

Apprenticeships, Internships, & Other Education-to-Career Programs

Education-to-Career Programs as Tools for Improved Completion



Programs that include structured, on-the-job training provide a clear link between education and careers.

Apprenticeships, internships, and other education-to-career programs provide structured experiences that facilitate the transfer of classroom learning to practical, on-the-job training. High-impact student success practices emphasize the importance of these structured pathways to postsecondary completion. Creating a connection between education and workforce demands has a long history in the United States, and efforts have recently regained the attention of government entities at all levels.

High-impact practices, such as apprenticeships, internships, and other education-to-career programs, have been proven to increase student success and postsecondary completion, especially for underserved populations. However, underserved populations tend to have less access to these services.¹ Moreover, variability in how programs are governed, regulated, and executed can affect program success. Programs that are rigorous, encourage collaboration, provide frequent feedback, and are connected to classroom learning provide strong models for success.²

Education-to-Career Programs

Education-to-career programs occur in various forms starting as early as

elementary school and can extend beyond job placement. Types of programs include:

- Apprenticeships
- Clinicals
- Cooperative Education (Co-ops)
- Externships
- Internships
- Job Shadowing
- Work-Based Learning (WBL)

Programs can be initiated by either education institutions or employers, and in many instances are driven by an employer's need for a skilled workforce. Heavily regulated fields rely on the integration of education-to-career programs more frequently than non-regulated fields.

Apprenticeships

Apprenticeship programs are cost-effective mechanisms for developing workplace skills. They can involve on-the-job training, a paid-work component, and classroom experiences. According to the Urban Institute, estimated apprenticeship returns are nearly \$28 in social benefits for every \$1 of government and worker costs.³ The federal government maintains a central repository of registered apprenticeship programs via ApprenticeshipUSA. Traditional apprenticeship industries include construction and manufacturing, but programs have emerged recently in other fields, such as healthcare, energy, and homeland security.⁴

Apprenticeship Models	Overview	Oversight
Pre-Apprenticeship	Provide necessary skills prior to enrollment in an apprenticeship and are officially aligned with a registered apprenticeship.	Education institution provider and/or employer
Registered Apprenticeship	Must meet federal requirements and result in a credential recognized by either the U.S. Department of Labor or a federally-recognized state apprenticeship agency.	U.S. Department of Labor
Unregistered Apprenticeship	Not regulated by the US Department of Labor; may end in an industry-recognized credential.	Employer
Traditional Model	Combines classroom instruction and on-the-job training throughout the program	U.S. Department of Labor
Front-Loaded Model	Instruction prior to the first day on the job, with wage increases based on progression.	U.S. Department of Labor
Segmented Model	Suitable for associate’s degree programs with instruction during semesters and work experience in-between terms.	U.S. Department of Labor

Internships

Internships are a form of experiential learning that align classroom learning with practical application in a professional setting. They are frequently initiated by the employer. From a postsecondary education perspective, internships are ideally aligned with the student’s program of study. Internship programs vary and can be paid or unpaid, credit-bearing or not-for-credit, and full-time or part-time. Federal regulations govern the employment component of internships under the Fair Labor Standards Act (FLSA). Guidelines established by FLSA prohibit certain types of work for minors and provide guidelines on compensation requirements for internships. Beyond these regulations, federal policies do not govern internships.

Internship Models	Overview
Paid & for-credit	Student is compensated for work performed and provided a grade by the postsecondary institution.
Unpaid & for-credit	Student is provided a grade at the end of the term by the postsecondary institution.
Paid & not-for-credit	Student is compensated for work performed from the employer, but the postsecondary institution may not be involved.
Unpaid & not-for-credit	No official mechanism for monitoring and tracking.

create a challenge for low-income students, especially in programs of study that have this requirement as part of the curriculum, due to added expenses such as transportation, housing, and other costs.

Under FLSA guidelines, unpaid internships are not meant to displace regular employees, but instead are intended to provide a training mechanism for students while they are enrolled in an educational program. Unpaid internships

Other Education-to-Career Programs

In addition to apprenticeships and internships. There are other education-to-career programs, including clinicals, cooperative education (co-op), externships, and job shadowing. Each program contains a work-based learning component, varies in duration, and may not have state or federal oversight.

Funding

Funding mechanisms vary for each program. Registered apprenticeships utilize the most formalized funding structure, and participating companies may be eligible for grants through the federal and/or state government. Internships and other education-to-career programs are funded primarily through sponsoring businesses or grants awarded to education institutions. Informal programs, such as job shadowing, can be performed with minimal cost.

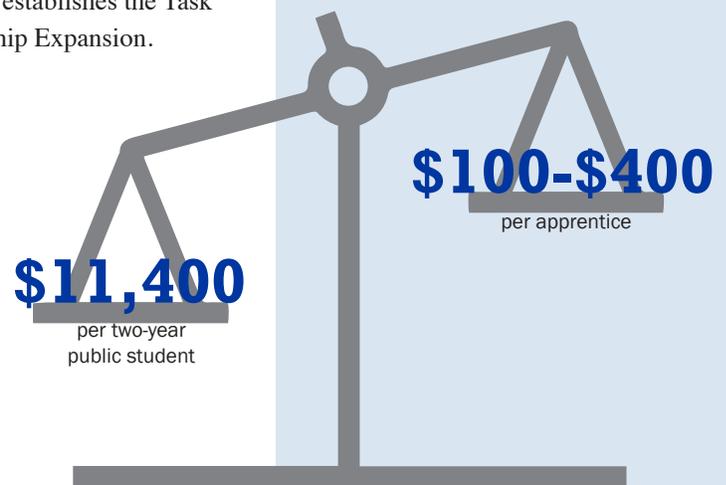
States fund and support registered apprenticeships through various instruments, including tax incentives to sponsoring companies, grants to support apprenticeships, tuition support, and state-level employer training programs. For example, California funds apprenticeships through annual state appropriations, known as the Montoya Funds, and has created the California Employment Training Panel to fund employers via a special payroll tax to train existing workers.

Program	Overview	Oversight	Duration
Clinicals	Structured, on-the-job experiences in clinical settings that expose students to the future scope of practice in a particular field.	Licensed provider in the field of study and the postsecondary institution provider	6-24 months
Cooperative Education (Co-op)	Students that participate in co-op programs typically stop taking classes to work full-time in a field related to their course of study.	Postsecondary institution provider	3-12 months
Externships	A temporary learning experience in a professional setting, similar to an internship without college credit.	Employer	1-3 months
Job Shadowing	A career exploration activity that provides short-term exposure to an occupation of interest via observing a professional on-the-job.	No oversight - typically monitored by the person providing the experience	Day or multi-day experiences
Work-Based Learning (WBL)	Secondary experiences which incorporate components of internships, apprenticeships, service-learning, and paid work experience to reinforce academic, technical, and social skills.	Secondary education provider	Ranges from several hours to a maximum of 4 years

Federal Policy

Apprenticeships

- Presidential Executive Order Expanding Apprenticeships in America – June 2017: Increases the ApprenticeshipUSA Fund by \$200 million, and proposes to ease regulatory burdens, reduce taxpayer support for underperforming programs, and promote development of internships by third parties. Also, establishes the Task Force on Apprenticeship Expansion.



The federal government spends at least **28 times** more per community college student than apprentice each year.⁵

- **ApprenticeshipUSA State Expansion/ Accelerator Grants – 2016:** The U.S. Department of Labor awarded \$50.5 million to 37 grantees across the country through a competitive grant process to support apprenticeship expansion. Another \$10.4 million was awarded in the form of accelerator grants to assist with educational integration and workforce engagement to all 50 states, U.S. territories, and the District of Columbia.
- **National Apprenticeship Act (Fitzgerald Act) – 1937:** Authorized the Secretary of Labor to create labor standards for apprenticeships, register apprenticeships for federal purposes, and appoint national advisory committees.

Internships

- **The Fair Labor Standards Act (FLSA):** Established regulations to determine whether interns are required to be paid minimum wage and overtime pay. Additionally, FLSA establishes specific criteria for unpaid internships with a focus on ensuring the internship is connected to an educational experience and is not displacing paid workers.

Other Education-to-Career Programs

- **Workforce Innovation and Opportunity Act (WIOA) – 2014:** Strengthens and improves the public workforce system and helps Americans (including varied subgroups) gain access to quality jobs and careers. WIOA helps employers hire and retain skilled workers.
- **Carl D. Perkins Career and Technical Education Act – 2006:** Changed the term “vocational education” to “career and technical education”, strengthened academic and skill achievement of students, and created stronger postsecondary-to-career pathways.

Specialized programs of study were created to bridge content between secondary and postsecondary education with a focus on state and local accountability measures.

Tennessee Policy & Programming Apprenticeship

- The Apprenticeship Assistance Training Grant (AATG) is administered by the Tennessee Department of Labor and Workforce Development (TDLWD). The Tennessee State Workforce Development Board authorized \$1,000,000 to develop and implement the AATG program.
- Updated work-based learning policies went into effect in Tennessee for the 2015-16 school year (SBE Rule 0520-01-03-06 and High School Policy 2.103).⁶ Under these policies, students earn high school credit through a practicum course while spending multiple days a week at an apprenticeship, internship, or co-op.
- 2017-2018 Tennessee Governor’s Budget added \$15,000,000 to provide non-recurring funds for competitive grants. These grants allowed districts to upgrade equipment for high growth industries to support K-12 pre-apprenticeship programs.

Internships

- **Opportunity Now** is a city-wide internship initiative launched by Nashville Mayor Megan Barry in 2017 with the goal of exposing youth to employment opportunities through summer internships.
- **STEP-UP Chattanooga** is a summer youth employment program modeled after the STEP-UP Achieve program in Minneapolis. The program places high school students in paid internships throughout Chattanooga. Funders include the Public Education Foundation, Benwood Foundation, and BlueCross BlueShield Tennessee Health Foundation.



410,370 active apprentices

91% of apprentices find employment

\$60,000 or higher average salary

Apprenticeships in Tennessee

55 counties

309 sponsoring companies

145,307 registered apprenticeships

5,466 active apprenticeships

539 completers

Source: U.S. Department of Commerce, U.S. Department of Labor

Other Education-to-Career Programs

- Labor Education Alignment Program (LEAP) was created in 2013 to provide technical training opportunities for Tennessee Colleges of Applied Technology (TCAT) and community college students. Programs are created with input from local employers and encourage communities to align local workforce needs with educational offerings. Grants are available through a competitive process led by the Governor's Workforce Subcabinet. The \$10 million competitive grant process has funded 67 of Tennessee's 95 counties to participate in these efforts.

- New Skills for Youth Grant (NSFY) is a competitive grant funded by J.P. Morgan Chase and the Council of Chief State School Officers (CCSSO) with the intent of increasing the number of students who graduate from high school prepared for careers. After receiving this funding, Tennessee developed a mini-grant process for counties and regions to apply for funding for local expansion and innovative programs.

Postsecondary Policy & Programming

Postsecondary Policies

System-wide policies and guidelines do not exist for apprenticeships, internships, and other education-to-career programs for postsecondary institutions in the state. Guidelines are established at the institutional level through individual departments. Many programs at the Tennessee Colleges of Applied Technology require an on-the-job training component as part of the curriculum design and are managed primarily by the directors of those programs. Community colleges and universities tend to have career centers that are the central hub for apprenticeships,



internships, and other education-to-career programs. Credit-bearing classes require students to register for internship courses.

Types of Postsecondary Programs

Apprenticeships

- *Tennessee Colleges of Applied Technology*: Programs are decentralized on campuses, primarily driven by industry, and vary by institution. Typical apprenticeship programs include advanced manufacturing and skilled trades such as welding, automotive maintenance, and machine repair.

- *Community Colleges*: Programs are decentralized on campuses, primarily driven by industry, and vary by institution. Typical apprenticeship programs include advanced manufacturing and skilled trades such as machine technology, industrial electricity, and construction management.

- *Universities*: Programs are infrequent, decentralized on campuses, driven by industry, and vary by institution.

Education-to-Career programs are implemented in all education sectors, from K-12 to adult education.

“The comparison between an internship and an apprenticeship is like comparing a row boat to a destroyer.”

- Anthony Carnevale, Director and Research Professor of the Georgetown University Center on Education and the Workforce⁷

Internships

- *Tennessee Colleges of Applied Technology*: Internships are decentralized on campuses, employer-led, and coordinated by individual instructors. Programs are related to the student's course of study.
- *Community Colleges*: Internships are fairly centralized on campuses, employer-driven, and frequently coordinated through a combination of institutional career centers and individual departments. Programs are typically related to the student's course of study.
- *Universities*: Internships are centralized on campuses, employer-driven, and primarily coordinated through institutional career centers. Programs are typically related to the student's course of study.

Other Education-to-Career Programs

- *Tennessee Colleges of Applied Technology*: Other education-to-career programs are decentralized on campuses, employer-led, and coordinated by individual instructors. Popular programs include cooperative education agreements, clinicals, and externships.
- *Community Colleges*: Other education-to-career programs are relatively centralized on campuses, employer-driven, and typically coordinated through institutional career centers. Popular programs include cooperative (co-op) education programs, clinicals, and job shadowing activities.
- *Universities*: Other education-to-career programs are centralized on campuses, employer-driven, and coordinated through institutional career centers. Popular programs include cooperative (co-op) education programs, clinicals, and job shadowing activities.

Questions to Consider

What restrictions exist based on labor laws?

The Fair Labor Standards Act (FLSA) is the federal law covering child labor laws and regulations for interns. Federal child labor provisions restrict the types of work that minors can engage in, such as roofing, using certain power-driven machinery, and mining. Agricultural work is subject to separate guidelines that prohibit minors from operating certain farming equipment and regulate the types of substances they are allowed to work with.⁸ FLSA internship regulations establish whether interns are required to be paid minimum wage and overtime pay. Additionally, FLSA establishes specific criteria for unpaid internships with a focus on ensuring the internship is connected to an educational experience and is not displacing paid workers.⁹

How are unregistered apprenticeships handled?

Data on unregistered apprenticeships is not readily accessible. However, calculated data from the combined 2001 and 2005 National Household Education Surveys suggest there are as many unregistered apprenticeships as registered apprenticeships across the United States.¹⁰ Unregistered apprenticeships are a mechanism for businesses to provide structured, on-the-job training programs without the burden of federal registration. The Kentucky Department of Labor encourages companies to start unregistered apprenticeships prior to officially registering an apprenticeship to gauge if the program will be sustainable and successful.¹¹

States to Watch

South Carolina



South Carolina made a commitment to support apprenticeship programs through the establishment of "Apprenticeship Carolina," which operates as a division of the South Carolina Technical College System. The goal of Apprenticeship Carolina is to secure 2,000 apprenticeship programs and 20,000 apprentices by 2020. In order to accomplish this, the focus of apprenticeship programs was expanded from traditional building trade programs to other fields such as nursing, pharmacy, and information technology. Additionally, employers are the central focus in this initiative and participate in the designs of programs based on their workforce needs. To incentivize business participation, South Carolina offers a tax credit of \$1,000 per apprentice for four years.¹² After the implementation of the tax credit, a 570 percent increase in employer sponsored apprenticeship programs emerged between 2007 and 2012.¹³

California



California has committed to funding apprenticeship programs since 1970 via annual appropriations known as the Montoya Funds. These funds are distributed through the California Community College Chancellor's Office and support classroom instruction related to apprenticeships and innovative apprenticeship programs. Additionally, the California Employment Training Panel provides funding to employers via a special payroll tax to upgrade skills of the existing workforce.¹⁴

How can states cultivate employer buy-in?

Tax credits have been the most-utilized incentive to engage employers in apprenticeship programs. Currently, 14 states offer tax credits to employers who hire apprentices: Alabama, Arkansas, Connecticut, Louisiana, Missouri, Montana, Nevada, Rhode Island, South Carolina, Tennessee, Virginia, and West Virginia.¹⁵ Another approach is to simplify the process for businesses. For example, Apprenticeship Carolina, a program housed in the South Carolina Technical College System, works with businesses to facilitate program design, implementation, and registration of apprenticeships. These services are provided via apprenticeship consultants and are free-of-charge to the employers.

How does Opportunity Now handle liability issues?

In order to minimize liability issues, Opportunity Now is the employer of record for internship placements. As the employer of record, they carry the liability and workers compensation insurance and handle payroll for all of the interns. This arrangement minimizes liability issues for the individual employers and lessens the administrative burden on organizations that host interns.

How can institutions and states replicate the German model?

The German model of apprenticeship has been successful internationally, but challenges relative to scale have emerged in the United States. Funding structure and culture are two important contributors to the success of the German model. The costs of apprenticeships are equally shared by the German government and employers. Employers in Germany are committed to this model because apprentices cost less than regular employees and are easy to terminate. Germany is heavily unionized; once an employee is hired, it is difficult to terminate employment. Apprenticeships provide an opportunity to evaluate employees prior to hiring them. To replicate and scale this model in the United States, new frameworks of shared-cost and shared-responsibilities between government, postsecondary education, and employers would be necessary.

How can states engage small companies?

Establishing apprenticeships can be an expensive, cumbersome and complex process that is especially burdensome for small companies. Strategies to engage small companies should include structured partnerships, streamlined processes, and reduced cost burdens. In Tennessee, the Regional Center for Advanced Manufacturing (RCAM) serves as a model. RCAM has established the Northeast State Community College/RCAM Group Apprenticeship Program, which houses several U.S. Department of Labor registered group apprenticeships. These apprenticeships are open to any company and provide a “turn-key” solution for workforce development.

Georgia

The Georgia Worksmart Initiative began in 2015 through a \$3 million grant from the United States Department of Labor. The program aims to increase postsecondary attainment to 60 percent across the state. The initial pilot for the program took place at King's Hawaiian food processing plant in Flowery Branch, Georgia. A strength of the program is the connection with the Technical College System of Georgia through the Quickstart Initiative. The collaboration involves companies in the development of programs that meet their workforce needs while the college system provides the classroom learning.

Ohio

Ohio's Apprenticeship Statewide Partnership Panel (ASPP)¹⁶ advocates for individuals completing apprenticeships by incorporating experiences into academic credit to provide a pathway to a technical associate's degree at Ohio's two-year public colleges, saving these students time and money and encouraging them to advance their academic credentials to contribute to a strong, educated workforce. As part of this initiative, Ohio has developed a complete list of apprenticeship opportunities organized by occupation and field.¹⁷

What can the state do to take away barriers for employers?

Barriers for employers include misinformation regarding apprenticeships, burdensome processes, and cost. Some employers equate apprenticeships with unions. Dispelling this myth could encourage more employers to consider apprenticeship programs. Additionally, creating state programs that assist employers with apprenticeships from inception through implementation could be particularly beneficial to small and mid-size businesses. Lastly, creating avenues to easily employ students in internships and apprenticeships could encourage expanded internship and apprenticeship involvement. The Opportunity Now model is a possible benchmark for this type of program.

How do these programs align with the Drive to 55?

Apprenticeships, internships, and education-to-career programs can help students connect education to their career choices. All have been noted for their impact on student retention, completion, and job placement. While most are associated with a credential recognized by the state's outcomes funding formula, useful programs like apprenticeships are not always counted toward the Drive to 55 or in the state's degree attainment rate. Currently, Tennessee does not have a formal way to track non-recognized credentials, mainly in the form of apprenticeships.

Other career-to-education programs, including internships, can be embedded in postsecondary programs and directly align with Drive to 55 completion goals. Furthermore, these on-the-job experiences can provide an avenue for students to acquire necessary employment skills while employers gain the opportunity to evaluate potential employees. In the K-12 system, work-based learning opportunities expose students to career pathways that aid in college and career choices. Also, students who participate in work-based learning opportunities in high school are more likely to graduate and attend a postsecondary institution.¹⁸

How do educational institutions manage internships?

System-wide internship guidelines do not exist in Tennessee. Academic institutions define their own requirements for internships including if the internship should be paid, qualify for academic credit, and led by an academic mentor. Internship programs are generally housed in the institution's career center, and can also be managed by specific departments/programs.

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Conclusion

Education-to-career programs can lead to (1) improved outcomes for student success, (2) stronger partnerships between postsecondary institutions and employers, and (3) a more efficient means to supply labor demands. These programs range from highly-regulated activities, such as federal apprenticeships, to short-term work-based exploration activities with minimal oversight. Public funding to support such programs aligns, to some degree, with the regulatory requirements, and is primarily executed through the apprenticeship model. Internships and other education-to-career programs are most often supported by the individual organizations responsible for program initiation and partnership development.

Due to the decentralized nature of most education-to-career programs, as well as limited policies to guide these efforts in postsecondary education, it is difficult to measure the many facets of concern for policymakers, such as total costs, equity gaps, employer satisfaction, or unmet labor demand. However, the postsecondary education outcomes of education-to-career activities with centralized policies and oversight, often found in industry-regulated programs, have produced higher-than-average graduation rates and job placement rates. In any case, programs to connect a student's education to tangible career experiences can directly benefit Tennessee's goal to improve college completion and degree attainment. Equally as important, this connection could strengthen the pipeline of talent for local employers to remain competitive in the global marketplace.

Key Terms

Apprenticeship: On-the-job training that includes a paid-work component and an educational component where individuals obtain relevant knowledge and skills for specific workplaces/occupations.¹⁹

Clinicals: Structured, on-the-job experiences in that expose students to future practice in a particular field.²⁰

Cooperative Education (Co-op): Students stop taking classes to work full-time. Co-ops are typically paid with a duration from three to twelve months.²¹

Education-to-Career Programs: Education programs that deliberately connect students to career exploration or work experience.

Externships: A temporary learning experience in a professional setting, similar to an internship without college credit.²²

Experiential Learning: A process through which students develop knowledge, skills, and values from direct experiences outside a traditional academic setting. Activities include internships, service learning, undergraduate research, study abroad, and professional work experiences.²³

German/Swiss (apprenticeship/dual) Model: Students spend three-four days in a paid, company-organized training held at the workplace. Remaining days students study related academic work in the classroom. Relies heavily on tracking students in middle school through the use of standardized testing. Employers and government split the cost.²⁴

Internships: A form of experiential learning that aligns classroom teaching and theory with practical application and skills development in a professional setting.²⁵ Interns are protected employees under the Fair Labor Standards Act (FLSA) which includes guidelines for unpaid internships.²⁶

Job Shadowing: A career exploration activity which provides short-term exposure to an occupation of interest via observing a professional on-the-job.

Micro-credentials: Fast-track, short-term credentials that provide training in high-demand workforce programs that often lead to jobs upon completion.

On-the-Job Training (OJT): Paid training by an employer while the student is engaged in productive work on the jobsite with the intention of providing knowledge and skills needed to perform the essential functions of the position. Employers are reimbursed by the federal government up to 50 percent of the wages paid to the participant.²⁷

Pre-apprenticeships: Programs designed to prepare individuals to enter and succeed in a registered apprenticeship program and has a documented partnership with at least one registered apprenticeship program.²⁸

Registered Apprenticeship: Apprenticeships that are registered with the U.S. Department of Labor and meet national standards for high-quality work-based learning.²⁹

Unregistered Apprenticeship: A form of apprenticeship not regulated through the federal government, but instead regulated through an individual industry or company; often used to on-ramp a company into a registered apprenticeship program.³⁰ Estimates indicate that unregistered apprenticeships exceed the number of registered apprenticeships.³¹

Scandinavian (school-based) Model: Students are introduced to a broad cluster of occupations beginning in middle school. In the third year of high school, students meet with a guidance counselor to decide what type of education they would like to pursue. Students then split their time between school and an apprenticeship for their final two years of high school.³²

Work-based Learning (WBL): A strategy to reinforce academic, technical and social skills through collaborative activities with industry. WBL experiences allow students to apply classroom theories to practical problems, to explore career options, and pursue personal and professional goals.³³

Work Ready Communities: A program sponsored by ACT that utilizes a community-based framework to align workforce development to education. Individuals are matched to jobs based on skill levels via the ACT WorkKeys National Career Readiness Certificate.³⁴

Additional Resources

Federal Policies & Reports

The Federal Resources Playbook for Registered Apprenticeship: <https://www.doleta.gov/oa/federalresources/playbook.pdf>

National Apprenticeship Act (The Fitzgerald Act): <https://www.doleta.gov/OA/fitzact.cfm>

U.S. Department of Labor (U.S. DoL) – Apprenticeship Data and Statistics: https://www.doleta.gov/OA/data_statistics.cfm

U.S. DoL – Apprenticeship Guidance: <https://www.doleta.gov/OA/guidance.cfm>

U.S. DoL – Apprenticeship Regulations and Legislation: <https://www.doleta.gov/OA/legislation.cfm>

U.S. DoL – Fact Sheet #71: Internship Programs and the Fair Labor Standards Act: <https://www.dol.gov/whd/regs/compliance/whdfs71.pdf>

U.S. DoL – Pre-Apprenticeship Overview: <https://www.doleta.gov/OA/preapprentice.cfm>

U.S. DoL – The Workforce Innovation and Opportunity Act (WIOA): <https://www.doleta.gov/wioa/>

Tennessee Policies & Reports

Tennessee Department of Education – Work-Based Learning Toolbox: <https://www.tn.gov/education/article/wbl-toolbox>

Training and Employment Notice – Pre-Apprenticeships (2012): https://wdr.doleta.gov/directives/attach/TEN/TEN_13-12.pdf

National Resources

ApprenticeshipUSA Toolkit: <https://www.dol.gov/apprenticeship/toolkit.htm>

ApprenticeshipUSA Sponsor Database: <https://oa.doleta.gov/bat.cfm>

Jobs for the Future - <http://www.jff.org/>

National Association of Colleges and Employers (NACE): <https://www.naceweb.org/>

National Association of State Workforce Agencies (NASWA): <https://www.naswa.org/>

National Skills Coalition - <http://www.nationalskillscoalition.org/>

U.S. DoL Education and Training Opportunities: <https://www.doleta.gov/business/TrainingEducation.cfm>

Urban Institute: <http://www.urban.org/registered-apprenticeship>

Endnotes

- ¹Kuh, G. D. (2008). Excerpt from high-impact educational practices: What they are, who has access to them, and why they matter. Association of American Colleges and Universities.
- ²National Survey of Student Engagement (NSSE): http://nsse.indiana.edu/html/high_impact_practices.cfm
- ³Lerman, R. I. (2013). Expanding apprenticeship in the United States: barriers and opportunities. *Contemporary apprenticeship: International perspectives on an evolving model of learning*, 105-24.
- ⁴U.S. Department of Labor: <https://www.doleta.gov/OA/apprenticeship.cfm>
- ⁵Lerman, R. I. (2014). Proposal 7: Expanding apprenticeship opportunities in the United States. Policies to address poverty in America.
- ⁶TN Department of Education – Work Based Learning FAQ: https://www.tn.gov/assets/entities/education/attachments/wbl_faq.pdf
- ⁷Glassdoor. (2016, April 2). 6 Differences Between an Internship and Apprenticeship: <https://www.glassdoor.com/blog/6-differences-internship-apprenticeship/>
- ⁸U.S. Department of Labor – Child Labor: <https://www.dol.gov/whd/childlabor.htm>
- ⁹U.S. Department of Labor – Fact Sheet #71: <https://www.dol.gov/whd/regs/compliance/whdfs71.htm>
- ¹⁰Lerman, R. I. (2013). Expanding apprenticeship in the United States: barriers and opportunities. *Contemporary apprenticeship: International perspectives on an evolving model of learning*, 105-24.
- ¹¹Colborn, J., & Jenkins, N. (2016). Recasting American apprenticeship: A summary of the barriers to apprenticeship expansion research project: <http://labor.ky.gov/dows/doesam/AppAndTraining/Apprenticeship%20Press%20Releases/RecastingApprenticeship.pdf>
- ¹²Apprenticeship Carolina: <http://www.apprenticeshipcarolina.com/>
- ¹³Center for American Progress – Policies states can enact to promote apprenticeships: <https://www.americanprogress.org/issues/economy/news/2014/06/30/92841/policies-states-can-enact-to-promote-apprenticeship/>
- ¹⁴Employment Training Panel: <https://etp.ca.gov/>
- ¹⁵U.S. Department of Labor: <https://doleta.gov/OA/taxcredits.cfm>
- ¹⁶Ohio Department of Higher Education – Apprenticeship Pathways: <https://www.ohiohighered.org/transfer/apprenticeship-pathways>
- ¹⁷Ohio Department of Job and Family Services – Apprenticeship Index: <http://jfs.ohio.gov/apprenticeship/program/index.stm>
- ¹⁸Preparing 21st century citizens: The role of work-based learning in linked learning <https://edpolicy.stanford.edu/sites/default/files/publications/preparing-21st-century-citizens-role-work-based-learning-linked-learning.pdf>
- ¹⁹U.S. Department of Labor – Frequently asked questions about the apprenticeship program: <https://www.dol.gov/featured/apprenticeship/faqs>
- ²⁰Augusta University: <http://www.augusta.edu/alliedhealth/mlirs/cls/documents/cls-clinical-internships-policy-signed-3-10-14.pdf>
- ²¹Boyington, B. (2015, March 31). Understand the differences between a co-op, internship. *U.S. News & World Report*: <https://www.usnews.com/education/best-colleges/articles/2015/03/31/understand-the-differences-between-a-co-op-internship>
- ²²Oxford Dictionary: <https://en.oxforddictionaries.com/definition/us/externship>
- ²³University of Colorado Denver – What is experiential learning?: <http://www.ucdenver.edu/life/services/ExperientialLearning/about/Pages/WhatIsExperientialLearning.aspx>
- ²⁴Symonds, W. C., Schwartz, R., & Ferguson, R. F. (2011). Pathways to prosperity: Meeting the challenge of preparing young Americans for the 21st century: http://www.gse.harvard.edu/sites/default/files/documents/Pathways_to_Prosperty_Feb2011-1.pdf
- ²⁵National Association of Colleges and Employers – U.S. internships: <http://www.naceweb.org/about-us/advocacy/position-statements/position-statement-us-internships/>
- ²⁶U.S. Department of Labor – Internship programs under the Fair Labor Standards Act (FLSA): <https://www.dol.gov/whd/regs/compliance/whdfs71.htm>
- ²⁷U.S. Department of Labor: https://www.doleta.gov/layoff/pdf/OJT_REQ.pdf
- ²⁸U.S. Department of Labor - Tennessee pre-apprenticeship program and related resources: https://wdr.doleta.gov/directives/attach/TEN/TEN_13-12.pd
- ²⁹U.S. Department of Labor – Frequently asked questions about the apprenticeship program: <https://www.dol.gov/featured/apprenticeship/faqs>
- ³⁰Kentucky Department of Labor – Recasting American Apprenticeship: <http://labor.ky.gov/dows/doesam/AppAndTraining/Apprenticeship%20Press%20Releases/RecastingApprenticeship.pdf>
- ³¹Lerman, R. I. (2014). Proposal 7: Expanding apprenticeship opportunities in the United States. Policies to address poverty in America: http://209.240.81.218/files/downloads_and_links/expand_apprenticeship_opportunities_united_states_lerman.pdf
- ³²Symonds, W. C., Schwartz, R., & Ferguson, R. F. (2011). Pathways to prosperity: Meeting the challenge of preparing young Americans for the 21st century: http://www.gse.harvard.edu/sites/default/files/documents/Pathways_to_Prosperty_Feb2011-1.pdf
- ³³Tennessee Department of Education – Work Based Learning Toolbox: <https://www.tn.gov/education/article/wbl-toolbox>
- ³⁴ACT – Work Ready Communities: <https://www.workreadycommunities.org/>