READY NATION
COUNCIL FOR A STRONG AMERICA

REPORT

Ensuring Oregon's Global Success

Shrinking our "skills gap" through wise investments in children's learning

StrongNation.org/**ReadyNation**

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Acknowledgements

Council for a Strong America is a national, bipartisan nonprofit that unites five organizations comprised of law enforcement leaders, retired admirals and generals, business executives, pastors, and prominent coaches and athletes who promote solutions that ensure our next generation of Americans will be citizen-ready.

ReadyNation: Business, Kids, Workforce
Business executives building a skilled workforce by promoting solutions that prepare children to succeed in education, work, and life

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Executive Summary

If current education and labor market trends continue, Oregon will face a serious skills gap. By 2020, 70 percent of all jobs in Oregon will require postsecondary education. But only 65 percent of Oregonians currently have this level of education, leaving a 5 percent gap. **This gap translates into more than 100,000 open positions for which we won't have qualified applicants, thus leaving business teams disrupted and making Oregon less competitive.**

The skills deficiencies go beyond those related to specific occupations. Oregon businesses are also concerned about the lack of increasingly important "deeper learning skills"— such as communication, collaboration, and critical thinking—required for virtually any occupation in today's world. In a recent survey conducted by the Wall Street Journal, business executives reported that such skills are extremely important and that they frequently have a difficult time finding employees with these skills.

A pipeline of skilled workers will be hard to create when 26 percent of Oregon high school students fail to graduate on time, and only one-third of our public school students meet college-readiness benchmarks on the ACT. The results will be costly for students, businesses, and our entire state – reflected in the price tags for remedial education, lowered lifetime earnings, and poorer tax receipts.

To reverse Oregon's skills-gap troubles, ReadyNation's business members urge the adoption of educational approaches that will help ensure students develop their mastery of core academic content and the deeper learning skills needed to produce a world-class, competitive workforce. Oregon has invested in these approaches, but not sufficiently: While competitive grants have provided some students with these opportunities, support is frequently not sustained. Further, deeper learning programs do not reach many students who can benefit from them.

The bottom line: The future of Oregon's economy depends upon the caliber of our workforce. If we expect to compete and succeed in the global marketplace, we must act now to ensure our businesses have the skilled workforce we need.

Unprepared Students, Unprepared Workforce

Although businesses have always needed workers proficient in the "3 Rs" – reading, writing, and arithmetic – today's fast-paced, international marketplace requires even higher proficiency levels of these basic skills. But they are too often lacking, especially among those entering the workforce.

- According to the "Nation's Report Card"—the National Assessment of Educational Progress —only 36 percent of Oregon 8th graders are proficient in reading, only 34 percent are proficient in math and only 35 percent are proficient in science.[1]
- 26 percent of Oregon high school freshmen fail to graduate within four years—the third worst rate in the nation.[2]
- In 2016, only 32 percent of Oregon students taking the ACT test met college-readiness benchmarks in the four subjects tested—English, reading, mathematics, and science. ACT research shows that students meeting the benchmarks have a strong likelihood of being successful in college.[3]

In addition to basic competencies, employers are increasingly concerned about a lack of communication, collaboration, and critical thinking skills—deeper learning skills. In a survey of 900 executives conducted by the Wall Street Journal, most (92 percent) believe that these skills are as important or more important than technical skills.[4] In that same survey, nearly 9 out of 10 executives report that they have difficulty finding employees with these skills.

Oregon's Growing Skills Gap

With education outcomes that need improvement, in addition to jobs that place an increasing emphasis on a variety of skills, how will the Oregon workforce of the future fare?

Examining state rankings on the percentage of students who graduate from high school on time, Oregon ranks near the bottom, in 47th place.

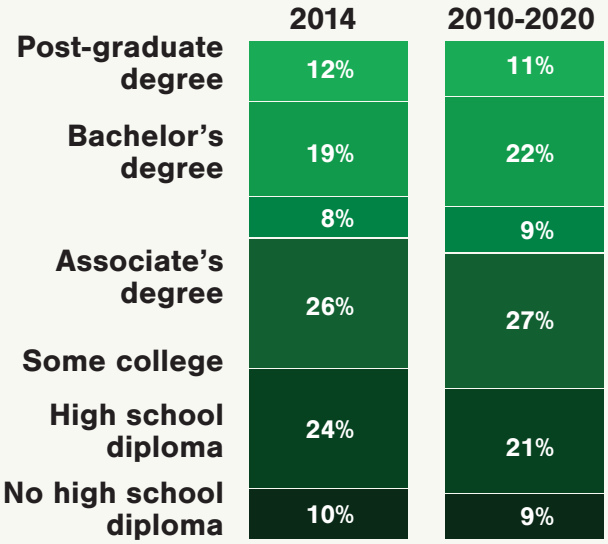
Rising Education Requirements

If current education and labor market trends continue, Oregon will face a serious skills gap. Consider these projections for Oregon:

- Of the 2.1 million jobs that will exist in Oregon in 2020, 70 percent will require some level of postsecondary education — but only 65 percent of Oregonians have this level of education, leaving a 5 percent gap. That gap will result in approximately 100,000 positions for which there won't be qualified applicants, **thus leaving business teams disrupted and making Oregon less competitive.**[5]
- Our state is midway through a decade, 2010-2020, in which there will be nearly 700,000 total job vacancies as a result of new jobs and openings from retirements and career switches. Among these will be more than twice as many job openings requiring postsecondary education (480,000), compared with openings for those with a high school education or less (214,000).[6]

Job Openings Require Postsecondary Education Many Oregonians Lack

In 2014, 39% of Oregonians had postsecondary degrees. But 42% of job openings this decade require degrees.



Source: US Census, 2014; Georgetown Center on Education and the Workforce

- Middle-skill jobs account for 51 percent of Oregon's current labor market, but only 47 percent of the state's workers have a middle-skill level.[7]

Focus on Science, Technology, Engineering, and Math (STEM)

Jobs that are heavily reliant on science and technology are growing. The number of STEM jobs in Oregon is expected to grow by 19 percent in the current decade (2010-2020; versus 10 percent for blue collar jobs and 15 percent for sales or office support jobs).[8] Workers often need postsecondary education to capitalize on these types of jobs. In fact, 94 percent of Oregon STEM job openings will require some level of postsecondary education and 69 percent will require a bachelor's degree or higher.[9]

Health care support jobs are growing fastest in Oregon, with 34 percent growth expected this decade compared with 17 percent growth overall, on average. But only about one-quarter of health care support jobs will be available to those with only a high school diploma or less; 72 percent will require some postsecondary education.[10]

High Cost of the Skills Gap

The lack of a skilled workforce comes at a high cost for individuals, businesses, and the economy.

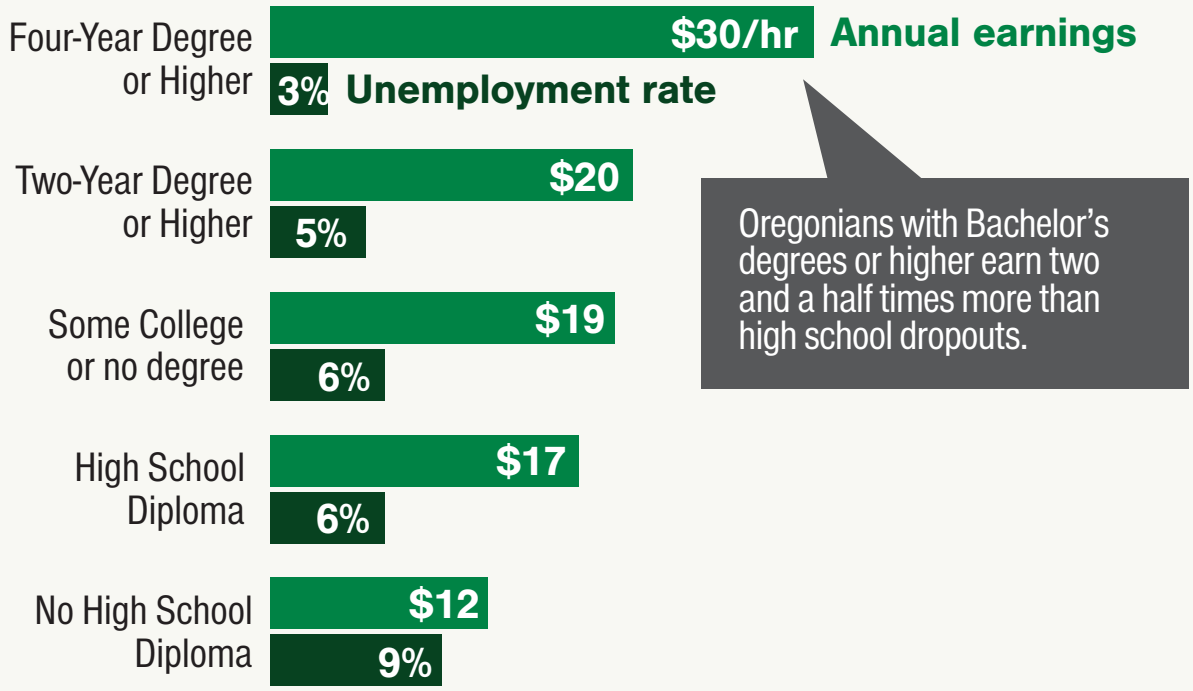
The unemployment rate for Oregon workers with only a high school diploma (6 percent) is nearly twice as high as that for workers with a bachelor's degree or higher (3.2 percent).[11] The wage gains from postsecondary education are clear, as well: workers with a bachelor's degree or higher earn over $10 more per hour than a high school graduate and almost $20 more per hour than a high school dropout.[12]

Graduating even an additional 1,000 of Oregon's high school dropouts could result in impressive economic benefits. These 1,000 extra graduates would likely:

- collectively earn $10 million more in an average year than they would without a diploma;
- increase the gross state product by $13 million; and
- increase state/local tax revenues by $1.6 million annually.[13]

Oregonians with Postsecondary Education Have Higher Earnings and Lower Rates of Unemployment

Compared to those with a high school diploma, Oregonians with a Bachelor's degree or higher have 76% higher earnings and are 50% less likely to be unemployed.



Source: State of Oregon Employment Department

Remedial courses and training to help students catch up and get on track for higher education and training are helpful, but they are expensive and inefficient. Almost three-quarters of recent high school graduates entering community colleges in Oregon require remediation. This remedial education costs Oregon students and the state an estimated $41.5 million annually.[14]

Closing the Skills Gap Through Deeper Learning

Business leaders know that young people entering college and the workforce need deeper learning skills:[15]

- A mastery of core academic subjects;
- The critical thinking and problem-solving skills necessary to find answers to challenges that—unlike multiple choice tests—are not necessarily on the page in front of them;
- Effective written and verbal communication skills to work as part of a team, or to interact with the public;
- Collaboration skills, such as interpreting others' messages and responding appropriately;
- The ability to direct their own learning, setting goals and tracking progress

toward those goals;

- An "academic mindset": self confidence, persistence and an understanding of how school prepares them for future success

These are skills that can be taught and reinforced, especially through hands-on learning and in the workforce. All of this goes beyond "textbook" learning to provide students and workers with the skills now needed in a competitive global market.[16]

This deeper learning approach is being implemented around the nation, including through innovative education models at the K-12 level. Many of these programs spark students' imaginations, provide opportunities to attain credentials, and help give their education greater, real-life relevance by demonstrating practical connections between what they learn in the classroom and what they might do on the job, later in life – often through real-world, work-based learning experiences supported by industry and community partners.

Career Academies

"Career academies" demonstrate a proven approach found throughout the United States that incorporate real-world, work-based learning. Although some programs are stand-alone schools, most are pathways within larger comprehensive high schools. Often called a "school within a school," pathways typically comprise no more than 200 students who stay together with the same teachers for the duration of the program. That continuity helps create close relationships among the students and with their teachers. It can create the kind of "team player" mentality employers too often find lacking in many of their employees.[17]

Key elements in proven and promising high school education models, such as Career Academies, are:

Work-based learning such as mentorships, job shadowing opportunities and internships with local employers brings actual career relevance to the students, deepening their understanding of how traditional academics are used in careers. This helps direct them toward training and education opportunities that will get them the skills Oregon employers are seeking.[18]

Project-based learning helps students make connections across subjects and brings greater relevance to classroom learning. Students work together on projects, developing academic and technical skills, as well as more experience with collaboration, communication and critical thinking.[19]

School-based enterprise, like student-led businesses or community service initiatives, is another form of work-based learning. It allows students to design, produce and deliver real products and services.

Resource Link Charter School, Coos Bay[21]

The Resource Link Charter School offers flexible learning for students in grades K-12, **using a combination of textbooks, project-based learning and online education.** Students design projects in collaboration with teachers, experts and other students. This approach fosters innovation and creativity and prepares students for college and careers.

Source: http://www.resourcelinkcharter.org

Support services, including counseling as well as additional instruction in reading, writing and mathematics, help students keep their grades up and stay on track for graduation.[20]

Health & Science, Beaverton

The Health & Science School was founded in 2007 and serves students in grades 6 to 12. The school focuses on STEM, offering college credit courses in several subjects. At the school, "students construct deep understandings and learn essential skills by creating real products for real audiences." **Learning occurs in collaborative teams and students develop critical thinking skills that will prepare them for college.** Two career pathways are available, the Medicine and Health Academy or the Engineering and Design Academy.

Source: https://www.beaverton.k12.or.us/schools/health-and-science/about-us/PublishingImages/Pages/School-Overview/hs2brochure.pdf

In a well-designed study of career academies across America, students were twice as likely as nonparticipants to be working in the computer, engineering, and media technology sector eight years after graduation, thus helping to increase the supply of STEM workers.[22] Young people who went through career academies earned more and were more productive than those not in the program.[23]

Deeper Learning Educational Models

A number of schools around the nation have adopted educational approaches to promote deeper learning and help ensure that students focus on problem solving, critical thinking, and communication and collaboration skills, to be college- and career-ready. Included among the educational models that focus on developing deeper learning skills are Expeditionary Learning, EdVisions Schools, Big Picture Learning, and New Tech Network.

In Oregon, there are several school models that focus on cultivating deeper learning skills.

Expeditionary Learning (EL) is a comprehensive school reform model that uses project-based learning to help students cultivate critical thinking, problem solving, and collaboration. A hallmark of this school reform model is learning expeditions, which are interdisciplinary real-word projects that serve as the primary curriculum units in EL schools. Student success is assessed using three indicators: mastery of knowledge and skills, quality of student work, and character.[24] Expeditionary Learning has a network of 152 schools in 30 states, including four schools in Oregon, in Beaverton, Bend and Hillsboro.

Rural Students in Oregon Are Less Likely to Enroll and Persist in College[28]

A recent study of 9th grade students who attended public schools in Oregon in 2005, 2006 or 2007 examined their educational outcomes over time. Results indicated that, compared to non-rural students, student from rural areas were less likely to enroll in college and to stay in college into the second year. This pattern of results held for students at all achievement levels, even those who scored at the highest levels on standardized tests. The authors argued that in order to increase college completion rates in Oregon, we must pay particular attention to rural students.

The EdVisions school model provides self-directed, project-based learning for its students. The key elements of EdVisions schools are: small learning communities, self-directed project-based learning, authentic assessment, and teacher ownership/ democratic governance. EdVisions schools operate 37 schools in 11 states, including one in Oregon, the Resource Link Charter School in Coos Bay.[25]

A study by a respected research and evaluation organization, the American Institutes for Research, provides promising results supporting the deeper learning approach.[26] The study compared student outcomes in 13 pairs of deeper learning and traditional schools serving similar, disadvantaged students in several districts in California and New York. Students in deeper learning schools:

- **Were 16 percent more likely** to graduate from high school on time (65 percent versus an estimated 56 percent who would have graduated on time in comparison schools[27]);
- **Achieved higher scores** on tests of English language arts, reading, math, and science;
- **Were 19 percent more likely** to enroll in four-year colleges and 62 percent more likely to enroll in selective colleges; and
- **Reported higher levels** of some non-cognitive skills, including collaboration, academic engagement, motivation to learn, and self-efficacy. However, for other non-cognitive skills, there were no differences (creative thinking, perseverance, perceived control, and self-management).

Although definitive evaluation research has not yet proven the effectiveness of models such as these, through these promising models Oregon high school students can understand the skills they will need in a particular occupation and can make more informed decisions about postsecondary education and training. Whether they go directly into the workforce or pursue advanced education, these students will ultimately enter the workforce much more prepared to hit the ground running, potentially reducing the time and cost of on-the-job training.

Conclusion

Oregon runs the risk of falling behind when it comes to preparing the future workforce to compete successfully in a global economy. Recognizing this risk, the state must take steps to address the skills gap, and continue on that course. To meet the future demands of a more skilled and educated workforce, policymakers should invest in what really works and support promising and evidence-based approaches that will ensure young people enter the workforce with the skills Oregon businesses need.

Innovative educational models, such as those incorporating deeper learning approaches, merit greater support to ensure students exit high school better-prepared for promising careers, as well as whatever postsecondary education and training they might pursue. Oregon must expand previous support for these models, so they are sustained and reach more students who can benefit from them. If we are serious about securing Oregon's economic future, we must act now to provide our businesses with the highly-skilled workforce needed to innovate and grow in the increasingly global marketplace.

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