



Innovative Workforce Solutions Review

A literature review of workforce support models from outside of the field of Early Childhood Education

DECEMBER 2020

Tina Ryznar | Aimee Dang | Natalie Tucker-Bradway | Ann-Marie Faria

MAKING RESEARCH RELEVANT

Innovative Workforce Solutions Review

A literature review of workforce support models from outside of the field of Early Childhood Education

DECEMBER 2020

Tina Ryznar | Aimee Dang | Natalie Tucker-Bradway | Ann-Marie Faria



AMERICAN INSTITUTES FOR RESEARCH®

1000 Thomas Jefferson Street NW

Washington, DC 20007-3835

202.403.5000

www.air.org

Notice of Trademark: “American Institutes for Research” and “AIR” are registered trademarks. All other brand, product, or company names are trademarks or registered trademarks of their respective owners.

Copyright © 2020 American Institutes for Research®. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, website display, or other electronic or mechanical methods, without the prior written permission of the American Institutes for Research. For permission requests, please use the Contact Us form on www.air.org.

Contents

	Page
Introduction	1
Workforce Development Strategies to Recruit, Train, and Retain a High-Quality Workforce	2
Workforce Development Strategy 1: Apprenticeships.....	2
Workforce Development Strategy 2: Sector Strategies	5
Workforce Development Strategy 3: Career Pathways.....	7
Workforce Development Strategy 4: Bridge Programs	9
Workforce Development Strategy 5: Realistic Job Preview	10
Workforce Development Strategy 6: Innovative Benefits Access.....	11
Conclusions: Application in Michigan	12
References	13

Introduction

Hiring and retaining highly qualified staff is integral to the success of any early care and education program. The quality of care, instruction, and service provision in the early childhood mixed delivery system is contingent upon the professionals who work for each program or provider. However, workforce challenges plague the early childhood field nationally and in Michigan.

In fall 2019, as part of the Michigan Department of Education – Office of Great Start’s Preschool Development Grant (MDE-OGS PDG), AIR conducted a [needs assessment of the early childhood mixed delivery system](#) in the state. In this needs assessment, AIR and its partners conducted six key informant interviews with state-level staff, agency leaders, and subject matter experts and ten focus groups with 118 participants including Michigan families, early child care and learning providers and administrators, home visiting staff, foundation representatives, and social and emotional health care providers. Through these engagement activities, we consistently heard that developing and sustaining a pipeline of high-quality EC educators, home visitors, and early intervention providers is costly and remains a challenge across Michigan. Across the system, workforce issues limit providers’ ability to offer high-quality programming. Specifically, we learned the following:

- Childcare providers struggle to find qualified and experienced staff, particularly for infant and toddler settings as well as in rural areas. Even when childcare providers do find qualified staff for their infant/toddler classrooms, turnover rates are high. Providers report that turnover is caused by underpaid and overworked infant/toddler teachers. The low wages of EC staff continue to be a challenge across the state and nationally.
- Workforce challenges and talent deficits are also present across the state in home visiting and early intervention programs. Finding qualified staff for home visiting is particularly difficult in rural communities. Staff turnover is exceptionally challenging in home visiting because of the need for building meaningful relationships between home visitors and the families they serve.
- Michigan’s early childhood (EC) workforce needs further training on subjects such as the impacts of trauma as well as the behavioral and emotional needs of young children.
- Across the mixed delivery system, there is a lack of culturally and linguistically trained professional staff.

Given these challenges, MDE contracted with AIR to conduct a literature review of innovative workforce solutions from outside the field of early childhood education to potentially apply those strategies to better meet the workforce needs of ECE programs and providers. This brief summarizes findings from AIR’s literature review on innovative workforce development strategies from industries outside of early childhood. The purpose of this document is to highlight six innovative workforce development strategies created to address recruitment, training, and turnover challenges in fields that are similar to but outside of ECE. Of these strategies, three focus on preservice training, one includes both preservice and in-

service training, one focuses on improving workforce benefits, and one focuses on providing a realistic job preview to potential applicants.

Workforce Development Strategies to Recruit, Train, and Retain a High-Quality Workforce

The following section outlines six workforce development strategies created by fields outside of ECE. Many of these strategies were originally developed as standalone approaches but are now commonly used in combination to address a greater number of workforce challenges or industry needs. Although each of these strategies was originally developed by fields outside of ECE, some are now being applied within the field, examples of which are provided.

Workforce Development Strategy 1: Apprenticeships

Example Industries: Healthcare, Information Technology, Manufacturing, Traditional Trades

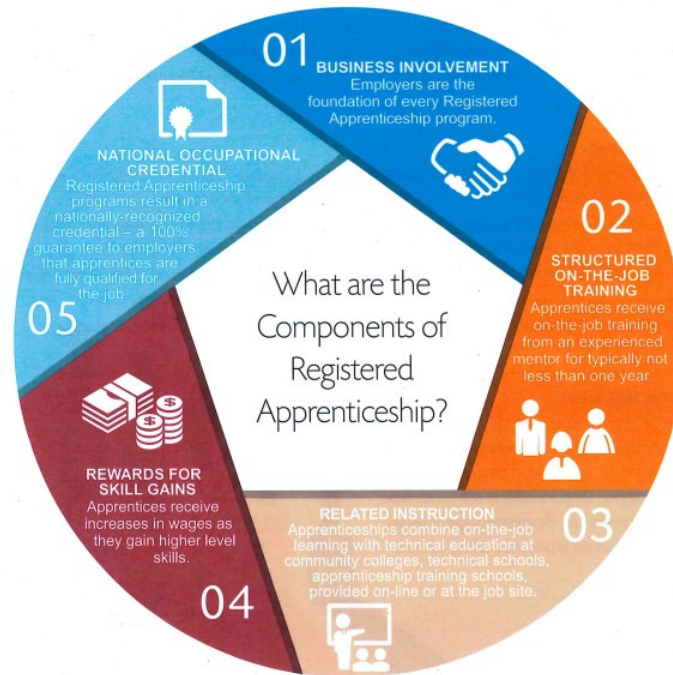
Apprenticeships are one of the oldest approaches to developing a skilled workforce. The goal of an apprenticeship is to prepare workers for a long-term career without the burden of taking on training debt or having to maintain additional employment during the duration of the training process. In practice, apprenticeships are employer-driven training models that provide a combination of on-the-job training and technical instruction. All high-quality apprenticeships share five key aspects (Figure 1). First, programs begin with an engaged employer. Next, the employer provides on-the-job training. In addition, apprentices must complete a number of related technical training courses. These courses can be delivered at local community colleges, technical schools, or job sites. Once an apprenticeship is completed, apprentices receive higher wages and credentials specific to their field.

There are two common types of apprenticeships in the United States: registered apprenticeships and not registered apprenticeships. Registered apprenticeships must meet established regulations such as providing paid employment to participants while they receive on-the-job learning, classroom learning, and mentorship. All workers who complete registered apprenticeships receive nationally recognized credentials. Apprenticeships that do not meet DOL regulations are still considered on-the-job training and are in many ways like registered apprenticeship programs but instead yield industry-recognized credentials.

Pre-Apprenticeship Programs

Pre-apprenticeships are programs that are not overseen by the DOL but are designed to prepare high school students to succeed in registered apprenticeship programs. While still in high school, these pre-apprentices receive field-specific instruction and on-the-job training while pursuing their diploma or GED. Pre-apprenticeship programs like registered apprenticeships are based in formal partnerships with employers and registered apprenticeship programs. Students who complete these programs and graduate receive advanced credit toward completion of their registered apprenticeship.

Figure 1. Components of Registered Apprenticeships



Source: U.S. Department of Labor (n.d.)

An example of a registered apprenticeship program in Michigan is the **Michigan Works! Healthcare Apprenticeship**. This program was developed in 2019 in response to a shortage of healthcare workers in southwest Michigan. Michigan Works!, a statewide network of workforce development boards, partnered with local training providers and employers to develop a new registered apprenticeship program focused on training and upskilling Certified Nursing Assistants (CNAs) and Personal Care Assistants (PCAs). Michigan Works! supports apprentices by registering them for the program, connecting them with a local training provider, such as a community college, and assisting them with job placement or advancement in their current position. This apprenticeship program is competency-based meaning that the length of the apprenticeship is based on the amount of time it takes the apprentice to effectively demonstrate the required competencies.

Apprenticeship could be a solid strategy to address ECE workforce needs. Apprenticeships prepare workers to enter a new field by offering no- to low-cost occupational training and supports. Some states already use apprenticeships in the early childhood field to address the shortage of qualified and experienced staff in ECE settings. One example is **California’s SEIU Early Educator Apprenticeship Program**, which is described in the following subsection. Apprenticeships like these provide paid on-the-job training and no-cost related instruction for staff interested in working as early childhood educators. Apprenticeships are therefore one pathway to overcome common barriers to completing training and education requirements for candidates interested in teaching in early childhood programs. Finally, apprenticeships encourage equal access to education and credentials, which may increase the diversity of ECE candidates.

Examples in ECE: California's SEIU Early Educator Apprenticeship Program

In response to a shortage of ECE teachers in California, the Services Employees International Union (SEIU), through the SEIU Early Educator Training Center, developed the Early Educator Apprenticeship Program. The goal of this program is to address California's ECE workforce issue through the provision of accessible on-the-job training and professional development and to increase teacher compensation without increasing costs for parents. This apprenticeship model has three separate programs, each of which focuses on one of the three major child care settings: federally funded Head Start programs, private center-based care, and home- or family-based child care programs. All three settings provide child development coursework and on-the-job training that align with the requirements of state ECE competencies and permit requirements, as well as academic and social supports. Funding for this program comes largely from workforce initiatives derived from both the state and federal government.

*The **Head Start Apprenticeship Program** is an intensive 9-month fully funded apprenticeship for unemployed Head Start parents to enter the ECE field and earn a California Child Development Associate Teacher Permit. This permit allows the apprentice to be hired as a full-time Head Start assistant teacher. The expanded portion of this program supports apprentices through wage increases and fully funded coursework toward attaining an associates and bachelor's degree, while simultaneously earning California's Child Development Associate Teacher, Teacher, and Master Teacher permits.*

*The **Early Educator Center-Based Apprenticeship Program** partners with a community-based organization that runs child care centers in low-income neighborhoods in Los Angeles. Apprentices work full-time at these centers as assistant or associate teachers in rooms with children who are 2 to 6 years old. Apprentices receive on-site mentoring and engage in fully funded child development course work at a local technical college and receive wage increases as they move throughout the program. Apprentices who complete the program earn California Child Development Associate Teacher and Teacher permits.*

*The **Family Child Care Provider On-The-Job Training Program** offers established and new home-based or family child care (FCC) providers, who care primarily for infants and toddlers, with intensive bimonthly coaching and no-cost related instruction at a local trade college. Once apprentices have completed 4 months of the program, they receive a monthly stipend that continues through the life of the apprenticeship. Apprentices who complete the program earn a state Childhood Development Assistant, Associate, and Teacher Permits. These permits signal a higher level of quality because FCC providers in California are not required to hold any certifications beyond basic licensing requirements.*

Workforce Development Strategy 2: Sector Strategies

Example Industries: Healthcare, Manufacturing, IT

Sector strategies are employer-driven strategies designed to meet the needs of a specific industry (or “sector”) to ultimately increase the entry-level skills of the workforce. Sector strategies are needed now more than ever, because entry-level workers need higher levels of occupational-specific skills than ever before (Barton, 2000; Baum & Ma, 2007; Osterman, 2008). However, entry-level workers often lack these occupational skills at job entry. Due to this gap between the needs of employers and the skill set of the workforce, different employers in the same region often share a common struggle in finding and maintaining entry-level staff with the required sector-specific skills. To address this challenge, sector training strategies were developed. All services and job trainings are linked to that sector’s specific regional needs, and occupational training is designed to help workers attain the industry’s recognized credentials.

In addition to serving the needs of employers, sector strategies are designed to support low-income workers to achieve entrance into or advancement within the labor market. Many sector strategies provide supports to remove barriers to employment or advancement into high wage jobs with benefits (such as health insurance). Some programs may also provide services to support program completion and long-term success, such as mentors, financial assistance to cover life expenses (e.g., rent, utilities, and child care), financial guidance, and soft skills training.

Sector strategies are often managed and implemented via a single organization or a collection of organizations that seek to develop industry-specific solutions within their region. In this way, sector strategies are also an effective tool for community and economic development groups to improve access to jobs for people living in impoverished communities.

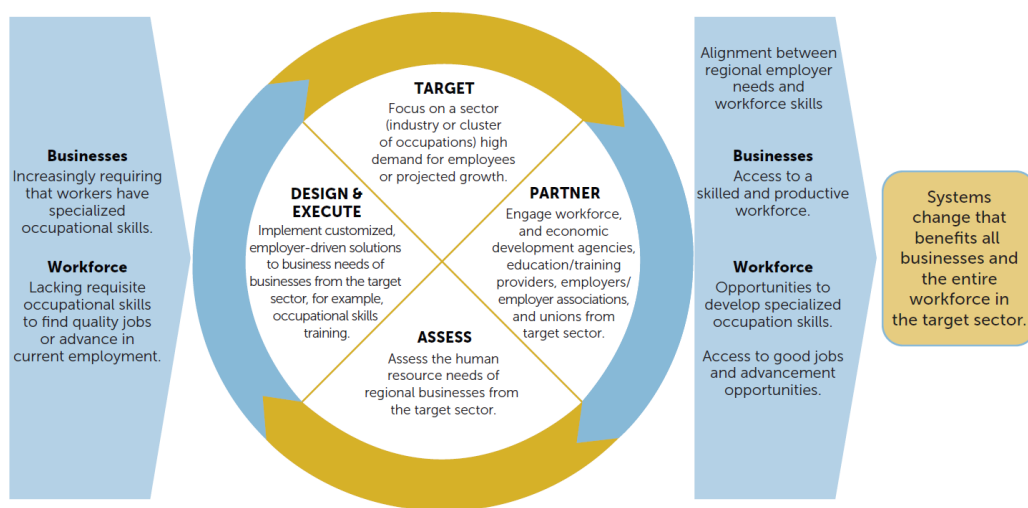
Evaluations of sector strategies demonstrate that these programs can increase earnings and improve job quality for the under-skilled workforce (Conway et al., 2007). Moreover, many businesses have credited sector training strategies with increasing their productivity and reducing operating costs (Maquire et al., 2010).

Key Components of Sectoral Strategies

- *Target a singular industry and/or a group of occupations.*
- *Function through established organizations (e.g., workforce intermediaries, such as Michigan Works!).*
- *Support workers to become competitive for quality job opportunities in growing industries.*
- *Meet the needs of employers, improving their ability to compete within the marketplace.*
- *Develop long-term change in a labor market directed toward both employers and workers.*

Source: Conway et al. (2007)

Figure 2. Sector Strategies: Goals, Program Features, and Intended Outcomes



Source: Ziegler (2015)

An example of a sector strategy in Michigan is the Michigan Bureau of Labor Market Information and Strategic Initiative’s **Michigan Industry Cluster Approach (MICA)**. MICA defines an industry cluster as a geographic concentration of employers, suppliers, and support institutions for a specific industry. Michigan’s key industry clusters are Manufacturing, Healthcare, Information Technology, Construction, Agriculture, and Energy. Each industry cluster works with the regional workforce development agency, Michigan Works!, to outline their shared workforce needs and challenges. At the local level, industry clusters define local needs and are led by local employers. At the regional level, Michigan Works! meets collaboratively with employers, training and education providers, economic development groups, as well as other relevant workforce development groups to problem solve that industry’s workforce needs. And at the state level, a cluster team develops regional trainings and advocates for statewide policy informed by the needs of Michigan’s key industry clusters. If Michigan wants to begin to form a sector strategy for a region within the state, the [Sector Strategies Toolkits](#) developed by Career Source Florida are also useful tools. These toolkits work through the initial steps of creating a sector strategy solution to a pressing workforce challenge.

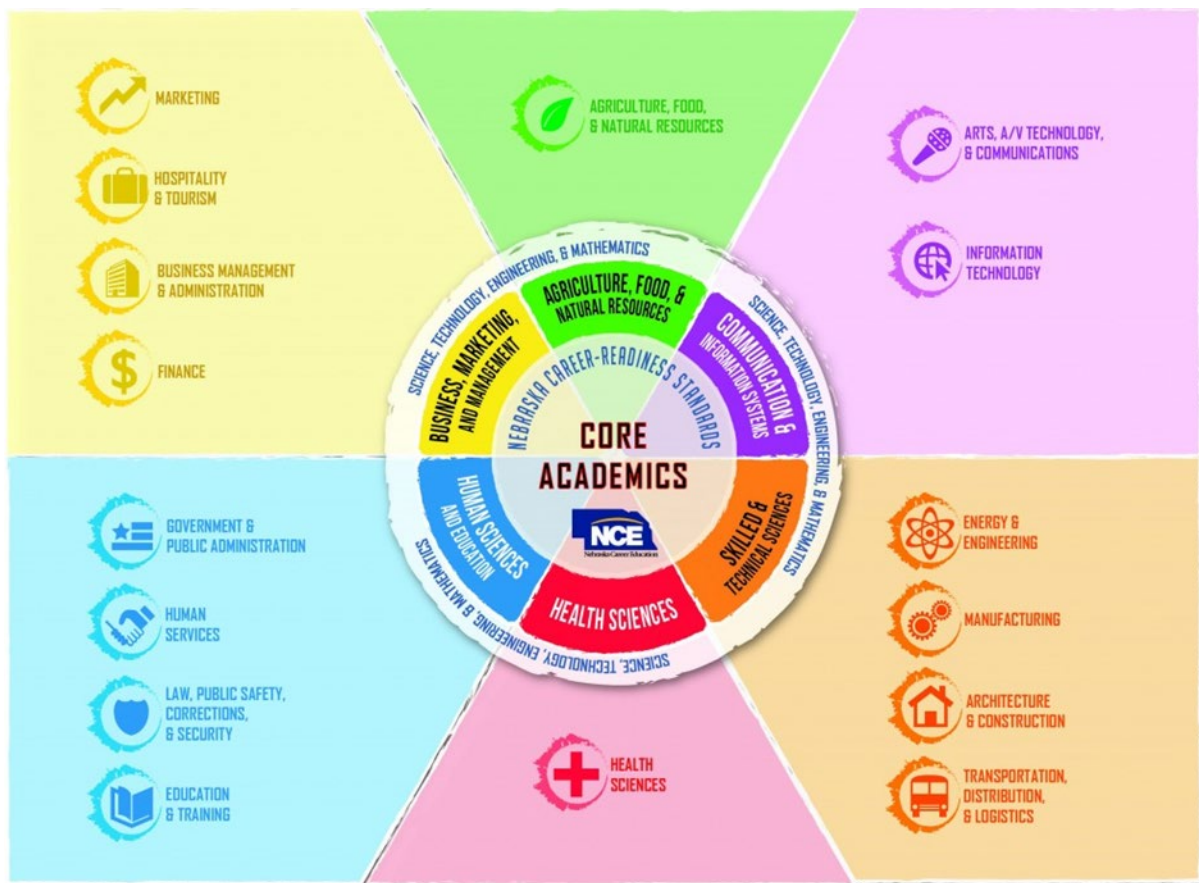
Sector strategies may be a viable solution to addressing ECE workforce challenges but were difficult to find in practice. Like apprenticeship programs, sector strategies prepare workers to enter a new field by offering no- to low-cost occupational training and supports. However, sector strategies expand on apprenticeship by capitalizing on the collaborative powers of more than one employer’s needs. Sector strategies also target entire communities of workers, rather than individuals targeted in apprenticeships. In Michigan, creating sector strategies may represent a viable strategy for addressing shortages in the ECE workforce across the state, specifically in infant and toddler classrooms and in rural areas. Regional collaborations of employers in rural areas with ECE shortages may also represent a viable solution to such shortages.

Workforce Development Strategy 3: Career Pathways

Example Industries: Healthcare, Sustainable Energy, Conservation

Career pathways are large groups of careers that share similar characteristics and whose employment requirements call for many common interests, strengths, and competencies. Career pathways provide useful frameworks to help students and educators make meaningful connections to real-world occupations. There are six career pathways that together cover all career opportunities regardless of educational requirements: Agriculture, Food, and Natural Resources; Communication and Information Services; Skilled and Technical Sciences; Health Science; Human Sciences and Education; Business, Marketing, and Management (see Figure 3).

Figure 3. The Six Career Clusters



Source: Partnerships for Innovation (2018)

Career pathway programs aim to make clear the steps required to enter and advance within a given field for prospective employees. The goal of career pathway programs is to provide clearly defined steps-based training and education programs that allow participants to secure entry-level employment, progressively attain credentials, and advance within their chosen field. Career pathway programs prepare participants for jobs and advanced careers with local employers within growth industries through job-specific training, skill building, and supportive services. Career pathway programs are

commonly run by a single entity such as a community college and serve low-income individuals with limited skills and employment barriers who are unemployed or underemployed. Participating in a career pathway program does not guarantee advancement, but it does provide workers with an improved understanding of the various types of advancement options within their field, how that advancement can be achieved, and what will be expected of them when they do advance.

An example of the career pathways strategy in Michigan is the **Pathways for Future Educators program**. As a collaborative program run in partnership between local schools and Eastern Michigan University, the Pathways for Future Educators program begins by identifying high school and junior high school students who demonstrate an interest in teaching. The program provides initial broad support and guidance to participants beginning in high school and continues that support in the form of full-tuition payment, financial assistance, and social support when students are admitted to EMU to begin a teacher training program. Upon graduation, participants are guaranteed a teaching interview in their home school district, the intention being that teachers returning to their home community will better understand the needs of the students they are educating.

The career pathways strategy could assist ECE workers in Michigan by clarifying the steps and the supports to achieve advancement within the ECE field. In fact, Michigan has a career pathways program for early childhood educators through **MiRegistry** (detailed below). MiRegistry supports ECE professionals by tracking their training, outlining what is needed to advance, and listing the available trainings that are needed to obtain ECE certifications and degrees. Within ECE, career pathways can move in multiple directions; laterally from one age-specific classroom to another, such as moving from teaching 3-year-olds to caring for infants, or upwards, such as moving from an assistant teacher position to a lead teacher position, and even to a center directorship. However, a challenge for ECE in the implementation of career pathways programs is the limited nature of pathways that remains within the ECE classroom. As such though these programs may support recruitment, they may actually also work against ECE's workforce needs by moving well-trained teachers up and out of the classroom.

Examples in ECE: Innovations to Support Early Childhood Career Pathways – MiRegistry

The Michigan Registry, MiRegistry, provides Michigan early childhood educators with early education career pathway support and is funded by the Michigan Department of Education. The MiRegistry website is a one-stop resource for ECE teachers to efficiently track their own individual progression on the ECE career pathway. The MiRegistry website provides an interface by which ECE teachers are able to track their own professional development by core competency areas, search for and sign up for upcoming trainings events, and access resources to better understand how to advance on the ECE career pathway. MiRegistry is also a hub for ECE program directors to support the professional development of their staff by reviewing their training and qualifications and as a means to scheduling professional development trainings.

Workforce Development Strategy 4: Bridge Programs

Example Industries: Healthcare, Material Science, Accounting, Biomedical, Computer Security

Bridge programs are a workforce strategy developed to help adults with limited education acquire basic skills to enter the workforce. Bridge programs can help adults who do not have a high school diploma or who lack English fluency enter the workforce through remedial coursework. Bridge programs are often initial steps in the career pathways process for adults whose reading, writing, math, and English language skills are below the 12th-grade level, regardless of having a high school diploma or GED. These programs “bridge” adult education (Adult secondary education, English as a second language, adult basic education) with occupational programs within community colleges. In the bridge program classroom, basic academic instruction in reading, writing, math, and English language is contextualized within occupational subject matter. Bridge program participants are also instructed in employment skills and college success strategies. Some bridge programs take the place of remedial courses and result in college credit and industry-recognized certificates, whereas others act as stepping stones to college-level job training.

An example of a bridge program in Michigan is the Bridges to Careers Program. This bridge program was designed to prepare unemployed or underemployed workers in the Detroit area with the academic and work-readiness skills necessary to bridge their entrance into an apprenticeship or other career pathway within the building trades. Eligible participants must have a high school degree but be assessed as having no more than an eighth-grade math and reading level. Once accepted, participants engage in an 8-week program during which they receive instruction in applied math and reading, an overview of building trades, essential soft skills, and other workplace-related trainings such as OSHA and first aid. Participants also receive a stipend and transportation to complete the program. Graduates of the program earn a National Career Readiness Certificate, which indicates their level of competency in applied math, workplace documents, and graphic literacy.

Bridge programs have the capacity to increase the number of trained ECE teachers entering the workforce and can support upward mobility within the field for teaching assistants. Bridge programs might also have the benefit of allowing historically under-served communities to access entry into the ECE workforce, further diversifying the workforce by reducing systematic barriers to postsecondary training and education. Bridge programs in early childhood education already exist, such as the **Asian Human Services Early Childhood Education Bridge Program in Chicago, Illinois**.

Examples in ECE: The Asian Human Services Early Childhood Education Bridge Program in Chicago, Illinois

This Early Childhood BRIDGE program in Chicago, Illinois, was created to support English as a second language (ESL) students interested in pursuing a career in ECE. It is a partnership between Truman College (one of the City Colleges in Chicago), local libraries, elementary schools, and community base organizations. The goals of the program are to (1) develop students' knowledge about the ECE field; (2) increase students' fluency in written and spoken English; (3) improve students' academic skills to prepare them for postsecondary education without remedial coursework; and (4) help students transition to college-level early childhood education programs, vocational training, and employment. The program is operated through a cohort model, where incoming students progress through the BRIDGE program together. The program is based on ESL content standards, and the curriculum is aligned to help students to move to college-level courses upon completion of their GED. During the program, students also learn how to write a résumé and cover letter and how to conduct online job searches. Moreover, participants in the BRIDGE program receive supports throughout their coursework including on-site childcare, personal counseling, and all of the materials they will need for the course.

Workforce Development Strategy 5: Realistic Job Preview

Example Industries: Health and Human Services, Business, Military

The realistic job preview (RJP) is a workforce strategy used to more effectively inform job applicants about good and bad aspects of a job. RJP's provide a richer description of a job than is typically included in job descriptions to help candidates decide whether the position is a good fit for them. This might include a more detailed account of the work environment, duties, and expectations. RJP's are used as an attempt to reduce turnover and avoid the financial loss and laborious process of recruiting and hiring throughout the year. RJP's provide potential hires with accurate information upfront so they can better understand the details and challenges they may face while on the job, before accepting an offer. RJP's are not in lieu of an interview and are designed to be used as an additional form of self-evaluation for the employment seeker (U.S. Office of Personnel Management, n.d.).

In addition, RJP's provide employers with more in-depth opportunities to acquaint potential employees with the rewards and challenges within a job that would not otherwise be made apparent in a job listing or through an interview. The format of RJP's vary and can include booklets or brochures, group meetings, meetings with current employees or customers, multimedia presentations, pre-application job preview videos, or structured observations (U.S. Office of Personnel Management, n.d.). The Children's Bureau of the U.S. Department of Health and Human Services awarded grants nationwide to develop RJP's from 2003 to 2008 for the child welfare services sector (Faller, 2009). In response, some states, including Michigan, used video platforms to showcase the most challenging aspects of child welfare and child protective services (CPS) jobs, including various forms of child abuse, undesirable household conditions found during home visits, and the long hours required (Faller, 2009).

RJPs can expose potential ECE hires, especially entry-level applicants, to the realities of the ECE field by offering a more comprehensive overview of the job. RJPs have been used in education for teaching staff as well as administrators. They are especially helpful for candidates who are uncertain and may not fully understand the labor-intensive realities of working with young children. Hiring teachers and staff who understand the challenges they may face can reduce teacher/staff turnover and therefore benefit children's continuity of care and learning. We were not able to identify any RJPs used within ECE.

Examples in Michigan: Realistic Job Previews in Child Welfare

Michigan's own child welfare RJP is a 36-minute video, titled Is This the Job for Me? This video is required viewing for applicants being considered for roles as children's protective services and foster care workers. Is This the Job for Me? focuses on frontline staff and supervisors discussing the details of their work and the positive and negative aspects of their roles. As a result of the implementation of this RJP, Michigan saw a 15.4% decrease in turnover for those who watched the RJP video versus those who did not. Of those who watched the video, 93.8 % were retained for at least one year, while only 78.4% of those who did not watch the video were retained (Champnoise, 2007).

Workforce Development Strategy 6: Innovative Benefits Access

Example Industries: Domestic

Many workers do not have access to benefits such as health insurance, accident or life insurance, and paid time off. These types of benefits provide not only a sense of security but also improve job satisfaction, which can affect turnover rates. Strategies developed to address the issue of access to benefits are basically nonexistent, with the exception of a strategy called Alia developed by the National Domestic Workers Alliance Lab.

Alia is an online platform targeted at domestic workers who clean homes and rarely have access to benefits. The Alia platform allows individuals who hire domestic workers to direct proportional digital payments toward benefits for these workers. Contributions can be gathered from any number of clients and are managed individually via the Alia platform by the worker on a smartphone or computer. Alia currently offers domestic workers the opportunity to access and manage their paid time off, disability insurance, accident insurance, critical illness insurance, and life insurance. These benefits are portable, meaning that workers can take their benefits with them when they leave a job or a client. Although Alia is currently focused on domestic workers who clean homes, the platform is being adjusted to effectively suit the needs of nannies and caregivers as well.

The provision of benefits varies across the ECE field. Basic benefits such as sick days and health insurance are often available to state and federally funded ECE program teachers. However, private child care centers and home-based child care providers are less able to provide their teachers with these benefits. Although private and home-based child care employees make up the majority of ECE teachers in the state, it can be assumed that even basic benefits, such as sick days and health insurance, are not available to most ECE workers. As such, the provision of an ECE benefits program, or some form of health insurance discount for ECE workers who purchase their own insurance, could represent an

effective and meaningful recruitment and retention strategy for the field. To date, we did not find an example of a similar benefits program applied to ECE.

Conclusions: Application in Michigan

The strategies outlined in this report were designed to address workforce challenges present in fields outside of ECE. Some of these strategies have also been applied to ECE. If amended to meet the needs of ECE, these strategies represent feasible opportunities for increasing the number of trained ECE professionals within the field and those entering the field. However, it is important to remember that a core component of these strategies is the process of supporting workers to achieve advancement and higher wages within their chosen field. This makes applying these strategies to the ECE field a challenge because advancement and increased wages are limited if a teacher is to stay in the ECE classroom. There are certainly aspects of these strategies that can support recruitment in the ECE workforce but implementing them in ECE could prove challenging.

References

- Barton, P. (2000). *What jobs require: Literacy, education, and training, 1940–2006*. Educational Testing Service. <http://www.ets.org/Media/Research/pdf/PICJOBS.pdf>
- Baum, S., & Ma, J. (2007). *Education pays 2007: The benefits of higher education for individuals and society*. College Entrance Examination Board. <https://research.collegeboard.org/pdf/education-pays-2007-full-report.pdf>
- Champnoise, C. (2007). *The RJP tool kit: A how-to guide for developing a realistic job preview*. National Child Welfare Workforce Institute.
- Conway, M., Blair, A., Dawson, S., & Dworak-Munoz, L. (2007). *Sectoral strategies for low-income workers: Lessons from the field*. The Aspen Institute, Workforce Development Strategies Initiative. <https://assets.aspeninstitute.org/content/uploads/2007/10/Sectoral-Strategies.pdf>
- Faller, K. C., Masternak, M., Grinnell-Davis, C., Grabarek, M., Sieffert, J., & Bernatovicz, F. (2009). Realistic job previews in child welfare: State of innovation and practice. *Child Welfare*, 88(5), 23.
- Maguire, S., Freely, J., Clymer, C., Conway, M., & Schwartz, D. (2010). *Tuning in to local labor markets: Findings from the sectoral employment impact study*. Public/Private Ventures. <https://www.issuelab.org/resource/tuning-in-to-local-labor-markets-findings-from-the-sectoral-employment-impact-study.html> [Includes JVS-Boston, 1st Per Scholas test, and WRTP]
- Office of Personnel Management. (n.d.). *Realistic job previews. Policy, data, oversight: Assessment & selection*. [https://www.opm.gov/policy-data-oversight/assessment-and-selection/other-assessment-methods/realistic-job-previews/#:~:text=A%20Realistic%20Job%20Preview%20\(RJP,of%20what%20the%20job%20entails](https://www.opm.gov/policy-data-oversight/assessment-and-selection/other-assessment-methods/realistic-job-previews/#:~:text=A%20Realistic%20Job%20Preview%20(RJP,of%20what%20the%20job%20entails)
- Osterman, P. (2008, August). *College for all? The labor market for college-educated workers*. Center for American Progress.
- Partnerships for Innovation. *Nebraska Career Readiness Standards: Core Academics (Image)*. Lincoln, Nebraska. <https://partnershipsforinnovation.org/resources/career-academy/>
- U. S. Department of Labor. (n.d.). *A quick-start toolkit: Building registered apprenticeship programs*. Department of Labor. <https://cc.howardcountymd.gov/LinkClick.aspx?fileticket=LzNDUnLaw-g%3D&tabid=494&portalid=0>
- Ziegler, J. (2015). *Sector strategies: Aligning the skills of the workforce with the needs of employers*. Mathematica. <https://www.mathematica.org/download-media?MediaItemId={95668467-4E0B-4F6E-AF51-C2E3A6D2E4DD}>



Established in 1946, with headquarters in Washington, D.C., the American Institutes for Research® (AIR®) is a nonpartisan, not-for-profit organization that conducts behavioral and social science research and delivers technical assistance, both domestically and internationally, in the areas of education, health, and the workforce. For more information, visit www.air.org.

MAKING RESEARCH RELEVANT

AMERICAN INSTITUTES FOR RESEARCH
1000 Thomas Jefferson Street NW
Washington, DC 20007-3835 | 202.403.5000
www.air.org

LOCATIONS

Domestic: Washington, DC (HQ) | Sacramento and San Mateo, CA | Atlanta, GA | Chicago and Naperville, IL | Indianapolis, IN | Waltham, MA
Frederick and Rockville, MD | Chapel Hill, NC | New York, NY | Cayce, SC | Austin, TX | Arlington, VA | Seattle, WA

International: Ethiopia | Germany (A.I.R. Europe) | Haiti