CREATING THE FUTURE AMERICAN WORKFORCE

Investments and Innovation in Human Capital

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70% Senior executives concerned about the availability of key skills needed for growth

67% U.S. manufacturing executives reporting a shortage of workers

$454 BILLION Annual U.S. investment on workforce training and development

$248 BILLION Annual U.S. investment in four-year college education

36% Reduction in U.S. unemployment if we filled the nation’s 4 MILLION unfilled jobs

16th U.S. world ranking in career and technical education

11th U.S. ranking in mathematics proficiency among adults compared to other OECD countries

44% U.S. middle skill jobs that require 3 MONTHS of training or less
Each of our nation’s “missing years” of education represents a decision not to finish high school, not to enter college, not to stay in college—or a decision not to return. Taken together, those decisions collectively add up to 121 million Americans\(^1\) without a college degree, costing more than $2.3 trillion in GDP and eroding U.S. global competitiveness.\(^4\) We need to aggressively recapture those missing years of education on every front; from high school diplomas, to college degrees and certificates, to workforce training.

Practically speaking, it is CEOs who will need to rise to the occasion and take the actions needed to close the skills gap and build a globally competitive workforce. The $248 billion we invest as a society in four-year college education is far exceeded by the $454 billion employers invest in workforce training and development each year.\(^5\)

Seventy percent of senior executives are concerned about the availability of the talent they need to grow their businesses and, shockingly, one-fifth of executives report doing nothing to address skills shortages.\(^6\) As a nation we face widespread talent shortages: 67 percent of manufacturing employers still report a shortage of skilled labor and 56 percent anticipate it growing within the next five years.\(^7\)

Jobs in science, technology, engineering, and math-related careers are growing 2 to 4 times faster than degrees in those fields awarded by U.S. universities.\(^8\) We rank only 16th in the world for career and technical education and 11th in mathematics proficiency among adults.\(^9\)
Globalization is creating changes in the economy, requiring workers to be more skilled in order to compete. An aging workforce and the retirement of 10,000 members of the baby-boom generation every day are only accelerating that trend. At the same time, American manufacturing has been transformed by technology and globalization. Factories are becoming technology centers. Employees now operate lasers, robotics, and computer-numeric-controls.

Closing the skills gap will depend on whether we make innovative and effective talent development universal and scalable; whether we fully leverage technology; and how we ensure that the American workforce has access to customized, integrated and accessible learning choices. It will depend on CEOs from the nation’s leading companies coming together to reinvent the continual development of their workforce and demand a whole new approach from our nation’s institutions of higher learning.

What’s exciting is how quickly this problem—decades in the making—could be reversed and how much we stand to gain as a society. An incredible 80 percent of “middle skills” jobs require one year of training or less and typically include clerical, sales, health care, electrical and construction occupations.

The payoff: if the nation’s unemployed had the skills needed to fill our four million job openings, U.S. unemployment would drop by 38 percent. The time to start is now. What needs to happen next is for CEOs to redefine workforce development, raise expectations about what’s possible and lead the conversation about super-charging our nation’s human capital.

Why Invest in Workforce Development?

In today’s fast moving world, talent is the only sustainable competitive advantage.

Klaus Kleinfeld, CEO, Alcoa, Inc.

Workforce development is our nation’s biggest education budget. We spend more than $770 billion a year on postsecondary education and training. Workforce development accounts for 65 percent of that total, with over $500 billion a year spent in areas including public job training, industry certifications and apprenticeships. Of that amount, employers are responsible for the vast majority of the spending—upwards of $454 billion a year. Employers have too often treated workforce development as a matter of compliance or a “nice to have” investment instead of a core strategy. Compliance-oriented training can account for as much as 25 percent of a corporate training budget which covers such topics as record keeping, policies and procedures, and internal audits. To create the future American workforce, we need to focus on training that is directly applicable to on-the-job skills, integrated into work requirements, and addresses actual company-specific business issues.
Massive mobilizations are possible. Companies and countries absolutely can transform their societies and their workforces. In a matter of decades, China was able to lift nearly half a billion people out of poverty.20

It’s easy to see how generations of American prosperity driven by growing educational attainment, economic advancement, and a steady rise of our middle class, can feel threatened by a “new normal” of job losses in industries and regions on the one hand and nationwide skills

The real pay-off comes when a company’s long-term strategy and current talent base are aligned with workforce development. Cisco’s Workforce Planning 101 program, for example, combines a long-term vision of the company’s goals with an internal talent assessment, to understand the capabilities Cisco has for achieving its desired future. Programs like Cisco’s allow companies to be precise about what the jobs are and what capabilities or skill levels are required for those jobs. By mapping learning plans to each of those job profiles, individuals gain a step-by-step guide to advancement.16

Pathways like these are a way forward for the 121 million Americans without a college degree. They can bolster the mechanical, technical, communication and leadership skills of those who do have four-year degrees. The right path forward is different for everyone. For some it means returning to school and for others it means on-the-job training or building specific skills.

Figure 1. 65 Percent of Postsecondary Education Spending Occurs Outside of Colleges and Universities.

Opportunities to Transform Our Workforce Now

Employees are looking for [companies] to provide them with opportunities to develop and grow while working. . . If you can motivate them, inspire them, and give them opportunities, they will engage and bring their best to the table.19

Tom Linebarger, Chairman & CEO, Cummins Inc.

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shortages on the other.²¹ We know that education is the solution. Yet when we look at the educational problems facing our nation and our workforce, it’s easy to fall into the trap of thinking that we’re facing an insurmountable problem – with the solutions decades away.

But when it comes to workforce development the barriers are not insurmountable. And the solutions can be found surprisingly quickly. The workforce development required to unlock unfilled positions can be measured in weeks and months not years or decades. According to a recent poll by Gallup, employers are much more concerned with the skills directly related to your job than where you went to school. If asked to choose, 84 percent say the skills are what is important—compared to 9 percent who would rely on the credential.²²

If CEOs and their companies collectively take that first step to invest in upskilling the American workforce, the potential for short-term progress is staggering. More than 80 percent of middle skills jobs require one year of training or less. Nearly 44 percent of middle skills jobs require less than three months of training.²³ This is an opportunity for companies to define the specific skills required for their middle skill jobs and create partnerships with education institutions to design the content and courses that will ultimately connect their workforce to these specific skills and continued employability. If we started these types of efforts now, we could begin to close a significant part of the nation’s skills gap within a year.

This is where action must begin for organizations and their leadership to take responsibility for their talent pipeline. A company that can identify individuals who need additional skillsets for new jobs on the horizon and is able to offer the custom skill development and courses based on those individuals’ gaps will succeed. For example, an employee might have 65 percent of the required skills to become a health care technician and require three courses and 3 months of on-the-job experience. With modularized or stacked courses, they could dual-track their efforts to quickly move into their next role in a few short months.
Taking Action in Talent Development

The imperative to invest in workforce development isn’t always clear. The imperative to take action to close the skills gap isn’t always clear. But certainly the consequences are severe if we fail to meet the challenge of investing in human capital today. Among companies now facing a skills shortage or anticipating one, 66 percent expect to lose business to competitors, 64 percent face a loss of revenue, 59 percent face eroding customer satisfaction and 53 percent say there will be delays in developing new products or services.

Then consider that the greatest projected growth through 2022 will be in skilled professions, typically requiring some post-secondary education and on-the-job training. Given the significant impacts of skills shortages coupled with the future growth in the American workforce, there are clear opportunities to take action in talent development, but it requires nothing less than a top-level initiative from the CEO.

Figure 3. Rapid Growth in Skilled Professions through 2022

The American Dream is shifting. We’re shifting from a work-to-retire mindset to one where we want meaningful work for life. It moves us toward a real need for ongoing, lifelong learning. We’re moving past this idea of a fixed point in time of four years where someone gets this thing called a degree.

Brandon Busteed, Executive Director, Gallup Education
DEVELOPING WORLD CLASS TALENT

According to Deloitte’s Talent Edge 2020 report, only 17 percent of executives believe their talent programs are “world-class across the board,” while 83 percent acknowledge that significant improvements need to be made.30

Leading companies are drawing from their own ranks to develop talent. Best Buy’s Path to Excellence program, for example, took on the challenge of creating a world-class culture of learning and development for its 167,000 employees. Employees earn “virtual badges” and progress through learning levels that correlate to where they are on their career journey. The result: stores with the highest number of “platinum” and “gold level” employees have outsold stores with the highest number of “bronze” and “silver” level employees by a 3:1 ratio.31

Executives are also leveraging technology to deliver learning to employees, including mobile delivery (42 percent), social media (35 percent), massive open online courses (27 percent) and gamification (13 percent).29 New mobile technology is increasing the capacity for communication and commerce on a 24-hour-cycle. Tablets, like the iPad are being used for as much as 18 percent of workforce training. Mobile apps allow for a consistent user experience, networking and collaboration and convenience.

LEVERAGING TECHNOLOGY IN WORKFORCE TRANSFORMATION

The biggest transformation in the history of IT is happening right now. Over the next five years, every company across the globe will need to figure out how to transform their organization to take advantage of Big Data, cloud, IT as a service, and analytics, and education is key to that effort.28

Tom Clancy, Vice President
EMC Education Services

Staying ahead of the impact of disruptive technologies is only possible by fully embracing new technology solutions and collaborative environments. It also means using technology to create bridges between individuals looking to gain new skills and career opportunities and companies who need that talent.

Balloon™, a skills and learning marketplace recently launched by Apollo Lightspeed, a division of Apollo Education Group, was created to bridge the gap between career-seekers’ knowledge and employers’ talent needs in a competitive labor market. Balloon’s initial focus is providing a course and skills marketplace to support the $3 trillion global technology industry. The marketplace already offers more than 14,000 technology courses and training programs from several education providers, and a database of more than 146,000 career listings from some of the nation’s most prominent employers. By tapping into a partner network of education providers, both in the higher education and technology sectors, Balloon serves as a comprehensive resource for educating and training employees — and preparing them to fill in-demand positions, many left unfilled due to a lack of qualified candidates.

Talent retention and development is especially crucial for companies experiencing rapid growth. IT distributor, Tech Data Corporation partnered with Florida State University (FSU) to create an in-house MBA program to develop their existing capabilities and invest in future leaders. FSU professors travel to Tech Data to teach MBA candidates, who participate in the program with assistance from Tech Data’s tuition reimbursement program.32
A McKinsey study of over 1,400 executives who lead global firms found that 70 percent believe that innovation was one of their companies’ top three drivers of growth. At the same time, 65 percent of these same executives admitted that they were not confident of their company’s ability to execute “innovation” successfully.  

Survival hinges on building the leaders, and the skilled workforce, that can continually innovate and adapt to change. Investments in learning give companies the tools they need to build capacity and develop the right skills for survival. Silicon Valley companies, for example, report internal learning and collaboration as the single biggest contributor to innovation.

The link between learning, innovation, and resiliency is equally apparent in global manufacturing. Whirlpool Corporation, for example, restructured and rethought its learning space, linking training and skills development to a larger strategic effort to ensure the company’s resiliency. Prior to restructuring, learning products would take as long as 18 months to rollout to the workforce.

Companies are seeking out methods to increase the communication and interpersonal skills of their existing staff. Goldman Sachs University was created, in part, to ensure that employees have the communication skills and connections to provide a foundation for success. Its programs include leadership development, products and markets training, diversity and inclusion, culture and orientation, and professional skills.

**CREATING A CULTURE OF INNOVATION AND RESILIENCY**

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**BUILDING “SOFT SKILLS” TO COMPETE**

According to the annual Talent Shortage Survey from ManpowerGroup, roughly 1 in 5 employers worldwide can’t fill positions because they can’t find people with the appropriate soft skills. Specifically, companies say candidates are lacking in motivation, interpersonal skills and flexibility.

A poll of senior executives by the Adecco group found that 44 percent cited soft skills, such as communication, critical thinking, creativity and collaboration, as the area with the biggest gap. Another study found that characteristics such as assertiveness, empathy, happiness, emotional self-awareness and problem-solving skills were better predictors of success than gender, education, geographic area, age or hours worked.
Each of the nation’s four million unfilled jobs represents a challenge— a challenge to companies to innovate and invest in workforce development. In the last few decades, it has become clear that we can no longer assume that talent is an available and unlimited resource. As brutal as the competition for talent is today, it’s nowhere near as brutal as trying to compete without the right talent.

We often talk about the nation’s skills shortage as though it were a public policy problem. It is, of course. But first and foremost, it’s a challenge for CEOs to realize that allowing a persistent skills shortage to continue is no less serious than failing to address any other critical aspect of corporate strategy. CEOs have the access to technology, the resources and the ability to take action. They are accountable for building workforces that can compete in the global economy, and that requires partnerships with higher education institutions to create customized programs that leverage new technologies to efficiently upskill their workforces and align training with their future talent needs.

At the same time, education institutions need to be partners in exploring flexible, innovative and creative solutions that can make a difference in the near term and longer term, as the education system continually evolves to better connect with the needs of the 21st century workforce. The Apollo Education Group is ready to make the future workforce a reality. We have developed some core competencies and insights in transforming workforce development, leveraging technology and innovation in learning, scaling skills development and building education-business partnerships, which we’re bringing to the conversation.

If you’d like to learn more about our plans, please visit: http://www.apollo.edu/workforce, or email me at Officeof.theApolloGroupCEO@apollo.edu.

A Call to Action to CEOs: Now is the Time

BASF, the world’s largest chemical company, set out to create an entirely new way of looking at its business. Through its “Perspectives” learning initiative, it effectively changed the company’s DNA, touching many of the company’s practices and functions across the value chain. The result transformed the company culture and mindset from a technology- and product-driven company, to one driven by its markets and its customers.40

IBM has developed an innovative system for managing its workforce training, where each employee has a profile of the skills and competencies he or she has and which are needed to meet very specific career goals. Specific learning opportunities to meet those goals are provided to each individual employee. After completing a project, the employee’s profile is updated with the new skills and experience gained on that project and focus areas for future skill development. These profiles are made available to managers who may be looking for a certain skill set for new or existing projects.41

Organizations need to find ways to repurpose the skill sets of their people. It’s about learning new tools, new techniques, and the mindset to embrace new models. . .many organizations have people with skill sets that were modern 20 years ago, but in the next five years, they’re going to be dinosaurs. There needs to be a sense of urgency to figure out ways to upskill their people asap.42

William Schmarzo, CTO, Enterprise Information Management & Analytics, EMC

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End Notes

1 Center for Effective Organizations, “Steve Kerr and His Years with Jack Welch at GE,” (2003).


8 STEM degrees are growing at 1.5 or 2 percent annually, compared to 21.4 percent growth in STEM jobs over the next 5 years, or approximately 5 percent annually. See Georgetown Center for Education and the Workforce, “STEM” (2011): 40 and Huffington Post, “Who Are the Next Generation’s Leaders in Technology, Science, Engineering, and Mathematics?” http://www.huffingtonpost.com/ivo-lukas/girls-stem-b_1342471.html.

9 OECD Skills Outlook in 2013: The Results from the Survey of Adult Skills.


14 Georgetown’s calculations use data from the U.S. Department of Education Integrated Postsecondary Education Data System (IPEDS), the U.S. Department of Labor’s Employment and Training Administration (DOLETA), the American Association for Community Colleges (AACC), the U.S. Education Department’s Office of Vocational and Adult Education (OVAE), Survey of Employer Provided Training (DOL), and Bureau of Labor Statistics. While Georgetown’s data on employer-based training (formal) are consistent with other estimates, Georgetown finds an additional $313 billion in spending on employer-based training (informal), to give a more complete picture of employer investments in workforce education. See Georgetown Center for Education and the Workforce, “Help Wanted: Projections of Jobs and Education Requirements through 2018,” (2010).


16 From Interview with Dr. Michelle Marquard, Director of Learning and Development, Cisco Systems, Inc.


27 Apollo Education Group Executive Interview Series conducted via telephone, January-March, 2014.

28 Ibid.


38 Apollo Education Group Executive Interview Series conducted via telephone, January-March, 2014.