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BY BILLIE R. MCNAMARA

**W**orkforce Readiness.  
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Sadly, chanting these words three times and clicking our heels will not magically transport us to the desired goal. There is no good witch standing by, ready to wave her wand and make all our dreams come true. The interwoven relationship between workforce readiness, business and industrial development, and schools has existed since the institution of public education in the United States. During the last third of the 20th century, however, this relationship became a focus of the U.S. Departments of Labor and Education, business and industrial councils, education administrators and public policy as America realized its future employees were not prepared to enter workplaces of the future.

“It’s time to stop being reactionary and start being proactive,” warns Darrell Luzzo, chairman of the National Work Readiness Council (NWRC), a consortium that includes businesses, labor unions, chambers of commerce, education

# Kill Gap: Future Workplace ne an Abyss

and training professionals, and several states' Workforce Investment Boards. "Entry-level workers, especially, have gaps in the basic skills that enable success in the workplace."

## A Lack of Transferable Skills

For more than 20 years, deficiencies in transferable workplace skills have been a focus of federal workforce initiatives; yet, enacting a plethora of laws, goals and guidelines has not resolved the problems. Early federal legislation addressed only preschool, primary and secondary curricula, with no specific requirement for workplace skills development. By the 1990s, the government recognized a need to include higher education and established the year 2000 as a target for maximum workforce readiness. Nearly a decade past that deadline, the American workforce remains in a crisis state.

Workers' transferable skill levels have likewise been a concern in the private sector for more than 20 years. Employers no longer place primary importance on reading literacy and computational

aptitude. Today, basic soft skills dominate workplace needs: interpersonal and intrapersonal knowledge; skills and abilities such as ethics, personal organization and work habits; time management; teamwork and interpersonal communication; anger management; reasoning and problem solving; and managing one's learning. Every federal, state and private-sector workforce readiness initiative published since the 1980s cites the requirement for soft skills in the workplace. The compelling 1990 report "America's Choice: High Skills or Low Wages!" found more than 80 percent of employers were concerned about workers' soft skill deficiencies.

The preponderance of opinion among recent authors supports the notion that higher-order thinking skills described in Bloom's Cognitive Taxonomy—application, analysis, synthesis and evaluation—are the most fundamental. Likewise, consciousness of one's learning is recognized as a critical requirement by SCANS, Equipped for the Future (EFF) and numerous independent studies. In 2006, the New Commission on the Skills

of the American Workforce declared mastery of higher-order thinking skills may define success and failure among 21st century workers.

Higher-order cognitive functions, often described as "metacognition," include metamemory and metacomprehension, or appraising the correctness of one's own recall; problem-solving, or taking appropriate steps when faced with the unknown; and critical thinking, or evaluating the quality of an idea. As focus shifted to educational accountability and individualized instruction in response to federal legislation in the 1990s and No Child Left Behind (NCLB), America recognized the need for learners to be aware of their own thinking and learning. Policymakers charged schools with identifying and remediating metacognitive deficiencies.

## Preparing the Millennials for Work

Does responsibility for developing workforce readiness, especially in terms of metacognitive skills, rest with primary, secondary or even postsecondary educators? Must employers provide metacognitive training? What about the population of future workers whose higher-order thinking is hampered by physical or psychological barriers? Specifically, individuals with ADD/ADHD, autism and certain other learning disabilities are often unable to monitor their own learning. A significant number of the 21st century's rising workforce has benefited from Individualized Education Plans and other accommodations under the Individuals with Disabilities Education Act (IDEA). However, there is no IDEA protection in the workplace.

Business faces additional challenges as the generation born between approximately 1982 and 2001—commonly called "Millennials" and "NetGen"—enters the workforce. One study reports that most employee discipline problems and stalled promotions among Millennials result from deficiencies in soft skills. Luzzo

describes Millennials' collective attitude as "me' expectations" that negatively affect their workplace success. While NCLB presumably prevents their academic failure as primary and secondary students, there is no corresponding safety-net in the workplace.

Globally, Millennials embody unique characteristics that present significant challenges to society and the concept of work as it is currently defined. Millennials have spent their entire lives with digital technology, nearly instantaneous information accessibility, and constant connectivity with friends or parents. This generation of "digital natives" has been told from birth it is special—rewarded nearly immediately for even the smallest accomplishment.

One suggested solution to ensure that they are ready for the workplace is worker credentialing, which verifies that an individual has a basic set of transferable skills for entry-level jobs. ACT adapted its WorkKeys system to create the National Career Readiness Certificate, which tests skills in math, reading and locating information. The NWRC's national workforce readiness credential tests in four skill areas: situational judgment, oral language, reading comprehension, and problem solving with applied math. The test draws on EFF's 16 skill areas and specifically focuses on entry-level workers.

### Things Change, but Education and Training Remain the Same

In the past two decades, learning activities have morphed from the traditional classroom (pen/paper/blackboard/textbook/one teacher) to today's online or multimedia presentations, but the basic structure has not changed. Training remains essentially a one-to-many distribution. Researchers warn existing education models, training and experience are insufficient preparation for delivering information to the new generation of workers. Instead, training must be deployed electronically in order to engage and

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maintain Millennials' interest and satisfy their on-demand, online and interactive learning preference.

Millennials need active learning that effectively teaches metacognitive skills. Online systems for teaching higher-order interactive and analytical skills are being beta-tested. Successful e-learning applications in workplace training can be expected to quickly migrate into K-12 curricula where they should prove effective in shrinking the metacognitive skill gap in public schools. Lifelong use of games and simulations provides an outstanding basis for all education and training of Millennial learners, at least 45 percent of whom are active learners. "It is the only way to teach problem solving, systematic thinking, effective communication, and learning skills that are critical to workers' success," argues futurist David Pearce Snyder.

### A Paradigm Shift

Workplace training and workforce readiness decisions require input from every stakeholder in today's business and educational worlds. As organizations adopt on-demand, interactive delivery, HR departments and in-line supervisors will no longer control timing and content of training. Likewise, organizations will not be able to monitor who has access to training materials, when they are down-

loaded, and how/where they are disseminated, including outside the organization.

"Workers' learning should no longer be controlled. Everyone should have full access to any source of information that will facilitate improved performance, and employers should provide that access," Snyder argues.

Snyder predicts in less than 10 years most organizations will shift all workers' training—everything from new-recruit orientation to executive development programs—to the Internet. Current e-learning (distance education) is simply a transitional phase until the structure of education completely changes.

"The best companies now budget time for regular training in their employees' work schedules and provide interactive formats, such as kiosks and dedicated computer stations, for their workers to access as needed and on-demand," said Snyder. "Information acquisition in the workplace takes half the time required for classroom delivery; retention is enhanced by 30 percent; the cost of training is reduced as much as 40 percent. Positive return on investment is quickly apparent because workers' efficiency is measurably increased."

Most big employers understand that good, technology-based learning programs will help attract digital natives and keep them engaged. Employers are



already moving toward such technologies—e-learning, computer simulations and avatar instructors—at an accelerating rate because educational technology is finally good enough to reduce training costs while measurably improving its effectiveness. As businesses fine-tune digital methods for delivering instruction, there is an expectation that technological advancements will migrate to secondary and postsecondary education and help mitigate the workforce skill gap. Considering the historical failure of school-based initiatives designed to prepare students for the workplace, however, education may be unable to meet the challenge.

In 1987, the National Alliance of Business proclaimed, “Workforce readiness is a matter of both quantity and quality.” If Millennial workers are not ready to meet employability standards of the workplace, can businesses afford the increased cost of remediation, on-the-job training, ad-

ditional supervision, diminished productivity, decreased product quality and reduced customer service that will result? If businesses rely on primary and secondary education to identify and teach workforce readiness skills, how will such learning fit into an already overcrowded curriculum? When will legislative initiatives and private-sector programs be effective for developing workplace competencies?

Snyder recently framed this question for educators: “Training and education have always been preparation for the future...but, what will the future be like?” He describes the future as a moving target: a work in progress that is widely expected to lead us through decades of ongoing innovation and adaptation. America’s high school graduates will clearly need to know more than the “3 Rs” to be prepared for the realities of life and work in a time of continuous change. Traditional classroom-based instruction

must be augmented by technology to provide *all* students with mastery of higher-order analytical and work-readiness competencies, so that the workforce skill gap can be closed once and for all. **T**

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