

## 3. EDUCATION AND WORKFORCE

### RECOMMENDATIONS

For Oregon to succeed in the 21<sup>st</sup> century, all Oregonians in all their diversity must be educated at higher levels than ever before. Oregon should embrace the ambitious education benchmarks proposed by the Governor and adopted by the Legislature:

40 percent of Oregon adults should have a bachelor's degree or higher (compared with 28 percent now), another 40 percent should have at least an associate's degree or other technical credential, and the remaining 20 percent should have a high school diploma that represents a high level of academic and work readiness skills.

To meet these appropriately aggressive goals, business leaders call for both broad *systemic change* to the PreK-20 education system, as well as a number of *targeted interventions*.

#### Systemic Changes

1. *Embrace the new high school diploma.* The new diploma will require students to meet standards to prepare them for postsecondary study, work and citizenship. Policymakers, educators, and the business community need to find collaborative ways to support students and schools to achieve these results.
2. *Support improvement of learning programs and delivery systems to help student meet the new graduation requirements.* Measures to do this should include small high schools, career academies, dual enrollment and early postsecondary credit programs, greater integration of career technical education and academic rigor, and closer integration of education and workforce programs.
3. *Improve cooperation and communication among PreK-20 institutions, workforce organizations, and employers in implementing high school graduation standards and meeting the job skill requirements of career fields.*
4. *Remove the financial barrier to postsecondary education for all Oregonians.* The state should guarantee that studies beyond high school are financially feasible for every student who graduates with the new diploma. To do so, Oregon should fully fund and broadly communicate the value of the Oregon Opportunity Grant and the Shared Responsibility Model.
5. *Prepare a unified, transparent, student-centered budget, PreK-20 for review by the 2009 Legislature.* The new budget model will need to be jointly designed by the executive and legislative branches, and should help identify the highest priority actions for the 2009-11 biennium.
6. *Advance work on a seamless, engaging PreK-20 curriculum and integrated student data system.*

#### Targeted Interventions

1. *Respond to urgent industry needs.* Oregon should focus on high-demand, high wage occupations. Key targets should include: a manufacturing workforce initiative connected to high school, community college and university for entry into technical and managerial occupations; continued investment in engineering to double the output of engineers in Oregon; and a curriculum for renewable energy and other jobs in emerging green industry clusters.
2. *Invest in K-12 practices validated by rigorous research.* Oregon should direct School Improvement Fund resources to the handful of K-12 programs proven through experimental trials, including K-1 class size reductions, K-2 reading tutors and monitors for students at risk of dropping out of high school.
3. *Investigate professional compensation models for teachers.* Oregon should explore new ways to expand career paths and reward teachers for student achievement, such as Chalkboard's Class Project being piloted in three school districts.
4. *Revamp K-12 teacher professional development.* Examine new strategies to support teacher professional development, including assistance in implementation of the new high school diploma.
5. *Support innovative workforce development models.* Create career pathways for adult learners that offer courses in small learning modules to enable progress while working, and continue work on developing career readiness certificates.

#### Next Steps

To achieve this bold vision, Oregon needs a dialogue among policy-makers, educators, business and community leaders and with the larger public. With this in mind, we call for

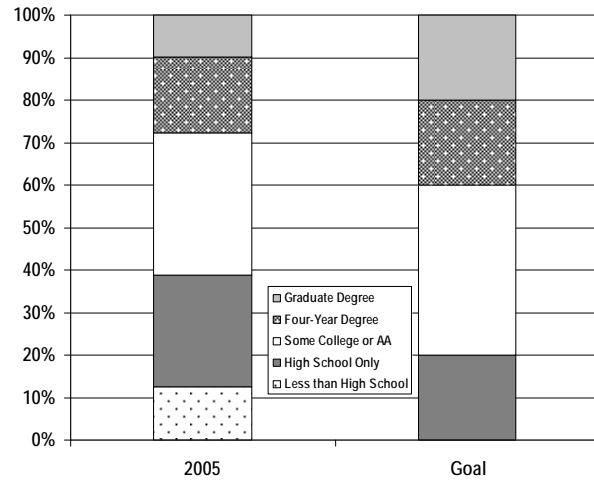
- A statewide Education Summit in 2008 to bring together key stakeholders.
- A broad-based engagement with the public to help refine the vision and earn support.

## The Vision We Are Trying to Accomplish

Education is the foundation of Oregon’s economic aspirations. For its companies and its economy to compete effectively in the global marketplace, Oregon must educate as many of its people as possible at the highest levels to which they aspire. All competitive, efficient enterprises require well-educated, skilled employees. This is particularly true of businesses that compete globally through innovation driven by knowledge workers. Such employees are going to be in shorter supply in coming years as the economy expands and as knowledge workers in the Baby Boom generation retire. Many Oregon employers say they are encountering these shortages already.

In keeping with this vision, the Business Plan proposes that Oregon dramatically increase the education attainment of Oregonians generally, and, at the same time, concentrate resources on specific skills and job readiness for high-demand occupations that will support economic growth in traded-sector industries.

Oregon’s Education Attainment: Current and Goal



Source: 2005 American Community Survey

**40-40-20.** The broad vision for education attainment is captured in a formulation that has come to be called 40-40-20:

40 percent of Oregon adults should have a bachelor’s degree or higher, another 40 percent should have at least an associate’s degree or other technical credential, and the remaining 20 percent should have a high school diploma that represents a high level of academic and work readiness skills.

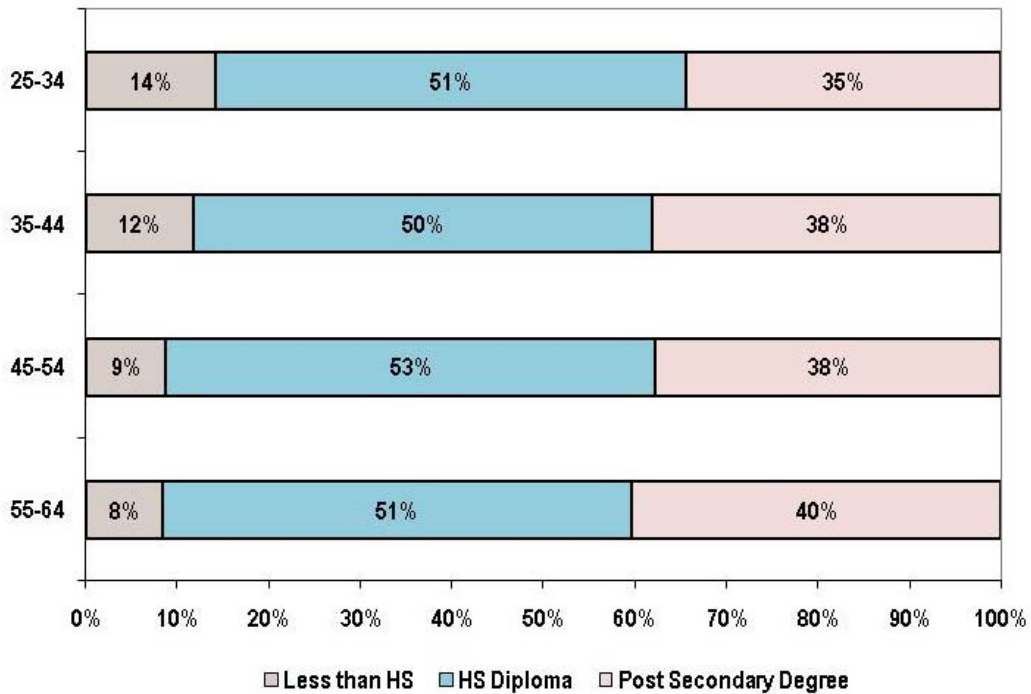
These attainment targets were embraced by Governor Kulongoski in his presentation of the 2007-09 education budget, and adopted by the Legislature in HB 3162. As the adjacent chart illustrates, this vision represents substantial increases in attainment at all levels.

The challenge of achieving such attainment should not be underestimated because Oregon is moving in the wrong direction. The generation of young working-age Oregonians (age 25-34) is more likely to have dropped out of high school and less likely to have graduated with a postsecondary credential than the generation poised to retire (age 55-64). While ambitious, these are levels currently being achieved in other nations and states. To be competitive economically, Oregon needs to step up its education attainment.

The 40-40-20 vision cannot be achieved overnight, but our experience with engineering education – where we are making tangible progress in doubling engineering graduate output – proves that feasible intermediate benchmarks can help us on the path to the larger vision. In the same vein, Oregon should also explore doubling the output of graduate-level health care professionals in the upper 40 percent target within a reasonable time frame (say, eight to ten years). In the 20 percent target, it should put resources and incentives in place to be sure that students without a high school diploma are at least *working* on a diploma, a GED, or other postsecondary certificate.

The recommendations that follow in this section will help Oregon turn out more well-educated Oregon residents. But the state should also adopt strategies to encourage innovation-driven companies and talented people to locate here, using as leverage our quality of life and our lead in sustainability. Attracting more top high school students from out of state to our public and private four-year institutions is another way to import well-educated talent. Many who go to school here decide to stay.

Educational Attainment Rates of Working Age Oregon Residents, 2006



Source: ECONorthwest analysis of 2006 American Community Survey

**High-Demand Workforce Strategy.** From the perspective of economic development, the urgency of achieving these goals can hardly be understated. Earlier Business Plan papers have documented the challenges facing Oregon with growing requirements for skilled labor, and the shortages facing many employers. The Workforce Investment Board reached similar findings in its strategic plan, *Winning in the Global Market*. In focus groups with industry clusters conducted this fall for the Oregon Business Plan, nearly every group cited workforce issues as a key constraint to growth in Oregon. In manufacturing, for example, 43 percent of firms report a shortage of skilled workers *now*, according to the *Oregon Manufacturing Workforce Strategy*. Engineering companies report a severe shortage in engineers and computer scientists with a bachelor's degree or higher. Likewise, companies that depend on technology, such as banks, insurance companies, and hospitals, are encountering more difficulty in finding highly qualified candidates for technical positions.

As noted later in this initiative paper, Oregon can address this problem in part by expanding the workforce education component built into its new high school graduation requirements, and proven in a number of school districts in Oregon.

Within this framework we also propose that Oregon continue to focus on education attainment in high demand occupations that will support economic growth. For example, demand is growing for scientists and engineers among technology and innovation clusters, and for production technicians and front line managers among manufacturers. Job demand is also growing outside of the traded sector in areas such as health care and in our emerging green industries. In December 2007, Oregon is expected to complete a “Sustainable Oregon Workforce” study. Decision-makers should pay close attention to the recommendations that come out in this report.

Employers can also address such shortages in significant part by broadening their target workforce to include people with disabilities, retirees returning to work, and individuals from diverse communities historically underrepresented in the workplace. Achieving this greater inclusiveness will require a more effective business-education partnership than ever before. The adjacent sidebar updates recent progress in workplace inclusion for Oregonians with disabilities.

### Where We Stand

The report is mixed regarding Oregon’s efforts to improve its PreK-20 education system. There were some big wins for education in 2007, and education officials have continued in earnest to make system improvements begun several years ago. We applaud and support these accomplishments, yet need to realize we have more work ahead of us than behind us in achieving the 40-40-20 vision. In particular, Oregon must make the entire education experience from preschool to technical training to graduate school more seamless and cohesive, and it must fundamentally redesign the education experience for the adolescent age span that encompasses the end of middle school through the beginning of postsecondary education. In particular, the high school experience must become more interesting, challenging, supportive, and rewarding for more students.

**Wins in 2007.** This year, Oregon renewed its focus on education.

- *Funding Restoration.* With strong revenues in hand, the Legislature restored at all system levels a large share of funding that has languished in recent years. Not only did the K-12, community college, and university systems receive significant increases, so did targeted investments along the education continuum that have promising results such as Head

#### UPDATE: GREATER INCLUSION OF WORKERS WITH DISABILITIES

The Oregon Business Leadership Network, with business and public sector partners, made several recommendations in last year’s Business Plan to help Oregon businesses recruit and accommodate more workers with disabilities.

One of these recommendations was to create an interactive website as a forum for business-to-business networking and as a resource on accommodation measures and resources.

Since the site, OBLN.org, was launched in 2005, its visits have grown to about 8,000 a month. It contains an e-magazine on inclusion issues and it has become a key tool in achieving two other recommendations: 1) creating a clearinghouse of accommodation resources and brokerages to meet business needs, and 2) creating a smoother interface between accommodation expertise and Oregon business. In 2008 the site will add blogging and streaming video capability.

OBLN has also made progress on its recommendation to offer business-led forums on linking accommodation strategies and measures to business plans. It conducted eight forums in 2007 with 25 to 30 businesses in attendance at each. It hopes to offer 12 such forums in 2008.

Other notable OBLN accomplishments:

- Opened a Salem chapter.
- With the Oregon Business Plan, produced a video, “My Abilities” to acquaint employers with the skilled contribution of disabled workers.
- Expanded its student intern program, involving students in 12 companies.
- Continued to give high school special education students work site exposure.
- Held a career fair, bringing employers together with 400 job seeking students and adults with disabilities.

Start, engineering (ETIC), health occupations, and the Oregon Opportunity Fund, the state's need-based grant program for college students.

- *New High School Diploma Standards.* In January 2007 the State Board of Education adopted demanding new standards for earning a high school diploma, and in the 2007 session, these were adopted as law. Under these standards, the knowledge and skills required for successful entry in postsecondary education are the same ones required for successful employment, in particular in skills such as reading, writing, math, problem solving, and teamwork.
- *Action on Budget Overhaul.* The 2007 session authorized and funded an Education System Design Team through the Governor's Office to take up overhaul of the state's fragmented education budgeting process.
- *K-12 Teacher and Administrator Mentoring.* All new Oregon teachers, principals, and superintendents will receive two years of high quality mentoring, which will phase in over four years. The assistance is designed to reduce the attrition rate among new teachers, 37 percent of whom leave the profession during the first five years.
- *Rewarding Transportation Innovation and Elevating Best K-12 Business Practices.* The Legislature charged the Oregon Department of Education with evaluating the K-12 transportation funding formula and developing alternatives that reward innovation. Lawmakers also funded a process through which the Secretary of State's Office will identify and disseminate best business practices in local school districts.

#### HIGHLIGHTS OF RECENT ACCOMPLISHMENTS

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| <ul style="list-style-type: none"> <li>✓ The state's 2007-2009 budget increased investment in education across the board, including full funding for Head Start, increases in funding for engineering related programs, and a significant increase in postsecondary need-based financial aid.</li> <li>✓ Oregon adopted new, more rigorous high school graduation requirements.</li> <li>✓ The Legislature authorized an effort to redesign the state's education budgeting.</li> <li>✓ The Legislature expanded teacher and administrator mentoring program.</li> <li>✓ The Department of Education, high schools, community colleges, and universities worked together to implement the Expanded Options program to create addition paths for qualified high school students to earn postsecondary credit.</li> <li>✓ The Department of Education will examine alternative methods to finance student transportation with the goal of rewarding local district innovation.</li> <li>✓ Legislators launched an effort to identify and disseminate best business practices in K-12 school districts.</li> <li>✓ Oregon now has adopted strategic plan for workforce development, <i>Winning in the Global Market.</i></li> </ul> | <ul style="list-style-type: none"> <li>✓ The Legislature adopted the Shared Responsibility Model as a better way to distribute state need-based financial aid.</li> <li>✓ In fall 2006, 19 small public high schools opened with support from E3's Oregon Small Schools Initiative (funded by the Gates Foundation and Meyer Memorial Trust), bringing its total number of schools to 30.</li> <li>✓ The Board of Higher Education led efforts to create programs that support students in pursuing high-demand occupations in fields such as health care and engineering.</li> <li>✓ Coordinated by the Board of Higher Education, all Oregon postsecondary institutions standardized their advanced placement credit policies.</li> <li>✓ With leadership from the Joint Boards, Oregon's university and community college systems have implemented student transfer and dual enrollment procedures more accessible to students.</li> <li>✓ Governor Kulongoski created the Employer-Workforce Training Fund to help create and retain living wage jobs in Oregon and to develop a highly skilled workforce.</li> </ul> |
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To meet Oregon’s appropriately aggressive vision for education, business leaders call for both broad *systemic changes* to the PreK-20 education system, as well as, a number of *targeted interventions*. The former are strategic and the latter tactical. Oregon needs both approaches to achieve its ambitions in education attainment.

## Systemic Changes

1. ***Embrace the new high school diploma.*** Oregon’s new high school graduation requirements, due to be phased in over the next seven years, are designed to better prepare Oregon students for postsecondary education, work, and citizenship. The new diploma raises the bar for graduation credits in two important ways. First, it increases the minimum number of required credits to graduate from 22 to 24. Second, it increases the number of required credits in the core subjects of Math, English, and Science, and further specifies that Math credits must be at the Algebra I level or higher.

Just as importantly, the new diploma calls for competence in two broader sets of skills and knowledge that both postsecondary educators and employers agree are essential for success in studies and occupations after high school. Under the new requirements, students must leave high school competent in what are called *essential skills*. These are skills in reading, writing, math, listening, speaking, reasoning, and inquiry. Students must also meet *career related learning standards* – demonstration of personal management, problem solving, communication with others, teamwork, an understanding of the employment environment, and capability in setting career goals and developing a plan to achieve them.

The state will phase in the new diploma requirement for all school districts over the next seven years. It should be noted that high school graduation requirements in some school districts already meet or exceed the new standards, and many students, on their own initiative, have met or exceeded these requirements for years.

*Business leaders applaud the new diploma requirements and call on policymakers to fund their timely and full implementation.*

In order to give all students the opportunity to meet the new high school requirements, school districts will have to revamp their expectations and accelerate learning, beginning with kindergarten. Teachers and administrators must retool, and they’ll need resources to do that. The Diploma Implementation Advisory Task Force is charged with advising the State Board on technical aspects of the transition, including cost, capacity, teacher supply and demand, and alignment with postsecondary curricula. Business leaders applaud the new diploma requirements and call on policymakers to fund their timely and full implementation. Business leaders also commit to working with educators to implement the essential skills component.

2. ***Support improvement of local learning programs and the systems that deliver them, so students can meet graduation requirements and ready themselves to succeed in both postsecondary education and employment.*** For example:
  - *Develop and support new high school models including small schools, career academies, and early college designed to support all students achieving the high standards established in the new diploma.* Oregon needs to revamp high school education. Large, impersonal high schools, which were originally designed to prepare a handful of young people for college and the majority for low-skill jobs, are obsolete. Technology and a competitive global

economy have created the need for all young people to have high skills and a postsecondary education to succeed. Small schools provide a personalized learning environment where students work on complex projects, study multidisciplinary topics, meet high expectations, and demonstrate what they know and can do. A growing body of evidence suggests students in small schools have higher grade point averages, perform better on standardized tests, and tend more to stay in school and graduate.

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State policymakers and local school boards should encourage and expand the career academy model. Career academies, which combine college preparatory work with technical and occupational courses in small learning environments, have boosted the post-school earnings of program participants. In a multi-site, experimental evaluation, the Manpower Demonstration Research Corporation (MDRC) reported the academies significantly reduced dropout rates among students at high risk of school failure – 32 percent of the non-academy high risk students dropped out of high school compared with 21 percent of their high-risk academy peers. Moreover, young men involved with the program earned \$10,000 more than non-academy men during a four-year follow-up period. Career academies are a widely deployed intervention across the United States, and in Oregon, more than a dozen academies are formally associated with the Career Academy Support Network (CASN). Business leaders call on the Legislature to provide technical assistance grants to existing academies to ensure they incorporate the curricula and instructional practices proven through the rigorous national evaluations.

Oregon must expand dual-enrollment, postsecondary options and college-in-the-high-school programs statewide with the goal of accelerating student learning to allow students to graduate from high school sooner and begin accumulating postsecondary credits earlier. Excellent dual-enrollment opportunities exist in pockets (such as McMinnville High School); however, Oregon still lacks clear state-level policies designed to create systematic opportunities for students to move through the high school curriculum and begin college-level instruction when they are ready. Such acceleration and additional learning options for students who have mastered the state standards or who demonstrate unique talents or capabilities and wish to continue their learning beyond that available at their local school are currently available in many other states. To achieve this goal in Oregon would require a state policy obligating each high school to develop a coordinated program of accelerated learning with one or more local community colleges and four-year institutions.

- *Better Integrate Technical Education in Curriculum and Instruction.* The new graduation requirements effectively do away with the old bifurcated tracks in which some students prepare only for college and some only for the trades. Standards that prepare all students for postsecondary education *and* work require both rigorous academic achievement *and* demonstrated competence in the general skills, basic

knowledge, and particular technical skills that apply to occupations. Spurred by the National Governors Association, there is a new movement afoot nationally to make career technical education (CTE) a more integral component of a rigorous high school education. As an NGA issue brief puts it,

Despite CTE's past reputation as a less-demanding track, research proves that career technical education engages and motivates students by offering them real-world learning opportunities, leading to lower dropout rates and greater earnings for high school graduates. When CTE courses also incorporate more academic rigor, research shows that student achievement significantly increases. These findings suggest that CTE should be an important aspect of a states' broader high school redesign strategy.

In Maryland, the brief goes on to note, 51 percent of students concentrating on CTE meet the state's university system entrance requirements, up from 14 percent a decade earlier.

Oregon is actually in a good position to build out CTE programs given its experience in the past decade developing Certificate of Advanced Mastery programs that give students options in exploring and preparing for career pathways while still meeting rigorous academic standards. Although the CAM does not survive in name, its best features do in school districts such as David Douglas, North Clackamas, and McMinnville\*, which provide models for successful CTE programs that could be adopted by other districts.

3. ***Improve cooperation and communication among PreK-20 institutions, workforce organizations, and employers in implementing high school graduation standards and meeting the job skill requirements of career fields, particularly high-demand occupations that pay well and buoy the economy.*** This is a corollary to the CTE recommendation above. If Oregon hopes to achieve its ambitious attainment vision, to implement its high school graduation standards, and to turn out graduates who are ready for further schooling and work, the stakeholders pursuing these outcomes must do a better job of working together. The education strategy and the workforce strategy must become one and the same, which is not now the case. Pieces of the two efforts touch at points, but the connection is not seamless.
4. ***Remove the financial barrier to postsecondary education for all Oregonians.*** Business leaders believe that Oregon should pledge that every student who meets the rigorous standards of the new diploma should be *guaranteed* access to an affordable postsecondary education. Policymakers made a significant move in that direction

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\* McMinnville High School's Curriculum Guide (available at <http://www.msdk12.or.us>) provides an excellent example of progress in the area. The guide outlines curriculum pathways for a number of professions ranging from finance and accounting to health occupations and technical trades. Next, the guide spells out recommended courses, quarter by quarter, from ninth to twelfth grade, including postsecondary coursework. The guide clearly outlines why particular courses are relevant, how courses build upon one another, and how other core academic work complements a professional specialty. Consequently, students at McMinnville High know: why related coursework is relevant, how they can jumpstart their college experience, what they can expect to earn if they follow a particular career path. Good work like McMinnville's is going on across the state, turning the high school years into a rigorous, relevant, and rewarding experience for more students.

through the Oregon Opportunity Grant and its “shared responsibility” approach. The grant reflects a partnership between working students, parents, and state and federal governments to meet college costs. The 2007 Legislature approved a major expansion of the grant program – more than doubling the resources available for state-funded grant aid.

Business leaders applaud the great beginning but call on the Legislature to make additional funding a priority in the 2009 Legislative Session. Oregon should aspire to levels of need-based aid delivered by our West Coast neighbors. In 2005-06, Oregon’s need-based aid per undergraduate FTE student was \$223 compared with \$695 and \$514 in Washington and California, respectively.

5. ***Prepare a unified, transparent, student-centered budget, PreK-20, for review by the 2009 Legislature.*** The Governor and the Legislature have made a commitment to create a unified, transparent, student-centered budget model to help shape priorities and make more effective public investments in PreK-20 education. As noted earlier, that will be taken up by an Education System Design Team authorized and funded in the 2007 session through HB 3141.

For years, Oregon has been making the vast majority of its public education investment through blanket funding of K-12 school districts, community colleges, and state universities (a smaller amount goes to the Oregon Student Assistance Commission and the Oregon Opportunity Grant program). Rather than *funding institutions*, the new system should *invest in education services on behalf of students*. Rather than allocate multi-million-dollar sums broadly to competing systems, the state should have a unified PreK-20 budget and fund distinct education programs across the continuum with an eye toward particular student outcomes. It should measure the effectiveness of those investments against specific performance criteria. The new approach will ask: How many students need services and what would it cost to provide programs to achieve a certain level of performance?

This budgeting overhaul, which will be taken up by the design team authorized in HB 3141, grows from a policy analysis recommended by the last Business Plan and shaped in

#### UPDATE: DRUG-FREE WORKFORCE

The Workdrugfree Employer Task Group has made progress on four recommendations in last year’s Business Plan:

*Mount a statewide campaign to triple the percentage of drug-free workplaces by 2008.*

- Pilot sites have grown from three in 2006 to 14 in 2007.
- The workdrugfreeoregon.org website was launched, featuring pilot site efforts, photos, success stories, and media coverage.
- The task force is planning a 2008 survey to measure employer progress in expanding drug-free work programs.

*Raise legislative awareness of the impact of drugs on business competitiveness.*

- The 2007 enacted statutory protections of employers to implement drugfree workplace programs.
- A January 2008 policymaker conference will raise awareness about substance abuse, workplace safety, and business competitiveness.

*Help the Workforce Investment Board establish a substance abuse prevention standard for job seekers.*

- The board approved a policy applicable to all WorkSource Oregon agencies along with an implementation plan.
- Policy implementation, begun in late 2007, will continue in 2008.

*Help the Oregon Board of Education create a career-related learning standard to prepare students for jobs in a drug-free workplace.*

- Drug-free workplace expectations were incorporated in Oregon’s new high school diploma standards adopted by the Legislature in 2007.
- In 2008 several large school districts will offer Workdrugfree employer-delivered presentations as a career-related learning experience.

a policy paper in 2007 by a group of the state's education budget experts. The paper recommends a new budgeting framework that will:

- *Introduce a unified and comprehensive picture of PreK-20 education revenues and expenditures at the beginning of the legislative process*, accounting for all revenues available to spend on public education, determining which expenditures relate to instruction and which don't, and identifying what the state is spending or intends to spend in program categories on a per-student basis.
- *Link student progress and system performance to budget development*, building a common understanding of performance expected by the PreK-20 system
- *Create a common understanding of emerging trends, budget drivers, and assumptions underlying the budget*, utilizing improved database and forecasting tools.
- *Streamline, simplify, and standardize budget building methods across the education continuum*, utilizing one set of budget rules, expanding the State School Fund budget system to the whole education continuum, and organizing the Ways and Means process around students rather than systems or institutions.
- *Increase budget transparency and communication among the stakeholders*, a process that will be helped by cohesive data, rules, and performance expectations.

6. ***Advance work on a seamless, engaging PreK-20 curriculum and integrated student data system.*** Oregon continues to make progress on key system improvements advocated in this and earlier policy papers of the Oregon Business Plan, especially integration of curriculum and student and school performance data.

- *A Common Curriculum.* The Boards of Education and Higher Education are establishing curriculum standards, proficiencies and assessments, and aligning them across the continuum. Curriculum and instruction must be designed at each level specifically to prepare students for the next level, particularly at the most difficult transition points, such as middle school to high school, and then high school to postsecondary studies and training. In the range of grades from 10 to 14, not only should the curriculum be rigorous, relevant, and aligned at every phase, it should be available to students at the pace that they learn and progress. In high school, all students must meet the minimum rigor of the diploma requirements in essential skills and academic credits, but also career learning experience. Some students will want to go beyond those requirements, with additional study in Advanced Placement, International Baccalaureate, career technical education pathways, or a combination of these advanced learning programs. High school students in particular should be well prepared for what they will encounter at the next level (whether school or a job), and in many cases, especially for juniors and seniors, advanced learning should be made available to them while they are still in high school. For example, dual high school-community enrollment, which now benefits many students, should be expanded even more.
- *An Integrated Data System to Track Student Progress.* Oregon has been working several years to create uniform, integrated, and automated student records to facilitate efficient transfer of student credits from school to school, both within and between education systems. This is needed to improve the movement of students along their chosen pathways, but it also represents the down payment on a much larger

commitment to improve and integrate data systems across the education spectrum in Oregon. If Oregon does this work well, students will have better information about their skill development and education planning choices. Schools and policymakers will be able to track student achievement and persistence more accurately. Longitudinal data, now in short supply across most state education systems, including Oregon, will make it easier to improve curriculum, instruction, and student services, and to hold institutions accountable for results.

A significant part of this effort is the student plan and profile, which will help students map the path to their education goals and track their progress. This part of the data system will also provide information on higher-grade requirements for lower-grade students and their parents. With this capability, students and their parents can see the full range of curriculum and assessment requirements along the full length of the pathway. Students, parents, teachers, and counselors should be able to go online, at any time, at any grade level, and compare a student's progress against the student's goals and against the requirements of a particular academic pathway.

The system wide implementation of the data system to accommodate student plan and profile is proceeding in stages. The Department of Education has designed the data system framework for the transfer of student records (the student profile), and is currently piloting this system in the Portland, Beaverton, Hillsboro, and Eugene 4J school districts. Full implementation of the student record component of the data system is expected in the 2009-2011 biennium. Work on integrating the student plan with the data system is proceeding more slowly, and it is complicated by the need to comply with the restrictions of the Family Education Rights and Privacy Act (FERPA). Currently there is no estimated date to implement this component of the data system.

## **Targeted Interventions**

1. ***Respond to pressing industry needs.*** Oregon should focus on high-demand, high wage occupations. The 40-40-20 vision is a long-term plan designed to address the state's educational and economic needs across multiple generations. But, Oregon industry also has clear needs over the next five years. To address the immediate needs, business leaders call for a manufacturing workforce initiative connected to high school, community college and university for entry, technical and managerial occupations. The state should also make continued investments in engineering, through the Engineering and Technology Industry Council (ETIC), in pursuit of its goal of doubling the number of engineering graduates and increasing engineering research five-fold. These investments will ensure that Oregonians have the opportunity to pursue rewarding technical careers and that Oregon industries have greater access to the talent they need to innovate and compete in the global economy. Finally, Oregon community colleges and universities should continue to develop curriculum that aligns with needs in Oregon's emerging green industries such as renewable energy, energy efficient buildings, and environmental technology and services.
2. ***Invest in K-12 practices validated by rigorous research.*** Business leaders applaud the 2007 Legislature's restoration of K-12 funding, but are convinced that an undisciplined expansion in spending stands little chance of improving achievement. Across the United

States, the K-12 system's track record of turning more resources into better outcomes is mixed at best. As the non-partisan Coalition for Evidence Based Policy puts it:

...over the past 30 years the United States has made almost no progress in raising the achievement of elementary and secondary school students, according to the National Assessment of Educational Progress, despite a 90 percent increase in real public spending per student.”

The Coalition points to a shortage of evidence-based education policies as the key reason the country has not seen stronger progress on achievement. The problem is two-fold. First, districts and states have lacked a willingness to rigorously evaluate education programs, so the knowledge base on what works in a K-12 context is relatively thin. Second, districts and states have underinvested in the few areas where solid research exists.

Oregon should direct resources from K-12's School Improvement Fund to three K-12 interventions that have met the research “gold standard”: achievement gains proven through an experimental trial that included carefully designed treatment and control groups and solid tracking of student outcomes. Those are:

- *One-on-one tutoring in K-2.* Proven approaches include the tutoring programs embedded in the *Success for All* (SFA) program, the Lindamood Phonemic Sequencing curriculum, and Oregon's Start Making a Reader Today (SMART) program.
- *K-1 class size reduction.* The Tennessee Student/Teacher Achievement Ratio project, or Project STAR, randomly assigned students and teachers to large and small classes. Students in STAR's small classes – 15-17 students – performed better than students in regular and regular/aide classes in all locations and at every grade level.
- *Monitors for students at risk of dropping out of high school.* Rigorous research points to only one intervention as being successful in reducing high school dropout rates. The Minneapolis-based Check and Connect program increased the likelihood of completing high school by 18 percentage points – 61 percent of Check and Connect participants completed high school or a GED compared with 43 percent of control group students.

The list of evidence-based practices will change over time as new research becomes available. Consequently, policy makers should monitor spending priorities and consider adjusting them each biennium based on the latest research.

3. ***Investigate professional career enhancement models, including new career paths, professional practice and compensation models for teachers*** A broad consensus exists among policymakers, academics, and the general public that the key to lasting education improvement starts with excellent teachers. The seminal study on teacher quality estimates the difference between having a good teacher and a bad one equates to one grade level's worth of achievement gains. And a recent study argues improving teacher quality is among the most cost-effective ways to improve student outcomes.

But the near-term challenges of attracting and retaining high quality teachers will be manifold. A disproportionate share of teachers are age 45 or older and will transition into retirement during the next two decades. Moreover, when schools attempt to replace those educators, they will face much stiffer competition from other professions for

skilled workers than they did when teachers in those age cohorts were first hired in the 1960s, 1970s, and 1980s.

For education to successfully compete with other professional occupations for skilled talent, schools will have to reward teachers more like professionals. The salary models in Oregon schools – like many across the country – rely almost exclusively on teacher’s seniority and education level. Researchers have concluded that neither experience nor the attainment of a master’s degree is a strong predictor of quality. Experience matters in the early years of a teacher’s career, but its importance weakens over time. Moreover, the attainment of a master’s degree in specific subjects (e.g., mathematics) may correlate with higher student achievement, but when measured across all teachers and all types of degrees, the average master’s degree shows no correlation with achievement.

To address the shortcomings of the existing career path and compensation models, school districts should consider new career pathways and salary schedules tied to skills, knowledge, and responsibility. Teacher unions, administrators, and school boards in the Sherwood, Forest Grove, and Tillamook school districts are working through the complex transition to better compensation through Chalkboard’s CLASS project. As lessons emerge from those districts during the next few months, other Oregon districts should follow their leads and reform compensation policy.

4. ***Revamp K-12 teacher professional development.*** Researchers agree improving teacher quality is the most effective and efficient way to boost academic achievement and believe rigorous professional development can play a key role in strengthening teaching practices. Yet, in Oregon, little is known about what’s delivered and what’s gained through professional development activities. Professional development is highly decentralized, with the most important work conceptualized and undertaken at the school and classroom levels. Fiscal accounting of the investment is incomplete, and officials struggle to evaluate outcomes.

With the new diploma standards on the way, teachers will need to retrain and retool to help students meet the higher expectations. The state should play an active role in creating a foundation of support for local professional development activities. The state should adopt and disseminate professional development standards, provide resources to small and remote districts that don’t have equitable access to resources, and serve as a clearinghouse of specific practices proven to change teaching practice and, more importantly, improve student achievement. In a recently completed study of professional development in six Oregon school districts, the Chalkboard Project found that teachers and administrators want and need more high quality professional development to assure teaching and learning that translates into higher student achievement.

5. ***Support innovative workforce development models.*** The business community recognizes that many adults today do not have uninterrupted 2- to 4-year timeframes to commit to postsecondary education. If Oregon is going to meet the global skills challenge, the postsecondary system must incorporate small learning modules to enable progress while working. The nationally recognized Oregon’s Career Pathways model is worthy of expansion. This innovative approach provides an array of short-term, postsecondary certificates linked to in-demand occupations, with employers actively involved in curriculum development. The model works with students in discrete steps – from remediation to technical competency to postsecondary attainment and

employment. The Pathways model deserves a focused, multi-year state investment with rigorous evaluation and follow-up dissemination.

## Next Steps

This agenda will succeed only with broad support from citizens across the state. Today, too many Oregonians remained unconvinced that education and skill attainment are critical to the state's economic success. So, before policymakers proceed with these ambitious proposals, they first must fine tune their PreK-20 vision and then persuade Oregonians that postsecondary education is the key to individual and collective economic opportunity. To start on that critical work, the Governor should convene a statewide Education Summit in 2008 and then engage the public to refine the education vision and earn their support.

### Education and Workforce Initiative Leaders

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### Background Resources

Coalition for Evidence-Based Policy. November 2002. Bringing Evidence-Driven Progress to Education: A Recommended Strategy for the US Department of Education.

Slavin, R., Madden, N., Karweit, L., & Wasik, B.A. (1990). *Success for All: Effects of variations in duration and resources of a school-wide elementary restructuring program* (No. 2). Baltimore, MD: Center for Research on Effective Schooling for Disadvantaged Students. Retrieved November 6, 2004, from <http://www.ed.gov/offices/OERI/At-Risk/cdspubs.html>

Torgesen, Joseph, Richard Wagner, Carol Rashotte, Elaine Rose, Patricia Lindamood, Tim Conway, & Cyndi Garvan (1999). "Preventing reading failure in young children with phonological processing disabilities: Group and individual responses to instruction." *Journal of Educational Psychology*.

Baker, Scott, Russell Gersten and Thomas Keating. When less may be more: A 2-year longitudinal evaluation of a volunteer tutoring program requiring minimal training. *Reading Research Quarterly*, Volume 35, Number 4; Oct-Dec. 2000.

Boyd-Zaharias, Jayne. *Project STAR The Tennessee Student/Teacher Achievement Ratio Study: Background and 1999 Update*. HEROS, Inc. Lebanon, TN.

Sinclair, Mary F. and others. 2005. "Promoting School Completion of Urban Secondary Youth With Emotional or Behavioral Disabilities." *Exceptional Children*. Vol. 71, No. 4.

Hanushek, Eric. February 1992. "The Trade-off between Child Quantity and Quality" *The Journal of the Political Economy*. Volume 100, Issue 1.

Rivkin, Steven G. et al. March 2005. "Teachers, Schools, and Academic Achievement," *Econometrica*. Volume 73. Number 2.

Rice, Jennifer King. August 2003. *Teacher Quality: Understanding the Effectiveness of Teacher Attributes*. Economic Policy Institute. Washington DC.

*Oregon's PreK-20 Education Enterprise: Rethinking the Budget Framework*. This policy analysis, supported by ECONorthwest, was underwritten by the Bill & Melinda Gates Foundation.

Retooling Career Technical Education. 2007 issue brief by the National Governors Association Center for Best Practices. Washington, D.C.