United States Falling Behind in the Global Market
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Our nation’s economic status in the global market is dependent upon the skill and knowledge of our workforce. The U.S. can no longer assume that our workforce is superior to other parts of the world. Our nation’s supremacy in the global economy will not be secure without concerted effort and investment (OECD, 2010). To ensure a dynamic future and advance global competitiveness, the United States (U.S.) must take bold and immediate actions promoting critical 21st Century skills, foundational knowledge, career planning, and post-secondary preparation. The connection between a high-quality workforce and competitive status in the global arena is undeniable (Conference Board, 2006).

For the past decade, the nation has been faced with profound changes in the workforce. Seismic shifts are occurring within the existing workforce population and skill requirements are far more rigorous. As baby-boomers retire, the country’s workforce is in a period of adjustment due to a shrinking pool of knowledgeable and skilled workers (Conference Board, 2006). Comprising about one-third of the country’s workforce, 76 million baby boomers, born between 1946 and 1964, will be retiring in sizeable numbers in the next decade. Meanwhile, education systems struggle to supply a sufficient number of skilled workers for existing jobs or those emerging in the new economy (ACT, 2011). The insufficient number of younger workers to replace the boomers is causing labor shortages in key industries. Business leaders are being forced to rethink recruitment, retention, flexible work schedules and retirement (Forbes, 2005). When 150 senior executives from the 1,000 largest U.S. companies were surveyed, 47% asserted that baby-boomer retirements would have the single most significant impact on the workforce in the next decade (Industry Week, 2008). Business leaders are sounding an alert regarding shortages of qualified workers in areas ranging from non-residential construction and energy to information technology, healthcare and the STEM fields (Harvard, 2011).
Technology and knowledge-economy expansion have transformed entire industries and their respective required workforces’ skill levels. In 1955, 60% of the American nonprofessional labor force was unskilled and 20% skilled. In 2008, the breakdown of non-professional labor altered to 68% skilled and 12% unskilled. In 2007, people with a high school education or less occupied only 41% of the 154 million available jobs. In the past thirty years, the total number of jobs in America increased by 63 million, while the number of people employed with no post-secondary education decreased by 2 million. Consequently, all net job growth was generated by positions requiring specific 21st Century skills beyond the traditional high school diploma (Harvard, 2011).

Advanced manufacturing, energy, information technology, healthcare, and other high-tech industries are the current engines of economic development. The morphing population and realignment of workforce skills exacerbates another problem. The entering workforce, comprised of high school graduates, lacks requisite abilities and knowledge (Conference Board, 2006).

America’s youth are ill-prepared to join the 21st Century workforce. The increasingly dismal indicators of low standardized test scores and low high-school graduation rates foreshadow an American workforce unable to compete in a global economy and to continue economic prosperity (America’s Promise Alliance, 2006). Recognized as a standard measure of international competitiveness, the Programme for International Student Assessment (PISA) has been administered every three years since 2000. In 2009, the PISA was administered to 15-year-olds in 65 countries and educational entities, including the United States, to measure reading, mathematics, and science skills, as well as general competencies (e.g. problem solving and functional skills). On the 2009 PISA, the U.S. demonstrated an average performance in reading and science and below the average in mathematics (OECD, 2011). Our nation’s mediocre performance underlines the crucial need to ensure that future workforces are equipped with the requisite skills to participate in social and economic development. This international achievement gap results in a reoccurring economic loss. Using economic modeling, relating PISA results to economic growth, a recent study suggests that a 25-point increase on the PISA score would equate to a gain of $41 trillion for the economy over the lifetime of the generation born in 2010. Increasing our nation’s average score to the performance of Finland could result in gains in the order of $103 trillion (OECD, 2011). Poor educational preparedness and subsequent inferior performance is a barrier to U.S. economic development. Today, people compete for jobs not just locally or regionally but internationally. The current labor market juxtaposes U.S. workers directly with people with much the same skills worldwide (OECD, 2011). The competition among countries revolves around a workforce with strong 21st Century skills and the ability to read for information, apply mathematics, and use information skills in order to keep pace with changing demands (OECD, 2010).
Preparing Employees for Work

Increasingly, employers complain that today’s youth do not have the skills required to succeed in the 21st Century workforce (Harvard, 2011). Based on a survey, several hundred employers asserted, “Far too many young people are inadequately prepared to be successful” and are “deficient” in oral and written communication, critical thinking and professionalism (Conference Board, 2006). Prominent companies and business organizations are reluctant to hire young people with just a high-school degree (Harvard, 2011).

High-school graduates are deficient in:

- Basic knowledge and skills of Writing in English, Mathematics, and Reading Comprehension,
- Written Communications and Critical Thinking/Problem Solving,
- Professionalism/Work Ethic (Conference Board, 2006).

A focus on college readiness alone does not equip high school graduates with the skills and abilities required to be successful in the workplace (Harvard, 2011). Additionally, 40% of employers are critical of obsolete and outmoded approaches to education, noting that the high-school graduates lack sufficient 21st Century skills, such as critical thinking, problem solving, creativity and communication, required for even entry-level jobs (Conference Board, 2006; Partnership for the 21st Century). The myopic attention to test scores and graduation rates often overshadows the fact that youth entering the workforce over the next two decades are lacking enough of the 21st Century or applied skills such as teamwork, decision-making, and communication. These skills will help them become effective employees and managers (America’s Promise, 2006).

When examining the competencies required for college readiness, workplace readiness and healthy youth development, high personal expectations, self-management, critical thinking, and academic achievement are critical for success in all three areas. Alternatively, while career planning, previous work experience, decision-making, listening skills, integrity, and creativity are considered vital in the workplace, they are negligible in most college-readiness programs. In order to equip students with a broader range of skills, a more holistic approach to education is required for students to succeed in the 21st Century (Child Trends, 2008). Per a recent poll, most students believe high schools:

- Failed to prepare them for work or college,
- Did not sufficiently challenge them,
- Did not provide work that was relevant to potential future careers, and
- Offered too few significant career-building opportunities such as internships (Associated Press-Viacom, 2011).

Unless K-12 education is transformed by increasing performance and 21st Century skills, the U.S. cannot remain competitive in a global economy (Conference Board, 2006). Our nation’s economic future depends upon improving the skills and knowledge of our youth as well as increasing the supply and quality of the workforce to ensure productivity within 21st Century industries and occupations (OECD, 2010, Department of Labor, 2007). The U.S. competitive position in the global marketplace is dependent on the skill level of its workforce.

**Impact on the Hispanic Population**

Today’s young adults are far more diverse than previous generations of Americans. Hispanics account for 51% of U.S. growth between the years 2000-2050. Hispanics are the fastest-growing segment of the population in the United States’ workforce, and Hispanic students are now the largest minority group in American schools. It is projected that Latinos will comprise half of the population under the age of 18 in the United States by the year 2020, having a dramatic impact on the workforce (Census, 2010). The Hispanic segment of the workforce is the youngest, with 50% under age 35. Indeed by 2030, citizens of color will represent 45% of the working-age population, up from just 18% in 1980 (Harvard, 2011). In 2007, Hispanics spent $700 billion annually, projected to increase to $1 trillion in 2011 (Adecco, 2007).

While a driving economic force, schools struggle to prepare Hispanic students for career and college success. Sadly, the Department of Education's National Center for Educational Statistics (NCES, 2010) reports the “sobering” fact that the Hispanic-Caucasian educational achievement gap has remained wide over the past two decades. The NCES report indicates that since the 1990s, math and reading scores for Hispanic students have increased, but the Hispanic-Caucasian achievement gap on the National Assessment of Educational Progress (NAEP) has persisted. Students performing at the lowest level on the PISA were not a random group and the results show that socio-economic disadvantage has a particularly strong impact on student performance in the United States: 17% of the variation in student performance in the United States is explained by students’ socio-economic background. Socio-economic disadvantage translates more directly into poor educational performance in the United States than is the case in many other countries (OECD, 2011).

During economic downturns, teens have been impacted more than any other age group by unemployment. As a result, the percentage of employed teens (16-19) decreased from 45.2% in
2000 to 28.6% in June 2010. Teens face Depression-era employment prospects. This crisis negatively effects low-income Hispanic teens that have a much harder time finding jobs than their Caucasian counterparts. Incredibly, only 15% of low-income Hispanic teens are employed (Sum & Khatiwada, 2010).

Table 1: Teen Employment Gap

<table>
<thead>
<tr>
<th>Family Income (100s)</th>
<th>Hispanic</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>15.4</td>
<td>30.3</td>
</tr>
<tr>
<td>20-40</td>
<td>20.5</td>
<td>33.8</td>
</tr>
<tr>
<td>40-60</td>
<td>24.9</td>
<td>37.4</td>
</tr>
<tr>
<td>60-75</td>
<td>24.1</td>
<td>37.2</td>
</tr>
<tr>
<td>75-100</td>
<td>33.6</td>
<td>40.7</td>
</tr>
<tr>
<td>100-150</td>
<td>35.5</td>
<td>37.8</td>
</tr>
<tr>
<td>&gt;150</td>
<td>19.7</td>
<td>35.1</td>
</tr>
</tbody>
</table>

As this population continues to grow as an economic force, schools must assess, support, and improve Hispanic students’ academic and work-based skills to ensure individual success in career or post-secondary endeavors and to sustain a globally competitive U.S. workforce.

Lack of Support for Guiding Career and College Readiness

High school students cannot prepare for career or college if they don't have a plan or a goal. Three barriers exist preventing our students from planning for career and college: (1) lack of guidance, (2) lack of relevancy of high-school courses to career or college, and (3) lack of challenging coursework (Roderick, Nagoaka, Coca, 2009, Harvard, 2011).

While high-school guidance counselors should be an essential component of any effective career and college plan, the current U.S. system provides students little or no useful guidance. Counselors, with an average caseload of 500 students, are expected to address students’ personal, psychological, academic, and social problems, as well as career and college guidance (Association for Career and Technical Education, 2008). Further complicating matters, guidance
counselors are often assigned responsibilities for conducting achievement tests, registering students for courses, addressing disciplinary issues, maintaining student records, and administering cognitive/aptitude assessments. These activities leave less time to focus on career and college guidance and planning. In a 2004 survey of Florida high-school counselors, more than 30% reported that “actual career counseling” occupied very little of their time (Osborn & Baggerly, 2004).

Education systems in many globally competitive countries assign far more importance to career counseling. Most secondary schools in Japan, the United Kingdom, and Norway formally schedule career guidance into the school day. In the Swiss system, middle school students are required to attend career information sessions, after which they establish a more detailed career plan in the occupational information centers. While in Germany, 8th and 9th grade students spend at least two weeks a year in company internships designed to expose them more directly to the world of work. In Austria, Denmark, Finland, Germany, the Netherlands, Norway, and Switzerland, after grade 9 or 10, as many as 70% of students select an educational program that combines classroom and workplace learning. This program culminates in a diploma or certificate signaling to the labor market the acquisition of strong workplace skills (Harvard, 2011).

Due to a lack of guidance or support, many students are unaware of the necessary steps to prepare for and enter college (Ikenberry & Hartle, 1998; U.S. General Accounting Office, 1990). As a result, often students do not take challenging courses that are prerequisite for success in a career or college (Roderick, Nagoaka, Coca, 2009). Students must access rigorous and relevant courses aligned to the knowledge and skills demanded by colleges and employers. Without a strong high-school plan including targeted goals, students shy away from these core courses. Instead, students are shuffled into a variety of basic courses, all with different names, but all characterized by a lack of rigor and lack of alignment to career or college requirements. Although many students aspire to post-secondary education, fewer than 50% of students take appropriate preparatory courses (Westover & Hatton, 2011).

**Lack of Focus on 21st Century Skills**

Our nation’s schools increasingly fail to prepare diverse student populations to compete on a global level as measured by the PISA, to develop 21st Century skills, and to plan for career and college. Schools must engage and guide students toward future careers (America’s Promise, 2006). When engaged in their schoolwork, students are more likely to be successful academically and in the workplace (Finn & Rock, 1997). Most high school students are at-risk of entering the workforce deficiently prepared in the 21st Century skills that ensure success.
The Workforce Readiness Report Card for young adults with a high school diploma does not have a single item in the Excellence List. All 10 skills that a majority of employer respondents rate as “very important” to workforce success are on the Deficiency List (Conference Board, 2006).

Table 2: Workforce Readiness Report Card for New Entrants to the Workforce – High School Graduates

<table>
<thead>
<tr>
<th>Skill</th>
<th>Percent of Students Demonstrating Deficiency</th>
<th>Percent of Students Demonstrating Excellence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Communications</td>
<td>80.9%</td>
<td>No skills are on the Excellence List for new entrants with a high-school diploma.</td>
</tr>
<tr>
<td>Professionalism/Work Ethic</td>
<td>70.3%</td>
<td></td>
</tr>
<tr>
<td>Critical Thinking/Problem Solving</td>
<td>69.9%</td>
<td></td>
</tr>
<tr>
<td>Oral Communications</td>
<td>52.7%</td>
<td></td>
</tr>
<tr>
<td>Ethics/Social Responsibility</td>
<td>44.1%</td>
<td></td>
</tr>
<tr>
<td>Reading Comprehension</td>
<td>38.4%</td>
<td></td>
</tr>
<tr>
<td>Teamwork/Collaboration</td>
<td>34.6%</td>
<td></td>
</tr>
<tr>
<td>Diversity</td>
<td>27.9%</td>
<td></td>
</tr>
<tr>
<td>Information Technology Application</td>
<td>21.5%</td>
<td></td>
</tr>
<tr>
<td>English Language</td>
<td>21%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Conference Board, 2006

With the flood of national reports and articles declaring the global economic crisis and the lack of a skilled U.S. workforce, our expectations and our aspirations have dimmed. We accept that this reality won’t change (ACT, 2011). According to *Pathways to Prosperity* (Harvard, 2011), educators must change this paradigm, ensuring that students entering the workforce are prepared to work. We can no longer accept the dismal status quo but must marshal resources, leverage technology, and rethink how we prepare students for career and college.
Planning for Career and College

Globally, the best-performing education systems take an individualized approach to learning, embracing students’ diversity in capacities, interests, and social background (OECD, 2010). In order to maintain global competitiveness, the U.S. must support, beginning in middle school, the creation of an individualized career and college plan including career objectives; a program of study; degree and/or certificate objectives; and work-related learning experiences (Harvard, 2006). When students develop a career plan and receive career counseling in high school, they are more successful in their academic courses, less likely to drop out, and are more successful post-high school (ACT, 2009).

Without guidance, students make impulsive or uninformed career decisions. Structured career guidance activities are essential in preparing students for successful education and career transitions. Strategic career and college planning promote students’ consideration of their own interests and abilities as well as the requirements and potential of a specific career choice (Association for Career and Technical Education, 2008). Career development is best achieved by creating a progression of college and career preparation experiences that engage students at all grade levels. This process starts with building a simple understanding of careers. Then, students should begin to explore their career opportunities and focus on specific career goals by taking targeted courses. All requirements for major occupations should be delineated from the beginning of high school so that students recognize the course-taking patterns and other experiences that would position them to be successful in that field (Harvard, 2006).

Access to pertinent information on preparation for admission to a college or a university of choice, and then how to negotiate the system to graduate in a timely manner with high grades, is discussed. Sources for advice on going to college can be located at community centers, public libraries, schools, and especially outreach programs and the Internet. Moreover, the role of faculty and of academic guidance personnel on most good campuses that are able to assist students in making informed decisions about career plans is provided. Whether a Latina or Latino student succeeds in going to graduate school involves having correct information, interacting and mentoring with supportive faculty, learning to use a computer with Internet capabilities, and completing a rigorous academic program (Harro, 2004).

Asserting that Georgia was forcing students to drop out of high-school due to frustration over non-relevant classes, current state schools chief John Barge announced, “We can do a much better job preparing students for post-secondary. Any parent will tell you that college is the most expensive career development.” For example, Barge said, an education major might not do his student teaching until his senior year in college only to find out he doesn’t like being in a
classroom. On September 18, 2011, Georgia announced plans to overhaul the current high school curriculum, making it more individualized, like college, and tailor students' career and college plans. Under the proposed plan, students would choose a “career cluster” that would lead them through the classes they need to either go on to a two-year or four-year college or to go straight into a job. After consideration, if passed by the State Board of Education, Georgia’s plan would go into effect for entering high school freshmen next fall.

Under Georgia’s plan, students would take core of classes such as algebra, English and history. At the end of their sophomore year, students would choose a cluster to determine career-related courses. For example, a student in the health sciences career cluster wanting to be a certified nursing assistant would take nutrition and wellness, chemistry and physical science — and go straight into a job after graduation. A student wanting to be a doctor would take Advanced Placement biology, physics and biotechnology and go to a four-year college. Students would have an internship during their junior or senior year aligned to their career cluster, giving them a chance to experience the occupation. And they’ll have teachers as advisers to help guide them throughout their four years of high school. Mike Buck, Chief Academic Officer at the Georgia Department of Education, asserted that no matter the choice of career cluster, all students will graduate eligible for college…”We're going to save a lot of kids and we’re also going to get a lot of kids plugged into careers they enjoy.” While other states support similar programs, Georgia would be among the first to make career clusters a requirement for getting a high school diploma. Dean Folkers, Deputy Executive Director at the National Association of State Directors of Career Technical Education Consortium, noted, “Many states use career clusters, but Georgia is taking it another step. It’s not about redoing career technical education for those kids. It’s about embracing it for all and realizing we all are ultimately preparing for a career and college.”

States, districts, and schools should emphasize 21st Century skills in a comprehensive manner. Critical 21st Century skills enable students to acquire and apply new knowledge and skills, connect new information, and collaborate with others to use information (Partnership for the 21st Century, 2003, 2008). Work-related learning and skills should be offered at the secondary level, and adapted to accommodate the abilities of each age (Harvard, 2011). Transition points are crucial for districts to consciously plan the process by which students move through each level of education in order to be successful in career and college. Academic achievement, career interest, and certainty of occupational choice positively influence degree and job attainment. For students entering the workforce, career and college planning can ensure that they are on track for early career success (ACT, 2009).
Solutions for Career and College Readiness: A Regional Perspective

*Florida Ready to Work*

Florida Ready to Work and WIN Learning are helping the State of Florida take the lead in career readiness. Representing a strong partnership between education and industry, Florida Ready to Work serves the entire state as a comprehensive, innovative, workforce education and economic development program building a skilled, certified workforce and attracting business investment from Tallahassee to Miami. Since its full implementation in 2007, Florida Ready to Work has grown to include 346 statewide business, education, and workforce development partners.

Students are able to sign up for the Florida Ready to Work program at high schools, regional workforce board one-stop centers, community colleges, technical centers, and many other locations serving students and adults. Almost 109,000 high school students signed up for Florida Ready to Work. Additionally, more than 81,000 jobseekers earned a second chance at finding a job through adult education and other credit recovery programs.

While the cornerstone of the Florida Ready to Work program is WIN Career Readiness Courseware®, four components support this journey: Assessments, Courseware, Credentialing, and Career Pathways. Together, the system works to ensure that Florida’s students and jobseekers build and match their skills to Florida’s workplace requirements. Participants in the Florida Ready to Work program begin their journey by: (1) signing up for the program; (2) taking a placement/assessment test to measure their current skills in the above nine areas; (3) entering assessment scores and viewing jobs which match current qualifications; (4) using the WIN Career Readiness Courseware® to improve skills and increase opportunities, assess improvements and view new prospects; and (5) downloading earned credentials to present to potential employers.

The Florida Ready to Work program has transformed the process of looking and applying for jobs in Florida, enhancing professional communications between students or jobseekers and employers. Since the program began in 2007, jobseekers completed almost 409,000 assessments through Florida Ready to Work—roughly one-third in each of the assessed areas, Applied Mathematics, Reading for Information, and Locating Information. In the past five years, students and jobseekers in Florida earned almost 105,000 Florida Ready to Work Credentials.

Employees with the Florida Ready to Work Credential earn more on the average than those...
employees who do not have a Florida Ready to Work Credential. With a Credential in hand, about 40% of Floridians earned wages greater than $9.00 per hour in the 2007 to 2008 period under study; without a credential, only 15% of Floridians earned above that $9.00 per hour threshold.

**Figure 1: Estimated Wages by Quarter**

![Graph showing estimated wages by quarter.]

Clearly, Florida residents of all ages and all backgrounds benefit from participating in the Florida Ready to Work program—developing their skills and clarifying their career pathways with support from WIN Career Readiness Courseware®. Participants who completed the Florida Ready to Work program and earned signed Credentials benefit most, not only in the year of their completion as illustrated above, but also probably throughout their career pathway.

**Western New York Career Center**

The Syracuse University Study (Hadlick, 2011) participants, from five Western New York Career Centers, used three of the WIN Career Readiness Courseware® modules—Applied Mathematics, Reading for Information and Locating Information—more extensively than the other modules. These most frequently used modules map directly to the National Career Readiness Certification (NCRC) exam and partially to the National Work Readiness (NWR) exam.

From May 2010 through December 2010, the Syracuse study measured the impact of WIN Career Readiness Courseware® on skill improvement within the three targeted modules of the WIN Career Readiness Courseware® and success rate in the credentialing process. Participants who spent more than two hours in the WIN Career Readiness Courseware® performed much better in the assessment phase of the program. For example, the average math score on the exams for participants who spent less than two hours in the courseware was 67; the average score for those who spent from two to six hours in the courseware was 84 — a 17 point
differential. Participants made significant gains within the WIN Career Readiness Courseware®, and these gains were validated using independent NCRC and NWR assessments. The Syracuse study demonstrated that WIN Career Readiness Courseware® built foundational skills.

The WIN Career Readiness Courseware® was helpful to all and also proved extraordinarily useful for assisting English Language Learners to acquire work-ready foundational skills. For all five Workforce Investment Board career centers over the eight-month study period:

- Skill gains in Applied Mathematics (n=140) showed a 1.1 level increase essentially improving skills from beginning basic to low-intermediate basic education.
- Skill gains in Reading for Information (n=60) showed a 1.3 level increase improving skills from beginning basic to high intermediate basic education.
- Skill gains in Locating Information (n=69) showed a 2.0 level increase.

The Syracuse study found dramatic changes for all participants across all three skills measured in the national work readiness certifications — Applied Mathematics, Reading for Information, and Locating Information.

**Conclusion**

Shifts in the workforce, global connectedness, and skill requirements have transformed the U.S. labor markets. Baby-boomers are retiring in record numbers. Job competition is across regions and even countries. The skills needed to compete in the labor market have changed dramatically. In 1955, 60% of the American nonprofessional labor force was unskilled and 20% skilled. Fifty-three years later in 2008, while 20% of the workforce has remained professional, the breakdown of labor has shifted the structure of the rest of the American labor workforce dramatically, to 68% skilled and 12% unskilled.

**Figure 2: Labor Shift**
With this shift in global competition, workforce skills, and labor force population, we must prepare our students and jobseekers for the reality of today’s competitive workforce.

According to a recent (2011) Harvard report, *Pathways to Prosperity*, employers should ensure that high school students entering the workforce are prepared to work. WIN’s suite of customized Web-based tools, for assessing and aligning the education and workforce indicators with economic trends, delivering relevant and rigorous coursework, and tracking student progress toward planned goals ensures students have the skills needed to enter a wide range of occupations in various industries across the U.S.

A recent Associated Press-Viacom poll (released April 19, 2011) reports that most youth believe high schools fail to prepare them for work or for college. According to the article, “A majority say their school wasn’t good at helping them choose a field of study, aiding them in finding the right college or vocational school, or assisting them in coming up with ways to pay for more schooling.”

WIN Learning is changing this perception, one student at a time, in one career at a time by “helping educators and workforce development partners prepare today’s students for tomorrow’s jobs.”
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