



White House Report: President Obama's Upskill Initiative

April 2015



Executive Summary

The President's Upskill initiative is focused on realizing the full potential of America's workforce by empowering Americans with the education and training they need to develop new skills and earn higher wages. Some front-line workers may be just starting their careers, while some may be older workers who don't have the basic skills to allow them to take on more responsibility and reach higher-paying roles. Others could also be workers who may have the competencies, but not the formal credentials, to excel at a more senior-level job. This report focuses on central questions that are driving the work of the initiative to help more Americans "upskill:"

Who are front-line workers? Workers who can benefit from upskilling are both those that are in low-wage jobs as well as those with low skills. These are somewhat, but not fully overlapping groups: Some lower-skilled workers may not be low-wage but still need additional training if they hope to advance in their careers. Similarly low-wage workers are not all lower-skilled, and a recognition of their skills by employers making hiring and advancement decisions may be the path to upskilling rather than additional training. Some of the key characteristics of front-line workers include:

- **Most adults with low skill levels are working:** There are 36 million adults in the United States who score below Level 2 on OECD's international literacy assessment, meaning that they cannot compare and contrast information or integrate multiple pieces of information. Though some of these adults may be unemployed because of their skill deficiencies, in fact, two out of every three of these adults – about 24 million in total – are working.
- **Most low-wage workers have low skill levels – but many do not:** There are about 24 million low-wage workers, whose earnings – less than about \$28,000 a year – place them in the lowest 30 percent of earnings for all full-time workers. From the international literacy assessment, we know there are 14.5 million workers who have low basic skills and make less than \$30,000 a year, showing there is some overlap between the lower-skilled and low-wage groups. However, while there are no measurable differences in average skill levels between men and women, women are much more likely to be low-wage workers despite these similar skill levels.
- **Low-wage workers –as well as those with low skill levels – are highly concentrated in a small number of industries:** Almost 40 percent of low-wage workers are working in three industry groups: health care and social assistance, retail trade, and accommodation and food services, and workers with low skill levels are likely to be in these industries as well. Within these industries, workers tend to have jobs like personal and home care aides, cashiers, cooks, and waiters and waitresses.

How can front-line workers access training? For full-time workers often balancing other personal demands and responsibilities, on-the-job training through current employers, or employer support of training outside of the work site, are critical to help front-line workers advance. Yet employer-provided training is less likely to be offered to these workers, and access to training for less-educated workers overall has seen a particular decline in recent years.

- **The prevalence of job-related training has fallen:** Newly-released analysis of survey data shows that the prevalence of training has fallen between 1996 and 2008, the most recent year with data available. Over this period, the share of respondents ages 16 or older receiving any training in the past year fell from about 26 percent to 16 percent.

- **Employer-provided training is the most important source of job-related training but has declined alongside all training:** 16 percent of surveyed workers in 2008 reported receiving some kind of job-related training. For about three-quarters of those (12 percent of all workers), this training was employer-provided. By comparison, nine percent of workers received training on the job. In 1996, 21 percent of workers reported receiving employer-provided training, with 13 percent of workers receiving this training on the job.
- **Less-educated workers are far less likely to receive training than highly-educated workers:** According to the data from 2008, 24 percent of workers with a Bachelor’s degree participated in training in the past year as compared to less than 10 percent of workers with a high school degree. Only four percent of workers without a high school degree participated in training. Also, non-Hispanic White workers were more likely to receive training, with 18 percent of such workers participating in training in the past year as compared to 14 percent of African-American and only 9 percent of Hispanic workers.

Where do opportunities exist to upskill more workers? There are pathways across a number of industries and occupations through which front-line workers are advancing today, and others through which front-line workers can advance if their employers help them to gain the skills necessary. This can help employers fill in-demand middle-skill jobs while increasing economic opportunity for more Americans.

- **Between 2012 and 2022, about 20 percent of projected job openings are expected to be in occupations with earnings over \$30,000 but requiring less than a bachelor’s degree.** These fields provide significant opportunity for front-line workers to advance.
- **In many industries and occupations, advancement is possible with a small number of additional skills.** For example, in retail, Burning Glass has found that when looking at the top 20 skills demanded for job postings of retail sales, 70 percent of those skills are also in the top 20 skills demanded for retail supervisors. Retail sales associates can also move into jobs in customer service and financial service agents.

What are promising practices for supporting front-line worker advancement exist?

- **Expanding apprenticeships and other forms of on-the-job training that lead to better paying jobs:** On-the-job training at most companies is a combination of formal and informal, instructor-led training, e-learning and on-the-job training, coaching, shadowing, video training, self-study, testing and visual assessments. Apprenticeships are the “gold standard” for on-the-job training – nine out of 10 apprentices are employed after completing their apprenticeship, with an average starting salary of over \$50,000¹.
- **Increasing employer-provided education benefits that help employees work towards a degree while they are on-the-job:** On average, organizations spend \$16.5 billion per year on education benefits that allow current workers to continue their education and earn a degree or credential

¹ US Department of Labor, Frequently Asked Questions on Apprenticeships, <http://www.dol.gov/apprenticeship/faqs.htm>

while working or to go back to school. Further, education increases the likelihood that an employee will be promoted or given new opportunities, earn higher wages, demonstrate improved performance, and seek additional responsibilities.

- **Partnerships with educational providers and technology innovators:** Technology-enabled learning is changing the value proposition for employer investment in low-skill, low-wage worker training. E-learning enables lower-cost distribution, the ability to engage workers outside of the classroom, and much easier peer-to-peer learning.
- **Expanding labor management partnerships:** Labor management training initiatives are collaborations between employers and unions to give employees the opportunity to develop the skills and attain the credentials that employers need and employees want for career enhancement and employment security. Examples exist in various sectors of the economy including construction, manufacturing, health care, aerospace, and leisure and hospitality.

White House Report on the President's Upskilling Initiative

Introduction

Our country's greatest economic asset is the hard work, motivation and resilience of working Americans. When all Americans have the opportunity to master new skills, contribute their full talents to our economy, and be rewarded for it, our businesses, our families and our communities thrive. However, too many front-line workers do not progress to more senior roles within the companies they work for, despite their desire to learn new skills and earn better jobs. President Obama's Upskill initiative is an effort to realize the full potential of America's workforce, by empowering American workers with the education and training they need to contribute more, earn higher wages and build a fulfilling career.

The President's Upskill initiative builds on the job-driven training review that the President asked the Vice President to lead in the 2013 State of the Union. The Vice President's review identified employer training for front-line workers as an area in need of more job-driven training strategies to meet business needs and provide more workers with a path to the middle class. This initiative also builds on the President's efforts to increase educational opportunities that help Americans affordably gain the knowledge and skills needed to meet the demands of a growing global economy through critical investments in college affordability, including a \$1,000 increase in the maximum Pell grant award and a \$2,500 American Opportunity Tax Credit, investments in vocational training programs through the American Technical Training Fund, and America's College Promise, a new proposal to make two years of community college as universal as high school for responsible students.

The purpose of this report is to outline the "who," "why," and "how" of the Upskill initiative.

Who this is about: Section one of this report describes the characteristics of front-line workers and the challenges they may face to develop their skills and achieve wage progression and career advancement over time.

Why this is possible: In Section two, we focus on the primary channel through which low-wage workers can build their skills: employer-provided training. We look at the best data we could find on trends in employer spending on training. What we find is sobering. Access to employer provided training has fallen off substantially since the 1990s, and fewer workers receive formal training from their employers. One 2012 study found that only 1 in 5 workers had received any formal training in *the past five years*.

How it can work: Section three of this report focuses on the "how." We begin by discussing general steps to upskilling and show that there are a range of jobs in to which employers could aim to upskill their frontline workers. Then, we focus on specific best practice training strategies that some employers have successfully used both to equip their front-line workforce with the necessary skills to advance into better-paying jobs, and at the same time, to improve their own bottom-line by improving retention, employee engagement, and the quality of service they provide their customers.

Chapter 1: Who are Front-Line Workers and What are the Opportunities for Upskilling?

The Upskill initiative is focused on training and education strategies to help front-line workers realize their full potential and advance into higher paying jobs, without having to leave their jobs and go back to school full-time. In this initiative, and in this report, we are using a very broad definition of “front-line:” some front-line workers may be just starting their careers, while some may be older workers who don’t have the basic skills to allow them to take on more responsibility and reach higher paying roles. Others could also be workers who may have the competencies, but not formal credentials, to excel at a more senior-level job.

This section looks at two types of front-line workers who are likely to benefit from upskilling: adult workers with low basic literacy, numeracy and problem-solving skills, and full-time workers with low earnings, specifically those earning less than \$550 per week, putting them in the lowest thirty percent of all full-time earners. The goal of this section is to characterize what we know about these workers, as well as to provide examples of the kinds of career paths that could be available to them through upskilling.

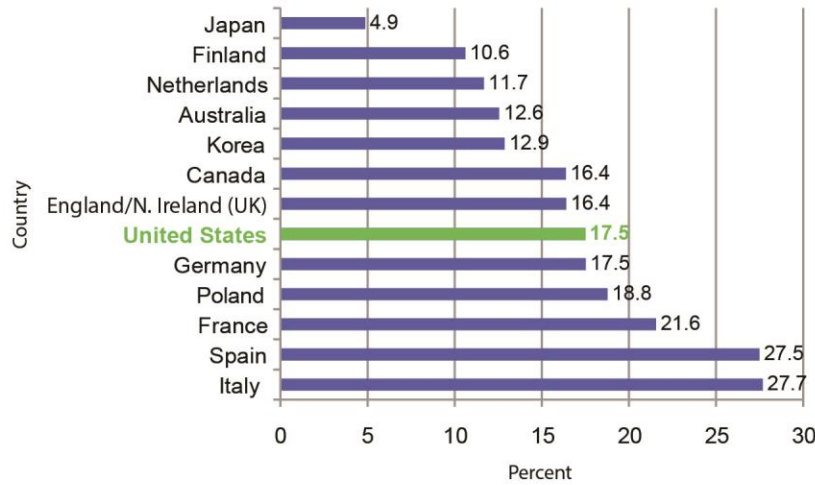
1.1: Adult Workers with Low Measured Skills

In 2013, the Organisation for Economic Co-operation and Development (OECD) released a Survey of Adult Skills that, for the first time, analyzed the literacy, numeracy, and problem-solving skills of a nationally representative samples of adults, ages 16 through 65, from 24 countries.² As shown in Figure 1, the survey rankings show that the United States has a high percentage of low performers in literacy, numeracy, and problem-solving in a technology-rich environment; the skill levels of U.S. adults have remained stagnant over two decades; and the youngest U.S. cohorts are outperforming older cohorts only slightly, unlike in many other industrialized countries.

² The OECD’s *Survey of Adult Skills* draws from a rich background questionnaire to measure relationships among respondents’ educational backgrounds, parental educational attainment, work history and skills, occupational attainment, use of information and communications technology, and cognitive skills. It measures these relationships in the domains of literacy, numeracy, and problem solving in technology-rich environments and rates performance in five numbered levels for literacy and numeracy, and in three levels for problem solving. In the United States, a nationally representative sample of 5,000 individuals was surveyed. An additional 5,000 Americans are being surveyed to allow for deeper insights into skill issues affecting unemployed adults (ages 16–65), young adults (ages 16–34), older adults (ages 66–74), and incarcerated adults (ages 16–74). These data will be released in 2016.

Figure 1

**Percentage of adults ages 16–65
with low literacy skills, by country: 2012**



NOTE: The term “low literacy” means “Below Level 2” on the OECD *Survey of Adult Skills*. Level 1 represents literacy proficiency scores of between 176 and 226 out of 500 points. Adults performing at Level 1 can complete simple forms, understand basic vocabulary, determine the meaning of sentences, and read continuous texts with a degree of fluency.

SOURCE: Organisation for Economic Co-operation and Development, *Survey of Adult Skills* (PIAAC) (2012). See “What Adults Can Do at Different Levels of Literacy Proficiency” (Annex B) at http://skills.oecd.org/Survey_of_Adult_Skills_US.pdf.

Who are Lower-Skilled Americans?

The Department of Education (ED) asked the OECD to perform additional analysis of the U.S. data to provide a more detailed understanding of the lower-skilled population and suggest policy recommendations. The resulting report, *Time for the U.S. to Reskill?* found that 36 million adults in the United States score below Level 2 on the literacy assessment. Consistent with the terminology OECD used in its *Time for the U.S. to Reskill?* analysis, we will use below level 2 in literacy as the threshold for “low literacy” and “lower-skill” throughout the remainder of this report.³

The OECD survey also collected data on educational backgrounds, parental educational attainment, work history and skills, occupation, and income. From these results, we have a wealth of demographic information on who these lower-skilled Americans are, as well as where and how they are similar to, and unique from, Americans with higher skill levels. Many of these characteristics are detailed below:

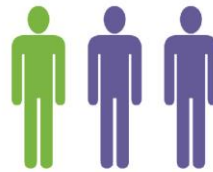
³ At level 1, adults can read relatively short digital or print continuous, non-continuous, or mixed texts to locate a single piece of information. Knowledge and skill in recognizing basic vocabulary determining the meaning of sentences, and reading paragraphs of text is expected. Adults at Level 2 would be expected to be able to integrate two or more pieces of information based on criteria, compare and contrast or reason about information and make low-level inferences. They would be expected to navigate within digital texts to access and identify information.

Figure 2

**About one in six U.S. adults
ages 16–65 had low literacy skills:
2012**



**About one in three U.S. adults
ages 16–65 had low numeracy skills:
2012**



SOURCE: Organisation for Economic
Co-operation and Development,
Survey of Adult Skills (PIAAC) (2012).

Lower-skilled Americans are slightly older than the average American. Among the estimated 36 million lower-skilled adults, 15.3 percent were in the 16-24 age range compared to about 18.5 percent of Americans overall. Meanwhile about 47 percent of lower-skilled Americans are aged 45 to 64 compared to 41 percent among the population as a whole.⁴

Lower-skilled Americans are also more likely to be minorities. More than half of the 36 million lower-skilled adults are Black or Hispanic. Nearly two-thirds of those in the lowest numeracy level are Black or Hispanic.

On average, there are no significant differences in the literacy and numeracy skills of men and women in the United States. Nineteen percent of men and 17 percent of women had literacy skills below Level 2. As for numeracy, 27 percent of men and 33 percent of women had numeracy skills below Level 2. Among youth, men are far more likely to have lower skills: two-thirds of the youngest lower-skilled Americans (ages 16–24) are men.

Formal Schooling

Among lower-skilled adults who are working, 42 percent have less than a high school diploma, 22 percent had a high school diploma but no further education, 11 percent had some postsecondary education but obtained no certificate or degree, 12 percent had a certificate, and 12 percent had an associate’s degree. Though the United States has higher levels of high school completion among adults than other industrialized countries, the OECD survey finds that the U.S. performs worse-than-average on

⁴ Comparisons in this paragraph, in *Age, Ethnicity, and Gender*, are taken from two sources: U.S. Census 2010 Brief on Age and Sex Composition (August 2011) for the overall U.S. population figures and from the OECD’s *Survey of Adult Skills* for the lower-skill population.

literacy and numeracy skills. As such, it is possible that the relatively high levels of educational attainment mask troubling weaknesses in basic skills abilities.

Children of U.S. adults with low levels of education are 10 times more likely to have low literacy-skills than are those who have highly educated parents.

The relationship between formal schooling and skill level seems to also have an intergenerational component. Children of less-educated parents are much more likely to become lower-skilled adults.

People with Disabilities

Adults with learning disabilities – irrespective of whether they are working, unemployed, or out of the labor force - are twice as likely as adults without a learning disability to be lower-skilled. Among those with a diagnosed learning disability, 35 percent have low skills compared to 17 percent of those without a diagnosed disability.

Presence of a reported disability is more common among lower-skilled workers that are unemployed or out of the labor force than those who are working. For example, among lower-skilled employed workers, 9 percent reported having a diagnosed learning disability. In comparison, 24 percent of the unemployed and 26 percent of those not in the labor force reported having a diagnosed learning disability.

What are Typical Labor Market Outcomes for Lower-Skill Workers?

The two-thirds of Americans with low literacy skills that are employed total nearly 24 million adults, a significant population of workers. According to the OECD, these lower-skilled workers tend to be employed in retail and auto mechanic services, hospitality and food service, health and social work, manufacturing, and construction.

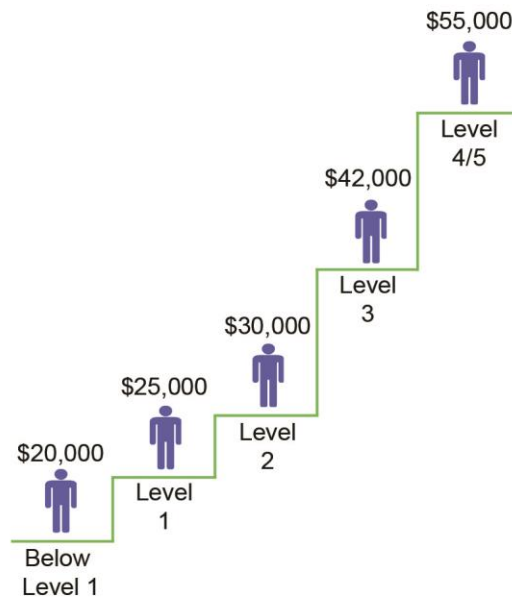
Nearly two out of every three Americans who have low literacy skills are employed.

In general, for working adults, higher literacy levels are correlated with higher incomes. As Figure 3 shows, median annual earnings of employed adults at the two highest levels of literacy proficiency (Level 4 and Level 5) were \$55,000 compared to \$20,000 for those with literacy skills below Level 1 (Figure 2 below).

Sixty percent of lower-skilled adults make less than \$30,000 annually.

Only 12 percent of adults at Level 4 and Level 5 have annual earnings less than \$15,000 and 41 percent make \$70,000 or higher. In sharp contrast, among all those with skills below Level 2, about 20 percent make below \$15,000 and only 7.25 percent make above \$70,000.

Figure 3
Median annual wages of employed
U.S. adults ages 16–65, by literacy proficiency
level: 2012



NOTE: Median annual wages are rounded to the nearest thousand dollars.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Program for the International Assessment of Adult Competencies (PIAAC), 2012. See level descriptors in Exhibit B-1 at <http://nces.ed.gov/pubs2014/2014008.pdf>.

1.2: Low-Wage Full-Time Adult Workers

Full-time adult workers who are earning low wages are a second group that can benefit from upskilling. These are workers with a large amount of experience and with strong commitment to the labor force, as evidenced by their full-time hours. Nevertheless, their earnings still place them, by our definition, in the bottom 30 percent of full-time workers.

Again, it is important to keep in mind the distinction between a worker's skill levels and their earnings. There are many low-wage workers who are not necessarily lower-skilled. These individuals may have strong literacy, numeracy and problem-solving skills, but face barriers to advancing in their careers. As an example, Burning Glass published an Analysis of Job Postings Data in April 2015 showing that while only 19 percent of administrative assistants today have a bachelor's degree, 65 percent of job postings for new administrative assistants require a bachelor's degree. Such requirements may pose barriers for the 71 percent of administrative assistants in the U.S. who do not have bachelor's degrees, should they seek a similar role with a different employers.⁵ While employers certainly have reasons for listing higher

⁵Burning Glass Technologies analysis of job postings data, April 2015 <http://www.burning-glass.com/research/credentials-gap/>

educational requirements for job applicants, making the best use of America's workforce means looking for ways that the experience and competence of workers can be rewarded without necessarily returning to school to earn a new degree. This can benefit employers as

Women are 42.7 percent of full-time workers over 25 and 52.6 percent of low-wage workers.

well because these extra educational requirements may lead to longer time frames to fill jobs. For example, according to Burning Glass Technologies Analysis of Job Postings Data, adding a bachelor's degree to job postings for maintenance supervisors leads these jobs to be open 20 percent longer. Employer-based upskilling strategies can both ensure that workers have the competencies employers need while also reducing barriers to filling these jobs for employers.

Who are Low-Wage, Full-Time Adult Workers?

According to 2013 data from the Current Population Survey, about 24 million workers older than 25, or about 23 percent of all full-time workers, earn less than \$550 per week. This benchmark was chosen because it is roughly the 30th percentile of earnings for all full-time workers. Table 1 shows that low-wage workers are more likely to be female, racial or ethnic minority, and more likely to have lower average levels of educational attainment relative to the average worker. For instance, women account for 42.7 percent of all full-time workers age 25 and over, but 52.6 percent of the low-wage workforce. Likewise, Hispanics are overrepresented among low-wage workers, constituting only 15.3 percent of the overall workforce, but 26.7 percent of the low-wage workforce. Blacks are also overrepresented, accounting for 10.7 percent of all workers, but 15.9 percent of low-wage workers.

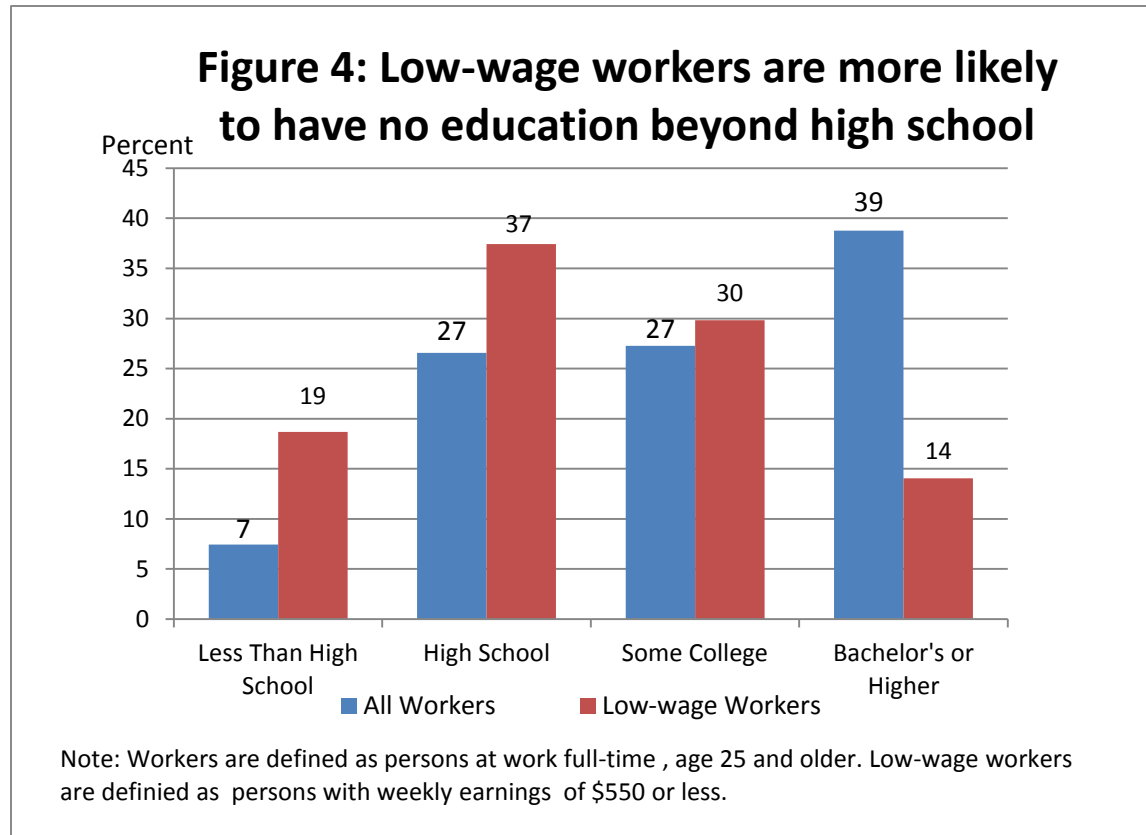
Table 1. Characteristics of Low-Wage Workers, 2013

Category	Full-Time Workers Age 25 and older			
	[Numbers in thousands]		[Percent Distribution]	
	All Workers	Low-wage Workers	All Workers	Low-wage Workers
<i>Total</i>	103,250	23,923	100.0	100.0
<i>Education</i>				
Less Than High School	7,671	4,472	7.4	18.7
High School	27,415	8,957	26.6	37.4
Some College	28,146	7,134	27.3	29.8
Bachelor's or Higher	40,017	3,361	38.8	14.0
<i>Gender</i>				
Female	44,044	12,585	42.7	52.6
Male	59,205	11,338	57.3	47.4
<i>Race/Ethnicity</i>				
White	68,309	12,011	66.2	50.2
Black	11,033	3,806	10.7	15.9
Hispanic	15,755	6,387	15.3	26.7
Asian	6,126	1,201	5.9	5.0
Other	2,027	519	2.0	2.2
<i>Region</i>				
Northeast	18,862	3,767	18.3	15.7
South	38,768	10,225	37.5	42.7
Midwest	22,276	4,846	21.6	20.3
West	23,344	5,085	22.6	21.3
<i>Children</i>				
Without Children in Household	64,096	15,034	62.1	62.8
With Children in Household	39,154	8,889	37.9	37.2

Source: 2013, annual averages from the Current Population Survey.

Note: Workers are defined as persons at work full-time, age 25 and older. Low-wage workers are defined as having weekly earnings of \$550 or less.

The education differences between low-wage and non-low-wage workers are striking. For example, as illustrated in Figure 4, about 19 percent of low-wage workers have less than a high school diploma compared to only about 7 percent of all workers.



What do full-time, low-wage workers do?

Although low-wage workers are employed throughout the economy, almost 40 percent are concentrated in three industry groups: healthcare and social assistance, retail trade, and accommodation, and food services. Low-wage workers are also highly concentrated by occupation: Figure 5 shows the top 10 largest occupations for low-wage workers, across all industries. Within each of the most common industries, Table 4 lists the largest occupations. In health care and social assistance sector, predominant low-wage occupations include nursing, psychiatric, and home health aides and personal and home care aides. Retail sales persons, first-line supervisors, and cashiers comprise the bulk of low-wage occupations within the retail trade sector. Within the accommodation and food services sector, low-wage workers are predominantly cooks and waiters and waitresses. In the management, administrative and waste management services sector, many low-wage workers are grounds maintenance workers, janitors and building cleaners.

Figure 5

Low-wage workers: Top-10 Largest Occupations

[Numbers in thousands]



Note: Low-wage workers are defined as persons at work full-time with weekly earnings of \$550 or less. Current Population Survey for 2013.

Chapter 2: Trends in Employer Provided Training

Section 2: Worker Participation in Employer-Provided Training

Now that we have established the main groups of workers who might benefit from upskilling, let us ask: *Where and how are front-line workers building their skills?*

There are a variety of places where lower-skilled Americans can learn skills that will allow them to advance. Community colleges, for example, can train workers in a variety of skills, as can other federally-funded job training programs. But the involvement and support of current employers is likely to be necessary for full-time workers to receive training that helps them advance for a few reasons:

- First, some community college and other training programs may not accommodate the schedules of many full-time workers – and even if these workers are training off-site, it will most likely be important for employers to help accommodate this training through flexible scheduling.
- Second, full-time adult workers may not qualify for need-based Federal student aid because of their earnings. Yet with relatively low earnings, these workers are still cash-constrained and may not be able to pay for training without employer support.
- Third, federal job training programs are primarily designed for those who are unemployed, although a limited amount of funding is available to pay for a portion of the costs of employers training current workers.
- Finally, employer-provided training is often most closely aligned to the specific needs of employers. While specific training may help individuals advance in their current employer, other general skills may be needed to advance into jobs with other employers or in other industries.

While there is significant survey data that illustrates how employers spend several times more than the federal government on job training, particularly for middle- and high-skilled employees, new analysis of the Survey of Income and Program Participation (SIPP) and other data point to a decline in the percentage of workers that are accessing employer-provided training and a particular disparity in access across educational levels, with less-educated workers likely to receive less employer-provided training.

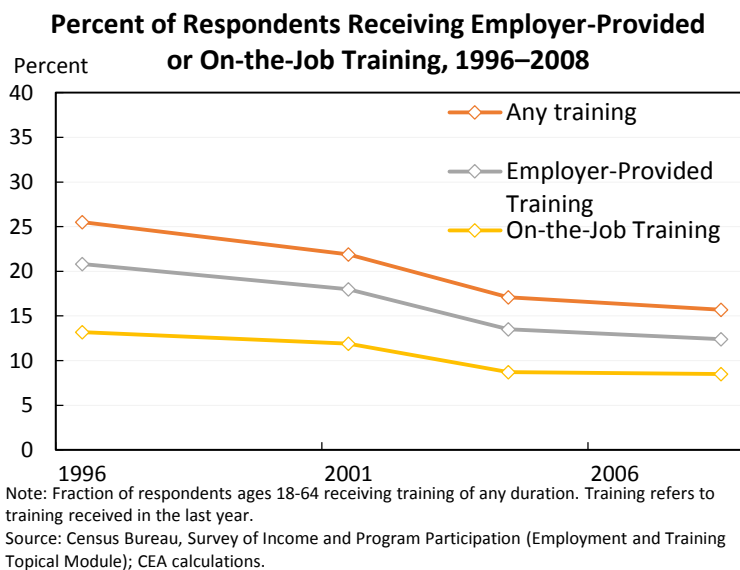
2.1: Analysis of Employer-provided Training using the Survey of Income and Program Participation

The most comprehensive data on participation in training comes from the Survey of Income and Program Participation (SIPP) Education and Training History topical module, administered every 3 to 5 years to between 14,000 and 52,000 respondents ages 15 and older. Since 1996, the SIPP has asked respondents whether they have received any training lasting more than 1 hour in the past 12 months. Respondents are then asked a series of questions from which can be determined whether they received training paid for by their employer, or whether they received training on the job. Since the questions ask about all training in the last 12 months, respondents can report receiving multiple types of training. We define employer-provided training to include both employer-paid-for training that occurs off the worksite and on-the-job training, although most employer-provided training is on-the-job.⁶

⁶ In 2008, among those receiving on-the-job training, roughly 8 percent report that it was paid for by the government, not their employer. An even smaller fraction (roughly 4 percent) report that they paid for the training themselves or through other means. Nevertheless, if the training occurred on the worksite, it is likely that employers had some role in its provision. We therefore classify these respondents as receiving employer-provided training.

The SIPP data provide stark evidence that access to training has declined since the late 1990s. As shown in the figure below, the prevalence of training has fallen in every year of the survey between 1996 and 2008. Over this period, the share of respondents ages 16 or older receiving any training in the past year fell from about 26 percent to 16 percent. Similarly, the fraction of respondents receiving employer-provided training (either on-the-job training or training paid for by the employer) fell from 21 percent to 12 percent over the same period, and the share receiving on-the-job training fell from 13 percent to 9 percent. While some of the decline could reflect the softening of the economy, the decrease is substantial enough to note.

Figure 4



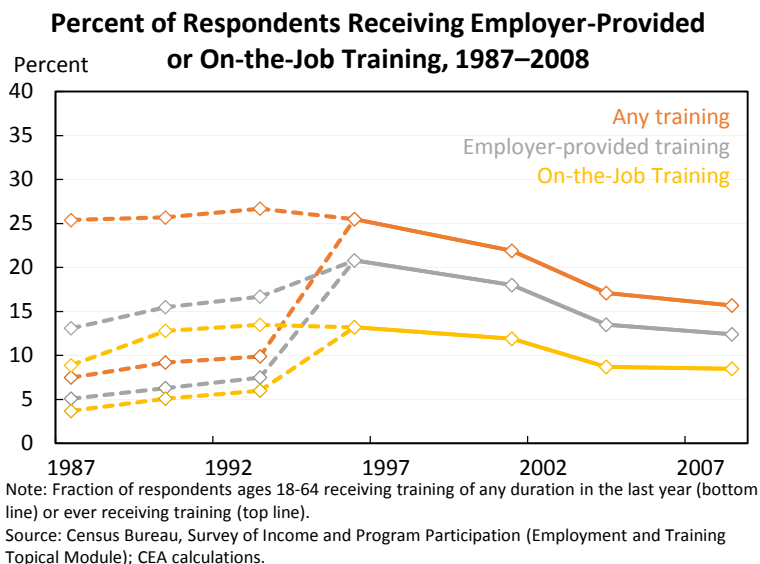
Changes in the SIPP’s survey design before 1996 make quantifying changes in training patterns over a longer period more challenging. However, under different assumptions about how to handle the changes, the SIPP provides upper- and lower-bound estimates of the prevalence of training. The data show that employer-provided training peaked in the mid-1990s after rising from the late 1980s.⁷

The SIPP also shows that workers only receive a modest amount of training in a given training spell, but over the course of a year this can accumulate to a significant amount of training. Training spells in the SIPP represent independent training activities, not multiple meetings of a single course. For example, as multiple meetings of a single course would be captured as one longer-duration training program rather than multiple short trainings. Among those who reported receiving any training in 2008, 47 percent reported that their most recent training spell lasted between a day and a week, while another 37 percent reported their most recent training lasting less than a day (8 hours). The distribution is relatively similar for respondents who received employer-provided training, while training among those who received on-the-job training were more likely to last for less than 8 hours. However, workers who receive training are more likely to participate in multiple training episodes throughout the year. About

⁷ Prior to 1996, the SIPP asks about two different time windows in which training could have occurred. It asks whether the respondent ever received any training, and whether the respondent started training in the last 12 months. In contrast, from 1996 on it asks whether the respondent participated in any training during the last 12 months, regardless of when this training began. As a result, the questions in earlier waves provide an upper and lower bound on the prevalence of training, but are not directly comparable with the question from 1996 on.

39 percent of respondents who received any training participated in four or more training episodes, while about 30 percent participated in only one episode.

Figure 5



We know little about the nature of the training in which SIPP respondents participated. Respondents were asked whether they received any training “to help search or train for a new job” or “to improve job skills.” Respondents themselves decided whether or not an activity qualified as training. As a result, the reported training could be anything that meets this generic definition, ranging from a one-hour lecture on workplace safety or sexual harassment to a months-long series of training sessions to improve specific skills. As a result, we cannot conclude from the SIPP whether the training improved skills that would allow respondent to contribute in their current or future jobs and to increase their earnings potential, or whether the training simply improved workplace compliance.

2.2 Characteristics of Workers who Receive Employer-Provided Training

The SIPP also provides a detailed picture of training participation by demographic group and educational attainment. In the most recent wave of SIPP data, from 2008, highly-educated workers and non-Hispanic White workers were more likely to receive training in the past year than lower-educated and non-White workers. In fact, respondents with a college degree or higher were more than twice as likely to receive training as respondents with a high school diploma or less. Non-Hispanic White workers were more than twice as likely to receive any training as Hispanic workers. Both highly-educated and non-Hispanic White workers were also more likely to receive either employer-provided training or on-the-job training than lower-educated and minority workers. These findings match a number of academic papers using various datasets, which have found that highly educated workers have the most access to employer-provided

training (Lynch and Black 1998⁸; Holzer and Reaser 1999⁹; Lerman, McKernan, and Riegg 2004¹⁰). While younger workers (ages 18-35) were slightly more likely to receive on-the-job training, older workers (ages 26-64) were more likely to receive off-site training. By contrast, the SIPP shows that men and women were similarly likely to participate in all types of training.

Table 3: Demographic Differences in Training: Percent of SIPP Respondents Ages 18-64 Engaging in Training by Type, 2008¹¹

Demographic Group	Any Training	Employer-Provided Training	On-the-Job Training
All	15.7	12.4	8.5
<i>Gender</i>			
Men	15.5	12.5	8.4
Women	15.8	12.3	8.5
<i>Educational Attainment</i>			
Less than High School	4	2.6	2
High School Diploma	9.9	7.7	5.6
Some College or Vocational School	15.8	12.3	8.8
Associate's Degree	19.3	15.5	10.1
Bachelor's Degree	23.7	19.7	13.1
Graduate Degree	26.7	21.2	13
<i>zAge</i>			
Ages 18-35	15	12	8.9
Ages 36-64	16	12.6	8.2
<i>Race and Ethnicity</i>			
White, non-Hispanic	17.7	14.4	9.5
African-American, non-Hispanic	13.9	10	8.1
Hispanic	8.6	6.3	4.7

Note: Fraction of all respondents ages 18-64 who reported participating in training of at least one hour in the past year.
Source: Survey of Income and Program Participation 2008.

⁸ Lynch, Lisa and Sandra Black. 1998. "Beyond the Incidence of Employer-Provided Training".

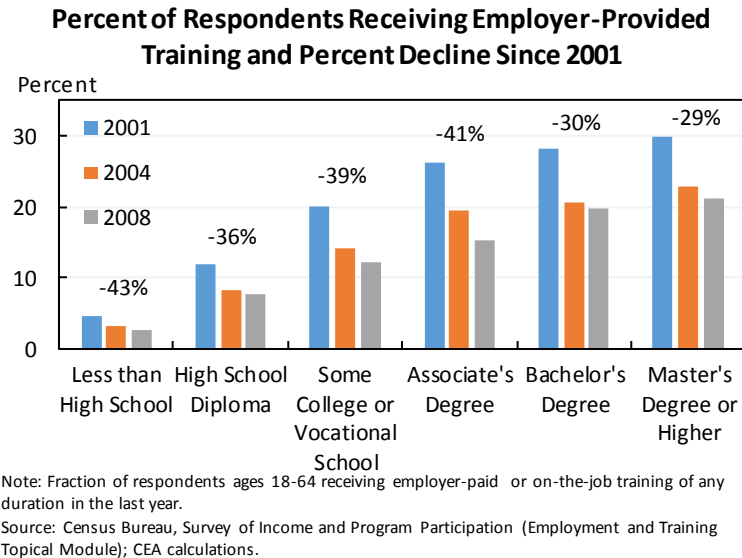
⁹ Holzer, Harry and Jess Reaser. 1999. "Firm-Level Training for Newly Hired Workers: Its Determinants and Effects." *Labor Economics* 18: 377-402.

¹⁰ Lerman, Robert, Signe-Mary McKernan, and Stephanie Riegg. 2004. "The Scope of Employer-Provided Training in the United States: Who, What, Where, and How Much?" In *Job Training Policy in the United States*. Kalamazoo, MI: Upjohn Institute: 211-244.

¹¹ *Industrial and Labor Relations Review* 52(1): 64-81.

While training rates remain highest for the most highly-educated workers, employer-provided training has fallen for workers of all education levels since 2001, as shown in the figure below. Employer-provided training has fallen by nearly a third or more for all workers, but declines have been even larger for those with less than a four-year degree.

Figure 6



2.3 What Other Sources Say about Employer-Provided Training

While the SIPP provides a representative picture of employer-provided training over time, a number of reports and research papers also identify a trend towards less employer-provided training in other data. Lerman, McKernan, and Riegg (2004) assemble evidence from three other surveys, in addition to the SIPP, and show that the incidence of employer-provided training rose in the 1980s through the early to mid-1990s. The surveys capturing worker reports of formal employer-provided training suggest that, in the early to mid-1990s, between approximately 15 and 40 percent of workers received some form of employer-provided training. Across the surveys, more educated, younger workers reported higher levels of training. An important caveat is that the one employer-based survey in this review suggests higher levels of employer-provided training. The authors point out that this survey includes only large employers (who are more likely to train) and includes very short intervals of informal training. Nevertheless, that data suggests that the great majority of workers at large firms receive some form of employer-provided training under this more expansive definition of training.

Cappelli (2015) reviews the recent literature and shows that employer-provided training has been declining since the 1990s, as have important sources of skills education like registered apprenticeships, technical education, and union training. Cappelli states that in 1979, young workers received on average about 2.5 weeks of training a year. Current Population Survey data from 1991 indicate that only 17 percent of workers reported that they had received any formal training from their employer at any

point.¹² Several surveys of employers around 1995 indicated that somewhere between 42 percent and 90 percent of employers offered some training, with the amount of training per year averaging just under 11 hours (Cappelli 2015)¹³. A 2012 report found that only 20 percent of workers had received any employer-provided formal training in the previous five years, and that 68 percent of respondents believed that keeping their skills up-to-date to remain valuable in their current role was their own responsibility rather than their employer's (Smith et al. 2012)¹⁴.

There are several forms of training that employers can offer. One type of training is tuition assistance programs (TAP), or tuition reimbursement programs, in which the employer pays for, or reimburses the employee for, continuing education and training courses. Employers can select which employees and what type of programs are eligible for assistance. A recent survey of 400 relatively large organizations in the United States found that 87 percent offered some form of tuition assistance, and among those that offered assistance, 59 percent had a formal program that was available to all full-time and part-time employees (Bersin and Associates 2009). Although many employers offer tuition assistance, however, take-up is relatively low across organizations: only 10 percent of the surveyed organizations reported that at least 10 percent of their employees participated in the program. Consistent with this, only 11 percent of SIPP respondents who receive employer-provided training report that its purpose was to train for a new job. However, this survey suggests that tuition assistance programs can be beneficial to both employees and employers, particularly when the program is aligned with the organization's overarching career development strategy. For example, 68 percent of employers reported that their TAP improved worker retention, 57 percent reported a TAP was necessary to remain competitive in its industry, and 54 percent reported that the total benefits exceeded the costs. From an employee's perspective, when an employer's TAP is aligned with an overall career development strategy, employees are more likely to be promoted, given new opportunities, and responsibility, and receive a raise.

Another form of training is informal training, such as learning from coworkers on the job. While the SIPP does not enquire about informal training, other sources show that informal training is much more widespread than formal employer-provided training. In a 1995 Bureau of Labor Statistics survey, workers reported nearly three times more hours of informal training than formal training (Frazis et al. 1998)¹⁵. A recent Georgetown study used the BLS survey information as a basis for estimating how much employers would spend on informal training, and other forms of training, in 2013 if the propensity to train remained the same as in 1995. They show that employers would spend the majority of their training budget on informal rather than formal training, with a total of \$413 billion going towards informal training and \$177 billion going towards formal training (Carnevale, Strohl, and Gullsh 2015)¹⁶. Lerman, McKernan, and Riegg (2004) find that the one survey in their study that includes informal

¹²Lynch, Lisa and Sandra Black. 1998. "Beyond the Incidence of Employer-Provided Training." *Industrial and Labor Relations Review* 52(1): 64-81.

¹³ Cappelli, Peter. 2015. "Skill Gaps, Skill Shortages, and Skill Mismatches: Evidence and Arguments for the United States." *Industrial and Labor Relations Review* 68: 2251-2290.

¹⁴ Smith, David, Diego De Leon, Breck Marshall, and Susan Cantrell. 2012. "Solving the Skills Paradox: Seven Ways to Close Your Critical Skills Gaps." Accenture.

<http://www.accenture.com/sitecollectiondocuments/pdf/accenture-solving-the-skills-paradox.pdf>.

¹⁵ Frazis, Harley, Maury Gittleman, Michael Horrigan, and Mary Joyce. 1998. "Results from the 1995 Survey of Employer-Provided Training." *Monthly Labor Review* June 1998.

¹⁶ Carnevale, Anthony, Jeff Strohl, and Artem Gullsh. 2015. "College is Just the Beginning: Employers' Role in the \$1.1 Trillion Postsecondary Education and Training System." Georgetown University Center on Education and the Workforce.

training implies that 95 percent of workers received training. They attribute the high number in that survey to the common use of informal training.

International data also show that lower-skilled workers are less likely to participate in training than more skilled workers. The OECD's *Survey of Adult Skills* tabulates job-related training – a broader form of training than employer-provided only - by skill level. Participation rates ranged from twenty five percent for workers Below Level 1 and just about thirty five percent for those at Level 1 to rates of 45 percent, 60 percent, and 70 percent for Levels 2, Level 3, and Levels 4 and 5, respectively. Just as in the SIPP data for the U.S., adults with low skills are much less likely than high-skilled adults to access job-related training.

Chapter 3: Where and How to Upskill

This report has so far identified a large group of workers who could benefit from upskilling and has outlined the major patterns and trends in employer-provided training. The data shows that access to employer training is low relative to where it has been in the past, suggesting room for employers to increase access to and uptake of training, particularly if they can do it in ways that benefit both workers and firms.

This final section focuses on where upskilling is happening today, where more of it could happen in the future, and how successful firms are already enabling this activity.

Opportunities for Upskilling Workers into High Growth, Good-Paying Jobs

This section begins by assessing where upskilling is happening by focusing on industries and jobs that already have clear pathways to advancement. Then, it reviews jobs that are growing significantly and could present opportunities for new upskilling pathways for many front-line workers.

Advancing Where There Are Clear Pathways

There are a number of industries and occupations for which the career pathways and opportunities for advancement are clear. For example, in retail, Burning Glass' Technology analysis of job postings data has found that when looking at the top 20 skills demanded for retail sales associates in job postings, 70 percent of those skills are also in the top 20 skills demanded for retail supervisors. By the same type of analysis, most retail sales associates have the skills they need to be able to transition into more senior roles as customer service representatives and more specialized roles such as financial service sales agents. Though these specialized roles may be in a different industry, they require many overlapping skills and competencies, and thus, provide strong stepping stones for workers' career advancement.

Other examples of career pathways could be entry-level warehousing roles such as inventory associates moving up to be warehouse supervisors. According to Burning Glass, these roles share 50 percent of the most in-demand skills. From supervisor roles, workers could advance into storage and distribution managers. Each of these steps comes with a significant increase in responsibilities and expectations, and typically a commensurate increase in earnings.

There are also a number of pathways in the health care field. Licensed practical nurses can become registered nurses, and the attainment of a bachelor's degree can increase wages and job opportunities even among registered nurses. As a result, more and more registered nurses with associate's degrees are returning to school to pursue their bachelors.

Creating New Pathways Where There is Significant Demand

For firms where the pathways to advancement are less clear, one way to identify better-paying jobs for low-wage workers to progress into is to look for high-growth jobs that do not require a bachelor's degrees.¹⁷

When looking at employment projections between 2012 and 2022, 19.7 percent of projected job openings are expected to be in occupations with earnings over \$30,000 but require less than a bachelor's degree. Registered nurses top this list, with more than one million projected job openings and a median annual wage of \$65,470.¹⁸ Other fast-growing jobs in the health sector include licensed practical nurses, (with typical earnings of \$41,540) and dental assistants, (with typical earnings of \$34,500). Customer service representatives are expected to show strong growth and have a salary slightly above \$30,000. First-line supervisors of office and administrative support work are projected to grow by about half a million jobs and have a median annual wage of \$49,330. In general, first-line supervisors of various types (construction and extraction workers, housekeeping and janitorial workers, personal service workers, and landscaping and grounds keeping workers) have high projected growth and annual wages above \$35,000, pointing to the importance of management and leadership skills for helping low-wage workers progress. Trades such as electricians, industrial machinery mechanics, and plumbers are also expected to see strong growth and all have annual wages between \$45,000 and \$50,000. The IT job expected to see the strongest growth is computer user support specialist, which has an average annual wage of roughly \$46,000.

These figures highlight that in the modern economy, there are a wide range of in-demand jobs that do not require a college degree, but nevertheless provide a good standard of living. These high-growth areas are examples of the well-paying jobs that front-line workers can be upskilled into.

Finally, as noted in previous chapters, low-wage workers are concentrated in some common industries and occupations. About 4.8 million low-wage Americans work in just five occupations: nursing, psychiatric, and home health aides; cooks; janitors and building cleaners; cashiers; and retail sales. This concentration offers employers in these areas the opportunity to deploy a set of best practices more widely without needing to develop highly individualized practices. If these occupations can become stepping stones to better paying jobs, over time workers in these jobs can contribute more, take on more responsibility, and increase their earnings, enabling them to improve their self-sufficiency and better support their families.

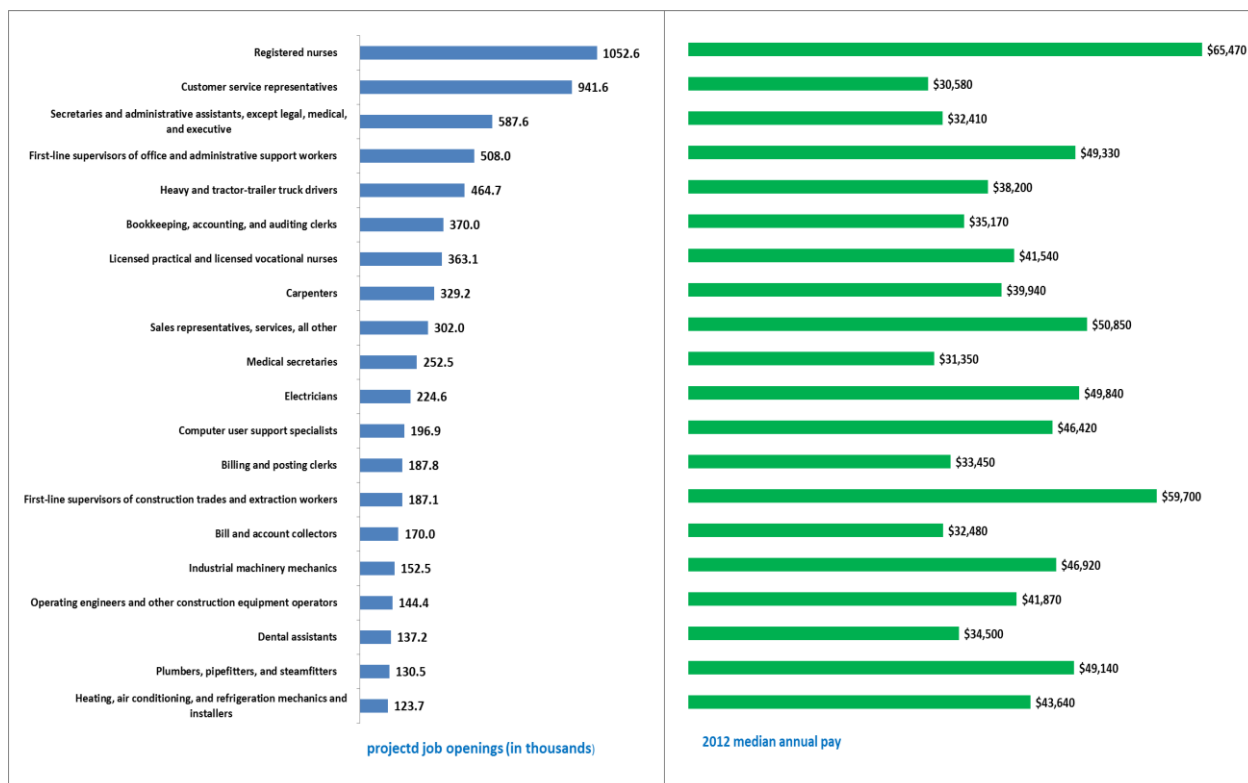
¹⁷ The U.S. Bureau of Labor Statistics, Employment Projects program provides information on the typical education and training requirements needed for entry into an occupation.

http://www.bls.gov/emp/ep_education_training_system.htm

¹⁸ However, this may be an example of where today's typical education requirements do not accurately represent future demand. The Institute of Medicine has recommended that 80 percent of nurses have a BA by 2020 <http://www.rwjf.org/en/library/research/2013/09/cnf-the-case-for-academic-progression.html>

Figure 7

Figure 9. Top-20 Occupations that are projected to grow faster than the average, pay more than \$30,000, and require less than a bachelor's degree. (Ranked by number of job openings)



SOURCE: Bureau of Labor Statistics. Occupational Employment statistics, 2012.

Examples of Upskilling in Practice

Many employers and labor management partners across the country are providing opportunities for front-line workers to learn, contribute, and earn more over time.

The purpose of this final section of this Report is to highlight the specific strategies that employers are using to train frontline employees, with case studies that demonstrate how these strategies can have positive outcomes for both employers and workers alike. These specific upskilling strategies include:

- Apprenticeships and other forms of on-the-job training that lead to better paying jobs;
- Employer-provided education benefits that help employees work towards a degree while they are on-the-job; and
- Labor management partnerships, as well as partnerships with educational providers and technology innovators.

In order to implement these strategies, there are a set of critical enabling conditions and tools that make any chosen strategy more successful. One such enabler is **technology**. While not a panacea for any and all skill issues, technology can make learning solutions cheaper and more flexible for employers and frontline workers alike. It can help with delivery of educational training at scale. It can personalize and

help accelerate individual learning. It creates opportunities to track and measure learning and enable analyses of data that improve the quality and reduce the cost of education and training opportunities.

A second critical enabler is use of **mentorship, or career guidance or coaching**. Connecting frontline workers to individuals can help them plan a path and seek information about options, and can help ensure that workers are using their time and resources most effectively.

A third critical enabler is the use of **partnerships between employers and educators, technologists, labor unions and workforce leaders** so that employers do not have to provide all training on their own. These partnerships follow many different models and serve to engage critical partners to create beneficial opportunities for all involved. They include partnerships that engage multiple firms in an industry to identify and address critical skills needs. They can take the form of strategic partnerships between a single employer and a local college that ensures employees have access to education and training opportunities to succeed and develop in the company. Labor-management training partnerships harness union structures to develop and in many cases jointly finance training programs for an entire industry.

In the pages that follow, this report will highlight specific examples of each of the best practices highlighted above, while pointing to the role of these key enabling factors.

Before going into the case studies highlighted below, it is important to clarify that many of these practices can and do overlap. Ideally, employers will leverage the right set of strategies in order to create the most optimal environment that is conducive to learning.

3.1 On-the-Job Training Programs that Lead to Advancement

Private industry spends up to \$177 billion each year on formal employee training and another \$413 billion on informal and on-the-job training, according to the Georgetown Center for Education and the Workforce.¹⁹ By way of comparison, the federal government invests about \$17 billion annually on formal job training programs across government agencies.

On-the-job training can take many forms, and the potential benefits of these many forms of training vary significantly for employers and workers alike. One form of on-the-job training is that which happens informally. The only instance in which this form of on-the-job training has been measured, and thus, specifically defined, was the Bureau of Labor Statistics' 1995 Survey of Employer-Provided Training. In the survey, informal training is defined as "unstructured, unplanned and easily adapted to situations and individuals."

Formal training, in contrast, is defined as "training that is planned in advance and that has a structured format and a defined curriculum." The survey found the incidents of informal training to be incredibly common, with 96 percent of employees reporting that they received such training while working for their current employer. In terms of the benefits of this form of training, the survey found interesting relationships between both formal and informal on-the-job training and employee turnover: high-

¹⁹ Carnevale, A., Strohl, J., & Gulish, A. (2015). College is just the beginning: Employers' role in the \$1.1 trillion postsecondary education and training system. Washington, D.C.: Georgetown University Center on Education and the Workforce. Available at <https://cew.georgetown.edu/wp-content/uploads/2015/02/Trillion-Dollar-Training-System-.pdf>.

turnover establishments provided less formal training than did other establishments; however, hours of informal training are not inversely related to turnover.

Today, training at most companies is a combination of formal and informal, instructor-led training, e-learning and on-the-job training, coaching, shadowing, video training, self-study, testing and visual assessments.²⁰ More progressive training formats also include experiential learning in which employees can apply learning and receive feedback in real time, including simulations, job rotations and action learning.²¹

Case Study

The ASCEND Program for Gap Inc. Workers

The ASCEND Talent Development Program was launched in 2009 as a pilot program in the company's Banana Republic brand, with the goal of cultivating a deeper bench of diverse talent with leadership potential. In subsequent years, the program has been expanded, and now also includes participants from Gap and Old Navy brand stores, as well as at the headquarters level. The ASCEND program is intended for high-potential front-line employees of diverse backgrounds with at least 9-12 months experience in role, and a demonstrated passion to advance their career in retail and assume enhanced responsibilities. Participants complete a year-long curriculum designed to develop business and leadership skills and abilities through group learning, independent projects and consistent mentorship from senior company leaders.

On average, between 65 to 70 percent of ASCEND participants are promoted following completion of the year-long program. As a result of the program, ASCEND participants not only gain from the opportunity to advance their careers at Gap Inc., but the stores where they work also tend to benefit from improved business performance. For example, in Banana Republic, the first Gap Inc. brand to adopt ASCEND, stores that employ ASCEND graduates have outperformed stores in their district and region in key performance indicators, such as sales and employee retention, ranging by about 30 percent to 80 percent.

Registered Apprenticeship

Registered Apprenticeship combines on-the-job learning with classroom instruction to increase an apprentice's skill level, opportunities, and wages, and meet the industry and national standards for registration with the U.S Department of Labor. For workers, apprenticeships offer opportunities to earn a salary while learning the skills necessary to succeed in high-demand career. Apprentices can gain the skills they need for good middle class jobs with little or no educational debt. At the successful completion of the on-the-job and instructional learning, apprentices receive an industry-issued, nationally recognized portable certificate of completion provided – provided by the U.S. Department of Labor or the State where the apprentice resides.

²⁰ Clarey, J. (2012). Structured social learning for today's workforce. Bersin by Deloitte. Available at http://marketing.bersin.com/rs/bersin/images/062812_CS_SocialLearning.pdf.

²¹ Lamoureux, K. (2010). Experiential learning for leadership development. Bersin by Deloitte.

Evidence suggests that Registered Apprenticeship programs are an effective model for building skills and creating pathways to the middle class and beyond. Nearly nine out of ten apprentices are employed after completing their apprenticeships with an average starting wage of over \$50,000. Apprenticeships have also been shown to increase a worker's lifetime compensation by over \$300,000 compared to their peers²².

There are more than 19,000 registered apprenticeship programs meeting the Department of Labor's standards nationwide. Last year, over 1,600 new apprenticeship programs were established nationwide, and more than 170,500 individuals entered the apprenticeship system. Nationwide, there are about 415,000 apprentices, and over 44,000 participants graduated from the apprenticeship system during the most recent year. Apprenticeships are available in over 500 occupations, and in a variety of industry sectors including energy, IT, hospitality, construction, and manufacturing, to name a few.

In Germany, Switzerland and the United Kingdom, modern apprenticeships are helping improve economic competitiveness. Unfortunately, in the U.S., we've under-invested and under-promoted the role that a 21st-century apprenticeship can play in meeting today's workforce challenges. The United States has less than one-third as many individuals starting an apprenticeship each year compared to the U.K., even despite the significant size differential. If the U.S. had the same proportion of individuals starting an apprenticeship each year as Germany, there would have been more than two million new American apprentices last year.

Case Studies

Finishing Trades Institute (FTI)

The Finishing Trades Institute (FTI) is the education department for the International Union of Painters and Allied Trades (IUPAT) and the Finishing Contractors Association. The FTI's core purpose is to develop and expand a qualified and competitive work force for the finishing trades industries and oversee the apprenticeship training program where those who wish to enter our trades learn their craft. This program is based on a nontraditional partnership between organized labor, employers, and the public and private workforce development sectors. The program combines safeguarding the environment with preparing skilled and unskilled workers for green jobs in the painting, finishing, glazing, and weatherization industries. FTI offers Pre-Apprenticeship programs, Registered Apprenticeship opportunities, and Journey-worker skills upgrade training programs. The program offers Apprenticeship opportunities for under-represented populations, including disadvantaged youth, women, and veterans. FTI registered its first set of apprenticeship standards with the U.S. Department of Labor (DOL) in 1945. In 2009 the FTI became the first stand-alone building trade's apprenticeship program to receive full accreditation from the U.S. Department of Education. The FTI is a leader and innovator in the apprenticeship world and continues to change the model with their outside the box approaches to things like; training, diversity, outreach and professional development of staff.

Registered Apprenticeship expanding into new industries, like IT.

IT-oLogy, a nonprofit collaboration of businesses, academic institutions and organizations dedicated to growing the IT talent pipeline in South Carolina and beyond, has committed to continuing work with

²² Department of Labor—Apprenticeship Quick Facts, <http://www.dol.gov/apprenticeship/quick-facts.htm>

partners Blue Cross Blue Shield South Carolina (BCBSSC) and Apprenticeship Carolina to expand their apprenticeship model across South Carolina. Through their expanded city and state reach, IT-oLogy also plans to work with business partners in Charlotte (Charlotte Works), Pittsburgh (Three Rivers Workforce Investment Board), and potentially Nashville and the state of Kentucky to drive expansion. IT-ology is targeting 350 apprentices in South Carolina and over 650 in the other partner areas.

National Institute for Metalworking Skills (NIMS)

The National Institute for Metalworking Skills (NIMS) was formed in 1995 by the metalworking trade associations to develop and maintain a globally competitive American workforce. NIMS sets skills standards for the industry, certifies individual skills against the standards and accredits training programs that meet NIMS quality requirements. NIMS operates under rigorous and highly disciplined processes as the only developer of American National Standards for the nation's metalworking industry accredited by the American National Standards Institute (ANSI). NIMS, at the forefront of efforts to establish Competency Based Apprenticeship programs, has committed to lead the effort to expand the use of competency-based apprenticeships in the precision manufacturing industry. NIMS will develop and disseminate an Apprenticeship Blueprint to help companies expedite implementation of customized apprenticeships that meet their talent needs. NIMS will also set a goal to issue 1,000 credentials to individuals in Apprenticeship programs. Through outreach to their network of 6,000 stakeholders, NIMS will provide a robust package of tools, resources, and technical assistance to support stakeholder efforts to establish or expand their use of Registered Apprenticeship.

3.2 Education benefits

Education benefits primarily include the provision of financial assistance to help employees pay for tuition or fees for post-secondary education. Many employers tie reimbursement to successful completion of a course or program. In addition to direct financial assistance, education benefits sometimes include partially or fully-paid release time to be able to attend classes. Sixty-two percent of organizations require employees to have tenure of one year after receiving Tuition Assistance Program (TAP) benefits. According to a survey of 400 companies over a broad range of sizes and industries, conducted by *Bersin & Associates* in 2008 and published in 2012, 71 percent of U.S. companies offer tuition assistance programs^[1]. Unfortunately, only 43 percent of working adults know whether their employers offer such a program.^[2] Additionally, low-wage workers often have a hard time covering tuition costs out of pocket upfront when reimbursement only comes after completion of a course or program. To alleviate this barrier, some employers have begun to provide funding in advance of a program. Best practice employers are engaged in significant efforts to make employees aware of the benefit to increase uptake. TAP is most often used for a course of study ending in Masters or Bachelor's degrees with about 50 percent of organizations funding professional certificate programs. In addition to providing tuition assistance, between 30 and 40 percent of organizations also help students choose their education path through advisory and resource programs. More employers could follow in their lead.

^[1] Kowske, B., Lamoureux, K. (2012). *Tuition assistance programs: Best practices for maximizing a key talent investment*. Bersin by Deloitte. Available at <http://www.edassist.com/~media/bh/edassist/resources-media/research-reports-webinars/maximize-tuition-assistance-programs/bersin%202012%20%20tuitionassistance%20study%20sponsored%20by%20edassist.ashx>.

^[2] Survey by Greenberg Quinlan Rosner

Organizations are increasingly aligning tuition assistance programs with their talent management strategies. Eighty-six percent of companies surveyed have done so. Several companies view tuition assistance programs as in their business interest, measured by retention, employee mobility, and employee performance. Indeed, the majority of employees who participate in tuition assistance programs do not leave their organization: Seventy-one percent of participants in one human resource survey participants reported that the majority of tuition assistance programs graduates stayed with their company.

Case Studies

College for America and Partners Healthcare Case Study

College for America at Southern New Hampshire University partners with employers like Partners Healthcare, the largest private employer in Massachusetts, to bring accredited, competency-based Associate's and Bachelor's degrees to working adults. Students may proceed through projects at their own pace, but must master every competency in order to graduate. Today roughly 1,000 students are enrolled, representing more than 70 employers nationwide. Annual tuition is about \$2,500, all inclusive, and is usually paid in whole or in large part by the student's employer.

Partners HealthCare, the largest private employer in Massachusetts, has committed to a system wide initiative to make a college degree free or close to free for tens of thousands of employees through a partnership with the College for America at Southern New Hampshire University.

Through their partnership with College for America, Partners enrolled 45 employees in a pilot program in January 2014, and after multiple graduation ceremonies, is now opening enrollment to allow most employees across Partners to pursue an accredited Associate's or Bachelor's degree at little to no cost out of pocket after tuition reimbursement. The company has also created the Partners Online College Preparation Program, a free web-based resource that has readied more than 700 of its employees for online learning. Today, Partners is teaming up with College for America to develop and implement an accessible certificate program for nonclinical frontline healthcare workers—essentially the first half of an Associate's degree. Together, the two organizations identified the competencies that nonclinical staff would need for care transformation.

Pepsico: Modernizing Tuition Assistance Programs

Pepsico wanted to increase front-line worker use of their higher education benefits for career advancement. They increased coverage of tuition assistance programs from 75 percent to 100 percent, and started directing employees to the highest-quality programs. They automated the administration process, which standardized enforcement of eligibility rules enabling more employees to access their benefits. These changes are enabling thousands more workers to access two- and four-year education programs for free.

3.3 Employers Partnering with Tech Innovators to increase access to high-quality and personalized learning

There is significant innovation underway in the technology-enabled learning marketplace that is changing the value proposition for employer investment in lower-skill, low-wage worker training. First, with the option of low-cost digital distribution, employers can much more easily maximize the value of their up-front investment in customized training. This has led to a surge of new training providers working directly with employers. Secondly, employers can create training options that are much more accessible anywhere and at any time by leveraging the growth of mobile, and more suited to demands of work and family that adults face. Finally, employers can leverage and support the growth of online communities that allow their workers to learn from peers, which can sustain them through a myriad of challenges that lower-skilled adults face.

First, e-learning tools are significantly easier for companies to deploy, as they typically do not require special hardware or software, and generally can be deployed without a lot of staff. Employers are using tools that provide tailored content, and cater to companies that need courses in many topics. Institutions of higher education, both public and private, are also getting in the business of e-learning, and increasing access by offering customized certificate and degree programs for employers.

Learning technologies are also taking advantage of being able to engage adults in learning in a multitude of settings beyond the traditional classroom', from use of mobile, gamification of learning, and use of simulations, to personalized instruction that keep the learner engaged and challenged.

Finally, technology is making it easier to learn from near-peers, which can be critical source of advice, mentorship and building a shared sense of purpose, agency and belonging. Social media tech tools are providing interactive opportunities for employees to engage with each other, with corporate leaders, coaches, and even mentors from outside of the organization.²³ The use of social learning tools by U.S. companies for training and development is growing. A third of companies surveyed reported using communities of practice (33 percent); 28 percent reported using blogs, wikis, and forums, 26 percent reported using expertise directories, and 13 percent social networking sites.²⁴

The use of social learning tools by U.S. companies for training and development is growing. One third of companies surveyed reported using communities of practice (33 percent); 28 percent reported using blogs, wikis, and forums, 26 percent reported using expertise directories, and 13 percent social networking sites.²⁵ More employers could take advantage of these new approaches.

There is certainly more need for work in this area. A study done by Education Growth Advisors found that the key limiting factors for the broader use of technology in supporting adult education and training were limited funding, lack of access to devices or internet and the ability of workers to be self-directed.

²³ Lamoureux, K. (2013). Career pathing: Optimizing engagement, learning, and retention. Bersin by Deloitte.

²⁴ Clarey, J. (2012). Structured social learning for today's workforce. Bersin by Deloitte. Available at http://marketing.bersin.com/rs/bersin/images/062812_CS_SocialLearning.pdf.

²⁵ Clarey, J. (2012). Structured social learning for today's workforce. Bersin by Deloitte. Available at http://marketing.bersin.com/rs/bersin/images/062812_CS_SocialLearning.pdf.

Pine Technical and Community College Employer Partnership: Mini-MOOCs to Create Rural Access

The partnerships Pine Technical and Community College (PTCC) established with almost forty companies is an illustration of how technology can be used in rural areas to give workers more opportunities to improve their skills and get credentials. PTCC worked with companies to develop a series of credit-bearing courses delivered via teleconferencing software that students can access while at work. Using mini-MOOCs, the partnership has created opportunities for over 300 workers from 38 companies allowing them to access courses that will lead to credentials and opportunities for advancement and better paid work.

Xerox Global Learning Innovation. Xerox places a strong emphasis on “workforce knowledge sharing” initiatives that allow individuals to show, share, and lead among their peers for advancement, with recognition by management. For example, all employees have access to a video sharing platform (similar to YouTube) that allows upload and global distribution of best practices and knowledge sharing. Contributors at all levels of the organization are able to share with senior management, benefiting from professional development and recognition that leads to advancement.

3.4 Better aligning workforce needs and higher education through competency-based education and prior learning.

The rapidly growing movement around competency-based education (CBE) programs in higher education is shifting the focus from what students know to what students *can do* with their knowledge. Thinking about learning in terms of competencies provides educators (the supply side) and employers (the demand side) with a common language and way of thinking of about education. This, in turn, is encouraging CBE programs to better align with the competencies that employers have identified as important or valuable. Because the best CBE programs are transparent about the claims they make for worker learning—what students know and can do—and use rigorous, performance-based assessments, employers can trust the graduates of these programs will, in fact, have the skills and competencies promised.

Because the new generation of CBE programs are self-paced and based on demonstrated mastery of competencies—as opposed to how long students sat in a classroom—students *can* complete them much more quickly (or, in turn, take the time they need to genuinely master a challenging competency). Employers can partner with providers to ensure that the competencies are the right ones, relevant and current, and can help inform program design. The new generation of CBE programs have tended to be offered at substantially lower prices, making them more affordable for students and giving employer based tuition remission programs far more impact. The promise of CBE is:

- Educational offerings that are well mapped to workforce needs
- Higher quality and trustworthy outcomes focusing on what graduates can actually do
- More affordable programming

CBE programs often work hand-in-hand with prior learning assessments (PLA), a way for awarding credit for the learning students already possess. Recognizing that students/workers often come to institutions

of higher education (IHEs) with learning gained elsewhere – from training in prior employment, military service, working in a family business – PLAs provide a way for those students to demonstrate what they already know and earn college credit for it. This speeds up their progress to program completion, saving time and also money, and allows the IHE to focus on what students do not yet know. Research shows that students who complete PLAs go on to complete their educational programs at higher rates than those who do not.

An indirect, but important, benefit of CBE and PLA approaches is their focus on demonstrable mastery of actual learning, which may compel traditional academic programs to better address this aspect of their work. The quality of academic programs in traditional higher education has been more input driven, with an emphasis on faculty credentials, library volumes, student entrance scores, and program outputs have often been less grounded in workforce needs. As a result, IHEs mostly believe they prepare students well for the workforce, while a distinct *minority* of employers agree.²⁶ With a focus on workplace competencies and rigorous assessments, CBE and PLA promise to close that gap and many believe that traditional IHEs will increasingly follow suit, better aligning the provider system with the employer side over time.

There are a number of near-term opportunities to expand high quality competency-based education aligned with employer needs. First, the CBE experimental sites now being launched under the supervision of the Department of Education will help us understand how to better align our federal financial aid program rules, currently based on time, with programs built around actual learning. Second, making progress on new and better performance-based assessments, leveraging new technologies, such as adaptive learning, immersive simulations, and data analytics, and advances in learning science. And finally, standing up new low cost CBE delivery models and finding way to get new high quality non-IHE providers into the higher education eco-system.

²⁶ Hart Research Associates on behalf of the Association of American Colleges & Universities (April, 2015), “Optimistic About the Future, But How Well Prepared? College Students’ Views on College Learning and Career Success” Available at <https://www.aacu.org/sites/default/files/files/LEAP/2015StudentSurveyReport.pdf>

Thomas Edison State College Gives Credit for UPS Learning

Thomas Edison State College (TESC) focuses exclusively on adult learning. Their programs are flexible and work around the student’s schedule. TESC also uses training and workplace experience to transfer as college credit. UPS began a partnership with TESC in 2007. UPS was looking for an institution that could provide uniform, quality higher education to its employees worldwide. UPS also wanted a college where employees could get credit for college-level knowledge they had developed on the job. When TESC and UPS began their partnership, they underwent Academic Program Reviews. Through this process, TESC reviewed training programs and determined whether they were eligible for college credit. When employees are able to earn college credit while completing training courses here at UPS, they save time, and UPS is able to make better use of tuition assistance funding.

Credits Received Through TESC Academic Program Reviews			
UPS Training Program	Total Credits Earned	Participants	Total Dollars Saved (March 2009-August 2014)
Driver Training School	6	5	\$3,840
Integrad: Managing Performance	8	7	\$9,000
Hub Supervisor Training School	12	89	\$197,460
Total:		101	\$210,300

In just the last 9 months, 515 UPSers have enrolled in TESC courses, and those 515 students are taking 819 courses. Last year 49 UPSers graduated from TESC. The average amount of time to complete a degree is 31 months. The percentage of management employees with a Bachelor’s degree has increased over 10 percent since 2004.

Goodwill Industries

The fastest growing population in the Goodwill Industries International (GII) enterprise is front-line supervisors and managers. To meet the needs of this population, GII operates a comprehensive Management Development program for the front-line Manager (MDP) and Donated Goods Retail Manager (DGR). GII, in partnership with Global Corporate College (GCC), a nonprofit organization which specializes in working with colleges and universities to offer continuing education through employers, developed the Social Enterprise Management Program (SEMC) for Goodwill employees to earn college credit for training achieved on the job and by taking online classes at Anne Arundel Community College (AACC).

Online courses are taught by instructors from Anne Arundel Community College. Face-to-face courses are taught by Goodwill employees who have been certified to train and facilitate the MDP programs. This unique blend of online and face to face training offers flexibility and affordability to students who may otherwise find it challenging to pursue such a program.

The certificate is issued by Anne Arundel Community College. This certificate is transferrable and students may choose to use the credits earned toward attaining a degree. Since the start of the SEMC program, 25 Goodwill employees have earned the certificate. The average amount of time to complete the certificate is 14 months.

Working at the Pace of Information Technology to Develop IT Workforce

Funded by the U.S. Department of Labor's Trade Adjustment Assistance Community College and Career Training (TAACCCT) Program, Sinclair Community College (SCC) is building upon their existing SinclairOnline distance learning course development and student support models and leveraging additional college services to create a complete competency-based education (CBE) system. A central component in the creation of the CBE system is SCC's revamping of the Computer Information Systems (CIS) curriculum to align with current state and industry standards. The revised curriculum consists of 31 CBE courses (23 CIS and 8 general education), which will be delivered in four modalities: self-paced online, instructor-led online, hybrid/emporium, and web-enhanced classroom. These courses will feed into four short-term certificates, four industry certifications, and three Associate of Applied Science (AAS) degrees.

Udacity Nanodegrees for Call Center Workers at Capital One

Nanodegrees, or stackable micro credentials, are a new type of credential built by online educational organization Udacity in partnership with employers. Nanodegrees aim to provide a more efficient, relevant path of study aligned directly with a specific job. Students take 4-7 online classes and build projects. Course work and portfolio are designed to be completed within 6-9 months with about 10-hours of learning each week. Students must defend projects in an exit interview with a Udacity Coach to receive their nanodegree.

Capital One is expanding its efforts with Udacity to provide its call center associates with pathways to develop the skills required for entry-level software engineering roles. Through the Udacity Nanodegree program, employees can participate in an online tech skills training focused on developing specific job competencies as employees build a portfolio of projects with guidance from coaches and classmates.

3.4 Labor management training partnerships

Labor management training initiatives are collaborations between employers and unions to give employees the opportunity to develop the skills and attain the credentials that employers need and employees want for career enhancement and employment security. Employers and unions often create "joint labor-management training programs" to accomplish these goals. Examples exist in various sectors of the economy including construction, manufacturing, health care, aerospace, and leisure and hospitality.

Existing evidence on the effectiveness of labor-management training partnerships indicates that these programs can work. While no random-assignment have been conducted, various reports indicate significant benefits for both the employer and worker. Studies have found that these partnerships "can

improve student achievement, cut costs of water delivery and wastewater treatment and limit child deaths from abuse while maintaining good jobs and improving the work environment.”²⁷

A case study on Hospital Employee Education and Training (HEET) projects to advance health care workers’ careers in Washington State reports that since 2008, this effort:

*...has built the skills of hundreds of health care workers. More than 800 students have enrolled in some 1200 classes since the first HEET grant. Workers have moved from the entry-level to nursing positions across the course of the grant. The full-time equivalents (FTEs) in the community college system averaged 65 per year. HEET students are overwhelmingly female, substantially more racially diverse than the state population, and many are well into their work and family lives (the median age of HEET students is around 38). Half of these workers never completed education past high school, for them, the impact of HEET has been particularly profound.*²⁸

Case Studies

Upskilling at Kaiser Permanente

In 2005 Kaiser Permanente and the Coalition of Kaiser Permanente Unions (a coalition of SEIU, AFSCME, UFCW, OPEIU, AFT, Steelworkers, Teamsters, IFPTE and other international and local unions) established two labor management trust funds the Ben Hudnall Memorial Trust and the SEIU UHW-West Joint Employer Trust fund serving almost 100,000 employees with career development and education opportunities.

The Ben Hudnall Memorial Trust (BHMT) provides services to 46,000 KP employees. BHMT works closely with KP’s National Workforce Planning and Development Department and its Regional counterparts to consistently adapt and expand Trust offerings to meet the needs of both management and labor union partners as well as those of the individual participant. In an eligible population that has grown from roughly 42,000 to over 46,000 in 7 years, the Trust has been able to increase participant engagement from just 1,382 participant touches in 2007 to 22,891 participant touches in 2014 - equating to 14,705 unique participants or 32 percent annual utilization rate across all Trust programs.

Over time, KP consistently sees:

- a 92 percent retention rate in individually selected programs, and a 94 percent retention rate in cohort programs
- an average of 32 percent new job placement rate in individually selected programs, and an average 45 percent new job placement rate in cohort programs
- an average 76 percent of those participating in both individually selected and cohort programs experienced higher-than-negotiated wage increases over time

²⁷ Beach, A. & Kaboolian, L. (2003). *Public service, public savings: Case studies in labor-management initiatives in four public services*, p. 8. Cambridge, Massachusetts: The Public Sector Labor-Management Committee and the J.F. Kennedy School of Government.

²⁸ Chenven, L., & Dresser, L. (2014). Turn up the HEET! Reflections on Washington’s six years of investment And innovation in the health care workforce. Madison, WI: University of Wisconsin-Madison Center on Wisconsin Strategy. Available at http://www.cows.org/data/documents/ex_1677.pdf.