

Career Pathway Development for Colorado's Education Industry FY19

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Executive Summary

Colorado State legislation HB15-1274 calls for the creation of industry-driven career pathways to ensure that education, training, and workforce systems stay deeply attuned and responsive to the needs of industry and the labor market.

To date, the Colorado Workforce Development Council (CWDC) and a coalition of partners, including the Colorado Community College System (CCCS), has worked to develop career pathways for key Colorado industries including the following: advanced manufacturing (Via HB13-1165), IT, healthcare, construction, cybersecurity and business operations. Results of the work are shared on the free online resource [Careers in Colorado](#) for students and jobseekers, and published in an annual report to help inform future program development. As of August 2019, Careers in Colorado is now included as part of the tools and resources in the new state platform, [MyColoradoJourney](#).

In recognition of the foundational role education plays in empowering individuals and building a strong Colorado economy, career pathway work in 2018-2019 focused on education, birth through lifelong learning. Stakeholders in three subsectors of education, Early Childhood (ECE), Kindergarten through 12 grade (K-12), and Postsecondary, were engaged in mapping, identifying, and validating industry and occupational information for these three industry pathways.

Career pathway work in education represents part of a much larger and multi-faceted examination of education in Colorado. The focus for pathway building is on present-state mapping to help students and jobseekers navigate career options in the industry. The process of engaging industry practitioners and subject matter experts highlighted future opportunities for alignment and clarity, with considerable overlap with education-related strategic initiatives from the Governor, legislature, state agencies, educators, and local stakeholders.

Education is a complex industry, with great variety in how and where education occurs and the qualifications and requirements for educators. There are

differences by setting, geographic location, type of institution, and age of learner, to name a few.

Given that context, the key themes that emerged from career pathway work in education over this past year are:

- The need to elevate the importance of the industry and communicate the value Colorado places on educating its residents.
- There is opportunity for continued conversation, collaboration, and systems-alignment between ECE, K-12, and Postsecondary subsectors of the education industry.
- Financial considerations underlay most conversations in education, particularly early childhood education. This includes barriers to entry into the profession (especially around education and training and support services for entry-level ECE educators), as well as living wage and competitive wage compensation concerns impacting recruitment and retention.
- There are educator talent pipeline shortages across the industry, with some occupations having more acute shortages in certain parts of the state.
- There is the opportunity for clarification regarding the credentials required for education occupations, including clear communication to both prospective educators for how to enter the field, and current educators for how to progress in their careers.

Industry Overview

The Education Industry is Colorado's 4th largest industry by employment; has \$10.3 billion in annual payroll; employs 8% of the labor force (more than 221,000 Coloradans); and has 16,000 annual job openings, more than 50,000 jobs over five years.

Early Childhood Education

Early Childhood Education encompasses "a child's learning and development from birth to 8 years old" ([Colorado's Early Learning and Development Guidelines](#)). Learning occurs in multiple settings including informal child care, child care centers, Head Start programs, tribal programs, family child care homes, and school district-based programs. The Colorado Department of Human Services (CDHS) and the Colorado Department of Education (CDE) guide the licensing, licensure and credential requirements for educators and programs to help ensure families have access to safe and high quality early learning environments.

K-12 Education

Kindergarten through twelfth grade (K-12) education is provided by public, private and charter schools in Colorado. The Colorado Department of Education (CDE) provides leadership, resources, support and accountability to the state's 178 school districts, 1,888 schools, more than 53,000 teachers, and more than 3,200 administrators to help them build capacity to meet the needs of the state's approximately 905,000 public school students ([Colorado Department of Education](#)). Career and Technical Education (CTE) in Colorado, with 29,741 middle schools, 106,720 high schools, and 34,535 postsecondary students, is managed through the Colorado Community College System (CCCS) ([CTE, CCCS](#)).

Postsecondary Education

Postsecondary education focuses on education beyond high school, typically resulting in a certificate, associate's, bachelor's, master's, or doctoral degree. There are 31 Public 2-year and 4-year colleges and universities with a total enrollment of 251,778; 103 Private and Seminary institutions serving 122,994 students; and 354 Private and Occupational institutions educating 31,265 students in Colorado ([Colorado Department of Higher Education](#)).

Education Career Pathway Development

Industry & Public Partner Engagement

Identifying regional industry-driven career pathways in Colorado utilizes the 8-step framework the CWDC developed with partners. Information on this framework can be explored in detail in the [2016 Building Industry-Driven Career Pathway Systems in Colorado Step-by-Step Guide](#). Building regional, industry-led sector partnerships is the vehicle for productive engagement with industry leaders and the starting place for career pathway systems-building.

As the driver of career pathway systems-building efforts, several key industry groups and leaders were engaged through industry forums and feedback gathering surveys between August 2018 and May 2019 to develop and validate the education career pathways. The key interactions included dozens of forums and work sessions facilitated by the career pathways project team with, Denver's Early Childhood Education Sector Partnership, The Early Childhood Professional Development (ECPD) Advisory Working Group, The Colorado Office of Early Childhood Education, The Colorado Department of Education, The Colorado Association of School Personnel Administrators (CASPA), The Colorado Department of Higher Education, and The Colorado Community College System's Career and Technical Education (CTE) team. The project team also received 483 survey responses from industry representatives from across the education industry on critical education occupations, competencies, credentials, and programs.

We would like to acknowledge and thank all of our collaborators from industry, education, government, and community-based organizations for their contributions.

Careers in Colorado Website Development

A primary deliverable of career pathway development under HB15-1274 is to "create a microsite concerning the career pathway on a state-provided, free online resource" that includes the following elements: industry/sector awareness, salary and wage information, employment forecasts, education, training, and support services. This requirement is fulfilled by the [Careers in Colorado](#) tool incorporated into the My Colorado Journey platform that launched July 2019.

Colorado state agencies—from workforce development, education and human services—have teamed up with pioneering data and technology firms to launch [My Colorado Journey](#). This powerful, personal and private platform provides step-by-step guidance for accomplishing career and education goals, whether it's finding the right job or applying to a dream college. As a free resource, My Colorado Journey will integrate collaborative case management tools and offer personalized support to individuals.

Information Sources Utilized

Each year, the CWDC and the CCCS analyze occupations that are in high demand and are important to Colorado's economic vitality. Data sources include; [Colorado Talent Pipeline Report](#), [Education and Training Data](#), [Labor Market Data](#), and [Demographic Data](#). This year, pathway work focused on education as a crucial industry across all regions of the state. Occupations across education were identified as top jobs. In Colorado, we define "top jobs" as an occupation with a median wage at or above a living wage, an above average projected growth rate, and above 40 annual openings. "Critical occupations" are identified by the industry as the occupations for which the industry may be facing shortages, difficulties in hiring or retention, or as occupations needed for a comprehensive career pathway.

The Occupational Information Network (O*Net) was the primary resource to identify job descriptions, knowledge, skills, and abilities and to identify initial career pathways. The knowledge, skills, and abilities for education jobs were crosswalked into the list of competencies available in the Competency Model Clearinghouse to create a framework for feedback from industry on core competencies.

Competency Identification

The [Competency Model Clearinghouse](#) provides a list and definition of Personal Effectiveness Competencies and Foundational Competencies that are important for all jobs. In addition, [O*Net](#) contains information about the knowledge, skills, and abilities important for each education occupation. The identified knowledge, skills, abilities, and competencies were thoroughly vetted with the education industry. See *Table 1* for a list of competencies that were identified as important for one or more education job:

Table 1: Identified Competencies

Foundational Competencies that all Educators Should Have:			
<p>Communication - Listen, speak, write, and signal so others can understand.</p>	<p>Reading - Understand written sentences, paragraphs, and figures in work-related documents.</p>	<p>Instructing - Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.</p>	<p>Customer Service - Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.</p>
<p>Problem Solving & Decision Making - Apply critical-thinking skills to solve problems by generating, evaluating, and implementing solutions.</p>	<p>Teamwork - Working cooperatively with others to complete work assignments.</p>	<p>Planning & Organizing - Plan and prioritize work to manage time effectively and accomplish assigned tasks.</p>	<p>Critical & Analytical Thinking - Use logic, reasoning, and analysis to draw conclusions and address problems</p>
<p>Working with Tools and Technology - Select, use, and maintain tools and technology (including computer and telecommunication) to facilitate work activity.</p>	<p>Lifelong Learning - Display a willingness to learn and apply new knowledge and skills.</p>	<p>Writing - Knowledge of the structure and content of the written language including the meaning and spelling of words, rules of composition, and grammar.</p>	
Personal Effectiveness Competencies that all Educators Should Have:			
<p>Initiative - Demonstrate a commitment to effective job performance by taking action on one's own and following through</p>	<p>Adaptability & Flexibility - Display the capability to adapt to new, different, or changing requirements.</p>	<p>Interpersonal Skills - Displaying the skills to work effectively with others from diverse backgrounds.</p>	<p>Professionalism - Maintain a professional demeanor at work.</p>

to get a job done.			
Dependability & Reliability – Display responsible behaviors at work	Integrity – Display accepted social and work behaviors and work ethic.		
Job-specific Competencies (that apply to some Education jobs):			
Psychology – Knowledge of human behavior and performance; individual differences in ability, personality, and interests; learning and motivation; psychological research methods; and the assessment and treatment of behavioral and affective disorders.	Administration & Management – Proficiency with business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.	Therapy & Counseling – Knowledge of principles, methods, and procedures for diagnosis, treatment, and rehabilitation of physical and mental dysfunctions, and for career counseling and guidance.	Public Safety & Security - Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.

Career Pathway Mapping

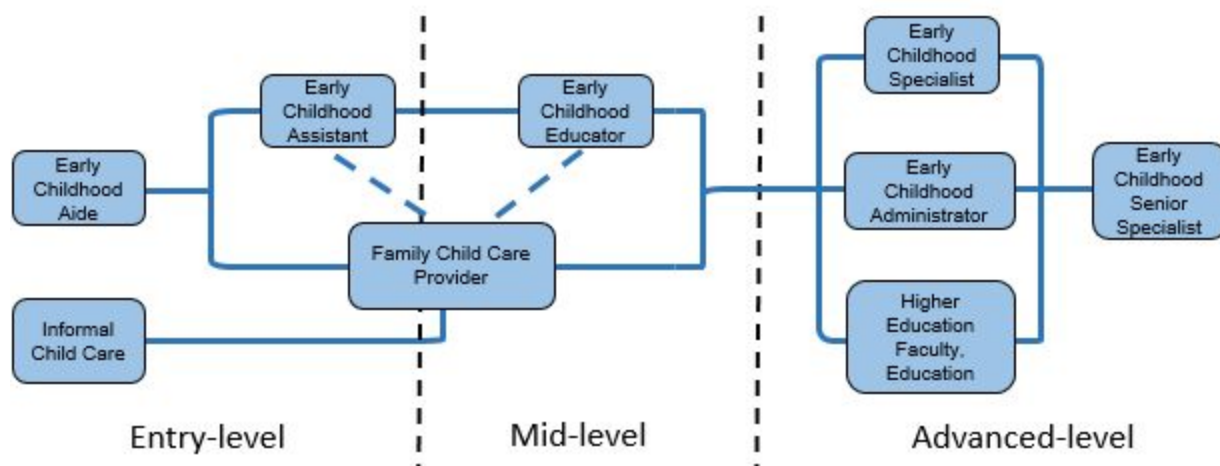
Introduction

Career pathway maps were created with input from industry representatives for Early Childhood Education, K-12 Education, and Postsecondary Education. These maps were then utilized as the basic structure to develop the interactive maps available on Careers in Colorado.

Early Childhood Education Career Pathway

Figure 1: Early Childhood Education Professional Pathway Map

Colorado's Early Childhood Education Professional Pathway



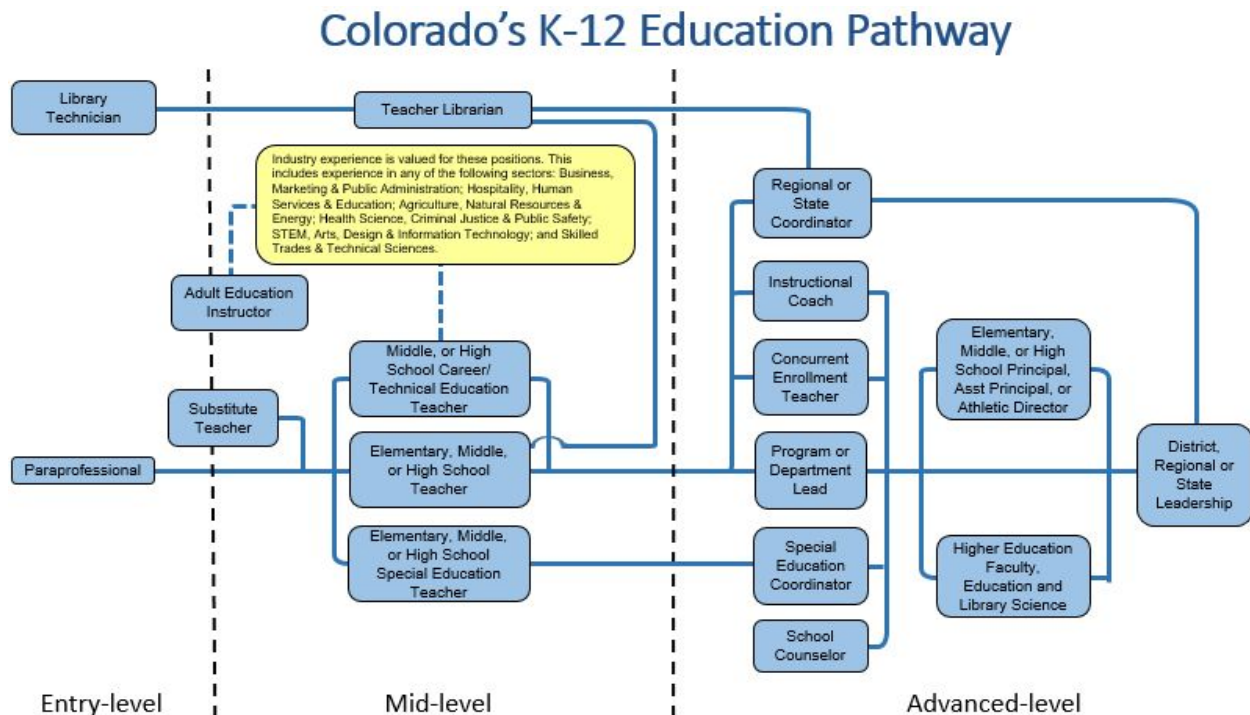
Feedback from educators created the following foundational decisions that guided the creation of the career pathway:

- Include every education-related job that exists in an ECE environment, not just the Top Jobs.
- Reference, but do not include jobs that represent the supporting roles identified in the NAEYC Power to the Profession “Field” (such as Business or Operations Administrators and Health Care Professionals (including mental health)).

- Capture all of the different early learning settings, such as Childcare Centers, In Home, School District, and Head Start. Reflect the different requirements for experience, education, certifications and different pay scales in the details of each job within Careers in Colorado.
- Recruiting a greater number of workers into the ECE industry is important. Therefore, Careers in Colorado should explain how to prepare for early childhood work, such as the value of babysitting or parenting experience, work in after school programs, participation in high school teacher preparation programs (such as Pathways to Teaching and Teacher Cadet), and obtainment of basic credentials, such as CPR. Of particular note is the ability of a student or job seeker to obtain a job as an Early Childhood Aide with very limited training or experience, providing a pathway for people to earn while they learn.
- Create links between the education pathway and the Healthcare pathway for Specialized Service Provider jobs, such as School Nurses, Psychologists, and Social Workers. These are primarily addressed within the Healthcare pathway, but the links should highlight the need for these roles in education and identify potential career options for people to move into the education industry.

K-12 Education Career Pathway

Figure 2: K-12 Education Pathway Map



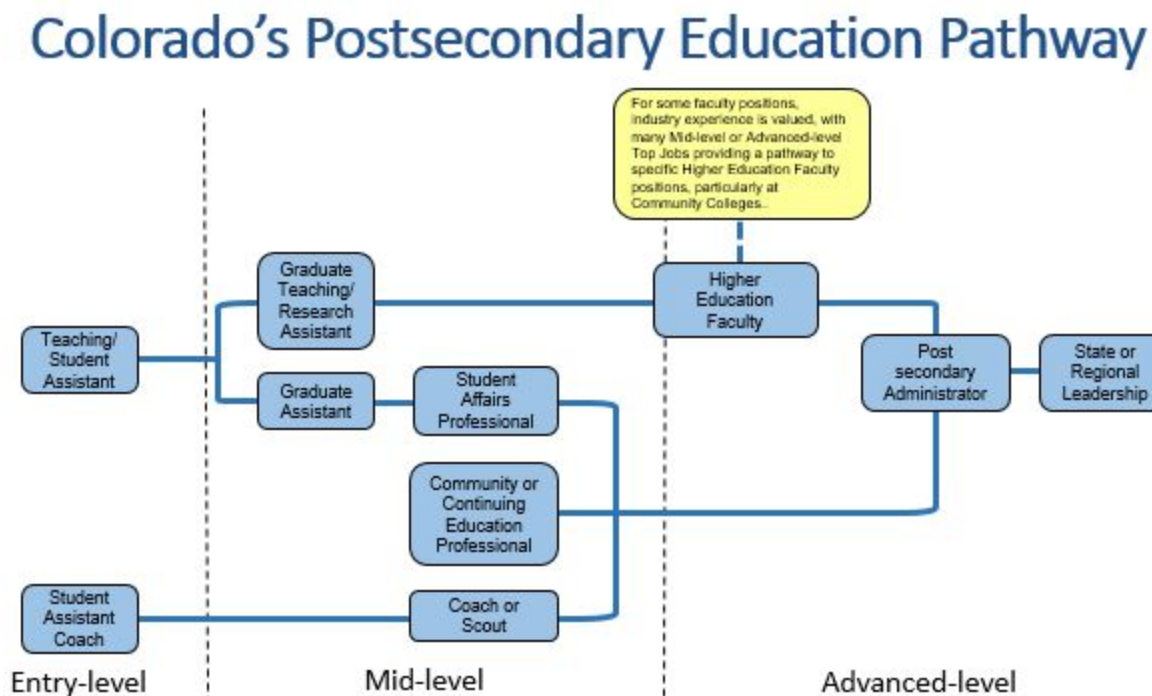
Feedback from educators created the following foundational decisions that guided the creation of the career pathway:

- Include every education-related job that exists in a K-12 environment, not just the Top Jobs.
- Reference, but do not include jobs that represent supporting roles (such as Information Technology, Custodians and Bus Drivers) that are primarily part of other industry pathways.
- Create the pathway so that it reflects the similarities and differences between Elementary, Middle School, and High School settings. A review of the job descriptions, salary, demand, knowledge, skills, and abilities, and education requirements across Elementary, Middle and High School settings identified many more similarities than differences. Therefore, many of these jobs were combined, with Careers in Colorado instead highlighting the different Endorsements that can be obtained, leading a student or job seeker into one setting over another.

- Create links between the education pathway and the Healthcare pathway for Specialized Service Provider jobs, such as School Nurses, Psychologists, and Social Workers. These are primarily addressed within the Healthcare pathway, but the links should highlight the need for these roles in education and identify potential career options for people to move into the education industry.
- Create links between the education pathway and other industry pathways for jobs that value industry experience, such as Career and Technical Education jobs. It is the expectation in each of these cases that students and job seekers using Careers in Colorado will be able to identify the links between industries, highlighting the need for these roles in education, and identify potential career options for people to move into the education industry from other industries.
- Recruiting a greater number of workers into K-12 education environments is important. Therefore, Careers in Colorado should explain how to prepare for K-12 education work, such as participation in high school teacher preparation programs, such as Pathways to Teaching and Teacher Cadet.

Postsecondary Education Career Pathway

Figure 3: Postsecondary Education Pathway Map



Feedback from educators created the following foundational decisions that guided the creation of the career pathway:

- Include every education-related job that exists in a Postsecondary environment, not just the Top Jobs. This should include Student Affairs jobs.
- Create the pathway so that it reflects the similarities and differences between community/junior college, 4 year colleges/universities, and continuing education settings. A review of the job descriptions, salary, demand, knowledge, skills, and abilities, and education requirements across these settings identified jobs that should be separated, such as Continuing Education Professionals, and jobs that should be combined, such as Higher Education Faculty. When a student or job seeker views these jobs in Careers in Colorado, they will be able to obtain information about the how the jobs differ by setting.
- Create links between the education pathway and other industry pathways for jobs that value industry experience, such as Career and Technical Education jobs. It is the expectation in each of these cases that students and job seekers using Careers in Colorado will be able to identify the links between industries, highlighting the need for these roles in education, and identify potential career options for people to move into the education industry from other industries.

Key Themes & Opportunities

Contextual Collaborations

The first [Statewide Education Sector Partnership](#) launched on Oct. 25, 2018. The launch of this partnership acknowledges the education sector as a significant source of employment for local and regional communities and a foundation for Colorado's economy. Furthermore, the launch recognized that stakeholders along the education continuum (early childhood, K-12, higher education) have shared interests and needs such as; talent recruiting and retention, public perception, and messaging. Collaboration across the education continuum is critical to strengthen the industry as a whole and fill critical talent needs.

The CWDC facilitated conversations with industry leaders on the following five priorities identified during the launch.

- 1) Skill building and pathways
- 2) Mapping the system
- 3) PR and marketing to promote education careers
- 4) Policy and legislation
- 5) Compensation

Related, prior to and during career pathway work in education this past year, a number of reports, strategic plans, and grant awards related to the current and future state of education in Colorado were underway.

Major reports, strategic plans, and grant activity include the following:

- [Colorado Department of Education Strategic Plan](#)
- [Colorado's Educator Shortage Survey Results](#)
- [TEACH Colorado, Rose Community Foundation grant](#)
- [Colorado Rises: Advancing Education and Talent Development, Colorado Commission on Higher Education Master Plan](#)
- [The State of Education, Education Leadership Council](#)
- [Workforce 2020 Plan, Early Childhood Leadership Commission](#)
- [Colorado Shines Brighter \(PDG B-5\) Grant Award, Colorado Department of Human Services](#)
- [EC Workforce Innovation Grants, Early Milestones](#)

The above, set in a larger context of Governor Jared Polis' election, his focus on education as one of his bold goals, and a specific focus to "Implement free full-day kindergarten for all and expand preschool" ([Governor's Dashboard](#)) through HB19-1262 and HB19-1055, further elevates the shared conversation and potential for alignment across education as an industry in Colorado.

Themes and Opportunities

Given that context, an overview of the key themes that emerged from career pathways work in education over this past year are as follows:

- The need to elevate the importance of the industry and communicate the value Colorado places on educating its residents.

- There is opportunity for continued conversation, collaboration, and systems-alignment between ECE, K-12, and Postsecondary subsectors of the education industry.
- Financial considerations underlay most conversations in education, particularly early childhood education. This includes barriers to entry into the profession (especially around education and training and support services for entry-level ECE educators, in particular), as well as living wage and competitive wage compensation concerns impacting recruitment and retention.
- There are educator talent pipeline shortages across the industry, with some occupations having more acute shortages in certain parts of the state.
- There is the opportunity for clarification regarding the credentials required for education occupations, including clear communication to both prospective educators for how to enter the field, and current educators for how to progress in their careers.

Acknowledgments

We would like to acknowledge the work of the career pathways project leads, and primary contributors to this report, Dr. Thomas Hartman, CWDC, Melissa Martin, CCCS, Scott Fast, Innovate+Educate, and Jean Dougherty, CWDC. We also want to acknowledge all our partners in the Colorado Department of Higher Education, the Colorado Department of Education, the Colorado Department of Human Services, the Department of Labor and Employment, the Colorado Office of Economic Development, the Colorado Community College System, the Colorado Workforce Development Council, and all our public partners. Most importantly we want to thank our industry partners and educators without whom we could not effectively build career pathway systems in Colorado.