Work-and-Learn IN ACTION

Successful Strategies for Employers
About the National Network of Business and Industry Associations

The National Network of Business and Industry Associations (National Network) is focused on better connecting “learning” and “work” to provide clear pathways to and from learning opportunities and good jobs. The National Network represents major business sectors and is funded through a collaborative partnership of Business Roundtable, ACT Foundation, the Joyce Foundation and Lumina Foundation. Members include leaders in the manufacturing, retail, healthcare, energy, construction, hospitality, transportation, professional and business, and information technology sectors. They represent the source of nearly 75 percent of projected U.S. job growth through 2020 (an estimated 30 million new jobs).
Preface

Hands-on, real-world work opportunities help students connect the dots between what they learn in school and what they will need to know to be successful in their careers. Characteristics of today’s workplace make this connection more important than ever. First, today’s jobs require individuals to have more specific, technical skills. Second, staffs are smaller, and employees need to be agile and respond to many tasks and changing responsibilities quickly. Third, employee demographics are changing as baby boomers retire and generations X and Y increasingly fill leadership roles. Finally, and more critically, technology changes so rapidly that there is a driving need for employees to innovate quickly and update and acquire new skills continuously.

Work-and-learn program partnerships are one solid way to surmount these challenges. Developing more work-and-learn partnerships among schools, businesses and other partners offers a clear path to giving working learners real-world experience on the job while in school. Building sustainable programs across the nation is boosting long-term learning and is a proven approach to solving the skills gap.

The following pages will introduce you to the nuts and bolts of work-and-learn and provide short summaries of programs delivering results today to businesses of varying sizes. This guide is intended to introduce employers, educators and others to a range of options along the work-and-learn continuum to help them find an approach that works for their organization and community. These programs can occur in a school, at a workplace or in the community. The models the National Network of Business and Industry Associations has chosen are yielding results and offering valuable lessons learned – paving the way to a future where work-and-learn is standard issue across the American economy.

Acknowledgments

The National Network acknowledges ACT Foundation and Business Roundtable for their support in the development of the guidebook. The National Network further acknowledges the contribution of its members and other participating companies whose time, ideas and feedback made this guidebook possible.
“As AT&T moves to a software-defined, mobile-first environment, the need to develop employees with the skills to succeed and to help us succeed has never been more critical. These programs create a new and innovative way to help address a rapid overhaul of our employees’ skills.”
— Scott Smith, Senior Vice President of Human Resources, AT&T

“Gilbane’s participation in the ACE Mentor Program is a win-win. We expose young people to our industry. At the same time, our staff who mentor gain valuable work skills and enjoy the personal satisfaction of giving back to the communities where we live and work. Further, they get to network with others in our industry.”
— Thomas F. Gilbane, Jr., Chairman and CEO, Gilbane, Inc.

“At Permac, we do not measure the success of the program just in monetary returns. The rewards are evident in the smiles of Right Skills Now graduates who are growing the business, challenging staff to approach problems in innovative ways, and mentoring future students on the benefits of program participation and pursuing a career in manufacturing.”
— Darlene Miller, President and CEO, Permac Industries

“Businesses must be committed to collaborating with their local communities in developing strategies to grow the next generation of local, skilled talent. Those communities with engaged businesses that focus on growing local talent will be the surviving and globally competitive communities of tomorrow.”
— Mario Lozoya, Director, Government Relations and External Affairs, Toyota Motor Manufacturing Texas, Inc.
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Closing the Skills Gap
Through Work-and-Learn Programs

Securing the right person for the right job at the right time is critical for employers operating in a highly competitive, innovation-driven global economy. Today’s 21st century workforce has to be highly skilled, agile, and able to learn and adapt to changing business requirements and technologies. Yet despite this need, companies report significant skill shortages within their workforces.

According to a Business Roundtable survey of its members, which include more than 200 CEOs of leading U.S. companies, more than 95 percent of CEOs report a skills shortage within their companies. The competitiveness of U.S. businesses and the U.S. economy depends on closing this skills gap.

One proven method for companies to address the skills gap and develop a talent pipeline is to create work-and-learn programs that connect theory-based classroom instruction with career development. Work-and-learn models integrate structured education and training with the world of work, which includes career exploration, job exposure, internships and full-time employment. Work-and-learn programs can be applied at multiple career levels and job functions and may be tailored for participants ranging from middle school students to mid-career employees.

Work-and-learn programs allow employers to help students and workers gain and demonstrate necessary “hands-on” skills, competencies and other common employability skills (e.g., teamwork and dependability) that are necessary for workplace success. Human resource departments can also use work-and-learn models to increase awareness of job opportunities, recruit and hire more qualified candidates, and more effectively train people to specific standards. Employees and businesses benefit when individuals weave learning opportunities throughout their careers to upgrade their skills, acquire new competencies, and apply them across multiple jobs and industries.

Work-and-learn models integrate structured education and training with the world of work, which includes career exploration, job exposure, internships and full-time employment.
Through partnerships with community stakeholders (e.g., educational institutions, government and nongovernment organizations), businesses can implement work-and-learn models that meet their current workforce needs while also building a strong pipeline for qualified talent in the future. The models in the graphic below are some of the most common and effective work-and-learn approaches, including internships, apprenticeships, mentoring and job shadowing. These models are organized in a continuum based on the depth of the work-and-learn experience, ranging from low to high touch (general career knowledge to full immersion in an industry or career). As the business world adopts the work-and-learn framework, companies are creating unique and innovative hybrid solutions that mix elements of these work-and-learn models to meet the needs of their companies, employees, interns and future candidates. These hybrids succeed because they adapt to the specific needs of the company and program participants.

This guidebook contains examples of successful work-and-learn models developed and fielded by businesses to help solve their individual skills gap challenges. Although the various work-and-learn models fit into the broad model categories below, each example highlighted in this guidebook is tailored to fit the company’s unique needs and circumstances. The models in this guidebook cover a wide range of industries and were chosen because they are scalable and flexible, involve community
engagement (which may include participation by education institutions, local businesses, government and nongovernment agencies), and are replicable within other businesses and industries.

The most successful work-and-learn models must include elements that are valuable to both the employer and working learners. A quality work-and-learn model may include:

- Multiple funding sources;
- Competency-based learning progressions;
- Attainment of industry-recognized credentials;
- Assessments (e.g., third-party, observational, standardized) of the learning;
- Learners’ acquisition of academic credit;
- An emphasis on mentorship;
- Integration of common employability skills (e.g., critical thinking, communication, teamwork) into the learning progression;
- Work elements that reflect the regional/local economy;
- Support or operation by a third party, including industry associations, chambers of commerce and community colleges; and
- Strong community partnerships among the business, industry partners, government and educational institutions.

**Next Steps**

The National Network and ACT Foundation are focused on identifying and promoting work-and-learn models that meet the changing needs of working learners and businesses. The National Network and ACT Foundation are engaged in research to define and deploy the next generation of work-and-learn models, such as reimagined career and technical education, e-mentorships, and simulations. Stay tuned for future editions of this guidebook that will illustrate the evolving landscape of work-and-learn and provide tools for employers to develop these models.

“Work and learning for a whole host of reasons are becoming synonymous after age 18, and they are the gold standard for youth who are transitioning to adulthood, especially in economic terms.”

— Anthony Carnevale, lead author of a recent report from Georgetown University’s Center on Education and the Workforce recognizing the value of working and learning together
The matrix below is designed to provide an overview of the work-and-learn components included in each model profile. Identify the components of most interest to you and then select the models that feature these components. Once identified, review the profiles of these models in the guidebook to learn best practices for implementing those model components.

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<th>Model Name</th>
<th>Model Components</th>
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<td>ACE Mentor Program</td>
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<td>Alamo Academies</td>
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<td>The Apprentice School at Newport News Shipbuilding</td>
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<td>KY FAME</td>
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<td>MI-BEST Internship Program</td>
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<td>Prudential VETalent</td>
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<td>Right Skills Now</td>
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**KEY:**
- **A**: Apprenticeship
- **C**: Certification
- **CE**: Career Expo
- **CO**: Cooperative Education/Co-op
- **CR**: Credentials
- **CT**: Clinical Training/Practicum
- **E**: Externship
- **H**: Hands-on Training
- **IT**: Industry Tour
- **I**: Internship
- **M**: Mentorship
- **OJT**: On-the-Job Training
- **OB**: Online and Classroom Blended Training
The Architecture Construction Engineering (ACE) Mentor Program is a free afterschool offering, which over the course of 15 sessions exposes high school students to careers in the design and construction industry through real-world mock design and engineering projects. Students are guided through a project by their volunteer architect, engineer and construction management mentors and gain valuable exposure to businesses and leaders within the industry. Nationwide, approximately 20 percent of students in the ACE Mentor Program participate annually in internships with ACE-affiliated companies. Using Gilbane Building Company’s adoption of the ACE Mentor Program as an example, the utility of the model for many other companies in the design and construction industry is made clear.

The current and future success of Gilbane Building Company depends on talented architects and engineers to design buildings, coupled with enough construction managers and skilled crafts workers to build them. According to a 2012 McGraw-Hill Construction report, Construction Industry Workforce Shortages, more than two-thirds of surveyed industry representatives are concerned about workforce shortages. The team at Gilbane recognized that to meet the demand for future skilled workers, workforce recruitment should start at the high school level by exposing young students to careers in the industry.

Fortunately for Gilbane, the integrated construction industry developed a strategy and mechanism to help fulfill this workforce need with the creation of the ACE Mentor Program in 1994. Over the course of a year, students participating in the ACE Mentor Program are guided through a real-world mock design project, exposing them to careers in construction, architecture and engineering.

Scores of Gilbane employees have volunteered countless hours with ACE and have helped to create chapters in several cities across the country, including Providence, Cleveland and Houston. In addition, Gilbane Chairman and CEO Thomas F. Gilbane, Jr., helps lead the national nonprofit organization as its chairman, after previously serving as a board member.

ACE’s tried-and-true formula and its well-established, still-expanding network make leveraging the system easy for any company within the industry.
PARTNERSHIP

Today, there are 62 ACE affiliates (chapters) spread across 32 states, the District of Columbia and Puerto Rico that deliver the program in 200 cities and communities. Approximately 2,900 ACE mentors engage 8,000 students from 1,000 schools each year. Major construction and design companies sponsor ACE at the national level, including AECOM, Bechtel, Caterpillar, EMCOR Group, Gilbane Building Company and Turner Construction Company. Hundreds of local and regional firms sponsor ACE chapters.

NUTS AND BOLTS

In the ACE model, a team of architects, engineers, construction managers and other industry professionals mentors a group of high school students over 15 two-hour after-school sessions. During this free, hands-on program, students experience a realistic simulation of designing and planning a project, culminating in a presentation in a public forum. Students learn about industry careers as they interact and problem solve with active professionals and tour workspaces and construction sites.

Key elements of the program include:

- **Hands-On Training and Career Exploration:** Through real-world mock design projects, students are introduced to the key players in a large-scale design project and learn the role that each performs in the planning, design and construction phases of a project.

- **Exposure to Professional Offices and Construction Sites:** Students tour professional offices and active construction sites, gaining firsthand insight into the day-to-day experiences of workers in the industry.

- **Mentorship:** Students are guided through the project by their volunteer architect, engineer and construction management mentors and gain exposure to leaders within the industry.

- **Presentation and Team-Building Skills:** Students learn valuable professional skills, including communication, teamwork and problem-solving, while working in teams to develop the mock design project. At the culmination of the year, ACE student teams present their designs to fellow ACE students, teachers, mentors and prospective industry employers.

- **Paid Internships:** Each year, almost 20 percent of ACE students nationwide enjoy internship opportunities with ACE-affiliated companies. Gilbane regularly employs many ACE interns.

- **Scholarships:** In 2015 alone, ACE affiliates awarded $1.5 million in scholarships to students headed for college or into trade programs.

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— Thomas F. Gilbane, Jr., Chairman and CEO, Gilbane, Inc.

ACE students tour Cleveland’s Progressive Field where Gilbane has completed renovation projects.
The ACE Mentor Program is building a pipeline of future talent for the design and construction industry. More than 45,000 students have participated in the program since its establishment in 1994. Student and business participation, as well as survey results, prove ACE’s model is successful in exposing young students to careers within these fields. Moreover, 70 percent of program alumni in college report that participating in the ACE program gave them an advantage over their freshman college classmates.

The ACE program has received national recognition for its commitment to building a talented future pipeline of design and construction professionals. At a 2010 White House ceremony, the ACE program received the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring. More recently, in 2014, the American Institute of Architects presented its Collaborative Achievement Award to ACE.

ACE student benefits and outcomes include:

- **Strong Participation and Program Interest:** Across the nation, almost 8,000 high school students participate in the program annually. In fact, the demand from schools and students to join the program exceeds the availability of mentors.

- **Pathway to Future Training:** Of the 1,975 high school seniors who completed the program in 2015, 70 percent entered college declaring majors in architecture, engineering or construction. Historically, a remarkably high 75 percent of alumni have stuck to these majors during college.

- **Success for a More Diverse Workforce:** ACE alumni are significantly more diverse in terms of gender, race and ethnicity than their national counterparts studying architecture, engineering and construction. The ACE program is helping the industry become more inclusive to reflect the demographics of the nation’s future workforce.

- **Scholarships for Future Training:** ACE students are eligible to receive more than $1.5 million in scholarships that local affiliates raise annually. During the past two decades, ACE has awarded student scholarships worth $12.5 million.

ACE benefits to Gilbane Building Company include:

- **Building of Relationships Across the Industry:** Gilbane is one of the top educational builders in the United States. The company’s involvement in ACE helps establish valuable relationships with educators, school administrators and guidance counselors and therefore can be viewed as an advantage when the company bids on jobs.

- **Mentoring and Training of the Future Workforce:** Gilbane mentors spend between 30 and 75 hours per year working with ACE students during work hours — and frequently on their own time as well. The company does not view this time as lost productivity because employee mentors value participation in the program so highly that they readily make up any time out of office. Further, the mentoring opportunity increases their long-term loyalty to the company.

- **Alignment with Gilbane’s Corporate Social Responsibility Efforts:** Since 2007, Gilbane has donated more than $700,000 to the national ACE program and its local affiliates. It considers this “investment” an act of corporate social responsibility, a down payment on a future stream of employees and a training opportunity for current employees.

- **Leadership Opportunities, Particularly for Young Staff:** Gilbane strongly encourages employees at all levels to get involved with ACE. For young professionals in particular, volunteering for ACE is looked upon favorably for performance reviews and promotions. Chairman and CEO Thomas F. Gilbane, Jr., conducts an informal annual review of all business units’ participation in ACE and each summer grants Gilbane’s annual ACE Mentoring Award to one or more employees during a companywide town hall meeting. Winners receive $1,000 to give to their local ACE chapter.
Training for Emerging Professionals: While Gilbane does not measure the return on investment of its involvement with the ACE program, the company considers ACE an excellent training experience for its emerging professionals. Depending on the office, management candidates are encouraged or even required to become ACE mentors. Gilbane ACE mentors sharpen leadership, communication and teamwork skills and also expand their networks through contact with mentors from other firms.

SUSTAINABILITY AND OVERCOMING IMPLEMENTATION CHALLENGES

Comparatively little expense on Gilbane’s part is required to sustain its involvement in the ACE program. The most important ingredient for success is the CEO’s promotion of the program.

WORDS OF WISDOM

For design and construction industry companies of any size interested in growing the industry’s workforce, the ACE Mentor Program offers a “plug-and-play” model. Interested companies simply need to connect with a local ACE affiliate. A committed company where no affiliate exists can also take the lead in establishing an affiliate. ACE staff will assist in this process.

The ACE model also offers industries and large companies in fields outside of design and construction a readily adaptable framework. The key steps involve: (1) devising hands-on activities linked to the industry or company line of work; (2) recruiting mentors who are passionate about their work and eager to nurture the next generation of professionals; and (3) establishing a relationship with a school or school system. ACE is willing to share its experience, as well as organizational and programmatic materials, with other industries.

For businesses considering developing a similar program, ACE recommends that program organizers follow strong risk management practices such as carrying liability insurance and conducting background checks on mentors.

INFORMATION, TOOLS AND RESOURCES

• ACE Mentor Program www.acementor.org
• Gilbane Building Company www.gilbaneco.com

VIDEOS

• ACE Sponsor Companies Explain Benefits of Their Sponsorship http://bit.ly/1Lq6yPM
• Gilbane-Produced Video Showcasing ACE Program and Company Involvement http://bit.ly/1XmIbb5

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