give them a head start when they start school (Bosman, 2013).

Oklahoma is one state where every 4-year old child has access to prekindergarten schooling. The state also supports home visits by social workers so that they can teach caregivers the importance of talking to children and reading out loud. They also provide books since many of the homes do not have any books suitable for children. One researcher estimates that the benefit cost ratio of Oklahoma's early childhood education program is at more than 3:1. The state gains at least $3 for each $1 spent on early education (Kristof, 2013b). Bill de Blasio, Mayor of New York City, plans on adding 29,000 pre-K seats for the 2014-2015 academic year. Andrew M. Cuomo, Governor of New York, is also in favor of pre-K but does not want to raise taxes on the wealthy to fund it; something the mayor wants to do (Baker, 2014). The cost of universal pre-K education in New York State will be about $350 million a year (Hernandez, 2014).

The early education programs being pushed not only include pre-K classes but also home visitation coaching. This coaching starts during pregnancy with advice (e.g., do not smoke or drink while pregnant) and continues after birth with advice that includes how to manage stress and to talk to the child and reading aloud. These interventions are not expensive and result in a 59% reduction in child arrests by age 15 (Kristof, 2013a). Nisbett (2009) also believes that government should invest in intensive early childhood programs such as the Knowledge is Power Program (KIPP). More education results in higher IQ scores for children and higher IQ scores are correlated with future success.

Using Online Courses from pre-K to PhD to Deliver a Customized Learning Experience

There is a great deal of evidence that supports the view that online learning is effective with college students. Courses that blend online with traditional classroom learning appear to be the most effective way to teach college-level courses. Means *et al*. (2009) did a meta-analysis of more than 1,000 studies published from 1996 to 2008 comparing traditional classroom teaching with online learning. Online learning does offer many advantages over traditional classroom learning. In fact, students who take courses that are either completely or partially online will perform better than students taking traditional, face-to-face courses. Interestingly, hybrid (also known as blended) courses that combine classroom education with online learning seem to be the best of all delivery methods. Means et al. (2009) conclude that despite what appears to be a strong support for online learning applications, the studies in this meta-analysis do not demonstrate that online learning is superior as a medium. In many of the studies showing the advantages of online learning, the online and classroom conditions differed in terms of time spent, curriculum and pedagogy. It was the combination of elements in the treatment conditions (which was likely to have included additional learning time and materials as well as additional opportunities for collaboration) that produced the observed learning advantages. At the same time, one should note that online learning is much more conducive to the expansion of learning time than in face-to-face instruction (Means et al., 2009).

Diana G. Oblinger, president of Educause, made the following statement in response to the above study: "Online education provides additional opportunities. It gives people greater opportunity for flexibility, for experiential learning, for illustrating things in multiple ways such as visualization." Obinger emphasized that the study makes it quite obvious that colleges have to make sure to use online education and not insist on only offering courses using traditional, face-to-face instruction (Jaschik, 2009). The Open Learning Initiative at Carnegie Mellon University has been using hybrid courses that combine online and traditional classroom courses to accelerate learning. In one study involving different approaches to teach statistics, a comparison was made between a traditional class and a hybrid class. The traditional class met for 15 weeks, 4 times a week. The hybrid class met twice a week for 7 1/2 weeks. Students in the hybrid class had test scores and retention scores that were equal to or better than those for the students in the traditional classroom (Lohr, 2010). It appears that a hybrid approach can enhance productivity even with a course as difficult as statistics.

The Means et al. (2009) study examined online education for college students; online education is booming in higher education. Students all over the world are learning from Massive Open Online Courses (MOOCs) offered by organizations. The old method of lecturing passive students is an approach that does not work for many students and is probably boring to them in the Internet Age. People have to transform education and make learning fun. It is disconcerting when television cameras show "students dozing in school lecture halls" (Carnes, 2011). Nowadays, many are probably texting their friends during long lectures.

A new way of using online material is via flipped classes. With a flipped class, students watch the lectures at home, on their smartphones, or on school computers. They can view the lectures, which may be taped video lessons or PowerPoint with audio as many times as they need. Some teachers to make their the have students watch videos. There is a vast amount of material on the Internet that can be used to enhance a course. The classroom is used for solving problems, doing projects, or labs. The failure rate went from 30% to 10% with flipped classrooms. It appears that flipped classrooms are most beneficial for students at the bottom of the class. These are the students who do poorly and keep quiet in a traditional classroom. These students have no way to find additional help and they rarely get help from tutors (Rosenberg, 2013).

To graduate from a New York City public high school, a minimum of 44 credits must be earned 8 credits in English; 8 credits in Social Studies; 6 in Science; 6 in Math; 2 in Art; 2 in Foreign Language; 4 in gym; 1 in Health; and 7 elective credits (Otterman, 2011). There are high schools in New York that are allowing students to earn credits in innovative ways and do not rely only on traditional classroom learning. One high school allows students to take a sailing course to earn science or gym credit. The course is offered for free by a nonprofit organization in New York City. The curriculum was

developed with the help of a teacher who was certified. In order to receive math credit, students solve distance problems involving sailing a boat and taking into account speed and wind conditions. Students learn the practical applications of trigonometry in sailing boats (Otterman, 2011b). Some students earn physical education credits by volunteering at fitness centers in the various YMCAs in the city. Some high schools allow students to earn credits via internships; some students have internships at a film making studio that teach them how to write and produce documentaries.

Robinson (2005) feels that the enemy of creativity is standardization. Education today focuses on standardized exams and standardized curriculum. Reliance on traditional classroom learning may be beneficial for some students but can be devastating for others. Not everyone learns well in a classroom. As noted above, flipped classes offer many advantages for weak students. The corporate world needs people who understand divergent thinking, seeing multiple answers to a problem (Robinson, 2005). Schools today rely too much on standardized tests, which teach students that complex problems have one simple solution. Some subjects are considered extremely important which are languages and math; others are considered unimportant which are art, dance, drama, and music.

Robinson (2005) believes that the fine arts help to improve the creativity skills that are so essential for the leaders of the 21st Century. Most high schools do not have the resources to offer more than a handful of electives or courses in the fine arts. This, in effect, means that almost everyone takes the same courses a one think fits all approach. This reminiscent of the industrial age which demanded standardized, trained workers who could perform a narrow range of tasks, in factories on assembly lines, for example. Workers were not required to be creative and they were not rewarded for being so. The knowledge economy is very different. One might even compare schools to a prison. All prisoners have to eat the same food. Variety is a luxury not available to people in prison. Schools, however, are not prisons. Young people need variety; not everyone are interested in the same subjects.

Friedman H, Friedman, and Hampton-Sosa (2013) identify 10 basic skills that are crucial in what they refer to as the "age of chaos." The skills they identify as critical for students that wish to be employable and successful are communication, creativity, adaptability, critical thinking/ problem solving, ability to collaborate and cooperate, ability to retrieve, evaluate, and present information, interest/aptitude in lifelong learning, possession of applied knowledge in real-world settings, character/ethics/integrity, and positive attitude and empathy. These skills can be taught using liberal arts courses as well as business courses. It is the expertise that matters, not the particular course. There are a number of business schools that are incorporating the liberal arts into the business curriculum. There is a belief that many of the skills - critical thinking, communication, creativity, and complex reasoning - can be taught more easily in the liberal arts (Lavelle, 2013).

Pannapacker (2013) notes that liberal arts majors have many of the skills needed by business but often do not make it through the stage one screening process because they lack some specific critical ability such as working with spreadsheets or another technical skill. Many do not have the quantitative way of thinking which comes from using statistics and analyzing graphs and data. The abilities they do possess might be of great value to an organization. In fact, Pannapacker (2013) states: "Most of all, employers want adaptability. They want employees who can get things done, even if it's something they'e never seen before." Adaptability (with creativity and the ability to acquire information) is something liberal arts majors should possess.

A simple and inexpensive way to improve educational outcomes is by allowing students at all levels to use online courses to speed up their education and access a greater variety of courses. This can both allow better-prepared students to speed up their education and also allow students to choose interesting electives. Using online and hybrid courses allow students to learn at their own pace. Logically, there is no reason that every student taking, say, a high school course in algebra should have one academic year to learn the course. Students from foreign countries may need more time to master English and less time for

mathematics. There are courses that some students might need two months to complete and other courses that might take 12 months. People learn different material at different rates. It is true that all students need certain basic skills; this does not mean, however, that all students should take the same courses. We should not be placing all students in a Procrustean bed of education. In fact, there is no reason to insist that everyone should need four years to complete high school (Grades 9 through 12).

There are many educational websites for children on the Internet that are free. Academic Earth (http://academic earth.org/) collects free lectures from top institutions such as Harvard, MIT, Princeton, and Yale and makes them accessible in one place, which makes it very easy to offer courses to students with interests in exotic areas. Universities such as Brigham Young University (BYU) currently offer online courses to junior high school students (http://ce.byu.edu/is/site/).

BYU (Brigham Young University)Independent Study is a nonprofit online educational program that offers more than 550 online courses across University, high school, middle school, and free non credit courses-to students throughout the United States and in over 90 foreign countries. Enrollment is open to anyone, anytime of the year, with a full year to complete most courses. They are continually developing more courses in their portfolio, so it is important to check our online catalog for the most up-to-date course listing.

They provide course options (Teacher-Led courses, Online courses, and Paper courses) to help high school students learn in many different situations. Traditional Paper courses provide the students with a paper version of the course and online access. Online courses provide virtual learning supported by the use of diverse videos, computerized labs, interactive activities, instructor tutorials, and animated clips. They also feature advanced features and productivity tools, including a student homepage, improved access to student grades, and a student progress calendar. Teacher-Led courses provide all of the benefits of Online courses while making the experience more interactive (http://is.byu.edu/site/about/what-is.cfm).

K-12 online education is growing rapidly; the number of children enrolled in full-time online public schools during the 2011-2012 academic year was 275,000 (http://www.connectionsacademy.com/news/growth-of-k-12-online-education-infographic.aspx).

The government at the federal and local level can play a significant role in helping parents of newborns acquire appropriate educational software that could be used on tablet computers. The software should be suitable for children from the age of 2 years and up. The cost of these electronic Head Start programs could be comparatively low given other alternatives. Public libraries could play a role in helping parents learn how to use the latest software and providing other types of support. One goal would be to expose infants to the millions of additional words that children from affluent homes hear (Rich, 2013; Hart and Risley, 2009; Hart and Risley, 1995).

There is another important advantage to online learning. It becomes possible to do very in-depth course and student assessment at a very granular level using the same types of tools and techniques associated with e-commerce. In online it is possible to determine how a user interacts with a site with a great degree of detail. It is possible to determine how quickly users move through a site and what paths they take. It is possible to determine where and how often students pause and rewind a section of video. If teachers find, for example, after reading a certain section students click to look up definitions or additional information, it might conclude that there may be some essential context that is missing from the initial web page. Or if students rewind a particular section of a video, it might guess that it is a section that lacks clarity or that students find complicated. Using this information would allow teachers to provide appropriate feedback and instructional support.

One exciting development involving online learning for high school students is about to happen in Los Angeles. The Los Angeles Public Library is going to partner with a private online learning company to offer high school diplomas. The goal is to eventually introduce this type of diploma in libraries throughout the country. Howard A. Liebman, superintendent of the Smart Horizons Career Online Education (SHCOE) Corporation, said the following about the program: "The exciting thing about public libraries is

they are places people trust. So people, who may have felt ashamed about not having a high school diploma, will feel safe going there to get one" (Watson, 2014). It should be noted that SHCOE develops "career-based high school diploma programs that are designed to prepare students for entrance into the workplace".

Skills are very important but there is convincing evidence that what really matters in education and success in life are character traits (Texas Parenting News, 2011; Tough, 2012; Wilce, 2014). The critical traits according to Wilce (2014) are: resilience, self-discipline, honesty, courage, and kindness. Other scholarly traits are, autonomy, curiosity, fearlessness, gratitude, grit, hope, love, passion, perseverance, personality, resilience, self-control, zest (Texas Parenting News, 2011). If children need to succeed parents should not forget about the importance of instilling values and character.

Home Schooling

About 4% of children are being home schooled in the United States. A major reason for this is dissatisfaction with the public school system and its inability to meet the special needs of children, the inability to provide a safe and secure environment, or the lack of sufficient educational rigor. Since 1999, the number of children being home schooled has increased by 75%. Educators expect the number of children being home schooled to increase dramatically over the next decade (Berry, 2013). The quality of education provided in home schooling does not necessarily suffer when compared to traditional schools. In fact, home schooled children score between the 65th and 89th percentile on standardized assessment tests (traditionally schooled children score at the 50th percentile). Gender and racial differences disappear when children are home schooled. What is even more surprising is the difference in cost to the taxpayer: the average expenditure for public school students is approximately $10,000 per child and only $500 - $600 for one that is home schooled (Berry, 2013).

Given the increasing availability of high quality learning material, both online and paper-based, home schooling is becoming an increasingly feasible option for parents who are well prepared, involved, and motivated. Some parents may be interested in home schooling but only for the summer months. This is one way to ensure that young people do not lose those three months. The potential downsides of home schooling can include the loss of opportunities for socialization, developing a social network, learning how to interact and manage diversity, working in groups, and engaging in sports activity. Students could potentially be exposed to a narrower range of ideas and customs. There may be fewer opportunities for character building. But all this can be mitigated in many ways provided that parents make the effort to do so. Home schooled children can join community groups, volunteer, and join independent sports leagues. Social networking sites makes it very easy for people to find and meet others face to face with common interests in a wide range of areas.

Conclusion

The first thing educators must admit is that the system is broken and needs a big fix. The one size fits all approach to education makes no sense in the global Internet age. We need a solution that recognizes that we are all different. What is interesting to one person may be quite boring to another. We also learn at different rates. Some people can pick up a foreign language in a few months and others may need years. The simplest solution involves incorporating online and hybrid courses at all levels of education. Courses can be targeted to children as young as the age of 2 years. If young people can start their education at the age of 2, they should be able to read when they start first grade. Head Start programs may be relatively expensive but electronic Head Start programs may cost next to nothing. Government has a role to play by helping parents acquire appropriate educational technology.

The mission statement of Southwest Airlines said that "People rarely succeed at anything unless they are having fun doing it." (Pink, 2006: 186-187; Collinson, 2002). Education has to be exciting and interesting. Learning can be fun but it needs to take advantage of the numerous online tools that are available and not rely solely on classroom lectures.

For educators who believe that change is not necessary in

education, White's (2013) article describing his experiences with the newspaper industry should be an eye-opener. Many newspapers refused to believe that, they had to change despite all the evidence around them that the public's way of obtaining news was changing. White asserts that newspaper people "could not envision a reality that was too far removed from the one we had experienced." White, who is now in education, sees the same kind of myopic thinking. Educators are still arguing about the value of online courses when students have made up their minds about how they want to learn. Educators have to wake up and recognize that many companies and industries thought it could never happen to them. Friedman (2013) compares higher education to the General Motors Company back in the 1960s; executives felt the company was invincible and were taken by surprise when Japanese companies came out of nowhere using technological breakthroughs and improved quality to topple G.M. The same is going to happen in education if educators do not adapt.

References

[1]. Alexander, L. (2009, October 26). Why colleges should take only 3 years. *Newsweek*, 26-29.

[2]. Baker, A. (2014, February 25). De Blasio says New York can add 29,000 pre-K seats. *New York Times*. Retrieved from http://www.nytimes.com/2014/02/26/nyregion/new-york-city-can-add-29000-seats-for-pre-k-mayor-says.html?_r=0

[3]. Berrett, D. (2013, October 28). States demand that colleges show how well their students learn. *Chronicle.com*. Retrieved from http://chronicle.com/article/States-to-Colleges-Prove-Your/142651/?cid=at&utm_source=at&utm_medium=en

[4]. Belsky, G. and Gilovich T. (2012). The secret to memorable vacations: Keep 'em short and end 'em sweet. *Time.com.* Retrieved http://business.time.com/2012/02/15/the-secret-to-memorable-vacations-keep-em-short-and-end-em-sweet/

[5]. Berry, J. (2013, June 8). Report: Home schooling growing seven times faster than public school enrollment. *Breitbart.com*. Retrieved from http://www.breitbart.com/Big-Government/2013/06/07/Report-Growth-in-Homeschooling-Outpacing-Public-Schools

[6]. Bosman, J. (2013, October 27). A library of classics, edited for the teething set. *New York Times*, 1, 4.

[7]. Bowen, W. G., Chingos, M. M., and McPherson, M. S. (2009, September 18). Helping students finish the 4-Year run. *Chronicle of Higher Education*. A28-A29.

[8]. Carnes, M. C. (2011, March 11). Setting students' minds on fire. *Chronicle of Higher Education*. *57(27)*, A72.

[9]. Collinson, D. L. (2002). Managing humour. *Journal of Management Studies*, 39 (3), May, 269-288.

[10]. Cook, J. (September 13, 2012). There's a simple solution to the public schools crisis. *Gawker.com*. Retrieved from http://gawker.com/5943005/theres-a-simple-solution-to-the-public-schools-crisis

[11]. Council on Foreign Relations (2013). Remedial education: Federal education policy progress report and scorecard. *Renewing America*. Retrieved from http://www.cfr.org/united-states/remedial-education-federal-education-policy/p30141?cid=otr-marketing_use-remedial education

[12]. Delli Santi, A. (2014). Christie to propose longer school day in State of the State. *MyFoxNY*. Retrieved from http://www.myfoxny.com/story/24442049/christie-proposes-longer-school-day-amid-scandal

[13]. Fernald, A., Marchman, V., Weisleder, A. (2013, March). SES differences in language processing skill and vocabulary are evident at 18 months. *Developmental Science*, 16 (2), 234–248.

[14]. Friedman, T. L. (2013, March 6). The professors' big stage. *New York Times*, A23.

[15]. Friedman, H. H. and Friedman, L.W. and Hampton-Sosa, W. (2013, August 9). Selecting the right college major in the age of chaos, the global Internet age. *SSRN*. Available at SSRN: http://ssrn.com/abstract=2308135 or http://dx.doi.org/10.2139/ssrn.2308135

[16]. Fritsky, L. (2012, February 1). Why a really long vacation might not make you happy. *Psychology Today*. Retrieved from http://www.psychologytoday.com/blog/vacation-mentality/201202/why-really-long-vacation-might-not-make-you-happy

[17]. Gordon, R. J. (2013, September 8). The great stagnation of American education. *New York Times*, Sunday Review, 5.

[18]. Greene, J. P., Kisida, B., and and Mills, J. (2010). Administrative bloat at American universities: The real reason for high costs in higher education. *Goldwater Institute*, Policy Report No. 239, Retrieved from http://www.goldwaterinstitute.org/article/administrative-bloat-american-universities-real-reason-high-costs-higher-education

[19]. Hart, B. and Risley, T. R. (2009, April 8). Meaningful differences in the everyday experience of young American children. *Education.com.* Retrieved from http://www.education.com/reference/article/Ref_Meaningful/

[20]. Hart, B. and Risley, T. R. (1995). Meaningful Differences in the Everyday Experience of Young American Children. Baltimore, MD; Paul H. Brookes Publishing.

[21]. Hernandez, J. C. (2014, January 17). De Blasio, a critic of charter schools, may need them for his pre-k agenda. *New York Times*, A20.

[22]. Hirsch, Jr., E.D. (2012). Primer on success. [review of the book *How children succeed:* Grit, curiosity, and the hidden power of character by Paul Tough]. Education Next. Retrieved from http://educationnext.org/primer-on-success/

[23]. Jaschik, S. (2009, June 29). The evidence on online education. *Inside Higher Education*. Retrieved from http://www.insidehighered.com/news/2009/06/29/online

[24]. Keller, B. (2013, October 21). An industry of mediocrity. *New York Times*, Education, A21.

[25]. Kristof, N. D. (2013a, October 27). Do we invest in preschools or prisons? Sunday Review. *New York Times*, 11.

[26]. Kristof, N. D. (2013b, November 10). Oklahoma! Where the kids learn early. Sunday Review. *New York Times*, 1, 11.

[27]. Lavelle, L. (2013, April 10). Business schools embrace the liberal arts. *Bloomberg BusinessWeek*. Retrieved from http://www.businessweek.com/articles/2013-04-10/business-schools-embrace-the-liberal-arts

[28]. Layton, L. (2013, December 3). U.S. students lag around average on international science, math and reading test. *Washington Post.* Retrieved from http://www.washingtonpost.com/local/education/us-students-lag-around-average-on-international-science-math-and-reading-test/2013/12/02/2e510f26-5b92-11e3-a49b-90a0e156254b_story.html

[29]. Lohr, S. (2010, October 11). In higher education, a focus on technology. *New York Times*, B3.

[30]. Means, B., Toyama, Y., Murphy, R., Bakia, M., and Jones, K. (2009). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. *U.S. Department of Education Office of Planning, Evaluation, and Policy Development, Policy and Program Studies Service*. Retrieved from http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf

[31]. Nisbett, R. E. (2009). Intelligence and how to get it. New York: W. W. Norton & Company.

[32]. OECD (2012). Key findings: Results from PISA 2012. Retrieved from http://www.oecd.org/pisa/keyfindings/PISA-2012-results-US.pdf

[33]. Otterman, S. (2011, June 27). Taking a spin on the Hudson, and earning course credit, too. *New York Times*, A18.

[34]. Pannapacker, W. (2013, November 22). No more digitally challenged liberal-arts majors. *Chronicle of Higher Education*, A27-A28.

[35]. Parke, G (2013, August 29). Administrators critique Obama's education proposal. *DukeChronicle*. Retrieved from http://www.dukechronicle.com/articles/2013/08/29/administrators-critique-obamas-education-proposal

[36]. Pink, D. H. (2006). *A whole new mind*. New York: Riverhead Books.

[37]. Ravitch, D. (2013). *Reign of error: The hoax of the privatization movement and the danger to America's public schools*. New York: Alfred A. Knopf.

[38]. Ravitch, D. (2011). Waiting for a school miracle. *New York Times*, A27.

[39]. Rich, D. (2013, October 22). Language-gap study bolsters a push for pre-K. *New York Times*, A1, A3.

[40]. Robinson, K. Sir (2005 April). How creativity, education

and the arts shape a modern economy. *Education Commission of the States: Arts and Mind Series.* Retrieved from http://www.ecs.org/clearinghouse/60/51/6051.pdf

[41]. Rogers, M. (2013, October 8). Troubling stats on adult literacy. *Inside Higher Education*. Retrieved from http://www.insidehighered.com/news/2013/10/08/us-adults-rank-below-average-global-survey-basic-education-skills

[42]. Rosenberg, T. (2013, October 9). Turning education upside down. *New York Times*. Retrieved from http://opinionator.blogs.nytimes.com/2013/10/09/turning-education-upside-down/

[43]. Strauss, V. (2013, September 17). New census data: Children remain America's poorest citizens. *Washington Post*. Retrieved from http://www.washingtonpost.com/blogs/answer-sheet/wp/2013/09/17/new-census-data-children-remain-americas-poorest-citizens/

[44]. Texas Parenting News (2011). Character traits help children succeed in school and in life. *ChildCare Quarterly*, 35(3). Retrieved from http://www.childcarequarterly.com/pdf/winter11_tpn.pdf

[45]. Tough, P. (2012). *How children succeed: Grit, curiosity, and the hidden power of character.* New York: Houghton Mifflin.

[46]. Wilce (2014, February 5). Six of the best traits your child needs to succeed. *Independent*. Retrieved from http://www.independent.co.uk/news/education/schools/six-of-the-best-the-traits-your-child-needs-to-succeed-8899903.html

[47]. Troop. D. (2013, November 22). End to pay bump for teaching master's degree squeezes some education colleges. *Chronicle of Higher Education*, A8.

[48]. Young, T. (2013, November 5). Thirty two million reasons why children should start school at the age of two. *Telegraph*. Retrieved from http://blogs.telegraph.co.uk/news/tobyyoung/100244326/thirty-two-million-reasons-why-children-should-start-school-at-the-age-of-two/

[49]. Watson, J. (2014, January 9). Los Angeles library to offer high school diplomas. *ABC News*. Retrieved from http://abcnews.go.com/US/wireStory/los-angeles-library-offer-high-school-diplomas-21473857

[50]. White, B. P. (2013, September 27). Take it from an ex-

ABOUT THE AUTHORS

Dr. Hershey H. Friedman is currently a Professor of Business in the Finance and Business Management Department of Brooklyn College of the City University of New York. He is a deputy chair person of the department and also a chair person of Humor and the Murray Koppelman Professorship. He has received his doctoral in Business from the Graduate Center of the City University of New York. He has published more than 200 scholarly articles.

Dr. Hampton-Sosa is currently an Assistant Professor of Business in the Finance and Business Management Department of Brooklyn College of the City University of New York. He has completed his doctoral in Business from the City University of New York. He has published several peer-reviewed articles. His areas of interest include e-commerce business models and strategies, online consumer behavior, business analytics, the digital society, management and entrepreneurship, and innovative education.

Dr. Linda W. Friedman is a Professor of Statistics and Computer Information Systems at the Zicklin School of Business, Baruch College, CUNY. She has received her doctoral in Operations research in 1983 from Polytechnic University. She has published two books and many articles.