

EXECUTIVE SUMMARY

Many have argued that to successfully compete in the 21st Century U.S. labor market one needs at least a four-year college education. Indeed, for many of the best paid jobs in the Commonwealth, there is some truth to this claim. To compete with young workers with an advanced education who are coming to Massachusetts to find employment, it is necessary that we do everything we can to assure that all of our own residents who can benefit from a bachelor's degree or graduate study are afforded this opportunity.

But as this research reveals, by the beginning of the next decade a majority of expected job openings in Massachusetts will still require less formal education than the B.A. degree with a large majority requiring no more than vocational education or a community college associates degree.

This conclusion is based on new research that projects the education requirements needed to fill the jobs that likely will become open in Massachusetts by 2022. The Dukakis Center for Urban and Regional Policy at Northeastern analyzed U.S. Department of Labor projections to estimate the number of likely job openings in each of 675 detailed occupations between 2012 and 2022. Then, using U.S. Census Bureau American Community Survey data on current Massachusetts workers and the education trajectory of vocational school graduates, we projected how many of these future job openings in each detailed occupation could be filled with workers who will likely attend vocational schools in the Commonwealth. Finally, a survey of vocational school administrators was conducted to ascertain whether the state's vocational schools are prepared to meet future labor market needs.

This report has six major conclusions:

- Between 2012 and 2022, our research projects a total of nearly 1.2 million job openings in the Commonwealth. Two-thirds (66%) of all these expected job openings — nearly 780,000 — will occur as the result of retirements from existing jobs and the need for replacement workers who choose to leave a job in a particular occupation for another one. The remaining 382,000 of these projected job openings will occur as the result of net new job creation — an increase of 11.4 percent over 2012 levels. As such, simply looking at net employment growth misses two-thirds of the action in the coming Massachusetts labor market. Moreover, unless there is a profound change in the education requirements for these projected job openings, the vast majority of these replacement jobs will require little more education than that of current workers who occupy these positions.
- More than three out of five of the nearly 1.2 million job openings (63%) — due to net new job creation plus the need for replacement workers — will require less than a B.A. degree and one-third (33%) will require no more than a high school degree.
- Assuming no expansion of the vocational school system in Massachusetts, vocational school graduates will be able to fill approximately 11.7 percent of all job openings by 2022. Many of these jobs will be filled by students who go no further than a degree from a vocational school. But based on the experience of recent vocational school graduates, we expect a large number of future graduates to pursue additional education. As such,

while the state's future vocational school graduates will fill nearly 16 percent of all projected openings requiring no more than a high school degree, those going on to further education could fill 11 percent of openings requiring some college, 23 percent of openings requiring a community college associates degree, and nearly six percent of openings requiring a B.A. or more.

- Notwithstanding the vocational schools' ability to meet a significant portion of Massachusetts projected job openings, the Commonwealth's vocational schools need to find a way to increase their efforts at preparing workers for fields that are most dependent on such training. Mainly because of the need to fill jobs vacated by retiring workers, by 2022 Massachusetts employers will need to fill 27,000 job openings in Production Occupations and nearly 43,000 in Construction and Extraction Occupations. At present rates, the Commonwealth's vocational schools are projected to meet only 23 percent of expected demand for production workers about 23 percent in Construction.
- While various regions of the state have vocational schools that seem to be positioned well to meet their regions' projected occupational openings, there are other areas of the state including the City of Boston, the Metro North Region, Metro Southwest, and the Cape & Islands where more attention needs to be paid to increasing the capacity of vocational schools to meet projected job needs.
- A concurrent Dukakis Center analysis of the state's regional vocational schools and comprehensive schools with vocational programs suggests that for the most part the administrators of these schools are well aware of specific future occupational demand in the Commonwealth and are trying to meet that demand. With additional resources these schools could be well positioned to increase their training capacity to meet the Commonwealth's need for skilled workers.

Report Highlights

"... The majority of the expected job openings in MA between now and 2022 will require no more than a vocational education or a community college associate's degree." (*Introduction, Page 5*)

"...net growth in employment of nearly 382,000 jobs — an 11.4 percent increase in total employment during this decade" (*Section 2, Page 8*)

"...the number of projected total replacement workers between 2012 and 2022 is expected to reach nearly 780,000 — more than twice as many as net new job positions" (*Section 2, Page 10*)

"Altogether, counting new jobs and replacements jobs will require training of nearly 1.2 million workers by 2022." (*Section 2, Page 10*)

"...Simply looking at employment growth misses two-thirds of the action in the labor market" (*Section 2, Page 10*)

"...if the state's vocational schools continue to school the same number of students through 2022 as they do now, graduates from these schools could fill approximately 11.7 percent of all job openings over the decade" (*Section 4, Page 19*)

"...various regions of the Commonwealth will be in much better shape to meet the needs of employers than others. It also suggests the possible need of focusing more attention on vocational education in areas like Boston, the Metro North Region, Metro Southwest, and the Cape & Islands." (*Section 4, Page 19*)