

**WORKFORCE  
DEVELOPMENT IN  
FLORIDA:  
A LITERATURE  
REVIEW**

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**W**orkforce development is crucial to long term economic vitality, but developing effective policies involves complex interactions between local, state, and federal education boards, retraining programs, universities, firms, and more. Further complicating this dynamic are the destabilizing effects of globalization and technological innovation which perpetually change the skills needed in the labor market. By examining the academic literature on workforce development, insights emerge that help account for these complexities, and may enlighten the crafting of effective policies. In particular, the literature calls for new approaches to early childhood learning, primary and secondary education, mentorship programs, and worker retraining. Designing effective workforce development policy requires drawing on the wealth of knowledge provided by academic and scientific research; the purpose here is to stitch the relevant literature together so as to develop a comprehensive approach to workforce development.

## **EARLY CHILDHOOD EDUCATION**

James Heckman is a Nobel laureate in Economics and one of the leading labor market economists. In his 2000 paper “Policies to Foster Human Capital,” Heckman provides a comprehensive analysis of labor development policy, calling attention to important failures while providing alternative policy suggestions. In particular, Heckman (2000) stresses the primacy of early childhood in laying the foundation for continued success in life. Building on neuroscientific evidence and numerous longitudinal studies, Heckman & Masterov (2007) make the economic argument for investing more in young children, showing how at current levels of spending, government agencies underinvest in the young and overinvest in the old. A large body of research supports this argument: studies have shown that an early childhood program can from improve cognition, to increase educational attainment, and even reduce the likelihood of teen parenthood. Taking a closer look at an influential longitudinal study, the Abecedarian Project, will be helpful in showing how early intervention leads to such effective outcomes.

The Abecedarian Project was a longitudinal study that examined the effects of an intensive early childhood program on social, economic, and health outcomes of 101 infants through the age of 30. The childcare program encouraged cognitive and social development through year-round one-on-one care; children were engaged with a stimulating environment designed to develop language, cognition, and adaptive behavior. The results of this study were impressive: by the age of 30, those in the “preschool treatment” were twice as likely to be employed, six times less likely to be dependent on welfare, and four times more likely to have attained a college degree when compared to the control group. These findings are not unique to the Abecedarian Project, still other longitudinal studies have found similar results.

These results are important for policy design because tax dollars allocated to early childhood programs may reduce the need for spending on remedial education, retraining, and even policing and incarceration later in life. When calculated through the age of 27, the return on investment for the Abecedarian Project was \$5.70 saved for each dollar spent; the Perry Preschool Study, another early childhood study, produced a \$7.16 return for every dollar spend; projected until the age of 40, that figure rises to \$17.07. Several factors work together to produce such a high return. First, the benefits resulting from early intervention have more time to accrue than interventions made later in life, such as remedial education, retraining, etc. Second, these programs—by improving cognitive function—multiply the benefit that individuals get from current educational programs. Third, early intervention has been shown to reduce the need for social services, welfare, and even corrections. Given the large social benefit of an effective early childhood program, failure to invest more into these programs is inefficient. Yet, policymakers continue to prioritize primary, secondary, and higher education in their budgets.

## PRIMARY AND SECONDARY EDUCATION

Funding for primary and secondary education is sizable, yet American students continue to fall behind by international standards, particularly in math, where the U.S. ranks 26th out of the 34 OECD countries. The poor quality of American primary and secondary schools stands in stark contrast with its world class University system, which attracts top talent from around the world. Creating a more effective primary and secondary education system is an important piece of the puzzle in workforce development. Schools struggle for many reasons, and the debate over how to fix them is divisive. The aim here is to consider policies that increase school quality by reducing teacher turnover, by increasing linkages between students and firms with apprenticeships, and through the provision of mentorship programs.

“Teacher Induction” refers to mentorships and support services aimed at helping teachers—particularly first-year teachers—adapt to the classroom. These policies involve matching new teachers to more experienced teachers and faculty who can act as mentors, guiding them through the difficulties associated with teaching. Smith and Ingersoll (2004) find that teacher induction policies positively impact school productivity, teacher quality, and increase institutional cohesion in schools. Further, these support services were shown to greatly reduce turnover of

first-year teachers. When teachers are more prepared for the job, and have input and support from their older colleagues, they are better equipped to meet the needs of the students they serve. Placing more emphasis—and funding—on teacher induction could be a cost-effective way of improving primary and secondary education, and as a result, could better prepare students for the challenges they'll face in the workforce.

Secondary schools, particularly high schools, play an important role in the formation of a skilled and educated workforce, and could do a better job guiding students as they make life-defining investments in their future. Offering more internships and apprenticeships could help students learn about career opportunities while giving them exposure to employers. Heckman (2000) stresses the importance of creating linkages between school and work earlier on, and looks to the German apprenticeship system as a model. Heckman cites three key features to their approach:

- 1 Breaking down the artificial separation between the world of work and the world of learning by offering apprenticeships.
- 2 Giving students and the firms that apprentice them choice among a variety of learning situations.
- 3 Motivating students to perform well in order to secure the most desirable apprenticeships and motivating many firms to provide valuable training opportunities.

The key element is that schools and firms are in direct contact; this contact increases the information available to students, about the skills in high demand, and to firms, on the available talent. More interaction between student and firm is key to eliminating the skills gap, and the earlier these interactions occur, the more time students have to think about—and make—the right investments in their education and/or training.

Behavioral and motivational problems are significant impediments to student learning, and to institutional cohesion. The disciplinary role that teachers play is one contributing factor to their high rate of turnover. For students, behavioral and motivational problems can be major roadblocks to success, and can disrupt both cognitive and non-cognitive skill development. Non-cognitive skills include social skills, adaptivity to new environments, and motivational frameworks. Though these skills are not testable the way cognitive skills are (IQ tests), they are as important—if not more important—to long term success than cognitive factors. Heckman (2000) shows how an effective mentorship program helped students stay out of trouble and overcome obstacles, which has the potential to improve school environments. Heckman examines the Big Brothers/Big Sisters and the Philadelphia Futures' Sponsor-A-Scholar program and the benefit they provided to students:

*“18 months after being matched with a mentor, Little Brothers and Sisters (ages 10 to 16 at the time of the match) were less likely to have initiated drug or alcohol use, to hit someone, to skip class or a day of school, or to lie to their parents; they had higher average grades and were more likely to feel competent in their school work and report a better relationship with their parents.”*

Mentorships could be especially important for schools in at-risk communities, where students are more likely to face difficult home environments; poverty has been linked to chronic stress which can impair cognitive function, and this can undermine success. However, Shonkoff Et al. (2015) find that children who have at least one stable and committed relationship with a supportive adult are better able to cope and adapt to stressful or traumatic experiences. And it doesn't have to be a parent, it could be a caregiver, or other another person in their life. Mentorships could provide this role, and could ultimately contribute to long term student success while improving school quality. By addressing social skills, adaptive behavior, and motivation through mentorships, the education system could better prepare students for the workforce.

## RETRAINING

Public retraining is perhaps the most direct policy avenue for fostering workforce development, notable examples of public retraining programs are JobCorps and Jobstart. Evidence from these programs are not conclusive because programs vary in effectiveness and in their benefits. For example, women saw higher wage increases from public training than men, but when training programs relocated young men (aged 20-24) out of their neighborhoods, as was the case in JobCorps, a large decrease in crime and prison sentencing helping the program pass a cost-benefit analysis. Therefore, retraining is difficult to evaluate as a whole, and more research is needed on how to design these programs. However, there are examples of training programs done right, and these can be models for best practices.

One such example is The Center for Employment and Training (CET) in San Jose, California; Heckman accounts the results of a study of this program, and they are promising: "At a cost of \$4200 per enrollee, the programme showed sustained earnings gains of over \$3000 per year (a 40% increase)." Heckman goes on to list four program attributes that he believes enabled this retraining program to successfully translate to higher earnings:

- 1 Close ties to the local labor market.
- 2 Emphasis on job skills training over basic skills.
- 3 The curriculum being tailored to the needs of each participant.
- 4 Staff having extensive local knowledge and contracts, and the program having earned a positive reputation among employers.

In addition to training for high-demand skills, a successful public retraining program, like a good secondary education system, provides linkages to local and regional labor markets. Information asymmetry is a major culprit of labor market failures, and the solution to information asymmetry is to provide more accessible information on the jobs, skills, and training programs available. Universities design their career centers for very purpose, and provide an environment where students can learn about job opportunities, have their resume's critiqued, and develop connections to firms. Retraining centers must likewise provide a comprehensive set of services, especially linkages to employers.

An alternative to public training is private or on-the-job training. The advantage of private training is that firms have better information about the skills needed in the market. Evidence from Bartel (1995) find positive and significant effects of private sector training; however, these large benefits may reflect selection effects because more apt individuals are more likely to voluntarily participate in private training. For on-the-job training, those who are hired—the more skilled—are more likely to benefit. Therefore, even though private training can increase employment and wages, wide scale use of these programs may be limited. Private influence over training could take other forms, however. For example, firms could work with technical & community colleges to host customized skills training, hiring trainees upon completion.

## CONCLUSION

The academic literature indicates that investing in a competitive and adaptable workforce begins by targeting the young—cognitive gaps that develop early can cascade into a lifetime of problems, but this process can be circumvented by an effective early childhood program. Next, American primary and secondary schools will need to improve, and this can be achieved in several different ways, including: increasing support services for first year teachers so to reduce turnover; providing more internship and apprenticeship opportunities for high school students; and integrating mentorship services into schools. These approaches would improve institutional cohesion of schools, creating a better learning environment for students. More research is needed on how to design public retraining programs. However, a retraining program must link participants directly to employers in addition to providing skills training.

The literature reviewed here provides a broad overview of the set of policies available for fostering a better workforce, and many topics were not discussed. However, takeaways can be made, specifically on the importance of a life-cycle of approaches to learning; good education policy builds on itself, benefits are synergistic. Conditions early in life affect a child's capacity to effectively learn in school, bad home environments can be barriers to non-cognitive skills, and information asymmetries limit the individual's capacity to make informed choices during education and in the labor market. For each of these challenges, thoughtful policies can be crafted as a solution; many such policies were discussed above, but still more were not touched upon. Creating cohesion between the various institutions that guide a child into adulthood should be the primary goal of workforce development policy, only with a sense of continuity, empowerment, and opportunities will individuals be equipped to contribute to a thriving and innovative economy.

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