

Raising
the Bar
for
PreK-20
Education
in Oregon:

6

White Papers

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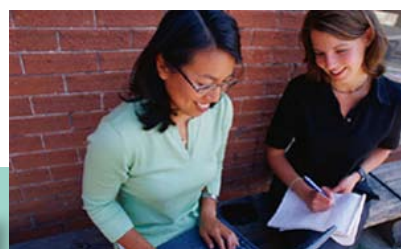


Raising the Bar for PreK-20 Education in Oregon:

6 White Papers

The six white papers gathered here describe Oregon's challenge in helping more Oregonians than ever before to attain a higher level of education. These papers, commissioned by the Roundtable and completed in 2005, lay the groundwork for discussions by Oregon's leaders and citizens about education changes that are needed and those that are under way.

OREGON EDUCATION ROUNDTABLE



A New Vision for Oregon Education.

Oregon must dramatically increase the education attainment of its citizens. The state's PreK-20 education systems must perform better, and they must be funded and structured differently.

Preparation.

Preparation is the strongest key to success in higher education. Too many Oregon ninth graders fail to obtain a high school diploma; 40 percent of those who do are not ready to succeed in postsecondary education.

Pathways and Persistence.

Students travel many paths to their education objectives. Oregon is smoothing these pathways but has more work to do.

The Competitive Imperative.

With increasing global competition and evolving technology, Oregonians must be well educated in order to hold good jobs and keep the Oregon economy competitive.

Affordability.

Oregon students, especially low-income students, are finding a postsecondary education increasingly harder to afford. Costs are higher, aid is not keeping pace, and most students are making up the gap with borrowing.

What Cost, What Results for PreK-20?

Oregon needs a uniform, transparent process for budgeting public dollars across the PreK-20 spectrum. It needs to know how it is spending funds, and what it is getting for the investment.

Acknowledgments and Credits

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These papers were developed under the direction of Jill Kirk, Oregon Business Council vice president and manager of the Oregon Education Roundtable project. Officials, experts, and peer reviewers from Oregon and beyond contributed their knowledge and insights to this work.

The Roundtable is grateful both to our donors and to those who volunteered their time to inform our research.

Authors of the six papers are, respectively: Jill Kirk, *A New Vision for Oregon Education*; Joe Cortright, *The Competitive Imperative*; John Svcarovich, *Preparation; Affordability; Pathways and Persistence*; John Tapogna, *What Cost, What Results for PreK-20?* John Svcarovich edited and produced these papers. Casey Tichenor of Graphic Communication designed this collection for print and online publication.

OREGON EDUCATION ROUNDTABLE

A New Vision for Oregon Education.

Oregon must dramatically increase the education attainment of its citizens. The state's PreK-20 education systems must perform better, and they must be funded and structured differently.



This paper presents a new vision for Oregon education, one that calls for educating more Oregonians to a higher level than ever before. To accomplish that aim, it calls for smarter investment in a PreK-20 continuum that puts students first and emphasizes results.

The vision outlined here is supported by five white papers. The first describes how the changing global economy and workforce are driving the need for higher levels of education attainment among Oregonians. The next three explore key aspects of postsecondary access — preparation, affordability, and student persistence — and their connection to the PreK-20 experience.

The fifth paper describes how Oregon could better budget its education investments, basing them on student-centered data and tying them to performance outcomes. Subsequent papers will discuss how the new approaches envisioned in the earlier papers might look in daily practice and what kind of governance these approaches may require.

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A New Vision For Oregon Education

Transforming Our Systems for the 21st Century

Summary

Our economic, social, and individual well being demand that Oregon educate more Oregonians to a higher level than ever before — and better than ever before. All Oregonians should — at a minimum — obtain a postsecondary degree or credential. To achieve that objective, Oregon must make the education experience — from preschool to graduate school — more responsive to learner needs, more accessible, more accountable, and more efficient.

This calls for a fundamental transformation of our existing public education systems, which will have to perceive, manage, and measure their performance differently than they have in the past.

There are three pillars to that transformation:

- ▶ Our systems must adopt a student-centered, PreK-20 frame of reference — seamless in curriculum, learning experiences, standards, and assessments.
- ▶ Oregon policymakers must adopt a unified, transparent education budget and budgeting process, tying expenditures to performance outcomes.
- ▶ Oregon's education enterprise must build a comprehensive, integrated data system that supports student planning and achievement, smoother education pathways, and institutional accountability for results.

Why Education Matters to Oregon

The Economic and Social Stakes Are High

Research and experience suggest a strong link between the well being of a people and their level of education attainment.

Where a populace is well educated, the economy benefits from greater innovation and competitiveness, increased productivity, higher tax revenues to finance public services, increased consumption, increased workforce flexibility, and decreased reliance on government financial support. Communities have less crime, more charitable giving and volunteerism, a more vital civic life, and greater social cohesion and appreciation of diversity. Individuals enjoy higher salaries and benefits, more stable employment, higher savings levels, improved working conditions, more personal/professional mobility,

improved health and life expectancy, better prospects for their children, enhanced personal stature, and more leisure time.

Although there is less concrete analysis to go on, it appears that the reverse is also true: the lower a state or region's education attainment, the more it struggles to maintain a competitive economy and all the benefits of that economy. The more likely it is to incur costly public support in the form of social services, emergency and indigent health care, and justice and corrections systems.

And the Stakes Are Getting Higher

Like advanced economies everywhere, the Oregon economy has, over the past several decades, become increasingly propelled by knowledge-based manufacturing and services, not only electronics, software, and electronic commerce, but also new products, process innovation, and sophisticated business practices now common in long-established traditional industries.

Out-competing, even staying up with economies in other states and nations, demands skills that can be developed only through rigorous and increasingly advanced education. Moreover, people at all levels of an organization must now hold such skills. This total workforce requirement did not exist even as recently as 30 years ago, when relatively few people needed advanced organization and leadership training, and when people without such training could still earn family wages with minimal education.

As Anthony P. Carnevale and Donna M. Desrochers point out in *Standards for What? The Economic Roots of K-16 Reform*, competitive economies are now based on value added to products and services rather than mass production of standardized, low-cost commodity goods. To stay competitive, companies must pay attention to product and service quality, variety, customization, convenience, consistency, and shorter product improvement and introduction cycles. This requires greater location of authority in front-line workers and managers, specific product and service expertise, and a range of sophisticated skills and abilities that are now fundamental to the knowledge economy. To paraphrase, employees today must have:

- ▶ Basic competence in reading, writing, and mathematics
- ▶ Knowledge of how to learn
- ▶ Listening and oral communication skills
- ▶ Creative thinking and problem solving skills
- ▶ Skills in interpersonal relations, negotiation, and teamwork.

Such requirements place enormous demands on our education systems, which must now educate all Oregonians in skills and knowledge previously reserved for a small percentage of leaders and managers. These requirements also mean that all individuals now need more formal education than ever before. Whereas a high school diploma was the minimum universal expectation of students up to a few decades ago, it now appears that no Oregonian can afford, literally, to have less than a two-year postsecondary degree or credential. Preferably everyone should have more, and should be prepared for more formal learning as a lifelong

No Oregonian can afford to have less than a two-year postsecondary degree or credential, and preferably everyone should have more.

process. This higher level of education attainment will not guarantee someone a secure place within the economy. However, failing to achieve it will almost certainly doom an individual to a precarious existence in an economy that tends to reward those who are educated and tends to punish those who are not.

The ante is also being raised in what a credential represents. Both higher education officials and employers have been increasingly displeased in recent years with the knowledge and skill proficiencies of too many high school graduates. Employers are even questioning what two- and four-year degree recipients know and can do emerging from postsecondary education systems rampant with grade inflation across the nation.

Finally, there is another dynamic at work. The U.S. and Oregon labor markets are nearing the end of a long period of abundant growth in college educated workers, in part because growth in college going has leveled off. In addition to the other reasons that more Oregonians need to acquire a postsecondary education, Oregon must stave off a shortage of well educated workers. Writing recently about this phenomenon, Cortright and Coletta note,

The three decisive trends that drove the growth of the U.S. labor force in the past three decades – the maturing of the Baby Boom generation, women's greatly increased economic role, and the increase in college attainment – all reverse or flatten out in the next two decades. The Baby Boom generation, now in its peak earning years, will soon begin retiring, depriving the economy of some of its most seasoned workers. Women's labor force participation doubled since the 1950s and has been a key force in growing the U.S. economy, but it cannot go much higher. And finally, the expansion of college education in the last two generations, raising college attainment rates from less than 10 percent of the population to more than 30 percent of young adults, has stopped growing. The combination of Baby Boom retirements, no net addition of women to the labor force, and a constant college attainment rate mean that labor is likely to be in short supply over the next two decades.*

If We Want Better Results, We Need a New System Design

The implication of these changes is that we need an education system vastly different from 50 years ago and very different from only 30 years ago. It must educate more Oregonians to a higher level than ever before, and it must educate them better than ever before.

Oregon needs an education system vastly different from 50 years ago and very different from only 30 years ago

This creates unprecedented challenges for everyone involved. The system will have to perceive itself, manage itself, and measure itself differently in order to serve students as they need to be served. The way funds are distributed and spent will have to be organized around students, not institutions. Changing the budget and distribution process will threaten many who are comfortable in the system as it is. To achieve transformation of vision, mission, and infrastructure on the scale anticipated will require the relentless focus of policymakers in education, government, business and philanthropy, the assistance of experts in and beyond Oregon, and the engagement of front-line educators, parents, and students.

*Cortright, Joseph, and Carol Coletta. *The Young and the Restless: How Portland Competes for Talent*. http://www.pdc.us/pdf/bus_serv/pubs/young_and_restless.pdf

An Education Vision for Oregon

In *Oregon Shines*, Oregon has established the goal of having the best educated and trained workforce in America by the year 2000, and one equal to any place in the world by 2010. In keeping with that goal and the evolving demands the economy is placing on its workforce, Oregon should move more students farther, and in many cases faster, through a quality learning experience resulting in skills and knowledge that make them valuable, productive employees and informed, engaged citizens.

To do that, Oregon's PreK-20 education resources must perform at a much higher level than at present. They must offer greater access to learning that is personalized, connected to the demands of work and citizenship, and relevant to the student's life experience and goals. They must prepare students well at each stage to move to the next stage. At the postsecondary level, they must afford every student access to as much education as he or she desires. That education must be affordable and must offer smooth pathways, capacity, and personal support to help students complete their studies.

To achieve the vision described above, we must make policy and operational changes that will allow us to say:

Oregon serves all students with an excellent, seamless, well-aligned education system, from preschool to graduate school. It is designed, governed, and funded to encourage each student to learn as deeply and to progress as rapidly as possible, and it holds both students and schools accountable for students learning to high standards.

The vision expressed above raises important questions: What do students need from an education system to be successful? What is the current capacity of the system to meet student needs? What changes to the system are required to enable it better to meet student needs?

Oregon should move more students farther, and in many cases faster, through a quality learning experience.

Questions for Education System Design

1. What do students need from the education system?

Students need to know what is expected of them at every stage of education, and why. They need to be well prepared at each stage for advancement to the next level. They need to be able to progress academically at their own rate of readiness. They need to be able to advance as far in education as their interests, hard work, and ability will take them. They need continuity in curriculum content and assessment as they move up through the grades. At the postsecondary level they need affordable options and they need the ability to move between system levels and institutions with minimal administrative barriers.

2. What is the current capacity of the system to meet these student needs?

Our education systems are not keeping up as demands for higher quality and greater capacity continue to grow.

We know from data recently assembled by Oregon's public postsecondary institutions that a significant number of student needs are not being met; we know from K-12 system data that too many students do not graduate from high school and even many who do are not ready for entry into postsecondary studies. (See the white paper Preparation.) We can conclude from these findings that the three separately governed and budgeted education sectors (K-12 schools, community colleges, state universities) do not presently have sufficient capacity to move more students farther and faster. These systems are dealing with more students, and arguably a number of students that are more difficult to educate, than in the past. We do not suggest that the systems' quality and capacity are diminishing, just that they are not keeping up as demands for higher quality and greater capacity continue to grow.

These data illustrate the dimensions of this problem:

- ▶ Student performance to expected standards flattens by the eighth grade and diminishes in high school.
- ▶ About 30 percent of ninth graders do not earn a high school diploma in four years.
- ▶ A lack of alignment and consistency in curriculum and expectations results in difficult transitions across system boundaries for many students — for example, a class may count for credit in some institutions but not in others. There are examples of agreements among high schools, community colleges, and universities regarding credit transfers and dual enrollments, but these are the exception and based on individual or local agreements rather than on system design anchored in uniform proficiency standards and assessments.
- ▶ Remediation requirements for students who are enrolled in postsecondary institutions are very high (approaching 30 to 40 percent in community colleges for reading and math), indicating that students haven't learned high basic skills well enough when they should have acquired them in the K-12 system. This increases student costs and time to completion while diverting institutional resources and diminishing system capacity.
- ▶ Nearly half of students who enroll in postsecondary programs after high school do not persist to the completion of a degree or credential.
- ▶ Postsecondary programs are unaffordable to a large number of lower-income students and their families, not so much because Oregon's tuitions are higher than the norm (which they are) but because the amount of need-based aid available is significantly lower than the norm.

3. What changes to the system are required to enable it to meet student needs?

First, our disparate education systems must be organized as a continuum of educational experiences and services designed around the needs of students, with the late teen years serving as the fulcrum of the design. The continuum should be designed so that all educa-

tion leading up to the late teen years is excellent preparation for postsecondary learning, careers, and citizenship. A higher percentage of 17- and 18-year-olds should achieve a high school diploma, and that diploma should signify that the student has the requisite skills and knowledge to succeed in postsecondary education without remediation.

In order for students to move farther faster toward their potential, a number of elements must be aligned and in place within the continuum. Preschool and kindergarten programs must insure that children are ready to learn as they enter elementary school. Students must gain key foundation skills in reading and math in the elementary grades. In both elementary and middle school they must be encouraged to set high expectations and goals for themselves, and when they reach middle school they must acquire the academic proficiencies that prepare them for success in high school and beyond. In high school their expectations and goals must be reinforced, they must have adequate learning options to accomplish those aspirations, and they must be able to move as fast and as far as they choose while still in high school, including into credit-based postsecondary studies. As they make the transition to postsecondary education, students should be so well prepared that they are ready for and comfortable with the academic demands they encounter.

In other words, course curriculum through the grade levels must unfold logically so that students learn what they should know at each level and then proceed smoothly to the next, even if the next level is at a different institution.

This progression through the education levels should be supported by several general design principles.

- ▶ Curriculum, assessments, and exit and entry placement criteria must be vertically aligned so that students advance efficiently and without artificial institutional barriers.
- ▶ Students must have access to an assessment system that provides them with feedback about their performance that will inform their next levels of instruction and help them to manage their own learning.
- ▶ Students' progress should be motivated and measured by performance to proficiencies rather than by time spent in classes: those who can advance quickly should not be held back by the artifacts of time-based credit systems; those who require more time to learn some or all subjects should be afforded as much as they need to become proficient.

These principles apply to the postsecondary level as much as they do to the K-12 years.

The new system will operate differently from today's fragmented, hierarchical, time-based approach. Accountability will be built into learning from the beginning, not just tested at the end of the process. Management of classrooms and schools in the new system will look as different from the traditional model as today's manufacturing processes look from factories in the 1950s.

Second, Oregon must adopt a budget and funding distribution system that is predictable, that invests for educational results, and that encourages the system to work in an integrated manner in support of students. This system should distribute funds in a way that encourages the results we want students to achieve. And student achievement and institutional perfor-

Our disparate education systems must be organized as a continuum of educational experiences and services designed around the needs of students, with the late teen years serving as the fulcrum of the design.

mance must be tracked so we can learn from experience and keep making improvements in policy and operations.

Third, the system must utilize information technology sufficiently integrated and aligned over the PreK-20 continuum to track and manage the educational progress of students and the operational performance of institutions. The data system would do this in many ways. One that would immediately be helpful is the ability to show both students and institutions where students are on their education path and how well they are progressing. For example, the K-12 system does not have the capability now to determine whether a student who withdraws from a high school has dropped out or simply transferred to another school system. At the postsecondary level, we are not able to track the persistence and completion of students who do not finish at the institution where they initially enroll. We don't know whether a student who doesn't return the next fall has left higher education or simply gone to another institution. A comprehensive PreK-20 data system with confidential student identifiers would yield feedback useful for analyzing and addressing large patterns and problems in student progress and system performance.

Transformation Requirements

We suggest, therefore, that there are three critical or “bedrock” infrastructure transformations required to meet students’ needs and achieve a new vision for Oregon’s public education system. They are:

- ▶ *A Continuum Framework.* Oregon must abandon its separate sector organization in favor of developing an integrated continuum of education services from preschool to graduate school. Curriculum, learning experiences, and assessments must be aligned in this continuum so students understand what is expected of them, find requirements cohesive across the education spectrum, and are well prepared at each level to succeed at the next.
- ▶ *A Unified, Transparent Fiscal Structure.* Oregon must develop a unified and transparent budget and distribution methodology for its education investment that is organized around per-student costs by education level and that procures services for students in the context of performance expectations.
- ▶ *A Comprehensive Data System.* Oregon must develop a robust integrated data system that is useful for student planning, that tracks student achievement and persistence, that efficiently carries all student assessment and transcript data across the continuum, and that measures institutional performance against public objectives and budget investments.

The Oregon Education Roundtable describes the transformations needed in greater detail in the companion white papers described at the beginning of this paper and posted at the Roundtable website, www.oregonedroundtable.org. A brief overview of each policy element is included here.

PreK-20 Continuum

The work to develop the PreK-20 continuum must include:

- ▶ Development of sequential and aligned core curriculum (e.g., writing, math, and science)
- ▶ Development of appropriate standards and assessments to define and evaluate students' proficiency levels across core disciplines and subject areas
- ▶ Development of mechanisms to ensure that students transition smoothly to their next level when they are ready, and to do that seamlessly where there are presently significant system boundary problems (such as entry and placement criteria, credit transfer, and funding disputes) that slow, discourage, or stop student progress
- ▶ Development of adequate student guidance and planning for next steps.

This work should probably proceed under the authority of the Joint Boards of Education, reporting recommendations to the Governor and the legislature as appropriate. The work needs to be done by teams that include influential members of each sector and it must be accorded highest priority by the sector chiefs. The best current research and practice must be incorporated in this work by forward-looking and deeply knowledgeable staff and consultants. This policy planning is being supported by a generous grant awarded in November, 2005, by the Bill & Melinda Gates Foundation.

Unified and Transparent Budget and Distribution Processes

It will take a sturdy instrument of change to produce the transformations necessary to create a true PreK-20 continuum. A budget is such an instrument. Budgets drive and therefore can change behavior in virtually all organizations, public or private, education or commerce. Developing a single unified and transparent budget for the education enterprise will be a powerful lever of change.

A unified budget will allow more flexible and rational funding of education levels:

- ▶ Funding will be attached to and follow students rather than institutions — so students and their families will make schooling decisions based on value, quality level, convenience and other factors that are important to them.
- ▶ Funding will be focused on levels of education — K-5, for example, or middle school, or lower division postsecondary programs — so that adjustments can be made for population levels, costs associated with the particular levels, and so forth.
- ▶ It will be easier to create more options for students, especially in their late teen years. For example, K-12 districts will have no disincentive to advance students ready for postsecondary programs. They do now because losing students, even for such a good reason as early advancement, means losing associated funding.

A transparent budget will allow policy makers, system managers, students and their families, and the general public to understand where funds come from, how they are distributed, and what they “buy.” This will accomplish four key results:

- Policy makers will be able to link the public interest — the performance results that are desirable at various education levels — to the public investment.
- System managers will be encouraged to use their revenue, especially public funds, to generate the performance results that are expected and that are in the best interests of students.
- Policy makers and system managers will be able to use budget awareness and analysis over the continuum to realize efficiencies and to target resources in ways that produce better results for students. (For example, policy makers might choose to spend less on transportation, more on reading, math, art, language or science programs. They might manage special education expenditures more closely. High schools might purchase instruction from community colleges or universities in order to offer more options to students.)
- Students, their families, and the general public will hold a higher level of trust in the system. The current opacity of the budget process makes it very difficult for people to understand and trust how spending decisions are made.

Budget transformation is a complex, technical project that must be managed carefully in conjunction with the development of the education continuum and the integrated data system. The effort will require significant resources, skillful project management, careful oversight and direction by the Joint Boards, and strong support from the Governor and the Legislature.

Integrated Data System

Aligned curriculum and assessments and a unified, transparent budget across the education continuum will require a robust and integrated data system.

Aligned curriculum and assessments and a unified, transparent budget across the education continuum will require a robust and integrated data system to generate and manage essential information. It must be able to move individual transcript, credit, assessment and planning data for each student across the education continuum and among separate schools and jurisdictions, and it must generate institutional financial and performance data for system managers, policy makers, and the public.

Representatives of the three education systems, working together, have already designed the first piece of a comprehensive system — automated collection and transfer of student credits and other related information within and between systems. The 2005 Legislature allocated \$4.8 million for implementation of that design. However, this is just the beginning of the effort. Building an information system of the scope envisioned here will likely require additional funding over time, public support, and assistance from private and philanthropic organizations, and the same level of commitment and discipline required to transform education system budgeting.

What is the system's capacity for systemic transformation to meet student needs and achieve the vision?

While many gifted professionals in the education arena in Oregon are advocates for reform and improvement, and while there are many promising experiments and prototypes underway, Oregon has nibbled only around the edges of system change. The change envisioned

here is fundamental and far reaching. Our institutional appetite for it, and our capacity for it, will be severely tested.

There are at least three requirements for success:

- ▶ Policy makers must agree on the need for change, the vision of change, and a theory of change that will be the organizing principle for the work process. Oregon has never attempted redesign and restructuring of this scale, and it will require disciplined commitment by the Governor, the legislature, the Joint Boards (the State Board of Education and the State Board of Higher Education), and by the current sector and institution leaders.
- ▶ The process must be organized into manageable, coordinated projects with task teams made up of highly regarded and competent people reporting their work to policy makers for approval and action.
- ▶ Public resources and management must be supplemented by business and philanthropy, especially the provision of expertise in system redesign and implementation. It will also require knowledgeable support from the business community, the philanthropy community, and advocacy groups. Leaders inside our education agencies will be able to lead and produce a portion of the work that is required, but their time and capacity is limited by their existing management responsibilities. External partners must become involved to add capacity, expertise, perspective, and a valuable linkage to stakeholder constituents.

Oregon is fortunate in this regard. The business community has been an active leader and partner in this effort the past decade. The Meyer Memorial Trust and the Oregon Community Foundation, long involved in this cause, have now been joined by the Collins Foundation, the Ford Family Foundation, and the Jeld-Wen Foundation in sponsoring The Chalkboard Project. These Oregon-based efforts have been greatly aided by generous grants from the Pew Charitable Trusts, the Bill & Melinda Gates Foundation, and the Lumina Foundation for Education.

OREGON EDUCATION ROUNDTABLE



The Competitive Imperative.

With increasing global competition and evolving technology, Oregonians must be well educated in order to hold good jobs and keep the Oregon economy competitive.

This paper examines the economic imperative for educating more Oregonians at higher levels than ever before.

This discussion makes it clear that Oregon's economic competitiveness — as well as the life prospects of our citizens — depends directly on the highest education attainment that Oregonians can achieve.

2 **The Competitive Imperative**

The Economic Case for Increasing Oregon's Education Output and Quality

Summary

Education now plays a pivotal role in the individual success of Oregonians and in the competitive health of the Oregon economy. To meet these challenges, more Oregonians must attain a higher level of education than ever before.

To achieve this objective at the scale required, Oregon must make the kind of commitment and investment that it did along with the rest of the nation in the 1950s and 1960s, when it dramatically increased higher education output and developed the community college system.

Raising attainment to the levels envisioned in this paper will increase the income of Oregonians by \$5 billion a year, and increase state revenues for public services \$350 million per year. It will also reduce expenditures for social programs related to low education attainment and it will increase opportunities for Oregon's increasingly diverse population.

What's at Stake

Global competition and technological change are raising the bar for the level of education that Oregon's citizens need to be successful and prosperous. Most newly created jobs demand higher skills than in the past, and the skill requirements of existing jobs continue to rise. Today, a majority of Oregon workers routinely use computers at work, including 70 percent of those who earn more than \$30,000 per year. Moreover, to be successful in competing at the high end of the global marketplace, Oregon employers now depend more than ever on the skills of their workers to develop new products, improve quality, increase efficiency, and deliver better customer service. On the other hand, low-skill jobs that pay relatively well have declined steeply in recent decades and are all but disappearing.

Against this backdrop, Oregon and the nation are on the cusp of a major change in labor markets. The retirement of the baby boom generation, coupled with other demographic factors, will tighten labor supply in the years ahead, so people and places with the highest skills will be best positioned to prosper. At the same time, the population is growing increasingly diverse. Oregon must figure out how to provide all of its citizens with access to marketable skills, good jobs, and productive lives.

Education attainment is the biggest single factor influencing the prosperity of individual Oregonians, the state's economy, and also state and local government's fiscal health and ability to provide essential public services. The more education that citizens acquire, the better their job prospects and income, the stronger the labor force, the more competitive the economy, and the more adequate the government revenues from individual and business taxes.

Competitive and demographic imperatives suggest Oregon has reached another watershed moment in public education, a time to raise education attainment on a scale similar to the 1950s and 1960s, when the nation and its states made huge investments in higher education, increasing the capacity of four-year institutions more than five-fold, and creating a new kind of institution, the community college, to help citizens prepare for technically challenging careers.

Right now, Oregonians as a whole are not sufficiently well educated for the challenges at hand. About 15 percent of adults have not completed high school, 26 percent have only a high school diploma, 34 percent have completed an associates degree or some college, 16 percent have a four-year degree only, and an additional 9 percent have completed a graduate degree.

To prepare for evolving economic challenges, no adult should fail to complete high school. Twenty percent should have at least reached the level of a high school diploma. Another 40 percent should have completed an associate's degree or some amount of college. Twenty percent should have gone as far as a four-year degree, and an additional 20 percent should have completed a graduate degree.

The economic payback from higher education attainment is enormous. If Oregon today were at the higher attainment levels envisioned above, the total personal income of Oregonians would be \$5 billion higher annually. Increased attainment would also recast public finance, generating additional tax revenues and lowering the cost of expensive programs in welfare, corrections, the Oregon Health Plan, and unemployment insurance — where caseloads overwhelmingly reflect low client education levels. The alternative is to struggle with greater competition from the rest of the world and fall farther behind those places that make the education investments that give them a competitive edge.

Higher education attainment could increase the annual income of Oregonians by \$5 billion per year.

However, greater education investment, while necessary, will not by itself achieve the attainment levels that Oregon needs. The current education system, designed for a different era and a different economy, will not only need to have more capacity; it will also need to be more integrated and efficient, more accessible, and more accountable for performance. The dimensions of these redesign requirements are explored in the Roundtable's companion white papers on a new PreK-20 vision, budget reform, K-12 preparation, and the PreK-20 pathways that students travel.

1. The Changing Demand for Skills

To know what kind of education system Oregon needs, it is necessary to know what kind of knowledge and skills will be required for success in this new century. They are very different from those that were needed decades ago.

The Challenges of Globalization and Technological Change

The United States has moved from an era of effortless superiority — when American firms had unparalleled technology and U.S. workers had the highest level of skills — to a world which has increasingly caught up in technology and education. Americans used to take pride that 80 percent of our population had completed high school. Now 70 percent of Indian and Chinese youngsters have a high school education. Among the 88 million college students in the world, only 14 million live in the United States. Even English is no longer our exclusive domain. There are more English speakers outside North America than living here, and by some estimates, more English speakers in China than in the U.S.

The implication is clear. Plenty of places around the world have a ready supply of hard working, English speaking workers with at least a basic level of skills and education. What once was sufficient to give U.S. workers an edge is now commonplace throughout the world.

Globalization has been worrisome in many respects to Americans, but most especially in the form of outsourcing. Increasingly, many basic production tasks, principally in manufacturing, have been moved out of the U.S. to other countries. More recently, some services such as check processing, telephone technical support, tax return preparation, and even software development have been outsourced. But overwhelmingly, the work that has been outsourced has been the routine, repetitive, low-value work.

While globalization has caused the outsourcing of some jobs, it has created others. In Oregon, a majority of the sales of large companies such as Intel, Tektronix, Nike, and Hewlett-Packard come from markets outside the United States. The people who work for these companies depend on globalization for their jobs. The success of each of these companies ultimately depends on their ability to continuously develop new and better products, processes, and markets stemming from ideas that thrive in a culture of innovation. This capability depends on the talents and drive of well educated workers.

Education and Skills Fuel Economic Success

As the U.S. has moved from a national, resource-based economy to a global economy driven by ideas and innovation, the critical factor in economic success has become education and skills. This is already the case today - and it will become more so in the years ahead.

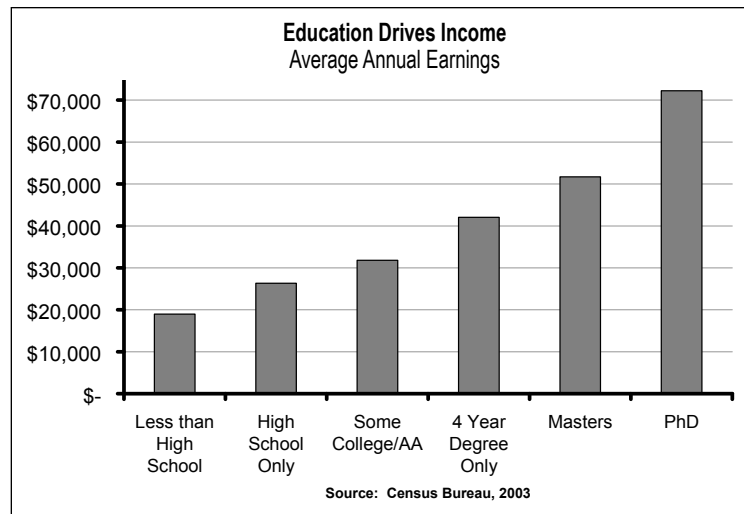
It has long been accepted that education is the foundation for individual economic opportunity. The key reason that Americans have historically supported public education is our broad social agreement that we need to give all citizens the foundation skills and knowledge they need to be successful in every aspect of life. Providing an adequate education is essential to having a level playing field where every citizen has an equal opportunity to realize their full potential.

There was a time when Oregon workers could earn good wages for modest levels of skill. Historically, a high school graduate could get a good paying job in a mill or factory. Those days are gone. Repetitive, routine, low-skill work has moved elsewhere, and no longer commands high wages here. Increasingly, the only jobs that pay well are those that entail a high

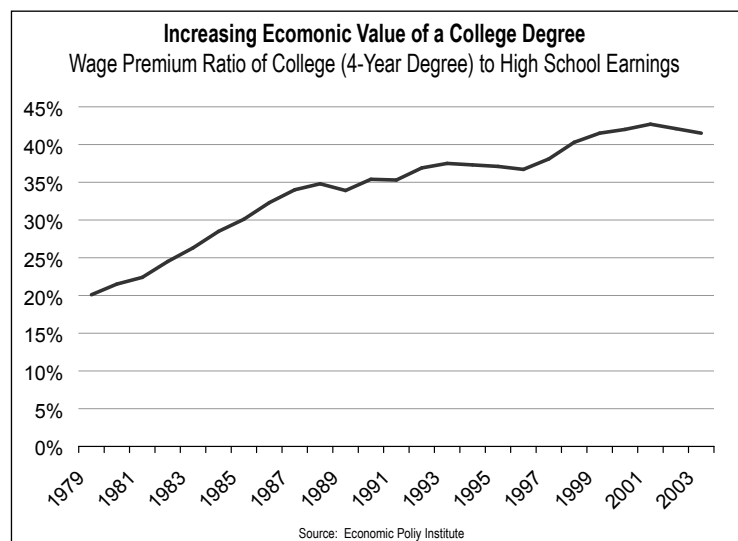
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level of skill and ability.

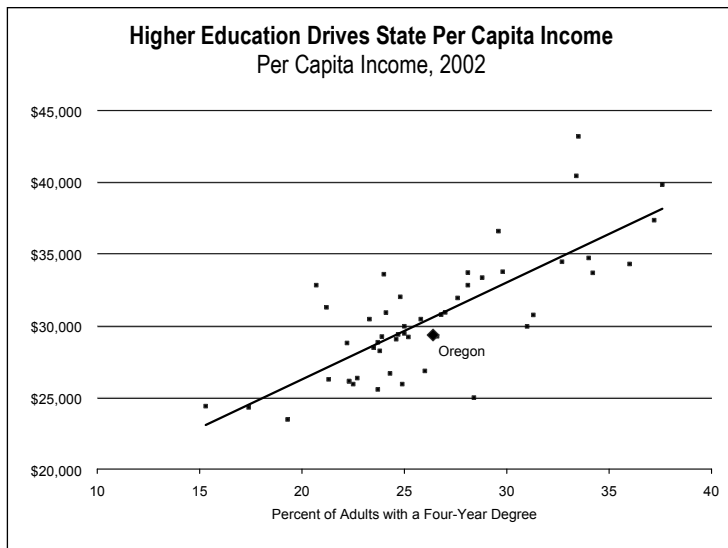
The one certainty about today's labor market is that individual economic success is directly tied to each individual's level of education. The more education a person has, the higher the typical level of earnings. Data from the Census Bureau show a steep "staircase" of annual earnings related to higher levels of education. Persons without a high school diploma average less than \$20,000 in annual income; those with just a high school degree about \$26,000. An associates degree or some college moves income above \$30,000 per year. Those with just a bachelor's degree average more than \$40,000 annually. Those with graduate and professional degrees earn, respectively, more than \$50,000 and more than \$70,000, on average.



The steepness of this staircase has increased steadily over the past few decades. The economic return for a college education has more than doubled. As recently as the late 1970s, a worker with a college education earned, on average, only about 20 percent more on an hourly basis than the typical worker with just a high school diploma. Today, the person with the college degree can expect to earn 40 percent more. (These figures actually understate the value of a college education because college graduates are less likely to be unemployed and more likely to hold full-time jobs, meaning the gap in annual income is even larger, as shown above). Over the past 20 years, after adjusting for inflation, the only group that saw an increase in wage income was workers with college or higher degrees. Everyone else saw their real wages decline.



Over a lifetime, the differences in economic opportunity afforded by a strong education are huge: education is the key to long term economic and financial security, not simply short term earnings. Recent data from the National Longitudinal Survey of Youth confirm the great variation in economic outcomes associated with different levels of education. This study followed a nationally representative panel of 10,000 young people since 1979. The cumulative earnings of college graduates in the 15 years between their 25th and 40th birthdays were 80 percent higher for men and more than twice as much for women than the comparable earnings of those with just a high school diploma. The median college graduate had also accumulated about 20 times as much in financial assets as the median high school graduate (Wolpin, 2005).



What is true for individual workers is also true for states. The states that have the highest incomes - and which have seen the greatest gains in income over the past two decades - have been those with the best educated populations. There is a very strong, positive relationship between a state's level of education and its average income. Careful studies of regional growth in the United States over the past decade show that the single most important factor in determining which places do well economically - and which struggle - is the education level of their population (Gottlieb, Weissbourd). Statistically, each one percentage point increase in the fraction of

the adult population with a college degree is associated with an increase in state per capita income of about \$675 per year.

The Changing World of Work Demands Higher Skills

Education is critically important to Oregon's long-term economic success because it determines how successful Oregon businesses can be. Increasingly, businesses in Oregon and elsewhere depend on the skill and talent of their workers to develop new ideas and become more competitive. A wide range of industries - from high tech to forest products to metals manufacturing - have pushed responsibility for innovation, quality, and productivity down to teams of front line workers. This new way of running businesses, what some call "high performance work organization," depends for its success directly on the skills of workers, especially their ability to work effectively as teams, to communicate with other workers (and with customers), and to identify and solve problems.

The high performance work organization depends for its success on the skills of workers.

In conversations with businesses, organizers of the Oregon Business Plan consistently heard that the only constant in the world of business is change. Few, if any, businesses in Oregon are succeeding by doing the same things they were doing twenty, ten, or even five years ago. Only those businesses that embrace change - that develop new products, relentlessly improve efficiency, find better ways to improve quality, and satisfy customers - can be successful. And the ability to change depends directly on the skills of workers and their ability to adapt and learn.

It's abundantly clear that skill requirements are only going up. There are many causes for this. Chief among them:

- ▶ Low-skill work is the easiest to outsource. Most of the jobs moving offshore involve routine, repetitive, low-skill work.
- ▶ Technology is raising skill requirements. Already a majority of all Oregon workers (and 70 percent of those earning \$30,000 or more) routinely use a computer as part of their job.

- ▶ To remain competitive, Oregon firms have automated many of their low-skill tasks, eliminating jobs for the unskilled, and creating fewer, but higher paid jobs for those with higher skills. When surveyed, 62 percent of private employers and 78 percent of public employers reported that they had made investments in technology and that these investments typically increased the skill requirements of all occupational groups in the organization.
- ▶ Much of the growth in the Oregon economy has been in industries that demand a higher level of skills.

This rising demand for skills is not expected to end anytime soon. If anything, it is expected to increase in the years ahead. The need to continually upgrade skills is the driving force behind the movement to promote lifelong learning. It will be a challenge for Oregon's education system to provide learning not just to children and young adults, but to persons at every stage in their working lives.

2. The Changing Labor Market

The availability of skilled workers is increasingly becoming the most critical element in economic success. While the demand for skills is rising, the U.S. labor pool is not expected to keep pace. Resulting shortages, particularly in talented workers, are expected to persist through the next two decades. As a consequence, those places that have a ready contingent of well-educated workers will be in a much better position to prosper economically.

Concurrent with growing labor skill shortages, the U.S. is experiencing a great increase in the racial and ethnic diversity of the workforce, particularly in Oregon. The state's ability to meet the supply challenge will depend on its ability to assimilate more immigrants and English language learners into local communities and economies.

An Impending Labor Force Shortage

Americans have come to take for granted the stimulus that an ever-expanding labor force provides to economic growth. But three forces that helped drive U.S. labor market growth over the past four decades are rapidly losing steam. The baby boom generation, now in its peak earning years, will soon begin retiring, depriving the economy of some of its most seasoned workers. Women's labor force participation, which has doubled since the 1950s and been a key part of growing the U.S. economy, cannot go much higher. And finally, the expansion of college education in the last two generations, which has raised college attainment rates from less than 10 percent of the population to more than 30 percent of young adults, has stopped growing.

The net result will be a dramatic decline in the rate of growth of the quantity and quality of the U.S. labor force. After growing at a rate of more than 1.6 percent for the half century from 1950 to 2000, the Bureau of Labor Statistics forecasts that U.S. labor force will grow less than half as fast, just .6 percent per year from 2000 through 2050 (Toossi, 2002).

Growth in the U.S. labor force is slowing at a time when the economy will need more skilled workers than ever before.

Workforce quality is somewhat harder to define, but it is generally measured by looking at the combination of workers' years of experience and extent of education. As the baby boom population begins to retire and is replaced by a smaller age cohort with roughly similar levels of education but much less experience, the growth rate in average worker quality will decline sharply. Economists for the Federal Reserve have estimated that average worker quality which grew about .58 percent per year between 1987 and 1994 will fall to a rate of just .07 percent for the remainder of this decade (Aaronson & Sullivan, 2001).

A Much More Diverse Workforce

This tightening in the labor market coincides with major changes in the racial and ethnic characteristics of the U.S. and Oregon populations. The nation and Oregon are both becoming more diverse. The percentage of the state's population that described itself as "white" in the last census declined from 92.8 percent in 1990 to 86.6 percent in 2000 (although changes in Census Bureau's way of asking about race and ethnicity make it difficult to directly compare data from one year to another). All of the state's minority populations increased, particularly Hispanics, whose population doubled.

Migration is always changing the face of Oregon's population. A majority of Oregon's current residents were not born in Oregon. In addition, nearly 8.5 percent of Oregon's 2000 population was born outside the United States - a total of nearly 300,000 residents. These new Oregonians hail from every continent: about 130,000 are from Latin America, 80,000 from Asia, and 55,000 from Europe. Africa, Australia, and Canada make up the balance.

Education Attainment of Oregon's Hispanic and Non-Hispanic Population, 2000			
Working Age Population, 25 to 64	Non-Hispanic	Hispanic	% Hispanic
Less than 9th grade	28,546	39,653	58%
9th to 12th grade, no diploma	134,792	20,963	13%
High school graduate (includes GED)	423,892	24,666	5%
Some college, no degree	496,306	18,281	4%
Associate degree	132,880	4,270	3%
Bachelor's degree	316,704	7,810	2%
Graduate or professional degree	160,428	3,920	2%
Total Working Age Population	1,693,548	119,563	7%

The biggest change in Oregon's demographic picture in the past decade is the growth of the state's Hispanic population, which grew 144 percent between 1990 and 2000, and another 20 percent between 2000 and 2003. According to the Census Bureau, Oregon had more than 325,000 Hispanic residents in 2003.

Census data from 2000 show that Oregon's Hispanic population has a far lower level of education than the rest of the state's population. Only about half of the state's working

age Hispanic population has completed high school (compared to about 90 percent of the non-Hispanic population). Slightly less than 10 percent of the state's adult Hispanic population has completed a four-year degree — compared to about 28 percent of non-Hispanics. Hispanics make up more than a quarter of the working age population that has not completed high school.

Demographic data indicate that the state's Hispanic population will continue to increase in the years ahead. Hispanics constitute about 9 percent of Oregon's population, about 7 percent of its working age (25- to 64 year-old) population but about 17 percent of its children under 5. Even with no further immigration, Oregon will increasingly become Hispanic.

With growth in the international character of Oregon's population, English learning is taking on more importance. According to Census 2000, among 18- to 64-year-olds living in the state, more than 140,000 people spoke English "less than very well."

The Hispanic population is simply the largest and most visible element of Oregon's growing diversity. The number of Asian Americans, African Americans, and foreign born residents has also increased during the 1990s. Oregon, like the rest of the nation, will become increasingly diverse in the year's ahead. Ensuring an adequate education for the state's new immigrant population — whether adults or children, whether from other states or countries — will be a key to Oregon's future economic prosperity.

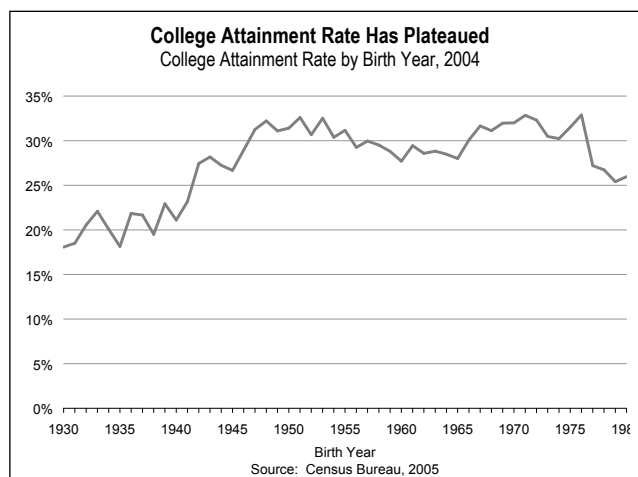
3. Raising the Bar: Moving to a Higher Level of Education Attainment

Although it is apparent that the economy of the 21st century demands a much higher level of skills than Oregon has been accustomed to providing, Oregon has been approaching this newest challenge with essentially the same education system it put in place for the challenges of the 1960s. Technological change and global competition should prompt policymakers to raise the bar — to dramatically increase the quality and level of learning provided to Oregonians.

The task is not beyond Oregon's will or capacity. The state met an education challenge of this magnitude half a century ago. As recently as the 1950s, fewer than one in ten U.S. adults had achieved a four-year degree. Along with other states and the national government, Oregon consciously made investments in the scale of its education system to better prepare a much wider group of the population for highly skilled work.

The wisdom of that investment is plainly apparent in demographic data. Among Americans born since 1945, that is, basically everyone who graduated from high school since the early 1960s, 30 percent of the population has gone on to achieve at least a four-year degree. Unfortunately, Oregon has not improved on that record. Oregonians born in 1975 were no more likely to get a four-year degree than people born in 1950.

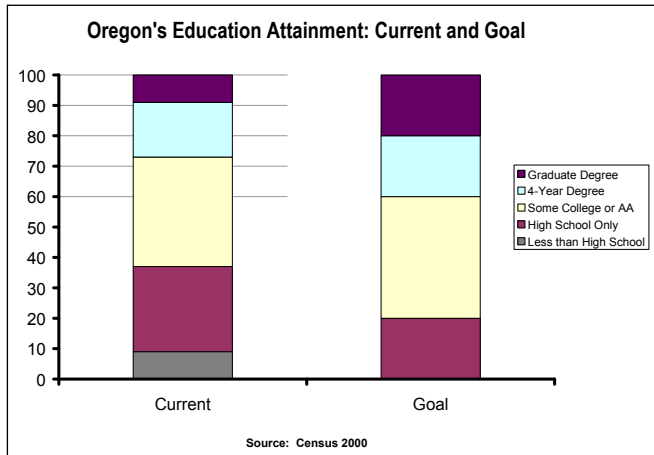
Currently, Oregon's population is slightly better educated than the U.S. average. According to 2000 Census data, only 15 percent of Oregon adults have failed to achieve a high school diploma, compared to about 19 percent nationally, and 25 percent of Oregonians have achieved a four-year degree, compared to about 24 percent nationally.



Percentage of Adults with a Four-Year Degree, 2000

37%	MD, MA
36%	CO
35%	
34%	NH, VA
33%	NJ
32%	MN
31%	KS, VT
30%	
29%	NY, CA
28%	IL, DE, UT, WA
27%	HI, RI
26%	AZ, OR, MO, NE
25%	OH, GA, ND, FL
24%	AK, WI, OK, IA, TX, PA, MT
23%	MI, TN, NM, ME, NC, SD
22%	IN, SC, LA, ID, AL
21%	NV, KY
20%	WY
19%	MS
18%	
17%	AR
16%	
15%	WV

Overall, Oregon has attained a 15/26/34/16/9 distribution in education attainment. That is, about 15 percent of adults have not completed high school, 26 percent have only a high school diploma, 34 percent have completed an associates degree or taken some college, 16 percent have a four-year degree only, and an additional 9 percent have completed a graduate degree.



To prepare its people for the kind of economy now unfolding, Oregon should aim for a 0/20/40/20/20 attainment distribution. No adult should fail to complete high school. Twenty percent should have at least reached the level of a high school diploma. Another 40 percent should have completed an associate's degree or some amount of college. Twenty percent should have gone as far as a four-year degree, and an additional 20 percent should have completed a graduate degree.

Among Oregonians between 25 and 64, Oregon is already measurably closer to this objective (because this age group excludes older Oregonians, who generally have lower levels of educational attainment, as well as young adults aged 18 to 24, who have not necessarily completed their educations). This core group of working age Oregonians has an education distribution of 9/28/36/18/9.

A Broader Set of Skills

Improving Oregon's education system isn't simply about increasing the amount of time spent in schools. It's also clear that the economy of the 21st Century will require a different and broader set of skills for individual success. That's because work organizations are changing from fixed hierarchies and mass production to flexible, team-based arrangements. The new

workplace depends on the creativity of team members. Job tenure has also changed. Few employees now have life-long careers with a single company. Most workers will change jobs as many as a dozen times or more in their life, and many will switch careers.

Studies of economic change illustrate that workers now need not only traditional, basic skills in reading, writing and mathematics, but also, as shown at left, much broader capabilities in adaptive learning, problem solving, and organization. Increasingly, technological and economic change is pushing

Skills and Abilities in the Knowledge Economy

- Basic skills: reading, writing, and mathematics
- Foundation skills: knowing how to learn
- Communication skills: listening and oral communication
- Adaptability: creative thinking and problem solving
- Group effectiveness: interpersonal skills, negotiation, and teamwork
- Influence: organizational effectiveness and leadership
- Personal management: self-esteem and motivation/goal setting
- Attitude: positive cognitive style
- Applied skills: occupational and professional competencies

Source: Carnevale & Desrochers

employers to seek out and hire workers who have learned how to learn, who can work well in teams, who have excellent communication skills, who are adept and problem-solving, and who bring creativity to the workplace. As it happens, these are the same skills that people need to be successful in all aspects of their lives.

4. Return on Investment: The Economic Case for Better Education

For Oregonians, and for Oregon, there are clear financial and economic returns from an investment in raising education attainment. It will increase personal incomes for Oregonians, will generate more tax revenue for schools and public services, will reduce the cost of many expensive public services, and will also generate other social benefits.

Income Impact

Improving the education attainment of Oregonians will, in all likelihood, increase the income of Oregonians by a substantial magnitude. Based on the current relationships between education and income, moving adult education attainment from the current 9/28/36/18/9 distribution to 0/20/40/20/20 described above would raise the total income of Oregonians more than \$5 billion per year. This would occur not only because individuals would make more money, but also because higher levels of education make individual workers more productive and adaptable, enable firms to be more innovative and successful, and help Oregon to be more competitive in the global economy.

Higher levels of education make individual workers more productive and adaptable, enable firms to be more innovative and successful, and help Oregon to be more competitive in the global economy.

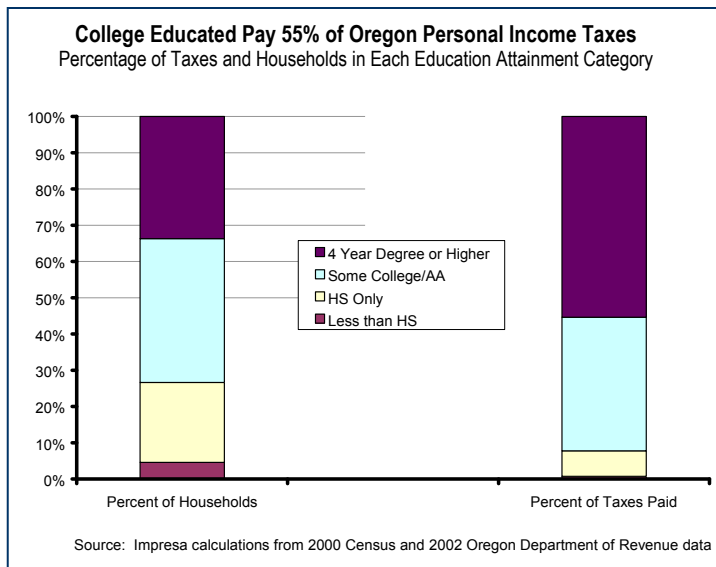
Education Shapes Oregon's Public Finance System

While individual Oregonians have a stake in education because it has such a profound influence on their own economic opportunities, the overall education level of the state has a dramatic influence on government revenue and expenditures. Well educated people generate higher income and more tax receipts to pay for essential public services. On the other hand, people who are not well educated generate less income and are more prone to struggle with problems that drive public expense in the form of unemployment, welfare, corrections, and public health insurance.

Revenue Impact

Because income is highly correlated with education, and because Oregon relies heavily on a progressive personal income tax, Oregon is highly dependent on having a well-educated population to generate income tax revenue to pay for schools and other public services. Data analysis indicates that households with at least one person who has completed a four-year degree — about one in three Oregon households — paid 55 percent of all Oregon personal income taxes in 2002. Households in which the highest education attained by any household member was just a high school diploma (or less) — about 27 percent of all households — paid less than 8 percent of all Oregon personal income taxes.

Improving the education attainment of Oregonians by the distribution described above would not only increase the annual income of Oregonians by \$5 billion, it would also increase in-state income tax revenues by \$350 million per year.



Expenditure Impact

Raising the education level of Oregon's population also will have the effect of cutting the demand for many expensive state services, not only now but in the future. The majority of the persons who require state aid in the form of public assistance, payments through the Oregon Health Plan, and unemployment insurance, as well as a majority of the persons institutionalized in the state corrections system, have a high school or lower level of education. It cannot be said that lack of education caused their problems, but it is a contributing factor because it denies them the skills, earning power, economic independence,

and self-esteem that people need in order to build successful lives. Though difficult to estimate exactly — given the relationship between education and Oregon Health Plan enrollment — improving education attainment along the lines proposed here would reduce the caseloads of the Oregon Health Plan among the 25- to 64-year-old age group by about 25 percent.

Program	% with a High School Diploma or Less
Oregon Health Plan participants	62%
Institutionalized in correctional or mental health facilities	71%
Unemployment insurance claimants	71%
Welfare recipients	63%
Medically uninsured	53%

Source: Impresa estimates from 2000 Census and 2002 Oregon Population Survey. Data are for adults between ages 18 and 64.

Low education attainment, like other social problems, also tends to be intergenerational. The strongest predictor of college attainment in a young person is college attainment by that person's parents. Therefore, getting the first person in the history of a family to obtain a post-secondary degree — a first-generation completer — is one of the best ways to break the cycle of intergenerational dependence and its future drain on public resources.

Other Social Benefits

Higher levels of education attainment correlate strongly with many other indicators of social well-being. Persons (and families) with higher levels of education not only have higher incomes, but also have better health, greater rates of civic participation (measured by voting), and lower rates of domestic violence. Also, children of well-educated parents tend to be more successful in school.

Consequences of Not Raising Education Attainment

If the benefits of education attainment are clear, so are the penalties for both individuals and the broader community. As the rest of the world catches up to the United States in basic skills and technology, not improving Oregon's level of education will severely handicap the state's economy and the income opportunities of Oregonians.

There is also a more subtle and ominous danger from not moving aggressively to raise Oregon's levels of education attainment. Failing to give every Oregonian a solid educational foundation will effectively deprive a portion of Oregon's people the opportunity to participate fully in Oregon's life and economy. Those who don't get a good education will increasingly become second-class citizens, deprived of opportunity and hope. This is an outcome that Oregon should strive to avoid as it becomes more racially and ethnically diverse.

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Preparation.
Preparation is the strongest key to
success in higher education. Too many
Oregon ninth graders fail to obtain a high
school diploma; 40 percent of those who
do are not ready to succeed in
postsecondary education.



The papers here on Preparation, Affordability, and Pathways and Persistence are concerned with the vital importance of getting as many Oregonians as possible to and through a postsecondary education, whether a graduate, undergraduate, or two-year degree, or a certificate in a skilled occupation.

These three issues are vital because the stakes are high. Postsecondary education affords Oregonians greater personal enrichment, income, and employability over a lifetime. It furnishes Oregon's enterprises the skilled human capital needed to compete and thrive in the global economy. It contributes to a stronger state economy and tax base, greater family stability, healthier communities, and lower social costs related to such factors as unemployment, low income, poverty, and ill health.¹ It also improves the prospects of families for generations to come when it enables students to become "first-in-family" to attain a postsecondary education.

3 Preparation

Improving Postsecondary Access, Persistence, and Completion

Summary

Findings

Oregon is doing a mixed job at best of preparing its K-12 students for postsecondary education, including at least 40 percent who are not ready to go on. Citizen expectations are inadequate. Not enough students graduate from high school in four years. Assessments show that large percentages of students lack adequate skills, especially in writing and math, to succeed in postsecondary education. This problem becomes worse and most evident in high school.

Recommendations

Oregon should embrace postsecondary preparation as the overriding purpose of K-12 education. It should reform and mobilize its K-12 systems for that purpose, particularly high schools, which should adopt demanding curriculum to prepare all students for postsecondary success. Oregon should help its citizens understand that the state economy, competing on a global stage, demands no less. Everyone in education should be focused on sound student preparation and smooth pathways from preschool to graduate school.

Preparation Is Paramount

Enhancing Personal Success

The better students are prepared for postsecondary education, the more likely they are to have high expectations for themselves, know what they want to achieve, gain access to the postsecondary programs of their choice, and perform well in their studies. They are also more likely to stay the course, progress efficiently, graduate, and find rewarding employment.

Delivering Cost Benefits

The better students are prepared to succeed, the faster they move through their studies, incurring less individual and institutional cost. The flip side of that — poor preparation — entails postsecondary remedial instruction, slower academic progress, and lower completion rates, all of which burden the student financially and cause inefficient use of institutional resources.

Too Many Oregon High School Students Are Not Adequately Prepared

There is a good deal of evidence to suggest that too many Oregon students are not sufficiently prepared to move smoothly from high school to postsecondary education. At least 40 percent of high school graduates are not ready to succeed in postsecondary education, in large part because they are not being prepared for that purpose. More Oregonians, including some educators and policy makers, must abandon the notion that a high school diploma based on moderate standards is a sufficient academic end point for a certain portion of the K-12 student population. But even for the majority of students who *are* being taught to a higher standard or who *are* pushing themselves to be ready for next-stage academic and career demands, improvements need to be made in the connections between what postsecondary institutions and employers expect and want in the way of preparation and what the K-12 system is providing. More work is needed to align standards between the K-12 and postsecondary systems, to recognize and transfer credits, and to track student and academic program performance for accountability and improvement.

Fortunately, many Oregon policy leaders and educators have begun to act on these needs. Such work is under way in a number of key places — the Governor's office, the legislative leadership, the State Board of Education, the State Board of Higher Education, and the three working groups appointed by the higher education board in 2004 to improve postsecondary access, service delivery, and support for economic development. This work is being encouraged and supported by such efforts as the Oregon Business Plan, the Oregon Education Roundtable, the Chalkboard Project,* the Oregon Small Schools Initiative,** and by business organizations and independent foundations. Oregon also has an ideal resource for this work in Standards for Success. S4S, located at the University of Oregon, is a nationally recognized program with extraordinary expertise in the knowledge and skill standards that high school students must meet to succeed in postsecondary education. It is also encouraging that Oregon is a participant in the American Diploma Project, the effort led by Achieve, Inc., to revamp high schools and the postsecondary preparation they provide students.

The task that confronts these organizations and resources is formidable.

High School Attrition

Apart from a small percentage of students representing transfers, home schooling, and other factors, Oregon high schools fail to get a substantial number of ninth graders across the

* The Oregon Business Plan is a project of the Oregon Business Council, Associated Oregon Industries, and the Oregon Business Association. The Oregon Education Roundtable is a business and philanthropy project initiated by the Oregon Business Council and the Oregon Community Foundation with additional support from the Lumina Foundation for Education. The Chalkboard Project is supported by five Oregon foundations: the Collins Foundation, the Ford Family Foundation, the Jeld-Wen Foundation, the Meyer Memorial Trust, and the Oregon Community Foundation.

** The Oregon Small Schools Initiative operated by E3: Employers for Education Excellence, is a \$25 million, multi-year effort supported by the Bill & Melinda Gates Foundation and the Meyer Memorial Trust to make schools smaller, more personal for students, and more rigorous academically. So far, 15 Oregon high schools have adopted the innovative small school format.

Oregon high schools fail to get a substantial number of ninth graders across the finish line in four years.

finish line in four years. In 2003, according to Oregon Department of Education research, only 68.9 percent of Oregon ninth graders who started four years earlier received a regular diploma.² The balance that did not achieve a diploma included dropouts (17.4 percent), those who reach graduation shy of required credits (5.9 percent), those who earned a GED certificate instead (3.7 percent),* and over 4 percent in a smattering of categories such as modified diploma, home schooling, legal withdrawal, adult high school diploma, and death. Attrition in this four-year period is a strong indicator that many students, apart from other problems, are in academic trouble. ODE research shows that more than 83 percent of students who drop out of high school are not on track to acquire the credits needed to graduate. It should be noted that dropout rates for Hispanic, African-American, and Native American students are proportionately higher than their share of the student population. However, as is the case with white students and with all groups combined in Oregon, the ODE research shows that dropout rates for these diverse populations are declining as schools make a greater effort to identify and support students who are struggling with school.

Skill Deficiencies

From among entering ninth graders, Oregon high school graduates and those lost to attrition represent a large share of students who leave high school with skill and knowledge deficiencies that leave them unprepared to succeed in postsecondary education and the workforce. Because Oregon does not require minimal skill or knowledge proficiencies as the primary criterion for high school graduation, and because it does not require assessment of skill and knowledge proficiencies among graduating seniors, there is no way to know precisely the extent of those deficiencies even among those who receive a diploma. There are, however, indicators that point to the severity and extent of this problem.

One indicator is low attainment of the Certificate of Initial Mastery (CIM). CIM attainment is significant for several reasons. First, CIM standards, even though they are calibrated to the tenth grade level, represent a level of proficiency that is much higher than that associated with the minimum 22 Carnegie Unit credits required to receive a high school diploma.** Second, Oregon University System research shows that entering freshmen with a CIM are more successful the first year than their peers with only a high school diploma.³ Among 36,296 graduating seniors in 2004, just under 30 percent sought and received a diploma with a CIM (indicating that the graduates met all state standards in writing, math, reading, science, and public speaking). This CIM attainment represents a modest improvement over the two previous years, but shows how far Oregon has to go in meeting the tenth grade benchmarks. Nearly 60 percent of the state's high school graduates in 2004 received a regular diploma without a CIM.⁴

In fairness, it should be noted that an unknown but probably small share of high school graduates have a full range or nearly full range of CIM-level proficiencies but do not acquire

* This paper does not take issue with the GED certificate as a form of secondary completion. However, as a matter of system performance, a GED is not an outcome on par with a high school diploma.

**A Carnegie Unit represents a minimum state requirement of 130 hours of instruction in a school year in a subject.

a CIM because it isn't required for graduation, college admission, or employment. Still others have proficiencies in some, but not all, CIM subject areas.

Even if CIM standards are not used to benchmark postsecondary preparation, there are other indicators that not enough students are sufficiently prepared as they leave high school. In fall 2004 testing, fewer than half of Oregon tenth graders met state benchmarks in writing. The fall 2004 math test for tenth graders was voided, but in fall 2003 testing, fewer than half of Oregon tenth graders met state benchmarks in math.⁵ The math results are particularly troubling because rigorous high school math in general and performance on the tenth grade math benchmarks in particular are strong predictors (along with subject matter fulfillment, grades, and college aptitude tests) of likely success in college.

Fewer than half of Oregon tenth graders met state benchmarks in math, a skill proficiency that is a strong predictor of success in postsecondary education.

So-So Proficiency at Grades 4 and 8

The proficiency gap that shows up in high school is rooted in earlier grades. In recent years, in the National Assessment of Educational Progress (NAEP), Oregon fourth graders and eighth graders have generally outperformed the national averages in math, reading, and science. Eighth graders bettered the national averages in writing while fourth graders trailed in the 2002 assessment.⁶ That is no cause for comfort, however, because a majority of Oregon children typically meets only the standard for what is called “basic” achievement, which isn't especially demanding. Only a fifth to a third of Oregon students typically achieve at the “proficient” level, which indicates competence in challenging subject matter.

A Grade of C in Measuring Up

In preparing K-12 students for postsecondary education, Oregon received a C in *Measuring Up 2004*, the biennial report of the National Center for Public Policy and Higher Education.⁷ Oregon rated the average grade, despite some improvement over the past decade, because other states are performing better and because Oregon lags top states in a number of indicators of preparation. *Measuring Up 2004* notes that Oregon eighth graders are outperformed by their peers in top states on the NAEP exam. Similarly, 37 percent of Oregon high school students take at least one upper-level math course, but in top states 59 percent of students take upper-level math.

National Corroboration

Oregon is not alone in failing to prepare a large segment of its K-12 students for success in postsecondary education. As two recent national reports suggest, Oregon may only typify what is happening in too many states.

Based on interviews with nearly 1,500 recent high school graduates, as well as 400 employers and 300 teachers of first-year college and community college students, Achieve, Inc. concludes that public high schools, despite doing a good job preparing many graduates, “are seriously failing a substantial minority.”⁸

- As many as two in five recent high school graduates say there are gaps between the education they received in high school and the overall skills, abilities, and work habits that

are expected of them today in college and in the work force.

- ▶ In hindsight, most of these students say they would have worked harder and taken more demanding courses; fewer than a quarter say they were challenged or faced high expectations in order to graduate from high school.
- ▶ The vast majority of college students and high school graduates without a college degree say they have gaps in preparation in at least one crucial subject or skill that they will face.
- ▶ College instructors and employers confirm graduates' assessments in even harsher terms, as they estimate that similar numbers of graduates are inadequately prepared to meet their expectations.
- ▶ College instructors are especially critical and are unsatisfied with the job that high schools are doing in preparing students in writing and mathematics. Instructors say they spend a significant amount of time teaching material that students should have learned in high school.

What students, employers, and postsecondary teachers say about poor preparation in the Achieve report is confirmed by extensive national assessment data reported in *Crisis at the Core: Preparing All Students for College and Work*.⁹ In this 2004 document, ACT, the nonprofit assessment service, says simply, "Most of America's high school students are not ready for either college or work. We've made virtually no progress in the last ten years helping them to become ready. And from everything we've seen, it's not going to get better any time soon."

How serious is it?

- ▶ 26 percent of ACT-tested high school graduates met ACT's College Readiness Benchmark for their first credit-bearing college course in biology
- ▶ 40 percent are ready for their first course in college algebra
- ▶ 68 percent are ready for college course work in English composition
- ▶ These readiness levels are dramatically lower for minority students.

Like so many other authorities on postsecondary readiness, ACT says the answer to this crisis is higher expectations of high school students and more rigorous, challenging course work. "Our research ... confirms that taking and doing well in specific courses - such as Biology, Chemistry, Physics, and upper level mathematics (beyond Algebra II) — has a startling effect on student performance and college readiness."

The Toolbox Baseline

The argument for rigorous high school curriculum owes a debt of gratitude to a groundbreaking 1999 monograph entitled *Answers in the Tool Box* by Clifford Adelman, a senior research analyst with the U.S. Department of Education.¹⁰ Based on a longitudinal study of students from high school graduation through age 30, Adelman found that a demanding high school curriculum, math in particular, is the strongest factor in postsecondary degree attainment. "Of all pre-college curricula, the highest level of mathematics one studies in secondary school has the strongest continuing influence on bachelor's degree completion.

"No matter how one divides the universe of students ... a high school curriculum of high academic intensity and quality" is the factor that most contributes to a student's likelihood of completing a college degree.

— *Answers in the Tool Box*

Finishing a course beyond the level of Algebra 2 (for example, trigonometry or pre-calculus) more than doubles the odds that a student who enters postsecondary education will complete a bachelor's degree."

Why So Many of Our High School Graduates Are Not Ready

How has it come to be that at least 40 percent of Oregon's high school students will leave their secondary years unprepared to meet the skill and knowledge demands of postsecondary education and the workplace?

K-12 Transition Gaps

High school principals and education officials who work closely with local schools say that the first significant signs of trouble show up in the ninth grade where test scores decline and about half of all high school dropouts occur. They attribute these problems to discontinuity in curriculum content and the culture shock that hits students moving to a new building, new peer environment, and new set of academic challenges.

Despite carefully articulated curriculum content at the state level, the reality on the ground is that elementary schools, middle schools, and high schools in too many districts operate as separate entities that do not work well enough together — or at all — in preparing students for the leap to the next level of academic requirements. Education officials say the problem is particularly evident in the transition from middle school to high school in subjects such as math and English, where students leaving middle school can be several levels of content away from the point where curriculum begins at the ninth grade. For many students, the difficulty and frustration of trying to catch up is compounded by the culture shock of the new environment and the emotional vulnerability common at this stage of adolescence.

High School Learning Is Not Sufficiently Personalized and Engaging

Although it is less a problem in rural areas, where communities and schools are more closely knit, high schools often tend to be bigger, more impersonal, and less engaging to students than elementary and middle schools. As a study committee of the Board on Children, Youth and Families has noted, "Engaging adolescents ... is not an easy task. Academic motivation decreases steadily from the early grades of elementary school into high school. Furthermore, adolescents are too old and too independent to follow teachers' demands out of obedience, and many are too young, inexperienced, or uninformed to fully appreciate the value of succeeding in school." Personalized, more engaging learning, the committee argues, occurs where schools and teachers provide challenging instruction and support, convey high expectations for student success, provide students choices, and make curriculum and instruction relevant to adolescents' experience, culture, and long-term goals. In this context, students derive a sense of belonging and purpose where teachers personalize instruction, show an interest in students' lives, and create a supportive, caring social environment.¹¹

The reality on the ground is that elementary schools, middle schools, and high schools in too many districts operate as separate entities that do not work well together — or at all — in preparing students for the next level of academic requirements.

This view generally frames the premise of national efforts to motivate students, particularly low-income and minority children, by creating smaller and more personalized learning settings. In Oregon, this philosophy underlies the contextual learning focus of the Certificate of Advanced Mastery. It is being demonstrated most prominently in the Oregon Small Schools Initiative noted earlier.

In High School, What's Challenging Is Optional

What Adelman says in his 1999 study and what ACT recently echoes about the need for rigorous course work explains a large share of Oregon's failing. Oregon has identified rigorous subject matter in its curriculum guidelines and in the standards of proficiency students must meet to achieve a Certificate of Initial Mastery and a Certificate of Advanced Mastery, but it doesn't require attainment of these standards as a state-mandated condition of high school graduation.* Although Oregon high schools must provide all students the opportunity to earn the CIM now and the CAM beginning with the 2008-09 school year, the CIM is optional and independent of diploma requirements, and the CAM will be, too.¹² As mentioned earlier, it is probable that many students do not pursue the CIM credential because it is not required for graduation, for admission to postsecondary institutions, or for employment.

For many Oregon high school students, the message in the diploma-only requirement is apparent: it isn't expected or necessary that you aim higher.

Setting aside the question of CIM and CAM proficiencies, Oregon's minimum statewide credits, 22 units, are not adequate to the postsecondary needs of Oregon students. In fact, Oregon's subject credit requirements for a high school diploma are among the least demanding in the nation, and also less demanding than Oregon University System entrance requirements.¹³ In the subjects most critical to college success, OUS requires 14 units** whereas the Oregon State Board of Education requires only ¹¹. Specifically, OUS requires four units of English, while the State Board requires only three; OUS, three units of math, the State Board, two; OUS, two units of second language, the State Board, one.*** Individual high schools can require more, and a number of them do. By the same token, ambitious high school students often match or exceed the more demanding standards. But for many students, the message in the diploma-only requirement is apparent: it isn't expected or necessary that you aim higher.

*With the high school graduating class of 2007, Oregon students, to receive a diploma, must meet four requirements that will be a condition of the CAM credential when it is made available in 2008-09. They must develop an education plan and build an education profile; meet state performance standards for extended learning applications through a collection of evidence; demonstrate career-related learning standards in such skills as personal management, problem solving, and teamwork; and participate in career-related learning experiences outside the classroom.

** Fourteen units is a minimum for the University of Oregon, which requires two additional units drawn from among English, math, science, social science, and second language for guaranteed admission.

*** In a working paper entitled Public High School Graduation and College-Readiness Rates: 1991-2002, Jay P. Greene and Marcus A. Winters of The Manhattan Institute rate only 33 percent of Oregon high school students as college ready, in large part because Oregon students who have met the minimum credit requirements for a high school diploma do not meet typical high school credit minimums for college admission.

Inadequate Citizen Expectations

Helping children set expectations and goals for postsecondary education plays a large role in the extent to which they attain such education. There is evidence that more than half of adult Oregonians apparently do not understand that the state's children no longer have the option of *not* obtaining a postsecondary education. The Chalkboard Project's survey of 1,800 adult Oregonians, a large, reliable sample, suggests that only 42 percent of Oregonians believes the purpose of K-12 education is to prepare students for college. Thirty-three percent believe the schools should be preparing students for employment directly after high school.¹⁴ Such low expectations shorten the horizons of children and undermine their aspirations.

Inadequate Support for Student Aspirations

The Stanford University Bridge Project, which studied six states, including Oregon, found that student aspirations for postsecondary education are not sufficiently ignited or are not adequately supported.¹⁵ As a result, for example, fewer than 8 percent of Oregon students surveyed knew all the academic requirements for admission to college and only a third could estimate tuition costs within two times the actual cost. There were widespread misconceptions among students and their parents about the cost of postsecondary education, the availability of aid, and how much academic preparation is required. The lower the family income, the greater the incidence of misconception.

Three excellent programs, Aspire, GEAR UP, and TRIO are working to close what might be called the expectations gap, but they reach only a handful of schools and students relative to the total number of schools and students in Oregon. Their principal value is demonstrating what could be accomplished on a larger scale.

Only 42 percent of adult Oregonians believes the purpose of K-12 education is to prepare students for college.

Teacher Subject Mastery Gap

Although Oregon has strengthened its teacher licensure and professional development requirements in recent years, it nevertheless suffers a significant gap in teacher subject mastery at the high school level. According to *Measuring Up 2004*, 66 percent of seventh through twelfth graders in Oregon are taught by teachers with a college major in their subject, while in top states 81 percent of middle and high school teachers have a major in the subject they teach. According to *Education Week*, almost 40 percent of high school students statewide are taught by a teacher without both an academic major and certification in the subject. That number jumps to almost 60 percent of students in high-poverty schools.¹⁶ Writing for the Education Trust in 2002, Craig D. Jerald is quick to point out that teachers are not to blame for this problem, which is called "out-of-field" teaching. For the most part, neither are teacher shortages. Jerald attributes the cause to "political lethargy and outmoded administrative practices" in hiring and assigning teachers. Studies suggest, he goes on to say, that out-of-field teaching frequently results from "the assignment of otherwise highly qualified teachers to subject areas that do not match their qualifications." As a result, students don't get the subject expertise they deserve, and teachers are burdened with lesson preparation and classroom instruction that is more difficult.¹⁷

Teacher-Student Ratios

Despite arguments in some quarters to the contrary, most educators and involved parents agree that smaller class sizes, created by lower teacher-student ratios, improve the classroom learning environment and allow teachers to give students more individual attention. Owing to state K-12 budget cuts caused by revenue shortfalls in recent years, Oregon has a statewide student-to-teacher ratio of 20.4 to 1; the national average is 15.9 to 1.¹⁸

System Disconnections

The Bridge Project argues that student aspirations for postsecondary education are undermined by what it describes as the disconnection between K-12 and postsecondary education systems. In Oregon the strength of this connection is an important issue because more than 80 percent of OUS students and more than 90 percent of community college students come from Oregon high schools.

Interviews with a number of current and past officials reveal that system disconnections do exist in Oregon although officials in both K-12 and postsecondary education are attempting to address them. Ironically, while Oregon is still struggling with proficiency standards alignment between K-12 and postsecondary systems, outside observers consider Oregon's progress so far on alignment one of its greatest strengths. In a 2004 policy brief, the Education Commission of the States noted,

Oregon's record of accomplishments towards a seamless education system positions the state as a leader in P-16 education. Oregon was one of the first states to develop a proficiency-based higher education admission system that utilizes student work samples, to employ teacher scoring and verifying of student proficiencies, and to offer Certificates of Mastery to students. Further, the original legislation that mandated statewide assessments — including CIM and CAM — is over 10 years old. ...While Oregon's reforms are not yet at a point at which they can be deemed a success or a failure, the state's commitment to P-16 education and progress towards implementing P-16 policies and reforms provide important lessons regarding broad issues such as policy alignment, innovation, consensus building and negotiating territory issues. While work remains to be done, much has been accomplished.¹⁹

The work to be done includes addressing at least the following gaps in preparation of high school students for postsecondary success:

- ▶ Oregon's minimum K-12 diploma requirements do not meet the Oregon University System's minimum high school course credit requirements for admission. Even with motivated students, there is some indication that more rigorous high school course work, particularly in math, may still not be sufficient to meet university requirements.
- ▶ Achievement of CIM standards is due to be included by OUS schools as a consideration for admission beginning in the 2006-07 school year, but not as a requirement.²⁰ Required elements of admission will continue to be high school graduation, credit fulfillment, grade point average, and skill assessments from the College Board (the SAT) and ACT.

- Over the past ten years, officials of the Oregon University System and the Department of Education have been working to align the proficiencies and standards of the CIM with university admission standards in the Proficiency-based Admission Standards System (PASS). CIM proficiencies align with PASS standards, and they contain many of the proficiencies required for success in university course work, but they do not contain enough of the proficiencies and content knowledge that university faculty members would like to see among entering freshmen. In math, for example, CIM requirements stop at geometry. OUS minimums include algebra II, and more competitive institutions often require pre-calculus.

The CIM-PASS gap occurred in large part because the CIM, a tenth-grade standard, was never intended to be the preparation benchmark for first-year college proficiencies. The CAM was meant to assume that role as a set of twelfth-grade proficiencies, but its implementation languished, leaving no direct bridge from CIM to PASS. High school students can take the PASS assessments in places where high school teachers have been trained to administer them (PASS personnel have trained more than 1,500 high school teachers to do these assessments), but PASS, like CIM and CAM, is optional.

- Oregon community colleges have open admissions, without requiring even a high school diploma. But they do administer national-standard placement examinations to determine what skills students have for various programs of study. Currently, it isn't clear whether CIM proficiencies align with proficiencies measured by these placement instruments. In 1997 community college officials began to design placement standards for community college academic programs in order to align them with CIM standards. But work on these standards, called Proficiencies for Entry into Programs, or PREP, fell by the wayside.

Officials from Oregon's Department of Community Colleges and Workforce Development have recently begun to look at this issue, in particular the extent to which Oregon's CIM assessment lines up with proficiencies measured by the ACT placement exams used by so many Oregon community colleges. That work is expected to take place through the spring and early summer of 2005.

The Joint Boards Working Group is beginning to examine and address these disconnections between the K-12, community college, and state university systems.

Update note: This paper was originally developed in the spring of 2005. On December 8, 2005, State Superintendent of Public Instruction Susan Castillo, long a supporter of the CIM and CAM program, publicly called for dropping them as separate standards and incorporating their skill proficiencies in new high school exit standards represented by a more meaningful diploma. The State Board of Education, in a policy discussion paper released for public review in the early fall of 2005, proposes that Oregon consider, among other changes, a reform of this nature, tying higher skill proficiencies and knowledge to required credits for high school graduation. The companion white paper, *Pathways and Persistence*, summarizes this Board proposal.

Limited Accelerated Studies

The CIM and PASS standards also align with Advanced Placement (AP) and International Baccalaureate (IB) program standards. Students who meet the standards of these high school-based accelerated studies tend to perform well in postsecondary schooling and have higher completion rates, both nationally and in Oregon. Since 2002, the College Board, which administers the Advanced Placement program, has been trying to expand the AP program to more high school students, offering AP, in effect, as a vehicle of curriculum reform in American high schools.²¹

Both AP and IB are well established throughout the United States, but there are a handful of states where these programs are strongly embraced as a means of accelerating high school students who are ready for postsecondary work. Florida, which has a strong commitment to accelerated studies, may be the most prominent example. It offers substantial funding to schools, teachers, and students to participate in these programs. The IB diploma qualifies as a graduation credential in place of a regular diploma. In 2001-02, Florida spent more than \$40 million in incentives alone for accelerated high school studies.²² Florida's postsecondary schools are engaged in these programs and students who perform well receive a good deal of advanced credit, so the state benefits by keeping students challenged, preparing them with rigorous curriculum, moving them along as fast as they are ready, and reducing demands on postsecondary capacity.

Despite the performance of accelerated studies programs, only a small fraction of Oregon high school students are engaged in them.

Despite the performance of these AP and IB programs, only a small fraction of Oregon high school students are engaged in them. Half of the state's high schools offer the advanced studies option, but only a handful of schools, most of them in the Portland area, have a significant number of students enrolled. Statewide, among nearly 170,000 high school students, only 2,487 AP exams and 2,639 IB exams were taken in the 2003-04 school year. The Beaverton School District, with seven high schools, is the most active in offering AP and IB courses. Last year more than 900 of the district's high school students took AP tests. About 45 percent of Southridge High School's 475 students took at least one IB course and 29 received full IB diplomas. In 2003-04, 231 IB diplomas were awarded statewide. (Oregon State University acknowledges the full IB diploma - providing that the student has a total score of 30 or higher - with guaranteed admission, sophomore standing, and a \$2,000 renewable scholarship, so long as no other university scholarship is received.)

At the state government level, Oregon dispenses federal funds to low-income students to defray the cost of AP and IB examinations. However, that is the extent of its support for AP and IB. Student access to these accelerated programs depends on the commitment of their local districts.

Far more Oregon high school students are involved in community college accelerated studies. In 2003-04, 6,910 students were enrolled in Tech Prep, also known as 2+2, and 11,306 were enrolled in Dual Credit. Students in these programs receive both secondary and community college credit at the same time. In 2003-04, according to the Oregon Department of Education, students earned 97,912 credits through these program, saving their families more than \$4.5 million in tuition costs.²³

Other promising accelerated college credit programs are emerging in a number of high schools around the state. These programs offer valuable models but are currently small scale and localized.

As described in Pathways and Persistence, the Oregon Legislature adopted Senate Bill 300 in the 2005 session to expand accelerated studies, particularly in high schools without existing programs. As noted in that discussion, SB 300 is a step in the right direction, and will expand accelerated studies in some situations, but it now contains a number of restrictions and other provisions which will have to be changed at some point if the legislation is to expand accelerated studies at a meaningful scale.

The Data Gap

Oregon education officials acknowledge that the state's education systems need but do not have an integrated data system. As students move through various education levels and systems, information deficiencies abound. Performance and transcript information isn't compatible. Students have no easy way of accessing information about academic requirements. No one tracks student performance long term. And there is no feedback loop on student postsecondary experience and performance to use as a basis for improving preparation at the K-12 level. Because Oregon lacks uniform student identification, tracking systems, and integrated data collection and reporting, there is no way to know what successes, failures, or costs are involved among those who leave the pathway and then resume.

As students move through various education levels and systems, information deficiencies abound.

Oregon is taking promising but as-yet preliminary steps to address this gap. These are described in greater detail in Pathways and Persistence.

Conclusions

- ▶ Oregon's performance in preparing its high school students for postsecondary education is mixed at best. Over half are being prepared adequately, and some very well, but at least 40 percent are not ready. This is an unacceptably high rate, leaving thousands of students — especially poor, minority children — to face the frustration, additional time, and added cost of finding their way in postsecondary education or the job market without the knowledge and skills they need to be successful. This number of unprepared students places an added burden on institutional resources as students are diverted into remedial classes and take longer to finish postsecondary programs — *if* they finish.
- ▶ A majority of Oregon citizens does not understand that postsecondary education is a must rather than an option if Oregon's children are to succeed in a more demanding, knowledge-driven economy. This by itself may be the state's most significant challenge in bettering the lives of its children.
- ▶ The K-12 system is not fully mobilized to prepare students for postsecondary education.

- ▶ Oregon's K-12 and postsecondary systems are farther along than most states in creating a seamless continuum of standards, curriculum content, and credits, but Oregon still has much work to do to have a true PreK-20 continuum.

What Oregon Should Do

- ▶ The Oregon Board of Education should adopt the official position that the purpose of the K-12 school experience, and particularly the last four years, is primarily to prepare students to successfully complete postsecondary education as a prerequisite to career and adult life. Postsecondary education includes all education and training that students wish to pursue past high school leading to a certificate or degree, whether one-year, two-year, four-year or more, whether provided by accredited public, nonprofit, or proprietary institutions.
- ▶ A public-private coalition of stakeholders, perhaps supported by philanthropy, should develop a concerted public education campaign to help citizens and parents understand that K-12 students have no better option than to prepare for postsecondary education and for the demands of the knowledge economy.
- ▶ The Oregon Board of Education should raise the expectations, standards, and capabilities of Oregon high schools to match the demanding requirements of postsecondary education and the work place.
- ▶ The Oregon Board of Education should require all high school students to take a rigorous curriculum, particularly in math, that prepares them to be successful in postsecondary education.
- ▶ The Oregon Board of Education and every school district in the state should hold high schools accountable for producing graduates ready to succeed in postsecondary education. Similarly, they should hold elementary and middle schools accountable for working with next-level partners to insure that there are no gaps in curriculum and instruction for students moving to the next level.
- ▶ Oregon's K-12 and higher education boards should urge school districts, state education agencies, and postsecondary institutions to shape the postsecondary aspirations of K-12 students from the earliest grades, making counseling, advising, and information resources increasingly available to K-12 students.
- ▶ The State Board of Higher Education and the Oregon University System should hold postsecondary institutions accountable for increasing the success of students they admit.
- ▶ The Oregon Board of Education should urge school districts to treat the last two years of high school as *an early phase of postsecondary education*, in effect making years 11 and 12 the time when struggling students acquire minimal proficiencies required to succeed in postsecondary studies or the time when a greater number of advanced students get a jump on postsecondary education by completing more demanding high school courses, by participating in Advanced Placement or International Baccalaureate programs, or by meet-

ing lower division collegiate requirements under dual enrollment arrangements.

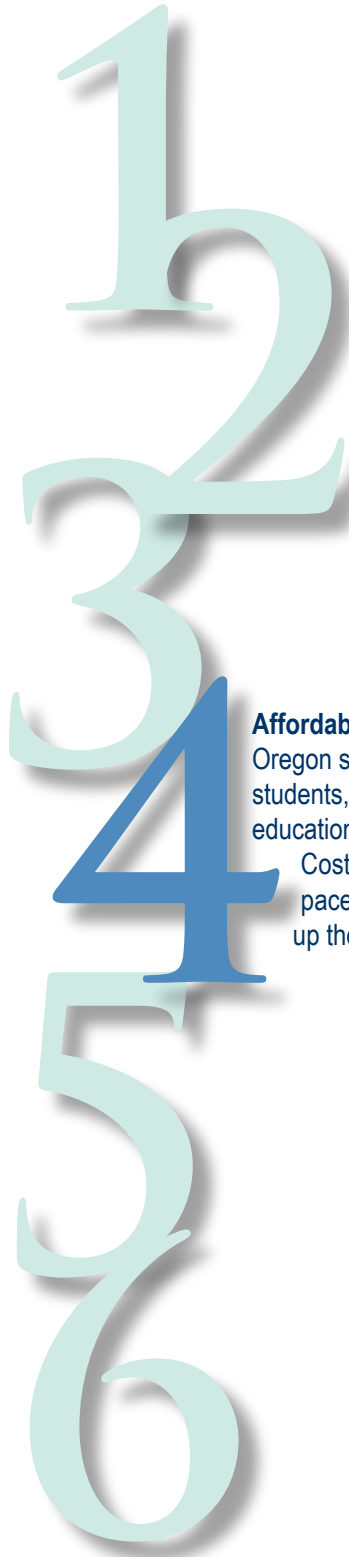
- Education officials at all levels should encourage public postsecondary institutions, K-12 institutions, and their faculties to work with one another to align standards and assessments.
- The state and its education agencies should facilitate these recommendations with an accessible, comprehensive data system that provides students with information about postsecondary requirements, and that enables policy makers to track student success and gauge institutional performance.

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OREGON
EDUCATION
ROUNDTABLE



Affordability.

Oregon students, especially low-income students, are finding a postsecondary education increasingly harder to afford.

Costs are higher, aid is not keeping pace, and most students are making up the gap with borrowing.

The papers here on Preparation, Affordability, and Pathways and Persistence are concerned with the vital importance of getting as many Oregonians as possible to and through a postsecondary education, whether a graduate, undergraduate, or two-year degree, or a certificate in a skilled occupation.

These three issues are vital because the stakes are high. Postsecondary education affords Oregonians greater personal enrichment, income, and employability over a lifetime. It furnishes Oregon's enterprises the skilled human capital needed to compete and thrive in the global economy. It contributes to a stronger state economy and tax base, greater family stability, healthier communities, and lower social costs related to such factors as unemployment, low income, poverty, and ill health.¹ It also improves the prospects of families for generations to come when it enables students to become "first-in-family" to attain a postsecondary education.

4

Affordability

Improving Postsecondary Access, Persistence, and Completion

Summary

Findings

Postsecondary education has become far less affordable for Oregon students, due to Oregon's continuing disinvestment in postsecondary education. Costs are higher, grant and scholarship aid is not keeping pace, and most students are making up the gap with borrowing that leaves them substantially in debt as they start their careers. The affordability gap falls hardest on students of modest means. Oregon, a high-tuition, low-aid state received a grade of F for affordability in Measuring Up 2004, the national survey of state performance in higher education.

Recommendations

Continue to push for strong need-based student aid. Link state funding of schools and need-based aid. Identify and act on ways to control rising postsecondary costs and tuition. Make tuition pricing transparent and comparable across schools. Improve secondary preparation and mitigate other factors that create hidden costs for students. Explore new partnerships among government, business, and philanthropy to increase student aid resources.

Why Affordability Is So Important

As noted in the first paper of this series, strong academic preparation, especially at the high school level, provides the most important foundation for student success in postsecondary education. Still, students must be able to afford a postsecondary education to achieve one, and in Oregon that's becoming more difficult.

Nationally, the cost of postsecondary education to students, particularly tuition, has been rising faster in the past two decades than inflation and family incomes.² The factors driving these increases are present in Oregon, too, but in addition, unusual long-term fiscal constraints have hampered the state's ability to support community college and university operations, causing public institutions to raise tuition to replace lost

state support.* The same budget constraints have reduced state appropriations for need-based student aid at both public and private Oregon institutions. For low- or moderate-income students the combination of rising tuitions and reduced aid has vastly increased the affordability gap. This is particularly true at the state's 17 community colleges and seven public universities (where Oregon high school graduates make up nearly 90 percent of the enrollment).

High and increasing costs from the first year onward, coupled with diminished need-based aid, create a cumulative burden that constantly endangers student persistence to graduation. Even students from middle-income circumstances are affected by these cost pressures. More students are borrowing more money to finance their education, so the cost of getting through school now follows students into their careers in the form of record levels of loan debt. Students who borrow money and then don't complete a degree have an even tougher time managing student loan debt because their earning capacity without the degree is diminished.

This paper outlines the dimensions of postsecondary affordability in Oregon, and then touches on several specific issues that are pertinent. These include state support for postsecondary institutions versus state support for students, the institutional cost spiral in postsecondary education, hidden costs that threaten postsecondary education affordability, and how Oregon might better engage business and philanthropy in solving the affordability problem, which is too extensive for government alone to tackle. These issues have the potential of yielding to policy solutions. There are some things that can be done right away, such as restoring previous levels of state aid to low-income students. Other challenges, such as controlling rising costs and developing new sources of student aid, will take further effort. The purpose of this paper is to start the conversation leading to the first steps.

High and increasing post-secondary costs, coupled with diminished student aid, create a cumulative burden that constantly endangers student persistence.

What We Mean by Affordability

Affordability, for the purposes of this paper, is the extent to which a postsecondary education is financially attainable to a student or that student's family. Bear in mind that student educational objectives, school choices, and circumstances differ widely. Some students have a game plan that extends through graduate school, while others want a two-year associate's degree. Some — about 40 percent — are “traditional,” that is, they are still dependents (reliant on parental support) who go to a four-year college straight out of high school. The

* The passage of Ballot Measure 5 in 1990 and then passage of two other ballot measures later in the 1990s respectively rolled back property tax rates and then cut and capped property tax rate increases, sweeping away the traditional K-12 school funding base. This shifted K-12 school funding to the State of Oregon, which derives the bulk of its General Fund budget from income tax revenues. This placed community college and state university funding in competition with the huge state school fund and other growing state expenditures, such as corrections. This budget competition constrained funding for higher education even when tax revenues were healthy and growing in the latter half of the 1990s. When the state went into a recession in 2001, tax revenues slumped severely, causing a fiscal crisis that restricted funds for all programs, including, of course, postsecondary schools. Despite recent improvement in the state's economic outlook, Oregon has not yet recovered from that fiscal damage.

balance are independent, usually older, many returning to school, some of them with dependents of their own. So, affordability has to be judged primarily in the context of the student's academic choices, circumstances, and means. For example, a dependent Oregon student might attend a four-year independent Oregon college and live on campus at a total annual cost of \$38,000 while another might live with parents and attend a nearby community college at a total cost of \$6,000 a year. If the family of the first student makes \$120,000 a year and lives within its means, the independent school is probably affordable. If the family of the second student makes \$20,000 a year, the local community college is probably a financial challenge. On the other hand, an academically accomplished student from a low-income family might be able to "afford" the higher priced school because of a generous aid package that covers virtually everything.

Net Expenses

The availability of student aid is pivotal in affordability.

A key calculation in affordability is net expenses. Net expenses are usually determined by totaling the cost of tuition, fees, books, and room and board, and then subtracting student aid, such as grants and scholarships. If the student or the student's family can muster the resources to pay for the balance, school is affordable.

In this regard, the availability of student aid is pivotal in affordability because it helps determine net expenses that students and families must pay, either from income and savings, or borrowing, which is increasingly making up the gap when income and savings are not sufficient.

Affordability Is a Serious Problem

Oregon's two-year and four-year schools have become far less affordable over the past decade. According to *Measuring Up 2004*,³ a national report of state performance in higher education, ten years ago 21 percent of mean Oregon family income was required to pay for a student's typical net expenses at an Oregon community college. Today that share has reached 29 percent. Ten years ago 25 percent of average family income was required for the net cost of sending a student to one of Oregon's public universities. Today that share is 34 percent. The share of average family income required to send a student to an Oregon four-year private institution has risen from 55 to 71 percent.

The burden is far more severe for families with low or modest incomes. Oregon's low-income and lower-middle income families, like such families nationally, have seen their earning power stagnate or drift slightly downward over the past decade.⁴ For example, attending one of Oregon's public universities (average annual student budget around \$15,000) can cost a student about \$10,000 net per year. That represents about 80 percent of the average income (\$12,000) of a low-income Oregon family; about 38 percent of the average income (\$27,000) of a lower-middle income family. Another way to look at it is that it represents more than half of the average income of 40 percent of Oregon families, who earn an average of \$19,500 per year. Such data explain why Oregon received a grade of F for affordability in *Measuring Up 2004*.

High Tuition, Low Aid

In a student's total yearly education budget, the combination of tuition and fees makes up roughly one-fourth of typical costs to attend a community college, one-third to attend a state university, and two-thirds to enroll at an independent institution. The combination of tuition and fees is the fastest growing cost among public institutions, and it continues to rise among independent colleges and universities.

Like many states, Oregon has, for years, directly subsidized its public postsecondary institutions, which have, in turn, set tuition to make up the difference between state support and institutional costs. The general subsidy has functioned, in effect, as an indirect tuition subsidy for students. This system seemed to work reasonably well for years as generous state appropriations, even with low need-based student aid, kept tuition relatively low. During the 1960s Oregon ranked as high as third in the nation in the share of per capita personal income that it contributed to public higher education, and through 1980 it ranked as high as 25.⁵ Under these conditions, Oregon was a low-tuition, low-aid state.

That began to change in the 1980s. From 1982 through 2004, tuition at Oregon's public institutions quadrupled in actual dollars and more than doubled in inflation-adjusted dollars.⁶ That trend was accelerated in significant part because voters approved ballot measures that forced additional state spending on corrections and that shifted responsibility for funding K-12 education from local property taxes to state income taxes. These changes placed new demands on the General Fund in competition with postsecondary education, a problem made worse by the vulnerability of Oregon's income tax-dependent system to revenue shortfalls during economic downturns. Oregon had just such a downturn in the first few years of this decade, reducing state revenues and funds available for postsecondary education. As the state saw its income tax receipts and state budgets shrink, it increasingly cut general support to public universities and community colleges. (It ranks 40th in share of personal income — under \$6 per \$1,000 — contributed to higher education.⁷) These schools, in turn, coped with cost and enrollment increases by raising tuition and fees. Meanwhile, Oregon did nothing to shore up state student aid. In fact, the state cut need-based student aid. Only in the 2005 Legislature, when lawmakers adopted a portion of the Governor's proposal to increase need-based aid, has Oregon attempted to reverse this trend. Oregon is trying to become somewhat less a low-aid state than it was, but it is still very much a high-tuition state.

As support for Oregon's community colleges and state universities has suffered from competition with other budget demands, these schools have responded by increasing tuition and fees.

Tuition and Fees Have Been Climbing Rapidly

Nationally in recent decades, tuition and fees have been climbing at a rate that far exceeds inflation, family income, and student aid. They have been rising even faster the past five years at Oregon's public two-year and four-year schools.

It should be noted that at Oregon's four-year colleges and universities the published tuition, sometimes called the sticker price, is not necessarily what students pay. Through tuition discounts (sometimes called fee remissions or fee waivers) or through school-based aid sources,

especially at independent institutions, lower income students, or those coveted for diversity or special talent, may pay substantially less than the sticker price. The Oregon University System has two kinds of tuition discount, one to reduce tuition costs for graduate students, and the other, called a programmatic fee remission, which a school may use to reduce the tuition burden for low- or moderate-income students, to attract high achievers, or to attract students who represent ethnic or geographic diversity. In 2003-04 OUS fee remissions totaled \$21 million for graduate students and \$34.7 million for undergraduates.⁸

Public Institution Increases

Through 2004, average annual tuition and fees in Oregon's 17 community colleges increased 28 percent over the previous two years and 64 percent over the previous five years. At Chemeketa Community College, for example, tuition and fees jumped from \$1,620 in 1999-00 to \$2,700 in 2004-05. In a similar time frame, tuition and fees in the seven schools of the Oregon University System have grown an average of 21 percent the last two years and 46 percent the last five years. Oregon State University typifies this increase. Annual undergraduate tuition in 2004-05 exceeded \$5,300, nearly a 50 percent increase over five years earlier.⁹

At both community colleges and public universities, tuition and fees are paying for an increasing share of institutional spending per student FTE while state appropriations are paying for a decreasing share. At Oregon State University, for example, tuition and fees went from 41 percent of this cost in the 1999-01 biennium to 55 percent in 2003-05. At the same time, the state's share dropped from 51 to 35 percent.¹⁰

According to the OUS 2004 Fact Book, Oregon ranked 44th in the nation for public four-year support per FTE* at \$5,631 in 2002-03 compared to the U.S. average of \$7,978. This gave Oregon the sixth highest public tuition and fees in the nation at \$6,228 per FTE that year.¹¹ Recently, however, the State Board of Higher Education has made an effort to contain tuition increases. In the summer of 2004, it held what would have been a 14 percent tuition increase to 10 percent. In August of 2005, the Board approved increases averaging 3 percent for the 2005-06 school year, a marked slowing from previous tuition growth rates.

Independent College Increases

Annual sticker price tuition and fees at Oregon's nine largest independent four-year institutions now average over \$23,000. This average is up from just under \$21,000 five years ago (in 2004 dollars). So, in a period when public university and community college tuitions have surged, average tuition at the largest independent schools has increased less than 10 percent. Nevertheless, because independent college tuitions are higher to begin with, this growth trend represents substantial jumps each year in actual dollars.

Tuition and fees at Oregon's community colleges and public universities have gone up 28 percent and 21 percent respectively in just the past two years.

* A full-time student is based on enrollment in about 15 credit hours per term, 45 per school year. Headcount includes all students enrolled, no matter whether they are taking a few credit hours or a full load. A full-time equivalent (FTE), adds up all credit hours, whether taken by full-time or part-time students, and divides them by 15 to derive the FTE figure. For example, five students (headcount five) who each take three credit hours make up one FTE.

Student Aid Has Not Been Keeping Pace

Relative to Oregon's rising living costs, and to dramatically rising tuition and fees, the amount of financial aid available the past decade to Oregon postsecondary students, particularly low-income undergraduate students, has been lagging.* This is particularly true of federal Pell Grants, the nation's most significant source of need-based student aid, and Oregon Opportunity Grants, the State of Oregon's grant program for low-income Oregon students attending Oregon schools.

Pell Grants

A Pell Grant is a key building block in an aid package for a low-income student. Annual Pell Grant funding is approaching \$13 billion with average yearly grants of nearly \$2,500. After sliding downward in constant dollars from 1980 through 1996, total Pell Grant funding has increased substantially in the past decade, but still not enough to keep up with enrollment and college cost growth.¹² At its peak in the 1979-80 school year, the Pell Grant covered almost all of a student's average cost of tuition, fees, room, and board at a community college, 77 percent of those expenses at a public university, and 36 percent at an independent institution. Today Pell Grant coverage for those costs has declined, respectively, to about 68, 41, and 16 percent.¹³

Oregon Opportunity Grants

State funding for Oregon Opportunity Grants has also failed to keep pace with rising student costs and enrollment growth among low- and moderate-income students. Opportunity grants, created in the 1970s, once equaled all of a student's tuition and fees at a public institution but by the 2004-05 school year covered less than half of that for a community college student and less than a third of that for a public university student. At the same time, grants to students attending Oregon's independent colleges and universities, although higher than for students at public institutions, covered only a seventh of tuition and fees.

Students were formerly eligible if their income or their parents' income fell below 75 percent of the national median family income. Starting with the 2000-01 school year, the Oregon Student Assistance Commission, in order to reduce the eligibility pool, changed that criterion for independent students to 55 percent of median family income (well below the poverty level). For the 2002-03 school year, OSAC made the same eligibility change for dependent students. Even with these eligibility adjustments, the state had sufficient funds in the 2004-05 academic year to make grants to only 18,500 of nearly 49,000 eligible students.** In the 2002-03 school year Oregon ranked 31st in the nation in state need-based grant assistance to undergraduate students.¹⁴

State need grants have failed to keep pace with student costs and the number of students who need assistance.

* Nationally, non-need-based aid has been growing somewhat faster than need-based aid, but comparative data on the relative growth rate of non-need-based aid in Oregon is not readily available.

**As a practical matter, the eligibility pool is about 70 percent of this number, representing just over 32,000 students who apply by the cutoff date

To address this growing deficiency, the Governor, in his 2005-07 budget, recommended a \$91.6 million increase in the Oregon Opportunity Grant program, which would have doubled previous need-based aid of about \$44 million in the 2003-04 biennium. In the 2005 session the actual outcome was not quite that good but still an improvement. The Senate cut the Governor's proposal to \$80.3 million and the House then reduced it to \$77.6 million, the level at which it became law in Senate Bill 5584. The law made need grant awards available to all eligible full-time students at community colleges and state universities, but to only 70 percent of eligible full-time students at independent institutions. For the first time, need grants are available to part-time students. Thus, the pool of eligible students has been expanded among public institutions, and students in most cases have seen annual grant increases of several hundred dollars over previous levels.¹⁵

Fee Remissions

In 2003 the Oregon Legislature capped fee remissions at OUS institutions, restricting fee remissions to no more than 8 percent of total tuition revenue. Prior to that fee remissions averaged 8.7 percent of total tuition revenues, so the cap represented a cut to previous fee remission levels and a restriction on growth in this form of student aid. The Governor's budget for 2005-07 recommends increasing the limit to 10 percent and then eliminating it altogether beginning in 2007-09.¹⁶

Other Aid

It is beyond the scope of this paper to quantify the grants, scholarships, and other subsidies awarded to Oregon students by individual schools, foundations, employers, and other donors. However, these sources of student aid, while significant, are apparently not filling the net cost gap that continues to grow for students as public need-based aid dwindles relative to rising postsecondary costs. Future discussions about postsecondary affordability in Oregon would benefit from better data on these sources.

Paying the Difference Is Boosting Student Loan Debt to Record Levels

As noted earlier, what the student or the student's family has to pay for net expenses is typically made up from resources such as disposable family income, savings, student income, or borrowing.

The great majority of students lean most heavily on borrowing to make up the difference. Most students or their families don't have enough disposable income or haven't saved enough to meet the high cost of schooling. The majority of students do some paid work while in school, but primarily only part time and principally to defray costs. Too much outside work cuts into academic performance, and most jobs don't pay well enough anymore for students to "work their way through" school.^{17, 18} Borrowing ends up as the most feasible option, especially for students from low- and moderate-income families.

The Student Debt Load

Thus, one of the most prominent consequences of the growing affordability gap is the increasing debt load that students and their families are accruing to finance net expenses. Just by itself, rising student loan debt suggests that net costs are steadily outstripping student and family resources, although affluent families may also be opting more frequently to use borrowing as an added resource in managing the way they finance the education of their children. There are many sources of federal and private student loans, with various interest and repayment options, for both students and parents of students. Borrowing is now so common in financing postsecondary studies, it is regarded in some quarters as a form of student aid, even though it must be repaid.

Data is hard to come by on the growth of student debt in Oregon, but the state, in all likelihood, mirrors national trends. Both grant aid and borrowing increased nationally for all postsecondary students from 1993-94 through 2003-04, grants growing 64 percent in constant dollars per FTE student, loans increasing 111 percent. Graduate students, it should be pointed out, borrow more money on average than undergraduate students, in part because graduate school is more expensive and grant aid is less available to them. Undergraduate students now meet slightly more of their funding needs through loans than grants, perhaps because undergraduate grant aid has not kept pace with demand in the past few years.¹⁹

Nellie Mae's 2002 National Student Loan Survey indicates that average undergraduate debt among borrowers rose from \$11,400 in 1997 to \$18,900 five years later, with the highest average for students at independent schools (\$21,200) and the lowest for those attending community colleges (\$8,700). The survey also shows that debt has been growing faster for students at public four-year institutions than for those at independent colleges and universities.²⁰

Debt Impacts

The manageability of the debt burden depends on how much a student has borrowed and the size of debt repayment relative to the student's later earning power. A quarter to a half of borrowers, according to the Nellie Mae survey, feel burdened by their debt, but a majority credit their loans for making further education possible, and they believe the cost of the loan is worth the benefit received.

Borrowing has two other dimensions worth mentioning. First, according to longitudinal research, borrowing correlates with stronger student persistence to completion,²¹ perhaps because it relieves students from the distractions of working while attending school, perhaps because it reflects the student's level of commitment to obtain a degree. Second, borrowing becomes a more onerous burden for students who don't attain a degree or certificate, because they leave school with the debt but without the credential that would improve their income opportunities to manage that debt more easily. A study by the National Center for Public Policy and Higher Education has found, for example, that half of entering freshmen borrow, and one-fifth of borrowers drop out. The study found that those who dropped out had a median annual salary of \$24,000. The borrowers among them had median debt of \$7,000 from student loans, and about a quarter of them defaulted on their loans.²²

Graduates are starting their careers with high education debt load; dropouts with debt have less earning power to manage repayment.

Affordability Poses Barrier to Postsecondary Opportunity

Thousands of potential students have been priced out of attending Oregon's postsecondary schools.

Analysis by the State Board of Higher Education's Access and Affordability Working Group asserts that 12,000 new freshman and community college transfers were shut out of OUS schools between 1989 and 2003 due to revenue reductions resulting from passage of Ballot Measure 5, the property tax limitation, in 1990. The working group projects that another 9,000 students will be shut out by 2011 if Oregon's current high-tuition, low-aid policies continue. The working group calculates that for every \$1,000 increase in college costs there will be a 5 percent drop in entering freshmen and a 2.5 percent decline in returning students.²³

The Oregon Community College Council of Institutional Research released a study in March 2005 showing that more than 64,400 additional students, on a headcount basis, would have attended the state's community colleges in the 2003-04 school year if tuition and funding had stayed on the growth trajectory they had before the recession. FTE attendance would have been higher by 7,660. (Part-time students, the study suggests, are more price sensitive than full-time students, in part because they are not eligible for financial aid. Hence, the drop in headcount from the enrollment trend line.) About 330,000 students attended Oregon's 17 schools last year, a headcount drop of about 76,000 from three years earlier, as state General Fund appropriations declined.²⁴

The Council estimates that for each 1 percent increase in average Oregon community college tuition, adjusted for inflation, headcount falls by .59 percent and FTE by .41 percent. Projections show that there will be a 25 percent to 30 percent loss in headcount enrollment in 2006-07 as a result of current tuition and state funding trends.

Conversely, making postsecondary education more affordable through student aid can counter such impacts. In a recent study for the Lumina Foundation for Education, Edward P. St. John and co-authors found that on average for every \$1,000 of need-based grant aid per student, there was a corresponding postsecondary enrollment rise of 11.5 percent among recent high school graduates. For an equal amount in non-need grant aid, enrollment increased 8.9 percent.²⁵

Institutional Support vs. Student Aid Policy

Given Oregon's recent history of disinvestment in postsecondary education, neither schools nor students have been receiving adequate support. In Oregon's fiscal system, postsecondary institutional support and need-based student aid both depend on the General Fund and are pitted against one another and other state needs — all competing for a slice of the same pie. Despite recent good news about expected increases in state revenue, Oregon's most recent legislative session proceeded on the expectation that the state will have a strapped General Fund budget in the 2005-07 biennium. In this environment, postsecondary education is in funding competition with K-12 education, social services, and public safety and corrections.

And within postsecondary education, student need-based aid is in competition with institutional support historically provided to keep tuition manageable for students.

There are obvious tensions in this arrangement. Student groups support increased opportunity grants, but also oppose tuition increases (which have been contained traditionally by appropriating additional funds for institutional support.) Increased institutional support to contain tuition is effectively a tuition subsidy for students of all income levels, so in a tangible way, it diverts to more affluent students a portion of resources that could be used to increase postsecondary affordability for Oregon's neediest students. Some legislators appeared to favor this approach, which the Governor has opposed.

Increased institutional support diverts to more affluent students a portion of resources that could be used to increase postsecondary affordability for Oregon's neediest students.

Postsecondary Cost Management

Apart from the earlier discussion of Oregon's fiscal difficulties, it is beyond the scope of this paper to analyze all the other factors escalating postsecondary education costs in Oregon and in the nation. Yet, because these costs are pushing up tuition levels at rates that far outpace inflation, family income, and student aid, the problem needs to be acknowledged now and addressed in the near future. Certainly, cost management, if not cost containment or reduction, must be included in any effort to keep postsecondary education affordable. Discussions of affordability should not begin with the assumption that rising institutional costs and pricing are inevitable, acceptable, and off the table. Nationally, there is substantial evidence that rising postsecondary costs can be managed, or even reduced, because many institutions — though still a minority — are demonstrating that it can be done.²⁶

This element of the affordability conversation makes postsecondary leaders nervous, especially among public institutions, which have weathered repeated cycles of state budget cuts. Postsecondary educators argue that they have cut costs to the bone. Nevertheless, this aspect of affordability is not well understood, in part because postsecondary officials have not made enough effort to render it less opaque. From a policy and budget perspective, it is impossible for Oregon's elected leaders to make informed decisions and trade-offs without understanding the factors — apart from reductions in state funding — that are driving tuition increases. In the same respect, both policy makers and the public would benefit from full, continuing, transparent disclosure of postsecondary revenues, expenditures, deferred obligations, and pricing. In regard to pricing, students and parents faced with market choices would be well served by full disclosure, transparency, and comparability among both public and private institutions. Postsecondary consumers do not now enjoy that benefit.

The conversation about cost management should include an examination of the trade-offs between directing more state investment to student aid in favor of support to institutions for instruction (i.e., the tuition offset). Colorado has embarked on such a shift in the current school year, allocating two-thirds of its higher education investment directly to students,

and one third to state institutions. For their one-third of state funding, state institutions were required to sign a contract that stipulates certain performance requirements, frees them substantially from regulatory procedures, and obligates them to keep tuition increases from outpacing inflation.²⁷

In *Collision Course*, a 2004 policy brief, the Lumina Foundation for Education lays out additional opportunities and strategies by which stakeholders can tackle the growing cost crisis in postsecondary education. Recommendations for institutions include adoption of best practices to contain rising costs, disciplined reallocation of resources to higher priorities, a search for new revenue sources, and a reduction in the practice of tuition discounting. Recommendations to states include limiting tuition increases to justifiable growth in direct educational expenses, providing budgetary incentives to public and private colleges to graduate students on a timely basis, and integrating fiscal, financial aid, and tuition policy.²⁸

Hidden Costs and Cost Saving Opportunities

There are a number of hidden costs that make a postsecondary education more expensive for both students and institutions. At the same time, there are opportunities to reduce existing costs for students and institutions.

Hidden Costs

Lack of student preparation for postsecondary work, difficulties with credit transfer, and lack of institutional capacity are some of the most prominent causes of higher-than-ordinary costs for students. As noted in the white paper *Preparation*, a substantial share of incoming freshmen are ill prepared for postsecondary study. As a result, at least a quarter of them require remedial instruction in subjects such as writing, math, and reading. This results in immediate extra cost for remediation classes and long-term cost from delay in getting through academic programs. (It also burdens postsecondary institutions with gaps in student skill and knowledge that should have been developed in high school.) An extra quarter of study at a public university to acquire missing credits can cost a student thousands of dollars at the same time that it creates an extra burden on institutional capacity.

Inadequate curriculum articulation and inflexible credit transfer policies have increased student costs in cases where students were not credited for courses taken prior to transfer, and which they had to take and pay for a second time. The State Board of Higher Education is addressing a number of hidden cost issues through its Excellence in Delivery and Productivity Working Group, commonly called the More-Better-Faster group.²⁹ The group has proposed a wide array of solutions, including better curriculum coordination between and among systems, system-wide credit transfer policies and procedures, dual enrollment arrangements for students at both community colleges and public universities, removal of capacity bottlenecks in high-demand courses, and support for these and other initiatives with a better statewide PreK-20 integrated data system.³⁰

Cost Saving Opportunities

Accelerated study at the high school level is one of the best ways for students to get a jump on postsecondary courses, improving their readiness for the next level and their performance once they get there. There is also a cost-saving bonus. A small percentage of Oregon high school students are earning advanced standing or lower division college credit while still in high school, principally through Advanced Placement or International Baccalaureate programs. Students can take advantage of similar programs that confer advanced community college credit either through dual enrollment or through the Tech Prep (2+2) program. Every postsecondary credit acquired in high school reduces the time and cost of acquiring that same credit in the postsecondary environment.

Online study, still in its fledgling stage, offers additional opportunities to reduce capacity problems and save students money through more efficient course delivery.

Better transfer, service delivery, and related issues are addressed in the companion white paper Pathways and Persistence, which is focused on smoother postsecondary education pathways for students.

Enhanced Partnerships

In *The Price of Government*, David Osborne and Peter Hutchinson describe how the nation and most of its states are caught in the vise jaws of a deteriorating tax base on one side and on the other, runaway healthcare costs, enormous spending on education, a staggering bill to incarcerate offenders, and huge retirement obligations to a population living longer. At the state level in particular, these forces have created what the authors call “an age of permanent fiscal crisis.”⁵¹ One symptom of this crisis is the inability of federal and state governments to keep up with the rising costs of postsecondary education, both through direct support for schools and through grant aid to students.

The implication of this reality is that government, at least for the foreseeable future, can no longer pick up as much of the postsecondary tab as it did in the decades following World War II. It still has a role to play in making postsecondary education affordable, especially to low- and moderate-income students, but it needs partners to shoulder a bigger share of the load. Unless that happens, more students will be denied a higher education and more who do go on will be saddled with larger and larger debt loads. Because students derive considerable personal benefit from an advanced education, it has been argued that they and their families should assume a share of responsibility for the cost. While this proposition is reasonable, there are limits to how much families and individuals can be expected to pay before communities, the economy, and society as a whole sustain loss of public benefit and long-term damage.

With government resources constrained, how can the energy and resources of the private and independent sectors be brought to bear even more than they are now on postsecondary

Government still has a role to play in making postsecondary education affordable, but it needs partners to shoulder a bigger share of the load.

affordability? In a 2003 paper, the Oregon Community Foundation estimated that private scholarships in Oregon provide less than 8 percent of the cost of attending a public college or university.³² Beyond that, it would be useful to have a comprehensive database that details the ways in which individual school endowments, foundations, companies, individual donors, and other stakeholders now share the burden of helping more students attain a postsecondary degree.

Such baseline information would be helpful in pursuing six recommendations in the OCF paper:

- ▶ Continue to identify ways to increase scholarship resources
- ▶ Identify and direct scholarships to underserved areas of the state with a focus on individual high schools
- ▶ Support state funding for early awareness programs that open doors to educational opportunities
- ▶ Understand workforce needs and encourage scholarship development in areas of identified need such as nursing and allied health occupations, education, and technology
- ▶ Continue to direct scholarships to community college and transfers to four-year programs
- ▶ Strengthen public-private cooperation to address gaps in funding and take advantage of new opportunities.

In addressing student aid, *Collision Course*, the Lumina report, suggests two particular initiatives for the nongovernment sectors:

- ▶ Individuals, corporations and foundations can expand private support for higher education institutions, particularly those institutions that are willing to take on the challenge of educating promising low-income students. Building endowment — and using it wisely — is the only long-term solution to reducing college dependence on tuition as a revenue source.
- ▶ As part of cafeteria-style benefits plans, employers can consider funding tuition-reimbursement programs for employees and matching employee contributions to state-based 529 plans for college savings.³³

It should be noted that the Access and Affordability Working Group considered proposing the creation of a need-based aid endowment exceeding \$2 billion. The group tabled that idea for the time being. A solution of that magnitude would not be possible in Oregon without the concerted involvement of a broad coalition of stakeholders.

What Should Oregon Do?

1. Continue to push for strong need-based student aid.

Recent increases in Oregon's need-based student aid are commendable and helpful, but still not enough so the state's neediest students can keep pace with the rising costs of postsecondary education. Oregon can and should do more to make postsecondary education more affordable and accessible through expanded need-based aid. Oregon Opportunity Grants should also be extended to students attending for-profit institutions, as is the case with federal Pell Grants. Proprietary schools meet a legitimate need, foster healthy market competition, and serve some of Oregon's neediest students. There is no reasonable justification for denying aid to low-income students who choose programs offered by these schools.

2. Coordinate state-level budgeting for tuition support and need-based aid, with a bias toward more funding for student aid.

Within the confines of General Fund budgeting, where allocation of more money for one purpose equals less for another, Oregon should consciously and transparently link its expenditures for institutional instruction and need-based student aid. As its principal strategy for maintaining affordability, the state should favor student aid over institutional support. Student aid directs state support to students who need it the most, it gives the state an added tool to address occupational shortages, and it gives students more power in making market choices. Oregon should closely watch Colorado's experiment with postsecondary investment to see how the assumptions and initiatives in that experiment work out in practice.

3. Explore the dimensions of cost increases and the possibilities of cost management.

Oregon should make an effort to identify and better understand the principal cost drivers at the state's public institutions, as well as ways that postsecondary revenues, expenditures, deferred obligations, and pricing can be made more transparent. Based on the findings of this effort, policy makers should advocate solutions that make postsecondary education more affordable while preserving its various public benefits.

4. Take the mystery out of postsecondary pricing.

The state should require full disclosure, transparency, and comparability in pricing among all postsecondary institutions — public, independent, proprietary.

5. Continue efforts to reduce hidden costs to students and find savings in existing costs.

Policy makers should pursue recommendations in the companion white paper Preparation to improve the high school graduation rate and the readiness of high school students to succeed in postsecondary education. The state should continue to pursue and adopt the efficiency and service delivery proposals of the Excellence in Service and Delivery Working Group, including better curriculum articulation and credit transfer policies, dual enrollment for students at both community colleges and public universities, removal of capacity bottlenecks in high demand courses, expansion of accelerated study programs for high school students, and adoption of a better statewide K-20 integrated data system.

6. Explore the current and potentially larger role of business and philanthropy as partners in postsecondary education.

The role and impact of individual schools, foundations, companies, and other donors in meeting the affordability gap in Oregon deserve a closer, more comprehensive examination. It is important to learn what share of the need they now meet and how they might be engaged more deeply in solving the affordability problem.

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Pathways and Persistence.

Students travel many paths to their education objectives. Oregon is smoothing these pathways but has more work to do.

The papers here on Preparation, Affordability, and Pathways and Persistence are concerned with the vital importance of getting as many Oregonians as possible to and through a postsecondary education, whether a graduate, undergraduate, or two-year degree, or a certificate in a skilled occupation.

These three issues are vital because the stakes are high. Postsecondary education affords Oregonians greater personal enrichment, income, and employability over a lifetime. It furnishes Oregon's enterprises the skilled human capital needed to compete and thrive in the global economy. It contributes to a stronger state economy and tax base, greater family stability, healthier communities, and lower social costs related to such factors as unemployment, low income, poverty, and ill health.¹ It also improves the prospects of families for generations to come when it enables students to become "first-in-family" to attain a postsecondary education.

5

Pathways and Persistence

Improving Postsecondary Access, Persistence, and Completion

Summary

The historic isolation of Oregon's education systems from one another has given rise to a variety of disconnections and obstacles to student persistence. State officials are now making commendable progress in eliminating or bridging those gaps, but much more remains to be done.

Oregon should strive for greater functional integration between K-12 and postsecondary education systems — i.e., a seamless PreK-20 continuum — in order to smooth the multiple paths traveled by students and to help them persist to higher skill levels and academic success.

Oregon has specific work yet to do to:

- ▶ Make curriculum and assessments span the K-12 and postsecondary divide more seamlessly.
- ▶ Develop postsecondary lower division proficiencies for credits
- ▶ Expand accelerated studies
- ▶ Address instructional capacity bottlenecks
- ▶ Improve school-to-school student transfer
- ▶ Develop a culture of student retention
- ▶ Develop a comprehensive, integrated PreK-20 student data system.

How Pathways Influence Persistence

Smooth Going vs. Gaps and Obstacles

Students travel part or all of a pathway — or many pathways — extending from preschool to graduate school. The smoother the pathway, the more likely a student will persist to completion, whether that end point is a two-year certificate, a two- or four-year degree, or a graduate or professional degree.

As explored in the first two papers of this series, inadequate preparation and rising costs pose the most prominent barriers to students in their quest for a postsecondary education. Yet even if students have prepared well and assembled the necessary funding, the pathway will not necessarily be smooth. When gaps and obstacles within the education systems themselves are scattered along the way, students often stall or lose

ground. If curriculum or assessments do not connect from one level to the next, if needed classes close out too fast, if credits don't transfer smoothly, students are more likely to be hampered or discouraged

External Influences

Other factors also play a role in student persistence. For example, one of the strongest indicators of successful college going and completion is the education level of students' parents. Drawing data from the National Education Longitudinal Study, the National Center for Education Statistics found that among students whose parents were college graduates, 68 percent who were high school seniors in 1992 had completed a college degree by 2000. By contrast, among students in this cohort who might be first-in-family or so-called "first-generation" college graduates, only 24 percent had achieved a degree by 2000 and 43 percent had dropped out.²

Persistence is also decidedly lower for students of color. In a summary table of 2002 federal data for Oregon's starting freshmen cohort of 1996, the Oregon Independent College Association Fact Book shows African American, Hispanic, and Native American students persisting at significantly lower rates than the overall student population and at even lower rates than white students.³ This is true at both state universities and independent four-year institutions, although at independent schools the persistence numbers of minority students tend to follow the higher persistence rates of students in general.

These data suggest that students who need retention assistance the most, and those most likely to benefit the most, are first-generation and minority students, many of whom are also from low-income families.

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Transition Points

Student persistence is influenced in particular by what happens at key transition points. At the K-12 level, these points include the very beginning at first grade, the move from elementary to middle school, the jump from eighth to ninth grade, and completion of high school with a diploma.

Postsecondary transition points narrow somewhat to making a successful start the first term of the freshman year and returning for a second year. For the growing number of students who start at a community college, the move to a four-year institution is also a big step. Students themselves have added new complexities to this transition. Whereas the traditional path has been to finish an associate's degree and then transfer to a four-year institution, many students are now transferring sooner than the end of two years. Others are simultaneously combining classes at four-year and two-year institutions, a practice called dual enrollment that institutions have been working the past few years to accommodate.

A Word of Caution

What we know about student persistence tends to be generalized according to data that is easiest to collect, for example, the percentage of a university freshman class that returns the

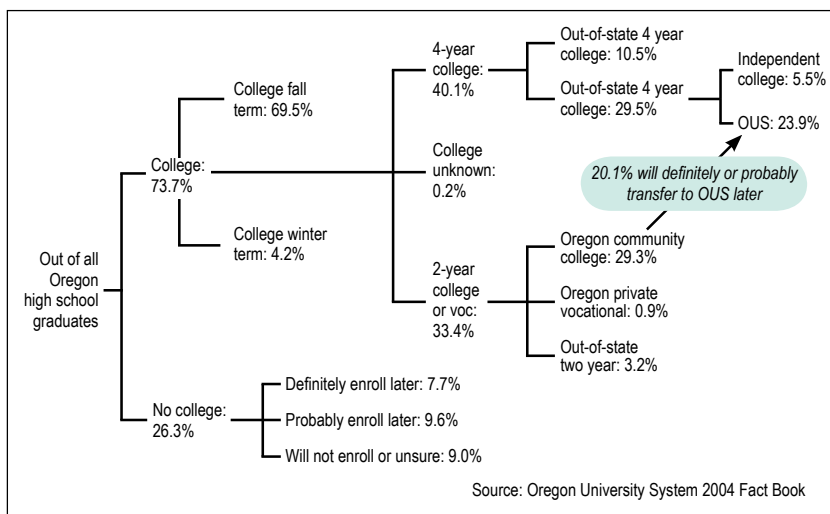
following year. This is meaningful because history shows students have a greater chance of completing a degree within six years if they make it through the first postsecondary year. However, because we don't have adequate data systems to track individual student movement across the geographic landscape and the postsecondary universe, we don't know if students not counted as completers at a particular Oregon school or postsecondary system may, in fact, have completed a degree somewhere else.

In speaking of persistence, we should also be careful about how we define student and system failure. Failure is present where students who want to complete a degree are forced off the path because of poor preparation, inadequate funding, or institutional barriers. However, we can't always know or assume that students who didn't finish didn't leave for good reasons, didn't get what they needed at the time, didn't get what they needed later, and didn't go on to be successful in employment and life. With present data limitations, we just can't be sure how many people really failed and how many simply moved on, either to finish what they want of school elsewhere or to achieve more immediate goals. Advocates of higher student persistence and postsecondary accountability have proposed a federal "unit record" database to track the educational progress of every college student in the nation.⁴ Privacy advocates on both ends of the political spectrum are opposed to the idea.⁵ It isn't possible to tell at the moment which side is likely to prevail or if a compromise might be reached.

Student Pathways

The diagram below illustrates the complex postsecondary pathways chosen by Oregon high school graduates, as reported in a survey of graduates from the statewide Class of 2003.⁶ In fact, student pathways are even more extensive and complex than this figure suggests. Today, Oregon has high school seniors taking college credit courses alongside their secondary curriculum, college-age students simultaneously attending community college and university courses, university students taking some of their classes in community college facilities,

students stopping out and returning a year or more later, full-time workers pursuing their education part time, students with degrees returning to update knowledge in their fields or to make complete career changes, and students of all ages and circumstances taking courses online, many of them from distant education providers, some of them from local or nearby institutions. An expanded diagram would also include graduate and professional studies.

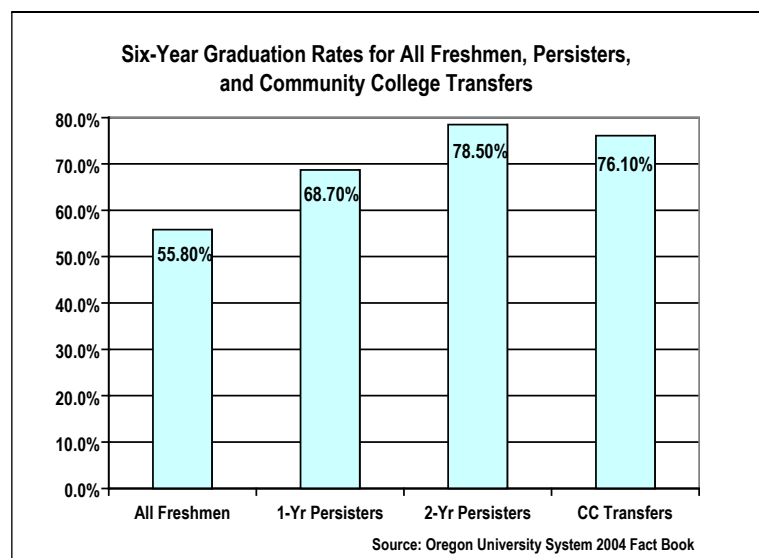


Undergraduate Persistence in Oregon

For all the reasons discussed at the top of this paper, Oregon has a compelling interest in seeing as many students as possible achieve postsecondary credentials. Unfortunately, Oregon, like most other states, has huge losses along its education pathways. First, only 69 percent of students who start the ninth grade will collect a high school diploma four years later. Among these secondary completers, a large majority embarks on the quest for a postsecondary credential, but only a bare majority completes it. As the diagram above illustrates, nearly three-fourths of Oregon high school graduates go on to some form of postsecondary education. But other data show that nearly half of these students do not finish a four-year program within six years, and nearly three-fourths don't finish a two-year degree program within three years.

In the Oregon University system 55.8 percent of the freshman class of 1997 achieved degrees within six years, either at the school where they started or at another OUS institution.⁷ This result reflects a steady, gradual improvement over the past five years, the result of increased OUS retention efforts. Six-year completion is higher among Oregon's independent colleges, where, on average, 65 percent of the freshman class of 1997 had attained degrees by 2003.⁸ As shown in the chart below, OUS students who persist to the second year have a higher rate of degree completion, 68.7 percent, and two-year persisters have an even higher rate of degree completion, 78.5 percent. This underscores the importance of getting students successfully through the first year ... and then through the second.

As the chart also illustrates, community college transfers who have successfully completed their lower division program complete four-year degrees at nearly the same rate as OUS students who persist through the first two years. There is reason to suspect, however, that among students who begin community college with the express purpose of transferring after two years into a four-year degree program a much lower portion complete than their peers who start at a four-year institution. Citing data from a 2002 national study⁹, Vincent Tinto, a national authority on persistence and retention, pegs the number at 27 percent,¹⁰ which is much lower than the data cited above for students who begin their baccalaureate program at one of Oregon's public or independent four-year institutions. Oregon does not collect the four-year completion rate of students who start their baccalaureate quest at community college, so it isn't possible to determine whether our community college starters do better or worse than the average cited by Tinto.



Time to Completion

A significant share of Oregon students exceed the traditional time frame for achieving a degree, particularly in public institutions. Just over half of OUS students who complete a bachelor's degree do so within four years. Nearly 37 percent finish in four to five years, and nearly 11 percent finish in five to six years.¹¹ Comparable data for students at Oregon's independent four-year schools show that nearly 84 percent of those who complete a bachelor's degree do so in four years, and nearly 97 percent finish by the end of the fifth year.¹² Oregon's community college students take much, much longer to get through lower division collegiate programs. According to unpublished data provided by the Oregon Department of Community College and Workforce Development, only 26.5 percent of students in lower division programs complete an associate's degree or transfer to a baccalaureate institution within three years.

Challenges Along the Pathway

Institutional impediments to student persistence take the form of policies, requirements, or practices that impair student preparation, that waste student effort, that slow student progress, and that fail to give students sufficient academic and emotional support. It's worth noting that a large share of students overcome these impediments and also that these obstacles were not created through ill intent on the part of our institutions. They result from evolving, uncoordinated policies and practices among separate systems and institutions that have often been well meaning but not sufficiently student centered. As a result, these systems and institutions, operating in relative isolation from one another, have paid insufficient heed to the total trajectory of a student education and the need to make it smooth and efficient from beginning to end.

Fortunately, Oregon policy leaders and education officials are taking steps to break down these old patterns. A large number of pathway and persistence issues have been under examination by the Excellence in Delivery and Productivity Working Group, one of three groups formed early in 2004 by the State Board of Higher Education to improve the performance of postsecondary education for students and the state economy. The EDP Working Group, sometimes called the More-Better-Faster group, is focused on smoothing and speeding the pathway for students with the aim of getting more of them through to completion.

Pathway and persistence issues are also being considered in other ways by the State Board of Education and by the Joint Boards Working Group. The State Board of Education is considering policy changes that will improve Oregon's K-12 academic content standards, curriculum requirements, credentialing requirements, and statewide student assessment system, as well as their connection to what is required of students in postsecondary education. The Joint Boards Working Group, at the request of the Governor, is developing new policy proposals that will integrate all of the State of Oregon's budgeting for and investment in education, and build a more seamless PreK-20 experience for Oregon students. (For more on the challenges

Education systems and institutions, operating in relative isolation from one another, have paid insufficient heed to the total trajectory of a student education and the need to make it smooth and efficient from beginning to end.

that state government faces in public education budgeting and investment, see the next white paper *What Cost? What Results for PreK-20? The Need for a Transparent, Performance-Driven Budget To Transform Oregon Education from Preschool to Graduate School.*)

Here are some of the pathway challenges that confront Oregon students, and, in turn, Oregon's education and policy leaders:

Disconnections in Curriculum and Assessments

Evidence in the field and informed opinion among education officials indicate that curriculum and assessments do not align adequately through the grades spanning Oregon's education systems, particularly between the K-12 and postsecondary levels. Such alignment is important in Oregon because more than 80 percent of OUS students and more than 90 percent of community college students come from Oregon high schools. Inadequate curriculum alignment can impede student advancement by causing students to develop knowledge at one level which isn't adequate or appropriate for success at the next. It can delay even high performing students who have gone out of their way to prepare carefully for the next phase of their education only to find they haven't mastered some curriculum content within their grasp because they were not aware they needed to. Misalignment in assessments can bog students down and waste their time taking tests at one level that don't have much to do with skills and knowledge required at the next level.

Misalignment creates other problems for students and their future employers when content, standards, and assessments for like-labeled curriculum differ among institutions, creating uncertainty about the likely capabilities of students from different schools and programs. Employers can compensate for these discrepancies by gradually acquiring familiarity with the capabilities of students bearing comparable credentials from different programs. They can decide over time which credentials from which programs signify competence, and which do not. Students are not so fortunate. Those with credentials achieved by taking a watered down curriculum face the prospect of rejection from savvy employers, or, once hired, they may struggle to do work that requires skills they don't have.

The extent of the misalignment in Oregon is not fully known because no one has studied the problem in detail, and because Oregon has not had a data system for tracking student progress along the education continuum. Still, educators and policy makers are aware of the most glaring disconnections.

State Board of Education Analysis

Perhaps the best analysis of these disconnections comes from the Oregon State Board of Education itself. In a recent policy paper, the board identifies a number of ways in which curriculum and assessments within the K-12 system and between K-12 and postsecondary education are less than seamless.¹³ For example:

- ▶ Oregon high schools have a two-tier, disjointed credentialing system. To receive a diploma to graduate, students must take a certain number of classes in particular subjects to acquire needed Carnegie Units. To receive a Certificate of Initial Mastery and a Certificate

Inadequate curriculum alignment can impede student advancement by causing students to develop knowledge at one level which isn't adequate or appropriate for success at the next.

Credit for proficiencies would begin to tie together the present disjointed systems of credentials.

of Advanced Mastery, students must demonstrate proficiencies in particular subjects in uniform statewide assessments. Most educators believe the proficiencies that students acquire pursuing certificates of mastery are essential to academic and life success. They are also more demanding than the skill levels required of traditional seat-time instruction to graduate. But attainment of either or both certificates is not required for graduation, nor for college admission.* The board proposes moving toward credit for proficiencies, which would, in effect, begin to tie together the present disjointed systems of credentials.

- ▶ The minimal number of Carnegie Units that the state has required for graduation, 22, is lower than the minimum required for admission to the Oregon University System, 24. The board supports the Oregon Legislature's recent directive to increase the minimum credits required from 22 to 24, adding one year each of math and English.¹⁴ The Board also favors requiring a second language to be one of the overall credits, and it would like to see a passing grade higher than a D to achieve a credit. (The minimum GPA for admission to OUS schools ranges from 2.75 to 3.0.) Right now, some Oregon high schools require just the state minimums for graduation and some set a higher bar. The Board believes Oregon needs a higher minimum standard in achievement of Carnegie Unit credits.
- ▶ Oregon's CIM standards, which are pegged to the tenth grade, fall short of skills required to do college-level work. In math, for example, they extend only to geometry while college level work requires Algebra II, and many schools require at least pre-calculus.**
- ▶ Proficiency standards and assessments in high school are loosely or poorly connected with traditional academic course categories. For example, the tenth grade math assessment covers algebra, geometry, and statistics, subjects that high school students may or may not have covered by spring of sophomore year. High schools complain that testing in such cases is out of sequence with instruction.
- ▶ There is no body of proficiency standards widely in place in Oregon high schools to prepare students for college-level work. As just noted, CIM attainment is not required for graduation and CIM skill standards do not meet college requirements. By the same token, a CAM is not required for graduation, and it focuses on learning methods and career development skills rather than academic skill proficiencies. To bridge this gap the Oregon University System developed the Proficiency-based Admission Standards System (PASS) a number of years ago. However, PASS-level proficiencies are (like CIM and CAM) not required for graduation, and only a fraction of Oregon's high school teachers have been trained to administer PASS assessments.
- ▶ Except for PASS, there is also no sure connection between Oregon's high school assessments (whether traditional, CIM, or CAM) and the skills required to do college-level work. Including PASS, there is no connection between high school assessments and the placement exams used by Oregon's open-admission community colleges to assess student readiness for first-year academic work.

There is no body of proficiency standards widely in place in Oregon high schools to prepare students for college-level work.

*Achievement of CIM standards is due to be included by OUS schools as a consideration for admission beginning in the 2006-07 school year, but not as a requirement. Required elements of admission will continue to be high school graduation, credit fulfillment, GPA, and skill assessments from the SAT and the ACT.

**The America Diploma Project sponsored by Achieve, Inc. and the National Governor's Association believes that high school exit standards in math should also include skills in basic statistics and probability.

- ▶ The statewide assessments do not directly connect with assessments commonly used by students seeking to attend college — the Scholastic Assessment Test (SAT) and the Aptitude for College Test (ACT). Neither of those tests directly ties to statewide standards, nor is either one applicable to early grade levels. Yet those tests have greater currency for many high school students because they are more widely recognized by colleges and universities.
- ▶ While Oregon proficiency assessments are useful in measuring actual high school student capabilities, their disconnection from other assessments causes many students and teachers (who often administer assessments) to regard them as an unnecessary extra burden, even an imposition on instructional time.

There is a close parallel between these findings and those of the Stanford University Bridge Project, which studied K-12 and postsecondary disconnections in six states, including Oregon.¹⁵

Update note: While this paper was in peer review in late November and early December of 2005, State Superintendent of Public Instruction Susan Castillo, long a supporter of the CIM and the CAM, publicly called for dropping them as separate standards and incorporating their skill proficiencies in new high school exit standards represented by a more meaningful diploma. The Superintendent's position, though not endorsed at this point by the State Board of Education, grows from the Board's policy discussion paper summarized here. Oregon is clearly on the threshold of a major debate about public education standards, credentials, assessments, and curriculum alignment across the grades.

Lack of Systematic Postsecondary Proficiencies

Since the days when Oregon policymakers developed the Oregon Education Act, the state's public postsecondary officials have become more involved in helping the K-12 system identify the curriculum standards and skill proficiencies that students must acquire in K-12 to succeed in higher education. Ironically, however, our public postsecondary schools have developed no system wide, uniform proficiencies of their own in the grade 13 and 14 general education curriculum.

This is a matter that Oregon will have to address if it hopes to achieve a PreK-20 continuum in which well-aligned curriculum standards, proficiencies, and assessments make student pathways smoother and hold both students and institutions accountable for results. The K-12 system is on the verge of fixing its own disconnections in alignment and moving toward proficiency-based grade 12 exit standards. Students will benefit greatly if they find content, standards, and assessments aligned when they move into the postsecondary system. Lower division students moving from school to school within the postsecondary system will also have more solid footing if the general education curriculum is proficiency based and more uniform. Obviously, such uniformity is less practical and desirable at the upper division level where university missions and degree programs tend to be more specialized and unique. Upper division programs will benefit, however, from students equipped with stronger general education proficiencies.

In developing the Oregon Transfer Module (discussed later in this paper), the state's postsecondary schools have laid some of the groundwork for a more uniform lower division general education curriculum. They agreed to accept each other's general education credits in lower division student transfers. The next logical step is to explore the extent to which these credits can be tied to well-defined proficiencies measured by uniform assessments.

The EDP Working Group broached this issue when it expressed an interest in tying "student outcomes" in the form of defined skills and knowledge to lower division transfer course credits. The group acknowledged that both students and their credits would travel more smoothly among institutions if those credits represented defined, uniform proficiencies across the state's postsecondary institutions. However, little system-wide, coordinated effort has been undertaken on postsecondary proficiencies tied to credits, although writing and math teachers have reportedly made some progress along these lines in their particular disciplines. Whether postsecondary officials are ready to embrace lower division curriculum content standards, performance benchmarks, and assessment standards similar to the K-12 system is unclear. It is unlikely that an outcome-based system would be uniform and credible without such standards and without an assessment system to measure their attainment. This remains an unfinished agenda item for the EDP Working Group and for Oregon's Joint Boards Articulation Commission.

Accelerated Studies

Our companion white paper on preparation describes how accelerated studies benefit Oregon students who want to get a head start on college-level study. The most significant accelerated studies programs, all in place for a number of years, have been Advanced Placement, International Baccalaureate, and community college Tech Prep and Dual Credit programs.* The preparation paper holds up accelerated studies programs as a high standard of preparation for college success and advanced credit, and it notes that the limited availability of such programs is a shortcoming in postsecondary readiness. Half of the state's high schools offer the advanced studies option for students planning to attend a four-year college, primarily in the form of Advanced Placement programs. However, only a handful of schools, most of them in the Portland area, have a significant number of students enrolled. And only a dozen schools, all but two of them in the Portland area, offer International Baccalaureate. The IB diploma program is considered the gold standard in accelerated studies and rigorous college preparation.

Fast, motivated learners are thwarted at schools without accelerated studies programs.

In a survey of Oregon high school instructional innovations, The Oregonian reported in September, 2005 that a number of high schools are beginning to offer other accelerated studies of their own creation.¹⁶ "Beaverton schools," it wrote, "have created Early College High School, a program that will allow about 110 juniors and seniors to take most or all of their classes at Portland Community College." At Scio High School students who earn their

*These community college programs involve by far the most high school students who take accelerated studies. In 2003-04, 6,910 students were enrolled in Tech Prep, also known as 2+2, and 11,306 were enrolled in Dual Credit. Students in these programs receive both secondary and community college credit at the same time. In 2003-04, according to the Oregon Department of Education, students earned 97,912 credits through these programs, saving their families more than \$4.5 million in tuition costs.

Certificate of Initial Mastery and meet other academic skill requirements can go to college free their senior year, either part time or full time through nearby community colleges.

Unfortunately, neither these innovations nor more established accelerated studies programs are available to enough students. Such limited statewide access to accelerated studies illustrates a gap in the pathway for many students who are ready to move forward at a faster pace than their peers. Fast, motivated learners at high schools without accelerated programs are, in effect, thwarted in their academic progress. As the state of Florida has found, widespread accelerated studies keep students challenged, prepare them with rigorous curriculum, move them along as fast as they are ready, reduce college costs for students, and reduce demands on postsecondary capacity.

Oregon policy makers agree. In 2005 expansion of accelerated studies topped the legislative recommendations of the EDP Working Group and the State Board of Higher Education. With support from state education officials, Associated Oregon Industries, and the sponsorship of Sen. Avel Gordly, the 2005 Legislature created what it calls the Expanded Options Program in Senate Bill 300.¹⁷ That legislation, scheduled to take effect in the 2006-07 school year, applies to students in grades 11 and 12 who are 16 years or older. The legislation has three significant features. It allows eligible students to enroll in post-secondary courses for credit at eligible post-secondary institutions; it prohibits institutions from charging students postsecondary course costs; and it directs resident school districts to enter into an agreement with postsecondary institutions for limited payment of costs from district State School Fund grants. The latter provision helps make advanced studies more affordable for high school students, particularly low-income, at-risk students.

Those involved in Senate Bill 300 say they expect it to expand accelerated studies as much as 50 percent more than the current level of offerings and to make the Expanded Options Program an even larger source of high school-based college credit than existing programs. In particular, it should prompt introduction of advanced credit studies in school districts where none now exist. This seems significant, and it is, but only because accelerated studies are in such short supply across Oregon high schools.

Relative to the need and the opportunity, SB 300 is really just a step in the right direction. The political negotiations leading to SB 300 produced several restrictions which will have to be lifted at some point if the Expanded Options Program is to reach critical mass. Right now the program significantly caps the number of total college credit hours that can be awarded for a given high school population, it limits how much money can be spent per student (roughly equal to a year of community college tuition*, and it permits high schools to petition for a state waiver from the program if it causes the school district “financial distress” or if a district already offers accelerated studies programs such as International Baccalaureate. The legislation contains another restriction in allowing credit through state community colleges

*In a high school of 1,000 students, for example, 330 college credits can be offered under the program per year. If half of the students in the school are juniors and seniors, roughly one three-hour college credit course would be available for every four and a half students. This is scarcely enough to help a broad base of students get a significant jump on college credits. As a practical matter, the credit cap seems to make the financial cap unnecessary since not enough credits are available for students to spend up to the financial limit.

and public universities, but not at independent or proprietary institutions. Mandated reports to the Legislature, starting in 2008, will review the program's implementation and impact, creating an opportunity to increase the program's effectiveness and scale.

Oregon also has an opportunity to remove some barriers to greater student participation in the International Baccalaureate program. For example, IB officials point out that learning experiences required to help high school students achieve career-oriented proficiencies are going to create serious time conflicts for IB diploma candidates. The solution, they suggest, is to treat the IB diploma as an alternative graduation plan. The IB program also believes it could reach and benefit more students if it could attract state financial support to offset the cost of teacher IB training and student IB exams. IB officials note that other states providing such support have recovered the investment through better student preparation and advanced credits that lower instructional loads and increase capacity at public postsecondary institutions.

Bottlenecks in Institutional Capacity

Oregon's public universities and community colleges have some course capacity bottlenecks which deny students the classes they need when they need them, delaying completion or even forcing some students to stop out. In many cases, according to postsecondary officials, stopping out becomes dropping out. Data on the extent and makeup of this problem is sketchy and primarily anecdotal, but it comes from postsecondary officials who concede there is a problem with what they term "capacity courses." A recent one-page report submitted by a study committee of the EDP Working Group indicates that capacity courses are different — and are handled differently — at the OUS and community college levels.¹⁸

At the university level, according to the report, course shortages more commonly occur in upper-division major or graduation requirements, slowing degree achievement of students who are affected. "The university," the report says, "admits and enrolls students and then does the best job it can to provide adequate access to courses" for them. Course bottlenecks are addressed "individually through expansion of class size or re-allocation of resources with[in] the university, often creating other bottlenecks elsewhere."

Community college capacity courses appear largely to be prerequisites for life or health sciences, or they are "common core" general education courses. The impacts of course shortages in community colleges include more restricted access to particular programs or the student's choice of institution. This keeps some students from enrolling, forces some to take a different path, and reduces enrollments.

Language at the end of the brief report suggests that education officials are not pursuing the problem with a great deal of urgency. Instructional administrators met once on the issue in fall 2004 and again in March 2005, when a subcommittee was formed to look into a "case study" or other "research approaches" to better define the problem.

The reality confronting students may not be so leisurely. Enrollment growth is likely to create additional course demands that will create more pressure on instructional capacity. At about 4 percent annual growth, the size of Oregon's high school graduating class should reach

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over 40,000 in 2008-09 before declining at about the same rate through 2012.¹⁹ At this pace, Oregon postsecondary institutions will be under less capacity pressure than some western states, where high school graduates are increasing at 20 percent or more each year.²⁰ Still, Oregon postsecondary schools will have to cope with increased enrollments. From today through 2012, for example, the Oregon University System projects that its enrollment will grow from roughly 82,000 to more than 91,000.²¹

In its 2005 work plan, the EDP Working Group has identified the need to closely monitor course capacity bottlenecks and develop proposals for legislation in 2007.²² Education officials suggest that they can shuffle available funds to address some capacity shortages but that the long-term solution must be adequate system funding to address enrollment growth. With constrained revenues and other spending demands, there is no certainty that Oregon can meet its postsecondary shortages in instructional capacity.

Apart from increasing the availability of courses in high-demand subjects, which will require reallocation of existing money, if not additional funding, the EDP Working Group has noted two other measures which would relieve capacity shortages. One is using more online instruction; the other is increasing accelerated study opportunities for high school students, which we have discussed above.

Another approach not entertained by postsecondary officials may be to create more restrictive postsecondary admission policies, even at community colleges. For example, a high percentage of first-year community college students taking college-level courses, perhaps as many as a third, are so unprepared for college work that they must take remedial courses in basic skills such as reading, writing, and math.²³ (Community college officials are now trying to determine the extent of remedial education and its cost.) Refusing to accept such students, at least recent high school graduates, is one way that the community college system could free up substantial instructional resources to address capacity shortages in high demand courses.* This, in effect, would push the problem back to the K-12 system where it originates. Of course, a policy change of this sort would engender substantial debate over the role and mission of Oregon community colleges and high schools.

Education officials suggest that they can shuffle available funds to address some capacity shortages but that the long-term solution must be adequate system funding to address enrollment growth.

School-to-School Transitions

A shrinking portion of today's students fit the traditional mold: graduating from high school, going directly to college, staying put, and graduating in four years. It isn't unusual for most to change schools, work part or full time, stop out and return, or piece their education together in other ways that fit their individual circumstances. Such movement, particularly from one institution to another, is a significant transition for most students, and hence a potential pathway obstacle. Historically, students have encountered the most difficulty in transferring credits from a community college to a state university, but credit transfer has sometimes been difficult even between community colleges and between state universities. In some cases, students haven't taken the right courses for programs at the receiving school, or some of the courses they have taken simply haven't been recognized. Disconnections of this sort raise

* It should also be noted that community colleges provide a substantial share of remedial instruction to the 10 percent of first-year state university students who need remedial classes in basic skills.

student anxiety about course selection and waste both student and system resources when students arriving at the receiving school must retake some courses they took earlier or must take others that come as a surprise. Such delays and inefficiencies can keep students from graduating on schedule, or even from finishing.

In conjunction with the EDP Working Group, Oregon postsecondary officials have begun to tackle various parts of this transition problem.²⁴ Their work has been given additional impetus by Senate Bill 342, a product of the 2005 session which requires community colleges and OUS institutions to collaborate on student transfer issues.

The most notable effort to date has been the Oregon Transfer Module, which is going into effect at many schools in the 2005-06 school year and should be fully in place by fall 2006. Modeled after the two-year associate of arts program transfer module, the OTM, is aimed primarily at the increasing number of students leaving one institution, typically a community college, and arriving at another, typically a state university, with some portion of a year's worth of education credits. The purpose of the OTM is to package first-year general education requirements (no fewer than 45 credit hours) at each community college and state university so students 1) know what courses to take, and 2) have the assurance that the OTM credits they earn with a C- or better are accepted at every other public institution in the state. Although the OTM course package differs slightly from institution to institution, each covers the same foundation skills and knowledge in writing, oral communication, math, arts and letters, social sciences, several science disciplines, and a few electives. Most importantly, schools are committed to accept credits earned in OTM courses at other institutions. Independent schools are also invited to participate in the transfer module program.

The OTM does not take the place of student diligence in planning lower division course selection for particular majors. And students should still take advantage of academic advising offered by their schools. However, one project favored by the EDP Working Group shows promise as a tool to help students map an academic path more efficiently. Appropriately, ATLAS, the acronym for Articulated Transfer Linked Audit System, would offer students a web-based guide to course and academic major planning. ATLAS would help students determine 1) what is available for particular programs or majors from campus to campus, 2) which of their credits, based on transcripts, apply to selected degree programs, and 3) what requirements they must meet to achieve their academic goals. ATLAS is still in the development stage, but officials hope to have a prototype of the program up and running sometime in the 2007-08 school year.

The EDP Working Group also supports the expansion and improvement of agreements between community colleges and state universities that advance two established practices to ease student transitions from one institution to the next. One is articulated majors, the other, dual enrollment.

Articulated major agreements allow students to begin their degree programs at a community college with the precise understanding of what courses in the two-year program align with four-year degree programs at an OUS institution. This gives students the convenience and cost savings of beginning a major at a community college without the fear of taking courses

that don't apply to the degree path. Because such agreements are typically tailored between particular community college and OUS schools or departments, they don't have system wide utility for students.

Dual enrollment agreements, pioneered in 1998 by Linn Benton Community College and Oregon State University, allow students simultaneously to attend a community college and an OUS university, achieving the benefits of each without the drawbacks that occur when such agreements are not in place. Students began the dual enrollment practice more than a decade ago, but without agreements in place they were considered part-time students at each institution and thus ineligible for student aid. Moreover, their community college credits faced transfer hurdles when they shifted full time to university study. The 24 dual enrollment agreements now in place serve more than 4,000 students, giving them the benefit of community college tuition savings, single admissions application, financial aid administered from one campus, single course registration, automatic credit acceptance at both institutions, and coordinated academic advising. Over the past four years, spurred by expanding agreements, student participation in dual enrollment programs has grown more than 250 percent.

Retention

Strong academic preparation, adequate financial means, and smooth pathways are the best guarantee of student persistence. Still, there is evidence that formal retention programs can improve persistence by strengthening students' academic capabilities, engagement in their studies, and their sense of belonging in a school's academic and social environment.²⁵ Advocates say retention programs are especially useful to low-income, first-generation, and minority students, as well as to older adults returning to school. Most retention programs are focused on getting students through the first year and back for the second, the part of the pathway where community colleges lose up to half of the freshman cohort and where four-year schools* lose a fourth to a third.²⁶

Oregon's public postsecondary institutions have lacked what one state education official calls a "culture of retention" as a "core campus value." The high priority that the EDP Working Group assigns to retention is a tacit acknowledgement that Oregon needs to do a great deal more to help keep students on track.

Oregon is far from alone in this regard. For decades, colleges everywhere posed an academic gauntlet where students either figured out how to succeed or went off to do something else. A review of the literature on retention commissioned by ACT, Inc., shows that research began to emerge in the 1970s on why students drop out.²⁷ Answers to the corollary question, what can be done to help students stay in school, have evolved since that time and have gathered momentum in the past decade. Competition for enrollment is now more intense. Society and schools increasingly recognize the importance of helping more students complete degrees. And in recent years there have also been calls for postsecondary accountability that would make student success and retention key measures of postsecondary institutional performance.

Oregon lacks a culture of retention as a core campus value.

*Oregon's four-year independent colleges do somewhat better, losing about 20 percent of their freshman cohort going into the second year, according to the *OICA Fact Book*.

Retention has been one of the most committed, methodical efforts of the EDP Working Group. Since April 2004, the group's retention subcommittee, in cooperation with state university and community college administrators, has surveyed retention best practices at schools around the state, all but completed a model to assess retention success among lower division students,* and lobbied for federal support to build a Student Success Center, a statewide resource to share retention data and best practices with campuses.²⁸

In student retention Oregon has both national and state-level best practices to draw from and build on.

A grid of the best practices survey indicates that our state universities and community colleges vary widely in both the kinds of retention programs they employ and the degree to which they believe these programs have been successful.²⁹ It is encouraging, however, that some portion of our 24 public institutions, in aggregate, claim effective programs in virtually all of the top-rated retention practices noted by ACT in a national survey of what works in student retention.³⁰ These include comprehensive campus learning centers, freshman seminars, various versions of student academic advisory programs, encouragement of learning communities, remedial and skill-building instruction, and honors programs. This means that Oregon has both national and state-level best practices to draw from and build on.

Western Oregon University's new Freshman Academy illustrates one such practice, a version of freshman seminar cited above. As described at the Academy's web pages,³¹ its three-credit course, Academy 101, will help students build connections to the WOU community, as well as develop the habits and skills of successful scholars. Academy 101 consists of six interconnected projects and initiatives: student survival and success strategies, freshman mentorship initiative, global literacy project, freshman academy portfolio, information literacy project and interconnected communities of learning and living.

Securing federal funding for a Student Success Center is a pivotal part of Oregon's coordinated postsecondary student retention strategy. The Oregon congressional delegation is attempting to secure a federal earmark for more than \$770,000 to fund the center, but the outcome of that effort is subject to the uncertainties of the federal budget process.

The Data Gap

As part of their case for greater functional integration between K-12 and postsecondary education systems, many of the nation's leading policy thinkers argue that education systems along the Prek-20 continuum should better integrate their student data systems. Such integration, they say, will give rise to numerous benefits. 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. The Bridge Project at Stanford University stresses such advantages in its 2003 report, *Betraying the College Dream: How Disconnected K-12 and Postsecondary Education Systems Undermine Student Aspirations*.³²

*The model will assess general retention success according to categories of students, but it is not designed to assess the effectiveness of particular best practices. Where retention success occurs and a number of best practices are in place, it will be possible only to infer some degree of influence by the latter.

Interviews with education officials and a review of agency documents reveal that Oregon has taken promising steps toward an integrated PreK-20 data system but has a long way to go before it can realize even a majority of the benefits envisioned above. Fortunately, it is laying the foundation for this work through the Pre-Kindergarten through Grade 16 Integrated Data System Project, also known as the KIDS Project.³³

Oregon began its current data effort in 2000, when representatives of Oregon's K-12 and postsecondary systems began to discuss the need for electronic transfer of high school transcript information to state postsecondary schools.³⁴ Then, as today, each of Oregon's three public education systems collected and maintained student data, but the systems' databases were incompatible with one another and, in many cases, were incompatible among their own system campuses and buildings. (Just to illustrate the latter point, there are about ten different vendor student information system applications and half a dozen internally developed SIS applications across Oregon's K-12 school districts and education service districts.)³⁵

At that time, as is the case today, these disparate systems impeded the flow of student transcripts and other information within and across systems. In the postsecondary admission process, for example, high school transcripts from incoming freshmen are still printed and physically mailed to public colleges. The schools then *hand key* a significant part of the information into their student information systems. This inefficiency stretches a student's admission process out to a four- to six-week time frame. Handling of student transfer data within both the K-12 and postsecondary levels is just as outmoded and cumbersome. It also takes four to six weeks in the K-12 system to get a student record from one district to another.

The idea of smooth student record transfer picked up renewed energy about 2003 when representatives from the three education sectors developed a model called College Admission and Placement Profile (CAPP) for electronically transferring traditional high school transcript information, state proficiency assessment data, and other student information to community colleges and state universities. Since then a prototype of CAPP has been tested using manual input.

In 2002, the State Board of Education added another impetus for automated student record maintenance and transfer when it ruled that all Oregon high school students must develop an education plan and profile to set career and life goals, ascertain learning requirements to reach those aims, and to monitor progress in achieving those requirements. Data project participants agreed that the student plan and profile should be incorporated into the model so students could access the data system to plan and monitor their progress, and to build a profile that was part of the transferable student record.

The Oregon Department of Education has laid the foundation for the student profile through the creation of a uniform student record. After four years of statewide assessments, a substantial amount of proficiency data is available for students who were in the K-12 system four years ago. As a part of the student profile, proficiency data will continue to grow throughout the grades with each year of proficiency assessment. In another eight years, in theory, academic achievement data could be available for all Oregon students, as far as they have advanced, from preschool through graduate school. The idea, according to

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education officials, is to develop a “warehouse and portal framework,” a system in which student achievement and related information is organized for secure, efficient online retrieval to students, parents, and educators, with appropriate privacy safeguards in place. For now, however, student profiles that are automated and accessible online do not exist.

How the student plan would be incorporated in this capability at the K-12 level has not yet been worked out. It is worth noting that postsecondary officials are developing the ATLAS online course planning service apart from the general effort to integrate PreK-20 data. It is likely that significant synergies could be captured by developing the K-12 plan and profile in conjunction with ATLAS.

Right now, Oregon is ready to implement only the automated transfer of the student transcript record, horizontally within sectors and vertically from K-12 to postsecondary. Early in 2004 the EDP Working Group put student data transfer at the top of its agenda, and along with the three education systems, it successfully built a case for legislative support. In the 2005 session the Legislature authorized a total of \$4.8 million from the 2005-07 budget, with portions of that total earmarked for each of the education systems. The heart of the project's work will be modification of campus-level data systems so they can communicate directly with other parts of the larger network.

Without question, student data transfer will be useful. For example, the current admission transcript process described above is expected to become a paperless 24-hour turnaround that reduces student wait time and college labor costs. And the system will have the capacity to give K-12 schools useful feedback about the performance of their students in postsecondary study. This feedback capability, part of the CAPP model, is now expressed in *The First Year*, annual OUS reports that correlate the performance of students on Oregon's tenth grade benchmark standards and their subsequent performance in their first year of college.

However, Oregon's still-unmet PreK-20 data needs, in both collection and integration, are large. The table below places the data gap in perspective and illustrates how far our systems have to go in developing easily accessible data for the benefit of students and their families, schools, policy makers, and Oregon tax payers.

PreK-20 Integrated Data System Attributes	Oregon's Capability
Keep a continuing student achievement record that is useful for students in building an education plan and profile and in measuring the education progress and the credits they have acquired toward their next steps and their overall education goals.	no
Facilitate rapid, reliable, and efficient transmission of student achievement and transcript information for the purposes of institutional admission and school-to-school transfer.	pending
Provide both K-12 and postsecondary institutions feedback on how well they have helped students attain knowledge and skills.	K-12, partial; postsecondary, partial
Provide a data platform for institutional performance accountability and measurement of education outcomes tied to public budget investments.	K-12, partial; postsecondary, no

To improve student persistence and pathways, our education officials also need to improve the kinds of data that they gather. For example, Oregon community colleges do not routinely collect and analyze campus and system wide data that would tell them and policymakers the precise extent, nature, budget toll, and trade-offs of remedial education for degree-bound first-year students.

There is also a need for student persistence information that Oregon alone cannot provide. For years most education systems have been able to assess only the extent to which students who start in

their local institutions finish or leave early. Yet with today's mobile students, who often take extra years and several institutions to complete a degree, it is impossible to know how many who leave a particular setting persist to a degree by other paths. As noted earlier, a national debate is now under way over the idea of a national student record system. One side of the conversation believes such data is desirable in ascertaining student pathways and success. Those on the other side oppose additional widespread collection of personal information, even coded for anonymity, about citizens who happen to be students. If a national student record system is eventually established, Oregon will probably be well positioned to contribute to it, assuming we continue to make progress on the data integration now under way.

Opportunities for Improvement

In General:

Oregon should and can achieve a student-centered, PreK-20 vision.

The issues explored in this paper illustrate that Oregon's education and policy leaders are right to pursue greater integration of PreK-20 education. In an economic age when all students need a postsecondary education, and when students take multiple pathways to their postsecondary goals, education systems now must be student centered. That means they must reach beyond their individual campuses and systems and work in concert with one another to create smoother pathways for students along the entire range of education services, from preschool to graduate school. In particular, they should seize opportunities to bridge or ease the transition points where students are vulnerable to delay or to leaving the path altogether. They should help more students navigate the pathway faster and more efficiently.

Recent efforts in this regard by the State Board of Education, the State Board of Higher Education (especially through the Excellence in Delivery and Productivity Working Group), and the Joint Boards of Education are commendable. These initiatives should be continued and accelerated. Because rational allocation of resources and greater institutional accountability will lead to smoother pathways, Oregon should move aggressively toward the transparent, unified PreK-20 budgeting framework recommended in the companion white paper *What Costs, What Results for PreK-20?*

Specifically:

1. The State Board of Education should adopt measures to eliminate the disconnections it has recently identified in curriculum content, standards, and assessments, especially between secondary and postsecondary education.

The Board, as soon as possible, should adopt the Legislature's directive to increase high school credits to 24 to match the entrance requirements of the Oregon University System. After that, it should reconcile and meld its two-tiered credentialing system of seat-time credits on one hand and certificate of mastery proficiencies on the other in order to create credit for

proficiencies. Specifically, it should create grade 12 proficiency exit standards that will make a high school diploma meaningful while assuring that students have taken content and met skill requirements matched to the demands of college-level studies, particularly in mathematics. These exit standards can be adapted from either or both of two successful models developed in Oregon: PASS and Standards for Success.

The substance of the CIM and CAM should be retained, whether or not they remain as stand-alone certificates or are absorbed into graduation proficiencies. CIM standards still have value as a tenth grade benchmark, and CAM standards should stay because they emphasize applied learning and career building skills.

Oregon should create grade 12 proficiency exit standards that will make a high school diploma meaningful while assuring that students have taken content and met skill requirements matched to the demands of college-level studies, particularly in mathematics.

Oregon must address the extent to which its various assessment requirements within and across systems are unnecessarily burdensome or are out of sync with each other and with other aspects of the student's learning experience. Our education systems should see if it is possible to eliminate or reduce the number of assessments related to proficiencies, admission, and placement as students cross the threshold into postsecondary education. Some assessments might be combined. Some might be beefed up to serve as a proxy for others, which could then be dropped. Within the K-12 system, curriculum delivery and the state's proficiency assessments in all grades should be aligned.

2. Oregon's postsecondary systems should begin the process of systematically developing uniform lower division student performance outcomes.

To make lower division credit transfer more seamless in substance, courses taken for those credits should be subject to system wide curriculum content standards, performance benchmarks, assessment standards, and assessment systems compatible with the K-12 system. The EDP Working Group broached this issue when it voiced an interest in tying defined student outcomes to transfer course credits. In terms of assuring articulation in transfer course credits, this would be compatible with similar proposals to tie proficiencies to credits in the K-12 system and to develop proficiencies at the K-12 level tied to first-year proficiencies at the secondary level. As noted earlier, it is unlikely that an outcome-based credits system would be uniform and respected without such standards and without an assessment system to measure their attainment. Both the EDP Working Group and Oregon's Joint Boards Articulation Commission should give this issue priority on their respective agendas, and school-level officials should also begin to explore it seriously.

3. Oregon should expand accelerated studies for high school juniors and seniors and realize the promise of SB 300, the Expanded Options Program, by lifting its caps on access as soon as possible.

In its current modest support for accelerated studies Oregon is missing a great opportunity to improve student preparation and to save both students and taxpayers substantial costs in postsecondary courses that many students are ready to tackle while still in high school. In SB 300 the state has made a promising start in expanding the availability of college credits to high school students, but the promise of the legislation will not be fully realized until its

built-in credit caps are significantly raised or eliminated. Liberal waiver provisions for school districts also weaken the potential widespread implementation of the program. Accelerated studies advocates and legislative sponsors should make removal of these impediments to program expansion a priority in the 2007 session.

Oregon officials should also work with the International Baccalaureate program to explore and develop ways to make the IB diploma program an alternate high school graduation plan, and to expand the IB program in general so it is accessible to more students.

4. Education officials should move more decisively to analyze and address instructional capacity shortages in the state university and community college systems.

While education officials are aware of instructional capacity shortages, they have been slow to fully analyze the extent and nature of the problem. This is evidenced by scant hard data collection and assignment of the issue to an obscure subcommittee to ponder a research design process. Instructional capacity shortages will only intensify as enrollments grow in our community colleges and state universities. In the interest of students, postsecondary officials should move more swiftly to analyze the extent and nature of the problem. They should do so with at least three objectives in mind: 1) to identify not only existing capacity bottlenecks, but also probable or impending ones, 2) to better manage capacity shortages within existing resources, and 3) to build a case for a longer-term solution to the problem, including a definition of resources needed.

Community college officials should also determine how much of their instructional resources are going to remedial education. They should consider, as a policy option, setting limits on the acceptance of skill-deficient degree-bound students in order to free and shift instructional resources to life and health sciences courses, and to general education courses, where there appear to be capacity bottlenecks. This recommendation is controversial, but Oregon could benefit from a debate about whether community colleges should assume the burden of teaching basic reading, writing, and math skills that students should have acquired in the K-12 system. A significant share of high school education in Oregon is delivered by community colleges. Perhaps these schools should devote more of their instructional resources to post-secondary education.

5. Education officials should maintain their momentum in streamlining post-secondary school-to-school student transfer.

Oregon is doing the right things to ease student transfer from community colleges to state universities, and also between schools within these two-year and four-year systems. The Oregon Transfer Module, now going into effect, fills an unmet need among community college students transferring during or just after the first year to a state university. Articulated major agreements and dual enrollment agreements likewise make student transfers more seamless. It makes sense to expand these agreements and to pursue development of ATLAS, the online degree and course planning system that will help students make sound choices in choosing among courses, programs, and schools at community colleges and state universities.

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Retention programs are worth pursuing, particularly for attrition-prone first-year students. The EDP Working Group has developed sound recommendations to achieve this end.

6. Oregon's public postsecondary schools should strive individually and together to achieve a culture of student retention.

Retention programs are worth pursuing, particularly for attrition-prone first-year students. The EDP Working Group has developed sound recommendations to achieve this end. These include a survey of best practices now in effect in Oregon institutions, a model to assess retention success, and a request for federal support to build a Student Success Center to share retention data and best practices.

Education officials should go a bit further with the last two recommendations. First, the model to assess retention success should have the ability to measure the outcome of particular retention practices. Second, if the federal earmark request for a Student Success Center fails in the next two congressional sessions, Oregon postsecondary officials should look to the 2007 state legislative session to fund the center in the 2007-09 budget.

7. Oregon should be persistent in integrating and improving its student data systems.

The process will take time, patience, and resources, but the benefits will make the effort worthwhile. Oregon is on the verge of creating 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 a significant and much needed accomplishment to improve student pathways, but it represents just the down payment on a much larger commitment needed to improve and integrate data systems across the education spectrum in Oregon. As indicated earlier, if Oregon embraces this commitment and does its 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. Oregon is taking steps toward these benefits through the Pre-Kindergarten through Grade 16 Integrated Data System (KIDS) Project.

From the perspective of student pathways and persistence, this paper is most concerned that education officials develop a robust student plan and profile in order to help students map the path to their education goals and track their progress. This part of the data system should also provide information on higher-grade requirements for lower-grade students and their parents. With this capability, students and their parents should know the full range of curriculum and assessment requirements along the full length of the pathway so there will be no surprises, no students who come up short. 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. There does not appear to be a good reason for postsecondary officials to develop the ATLAS online course planning service apart from the general effort to integrate PreK-20 data. The two efforts are similar enough that they should be closely linked, if not merged, to capture development synergies and create seamlessness in online course and degree planning across the PreK-20 spectrum.

To improve student persistence and pathways, our education officials also need to improve the kinds of data that they gather. For example, Oregon community colleges should routinely collect and analyze campus and system wide data that would tell them and policymakers the precise extent, nature, budget toll, and trade-offs of remedial education for degree-bound first-year students.

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What Cost, What Results for PreK-20?

Oregon needs a uniform, transparent process for budgeting public dollars across the PreK-20 spectrum. It needs to know how it is spending funds, and what it is getting for the investment.

This paper describes how Oregon could better budget its education investments, basing them on student-centered data and tying them to performance outcomes.

Such budgeting supports a vision in which Oregon makes smarter investments in a PreK-20 continuum that puts students first and emphasizes results.



What Cost, What Results for PreK-20?

The Need for a Transparent, Performance-Driven Budget To Transform Oregon Education from Preschool to Graduate School

Summary

Although Oregon state and local governments account for education spending in extraordinary detail, the state does not put that information to use in budgeting its education investments. As a result, state education budget debates rely on highly aggregated, multi-year, incomplete spending data segregated among preschool, K-12, community college, and university sectors. With this budgeting system, policymakers do not know what specific programs cost, what they spend per student, or what results such spending achieves.

Lacking clear and concise information, policymakers allowed per-student spending to drift during the past decade, resulting in costs and spending trends that have surprised many policymakers and education observers.

Oregon should adopt a budgeting system that is transparent, that establishes and measures results, and that uses its funding leverage to improve learning and achievement for students while meeting the skilled workforce needs of the state economy.

Introduction

Few aspects of the Oregon education system have captured more stakeholder and media interest in recent years than finance. This focus is due, in part, to the centralized nature of the finance decision, which today rests primarily with the state legislature. Moreover, during this most recent economic downturn, Oregon voters have been asked through several state and local measures to supplement K-12, higher education, and other government services. Voters twice rejected statewide efforts — Measure 28 (2003) and Measure 30 (2004) — aimed at stabilizing K-12 budgets and curbing tuition increases at universities. The rejection of these measures, particularly Measure 28, attracted significant national media notice.

A consensus has emerged among education observers that strengthening education finance — that is, the means by which Oregon funds its schools, colleges, and universities and the levels at which it funds them — is a key to improving system performance and student achievement. In recent statewide polls on K-12 issues respondents ranked funding at

or near the top of their concerns.¹ Meanwhile, a number of education observers have given Oregon low marks for college affordability. The Oregon Business Plan, an economic development strategy advanced by Oregon's business and elected leaders, puts it this way:²

Under the current delivery model for education, the total level of education funding recommended ... is inadequate to meet Oregon's long-term needs. Therefore, Oregon must 1) redesign the system to make it more effective, 2) reprioritize funding within the education continuum to meet highest needs, and/or 3) find new dollars.

While most education observers agree stable, efficient, and adequate finance is a key to improving Oregon's schools and universities, policymakers and other education stakeholders are ill prepared to implement meaningful reform because they lack clear, concise information on how our systems spend their money. And it's not for lack of trying. Oregon's K-12 school districts, community colleges, and state universities account for their expenditures in extraordinary detail. The record of these expenditures, with some investigative time and effort, support illuminating analyses of spending trends on key programs and initiatives, as well as the mix of staff salaries and benefits, supplies, and services required to operate the programs. Yet despite thorough accounting, policymakers at the state and local levels do not put the detailed information to full use.

This paper outlines how Oregon's state and local policymakers could make better use of the wealth of expenditure information they already collect across the PreK-20 education continuum. By improving the clarity and comprehensiveness of budget presentations, policymakers and the citizens they represent would begin to understand the variety of goals — some recognized today, others not — that exist in public expenditures from preschool to graduate school. And as policymakers gain a better understanding of the diversity of education programs supported with public dollars, they can develop performance expectations for each purpose, and, in the longer term, make appropriations contingent on meeting those expectations.

Oregon policymakers are ill prepared to implement meaningful education reform because they lack clear, concise information on how our education systems spend their money.

Spending Adrift: Funding Education In the Absence of Good Information

In April 2002, *The Oregonian* reported that Oregon's per-student spending on K-12 exceeded levels in California and Washington and had kept pace with common measures of inflation since the passage of Oregon's limitations on property taxes in 1991. At the time, that finding was met with a combination of frustration and disbelief. Policymakers, like then House Majority Leader Karen Minnis, wondered how schools could claim they faced fiscal pressures when state-level data suggested their budgets had outpaced inflation.³ School administrators likewise struggled to understand why they were routinely put in the position of eliminating or scaling back popular arts, music, advanced-placement, and outdoor school programs when overall budgets appeared to be keeping pace with inflation.

School advocates and policymakers were so confused by *The Oregonian's* finding that the Oregon School Boards Association (OSBA) commissioned a study to review K-12 spending since the passage of Oregon's property tax limitations.⁴ The OSBA study concluded that the

"It's very hard to examine from Salem how each school board allocates its money....

Why is it when we give generous increases each session, it never seems to meet the perceived need?"

— Then House Majority Leader Karen Minnis, The Oregonian, April 10, 2002

"School spending is a complex issue, and pinpointing where the money goes is not easy."

— The Oregonian, April 10, 2002

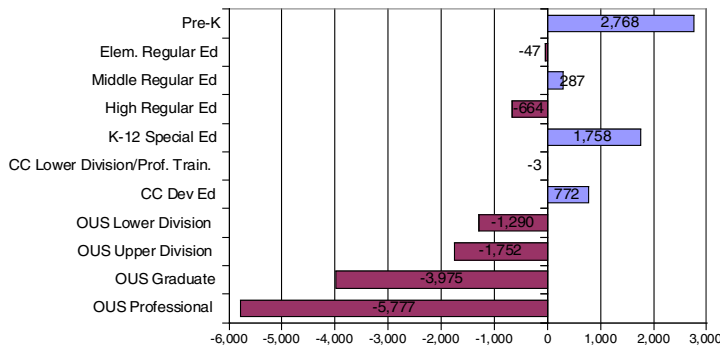
seeming contradiction between real, inflation-adjusted increases in per-student spending and program cuts was driven by two factors: 1) sharp increases in spending on students with special needs* and 2) inter-district equalization of per-student revenue, which generally transferred revenue from property-wealthy districts to property-poor districts. Across the state a number of different stories emerged. Districts with historically strong property tax bases (which tended to lose revenue through equalization) and those with high demands from special needs populations saw their revenues curbed while demands for special education peaked. By contrast, districts with weak local tax bases (that is, equalization's beneficiaries) and smaller special needs populations experienced less fiscal pressure and, in some cases, built reserves. Most districts fell somewhere between these two extremes.

While the findings were intuitive to most school administrators, the OSBA study was the first to clearly illustrate the effects of special education spending and equalization on Oregon's K-12 budgets during the 1990s.

In 2004, the Oregon Business Council, the Oregon Business Plan, and The Chalkboard Project built on the original OSBA work and extended it through the PreK-20 continuum. The extended analysis found that only four categories of Oregon's state and local education per-student spending grew in real terms: pre-kindergarten, regular education for middle school students, special education for K-12 students with physical and mental disabilities, and developmental education for community college students.⁵ Per student spending fell at the high school level and all levels of education in the Oregon University System.

While many policymakers and business leaders were generally aware of spending declines in higher education, few knew the magnitude of disinvestment and none had seen the per-student trends clearly displayed.

Figure 1: Change in Per Student Spending, 1991-2003
(Expressed in 2003 Dollars)



Source: ECONorthwest calculated using data from the Oregon Department of Education, Department of Community Colleges and Workforce Development, and the Oregon University System

It quickly became clear through the extended study that policymakers, business leaders, and other stakeholders lacked a clear understanding of how Oregon invests its education dollars and what it gets — or should expect — in return. Today, state and local policymakers would be hard pressed to measure how their recent investment in K-12 special education has improved the educational outcomes of students with disabilities or to what degree the disinvestment in higher education limited college access. Put simply, Oregon's education investments drifted during 1991-2005 with some areas gaining and others declining. Lacking timely and clear information on those trends,

state and local policymakers essentially traded one sector against another without knowing they were doing it and with no good sense of the consequences.

*Special needs populations include students with physical and mental disabilities, English-language learners, and students from low-income households.

The need for clear, concise data on education expenditures is urgent given the broad call for education reforms currently envisioned by education, business, civic, and philanthropic leaders. The Oregon Education Roundtable — a collaboration of business and philanthropy leaders, and the sponsor of this paper — has advanced blueprints to improve postsecondary access, persistence, completion, and affordability.⁶ Meanwhile, the Chalkboard Project — an unprecedented collaboration of five Oregon foundations — has advanced a 15-point action plan aimed at improving K-12 quality and accountability.⁷ Leaders of both of the efforts have explicitly called for radically improved budget clarity as a necessary precursor to substantive reforms.

Why Education Stakeholders Know So Little: Opaque Budgeting

The lack of clarity in existing budget presentations is a key reason policymakers and other stakeholders often fail to recognize emerging trends in education spending and services. Table 1 reproduces the state's recommended education budget for the 2005-2007 biennium⁸. Measured across a number of funding sources, the budget recommended that the state spend \$11.7 billion for the biennium. Moreover, the table suggests that amount will support 11,838 positions* — only a fraction of the actual work-force that will deliver education services to Oregon students.

Table 1: Recommended State Budget for Education, 2005-07 Biennium

Revenue Source	2001-03 Actuals	2003-05 Legislatively Approved	2005-07 Recommended
General Fund	\$5,210,896,132	\$5,912,108,147	\$6,168,125,863
Lottery Funds	677,073,696	516,620,137	365,421,878
Other Funds	1,653,929,719	1,707,646,008	1,513,673,930
Federal Funds	841,829,274	811,943,842	930,462,727
Other Funds (non-limited)	1,794,528,516	2,240,275,327	2,439,490,725
Federal Funds (non-limited)	0	189,658,587	255,186,904
Total Funds	\$10,178,257,337	\$11,378,252,048	\$11,672,362,027
Positions	14,462	15,421	14,458
Full-time Equivalent	11,769.58	12,660.28	11,837.76

Source: Oregon 2005-07 Recommended Budget

The recommended budget publishes a similarly structured table for each of five subcomponents of the education budget.

- ▶ Department of Education (i.e., K-12, Pre-Kindergarten)
- ▶ Department of Community Colleges and Workforce Development
- ▶ Department of Higher Education
- ▶ Oregon Student Assistance Commission (i.e., need-based aid programs)
- ▶ Teacher Standards and Practices Commission (e.g., licensing and certification for K-12 teachers)

This traditional presentation is misleading, or simply confusing, in a number of ways. The budget's shortcomings include a(n):

*The amount includes only education staff employed directly by the state and, therefore, omits nearly all employees of local K-12 school districts.

**How a Budget
Presentation
Shapes the
Legislative
Debate: Quotes
from the 2005
Session**

"We will talk in terms of billions of dollars, and the average person knows that \$5 billion, which is what the governor is proposing, is a lot of money. Many people will be asking why \$5 billion isn't enough to provide the quality education we all want for our state."

— Susan Castillo, Oregon Superintendent of Public Instruction, The Oregonian, editorial, January 11, 2005

"Despite what the special interests and lobbyists say, \$5.4 billion is the amount necessary to fund a full school year and prevent class size increases and teacher layoffs"

— State Sen. Richard Devlin, The Oregonian, letter to the editor, March 9, 2005

► *Incomplete accounting of revenues available to education institutions.* The budget carefully accounts for state-level revenues available to education and separates them into general and lottery funds. The budget also accounts for some - but not all - of available non-state revenue. For example, the presentation includes some of the key federal funds available to Oregon schools but has no accounting of local revenues, which compose a sizable share of funding at the K-12 and community college levels. Moreover, "other funds" include tuition paid by higher education students; however, the budget does not attempt to capture a variety of fees charged to K-12 students.

► *Level of program aggregation that obscures sizable programs with distinct goals.*

While the state recommended budget does present major levels of education separately, it fails to break out key programs within those levels of education. For example, during the most recent legislative session, policymakers debated whether the K-12 budget should be \$5.0 billion (the original budget recommendation), \$5.4 billion (the estimated level required to maintain prior service levels), or some amount in between. The presentation of the K-12 budget as a *single number* conveys to policymakers and the public that K-12 is a single program with a uniform set of goals.

In reality K-12 offers a variety of services often with very different goals or expectations. Advancing children through early grades poses different challenges than advancing them through high school. Special instructional programs for students with mental or physical disabilities or English language learners have a variety of expectations that complement - but nonetheless are distinct from - other education programs. Student transportation has its unique set of goals around student safety that are only indirectly related to K-12 core goals of student achievement and attainment.

Higher education offers a similar diversity of programs. At the community college level, some programs are designed to move students into four-year institutions, others to train students for specific jobs, and yet others to offer remediation for what students failed to learn in their primary and secondary educations. Finally, the Oregon University System delivers lower-division, upper-division, and graduate programs.

► *Lack of human scale with usable reference to the number of staff employed or students served.* The presentation depicted in Table 1 shows a number of full-time equivalent staff positions associated with the budget, but the staff estimate is limited to staff who work directly for the state. The number does not include 55,000 or more K-12 teachers and staff who work for local school districts and require the majority of education resources.

More importantly, the budget fails to clearly illustrate the number of students anticipated in the variety of education programs funded by the state. The 1990s saw growth in the number of K-12 students as the children of baby boomers moved through the system. Today, the demographic bulge is moving through the higher education system. The 1990s also witnessed strong growth in the number of children identified with mental and physical disabilities, English-language learners, and other children with special needs. While most education stakeholders are aware of these past trends, the state budget offers no clear presentation of how these populations will change going forward and what that implies for Oregon's education system.

- *Confusing presentation of biennial figures.* While presentations of biennial figures may have a useful role in legislative budget committees, they tend to confuse the debate anywhere else. Two-year numbers do not lend themselves to per-student spending analyses or growth rate analyses. All major sources of education finance data — the National Center for Education Statistics, *Education Week*, the National Education Association — report school spending on an annual basis.

While the preceding critique may appear excessive, one should not underestimate the importance of the form of the budget presentation. Table 1's incomplete, multi-year, and overly aggregated presentation shapes Oregon's public debate on education issues. While many Oregonians were aware of the calls for \$5, \$5.2 or \$5.4 billion for K-12 funding, few — if any — knew how those amounts would translate into overall per-student amounts or how those resulting per-student amounts related to the past. And more sophisticated policymakers may have been interested in exploring not only the overall per-student spending projections but additionally the per-student amounts for key programs: elementary school education, middle school education, high school education, special education, English as a Second Language, student transportation, and others.

Creating a Budget That Informs the Policy Debate

A budget presented in a multi-year, multi-billion-dollar, and multi-program format does little, if anything, to inform policymakers. While a handful of program experts may be fluent in the intricate trends and assumptions that underlie the recommended budget, most observers are in the dark. They know only that one appropriation level will maintain programs roughly as they exist while deviations from that amount will either expand or contract them. But responsible policymakers and their constituents should know more.

Oregonians should break out of the existing education “silos,” look across the entire PreK-20 continuum, and begin to understand how investments at one level affect another. Rather than debating education investments at the billion-dollar level per system, Oregonians could be asking:

- How much do we spend *per student* at various levels of PreK-20 education? How has it changed over time?
- Is per student spending adequate and, if not, what additional resources are needed and what would they buy us?
- What are the key non-instructional inputs to a quality education? How much do we spend on them? Could we get a better return on our investment?
- What drives labor costs (e.g., salaries, retirement benefits, healthcare benefits, contracted labor) and what share of our labor expenses fall in instructional and non-instructional categories?

A multi-year, multi-billion-dollar, multi-program budget presentation does little to inform policymakers.

- ▶ What different types of programs are we delivering through the continuum? What are their goals and are we meeting them? Does an investment or disinvestment at one level of the continuum directly impact spending or outcomes at another level?
- ▶ Where do we ask students and parents to share in the cost of education? Where don't we and why?
- ▶ How does a change in spending in higher education affect enrollments at Oregon public colleges and universities? When tuition levels rise, how many students opt out of the Oregon system, what are their characteristics, and where do they go?
- ▶ Across the higher education system, do different institutions provide some comparable programs at different costs? If so, are students attending lower-cost institutions rewarded uniformly with lower out-of-pocket costs?

This relatively short list of questions begins to illustrate the type of information that a revamped budget system could provide education stakeholders. Despite having strong, clear advantages over the existing process, any overhaul of the budget will have to overcome opposition from nearly all of the existing funded districts, institutions, and agencies. The current system, despite its flaws, is familiar and predictable to them. While they may have been dissatisfied with recent funding trends, the year-to-year outcomes have nonetheless been easy to foresee.

Budget transparency would expose duplication, degrees of efficiency, and programs never before scrutinized on a stand-alone basis.

Transitioning to a new budget presentation and process would bring uncertainty to district and institutional budgets in the short run. Budget transparency will expose duplication or varying efficiencies in service delivery. In addition, some programs that have never been scrutinized on a stand-alone basis would be exposed for evaluation at the state level for the first time.

Executed well, the overhaul of the budget process should radically alter Oregon's biennial budget debates. Clear, concise presentations will inspire sharper questions. Given the magnitude of the change, implementation of the transparent, performance-based budget should proceed in five stages:

1. *Select the list of distinct programs and organize expenditure and appropriation data to support a clear and accurate student-level resource accounting.*
2. *Create supplemental analyses that expose key cost drivers.*
3. *Develop and test performance outcomes (results) for each selected program.*
4. *Frame the budget debate in terms of results rather than inputs to education.*
5. *Incorporate performance funding into education budgets.*
6. *Maintain local control over spending decisions.*

The following sections describe each of these steps in more detail.

1. Select Programs and Develop Student-Level Cost Measures

A reformed budget presentation would span the PreK-20 continuum and isolate programs that are sizeable in scale and have unique purposes. For children below five years old, the budget would track separately pre-kindergarten (e.g., Head Start) and early intervention programs for those with special needs. The budget would separate regular education in K-12 schools into programs delivered to elementary, middle, and high school students. While this separation makes some sense today, future research might suggest other combinations (e.g., the integration of elementary and middle school-aged students). The state would appropriate specific amounts for English as a Second Language, alternative education, and two categories of special education (that is, programs targeted to students who remain in regular classrooms and programs for students in separate programs). Student transportation, which has distinct goals from most other K-12 activities, would receive a separate appropriation.

At the higher education level, today's community college activities would be separated into developmental/remedial programs versus those that lead to an associate's, or ultimately, a bachelor's degree. The state would divide funding of the Oregon University System into separate appropriations for lower division, upper division, graduate education, and professional schools. The state would also track separately spending on student scholarships.

This proposed disaggregation should initiate the budget reform debate rather than end it. Policymakers, administrators, citizens, and other stakeholders should be involved in developing the list of programs. Once selected, the list may change over time as new programs emerge in importance and others decline. Notable exceptions from the current list include programs targeted to K-12 low-income students, pregnant and parenting teens, and the talented and gifted.

Analyses sponsored by the Oregon Business Council and The Chalkboard Project (Table 2) show what the transparent budget would have looked like for the 2002-03 school year. Tracking spending from all relevant sources (e.g., federal, state, local, and private), Oregon education institutions and agencies spent \$4.1 billion.

The budget distinguishes between "stand-alone" and "supplemental" programs. A student can participate in a stand-alone program (e.g., elementary regular education) without participating in any other program. By contrast, students enrolled or participating in the supplemental programs are simultaneously enrolled in a stand-alone program. For example, many English learning students participate in forms of mainstream, regular K-12 education in concert with their ESL coursework.

For each program, the table shows the number of full-time equivalent students, per-student expenditures by major source, and the total state and local government investment (that is, the number of full-time equivalent students multiplied by the sum of the state and local per-student spending amounts). We look just at the state and local total because it is typically the focus of the budget debate at the capitol, universities, colleges, and school boards across the state; however, amounts for federal, private, and total spending could also be calculated.

Scanning across the continuum, state and local government budgets range from \$10.7 million (OUS professional programs) to \$1.2 billion (K-5 regular instruction, administration, and support). More than half of the programs fall in the \$10 million to \$100 million per year range. Spending per student for stand-alone programs varies from \$3,831 for remedial programs and development education at community colleges to \$21,090 for special education for K-12 students with severe disabilities who are served in separate educational settings.

Table 2: Oregon PreK-20 Budget, 2002-03 School Year

Program	Number of Full Time Equivalent Students Served	Estimated Expenditures Per Full Time Equivalent Student Served					Total State and Local Government Investment
		State	Local	Federal and Other Grants	Tuition and Fees	TOTAL	
PreK-20 Stand Alone Programs							
Pre-Kindergarten/Head Start	10,026	\$3,287	\$0	\$4,683	\$1	\$7,971	\$32,951,819
Early Intervention for Children Ages 0-5 Years Old	7,158	\$4,196	\$2,171	\$1,030	\$10	\$7,407	\$45,574,948
Grades K-5 Regular Instruction, Administration, and Support	241,344	\$3,341	\$1,729	\$696	\$254	\$6,020	\$1,223,620,032
Grades 6-8 Regular Instruction, Administration, and Support	131,443	\$3,162	\$1,636	\$665	\$287	\$5,750	\$630,757,207
Grades 9-12 Regular Instruction, Administration, and Support	166,162	\$3,429	\$1,774	\$762	\$493	\$6,458	\$864,494,052
Alternative Education Programs	7,363	\$3,747	\$1,939	\$1,510	\$80	\$7,276	\$41,865,695
Special Education Outside the Regular Education Setting	8,862	\$10,635	\$5,503	\$4,663	\$289	\$21,090	\$143,017,714
Remedial Programs/Developmental Ed	18,613	\$1,697	\$703	\$529	\$901	\$3,831	\$44,678,297
Community College Lower Division and Professional Training	74,084	\$1,951	\$809	\$628	\$1,036	\$4,424	\$204,497,342
OUS Lower Division Baccalaureate	23,058	\$2,923	\$0	\$306	\$3,560	\$6,789	\$67,402,920
OUS Upper Division Baccalaureate	33,072	\$4,080	\$0	\$468	\$4,776	\$9,324	\$134,919,418
OUS Graduate Programs	13,413	\$6,319	\$0	\$782	\$7,131	\$14,233	\$84,754,666
OUS Professional Programs	1,136	\$9,377	\$0	\$1,212	\$10,347	\$20,936	\$10,652,286
PreK-20 Supplements To Regular Education (Students listed below are enrolled in one of the stand-alone programs listed above)							
Special Education in Regular Education Settings	63,010	\$2,745	\$1,420	\$929	\$62	\$5,157	\$262,465,097
English as a Second Language	49,580	\$860	\$445	\$119	\$16	\$1,440	\$64,698,630
K-12 Student Transportation (Regular Students)	467,077	\$194	\$100	\$13	\$6	\$313	\$137,288,868
K-12 Student Transportation (Special Education Students)	71,872	\$366	\$189	\$22	\$4	\$580	\$39,876,441
Student Assistance Commission Undergraduate Need Grant*	17,340	\$960	\$0	\$0	\$0	\$960	\$16,646,400
GRAND TOTAL							\$4,050,161,832
Source: ECONorthwest calculation using Oregon Department of Education, Office of Community College, and Oregon University System data							

Although limited in scope, the single and relatively simple presentation illustrates a number of points that are not well known by most education stakeholders. For example, the federal government participates in the cost of special education but at levels well below the 40 per-

cent proposed in the federal law that authorized the programs.* The table also shows state and local per student spending hovers in the \$5,500 to \$7,500 range during K-12, dips for lower division community college and university students, and then increases gradually for upper division baccalaureate, graduate, and professional programs. Finally, the tuition and fees column illustrates that very little is asked of students and parents through 12th grade while tuition and fees increase as a student progresses through higher education.

While the presentation shines light on a number of interesting fiscal facts, it is limited to a single school year. If this presentation became the foundation of the state's education budget year after year, policymakers could easily track the growth and decline in key student populations, increases and decreases in federal contributions to the system, and changes in tuition and fees. The trends discovered through the OSBA, OBC, OBP and Chalkboard Project work would be updated routinely rather than exposed in decennial studies.

2. Create Supplemental Analyses That Expose Key Cost Drivers

While Table 2 presents a wealth of information not commonly reviewed by policymakers, a transparent budget would show much more. This section illustrates a number of supplemental analyses that would inform the budget debate by exposing key cost drivers of PreK-20 education activities. The recommended analyses presented here are far from exhaustive and represent only a fraction of the set of analyses policymakers should routinely review.

Policymakers need to know how educational expenditures are allocated between instructional and non-instructional activities, as well as understand how much spending goes to labor and non-labor costs. In accounting jargon, informed policymakers should track spending functions and objects.

► *Functions* are types of services delivered through the education process, including classroom instruction, student support services (for example, health and counseling), school and central administrative activities, operations of the physical plant, and student transportation. Generally, policymakers like to see higher shares of spending in instruction and lower shares in administrative and support categories.

► *Objects* record the way schools obtain their services. Schools obtain most of their services by paying salaries and benefits to teachers, administrators, and educational support staff. In addition to salaries and benefits, schools purchase services from vendors and consultants and buy supplies (for example, textbooks and paper).

Table 3 illustrates a common method for displaying function and object data simultaneously. This particular analysis compares Oregon's K-12 spending per student to the U.S. average for the 2001-02 school year. The Panel 3 comparison shows, for example, that Oregon K-12 schools spend \$265 less per student on instruction. Salaries per student run \$564 less than the national average while benefits per student averaged \$541 more than the U.S. average.

* That is, 22 percent for students with severe disabilities and 18 percent for students in regular education settings.

Table 3: Per Student Spending Per Fall Enrollee, Oregon and United States, 2001-02 School Year

Panel 1: Oregon 2001-02 Spending Per Fall Enrollee											
Objects	Functions										
	Instruction	Student Support Services	Instructional Staff Support	General Admin.	School Admin.	Operations and Maintenance	Student Transportation	Other Support Services	Food Services	Enterprise Operations	Total
Salaries	2,915	331	168	55	332	243	106	203	69	1	4,424
Benefits	1,164	130	73	20	133	113	53	119	37	0	1,843
Purchased Services	161	52	51	24	16	235	146	91	44	1	820
Tuition	40	0	0	0	0	0	0	0	0	0	40
Supplies	202	8	31	3	10	43	17	44	102	1	461
Other	8	2	1	10	2	15	5	10	0	0	53
Total	4,490	523	325	111	494	650	326	467	254	2	7,642
Panel 2: United States 2001-02 Spending Per Fall Enrollee											
Objects	Functions										
	Instruction	Student Support Services	Instructional Staff Support	General Admin.	School Admin.	Operations and Maintenance	Student Transportation	Other Support Services	Food Services	Enterprise Operations	Total
Salaries	3,410	280	224	75	327	296	120	126	108	3	4,970
Benefits	880	70	54	23	82	85	36	38	32	1	1,302
Purchased Services	139	30	45	47	14	198	129	63	22	4	692
Tuition	68	0	0	0	0	0	0	0	0	0	68
Supplies	236	9	36	5	9	145	21	15	140	5	621
Other	22	3	5	10	2	7	4	21	4	3	81
Total	4,755	393	364	160	434	731	311	264	306	17	7,734
Panel 3: Oregon and U.S. Difference (Oregon Minus United States)											
Objects	Functions										
	Instruction	Student Support Services	Instructional Staff Support	General Admin.	School Admin.	Operations and Maintenance	Student Transportation	Other Support Services	Food Services	Enterprise Operations	Total
Salaries	-495	51	-56	-20	5	-53	-14	77	-39	-3	-546
Benefits	283	60	19	-2	51	28	16	81	6	0	541
Purchased Services	22	22	6	-24	2	38	17	28	22	-3	129
Tuition	-28	0	0	0	0	0	0	0	0	0	-28
Supplies	-33	-2	-5	-2	2	-102	-5	28	-38	-5	-160
Other		-1	-4	-1	-1	9	1	-11	-3	-3	-28
Total	-265	130	-39	-49	60	-81	16	203	-52	-14	-92

Source: ECONorthwest analysis of data from National Center for Education Statistics

Oregon's "other support service" is also higher than the U.S. average.

While Table 3 compares Oregon's K-12 spending to the national average, similarly structured tables could support *interstate* K-12 comparisons (between Oregon and other individual states), *intrastate* K-12 comparisons (across individual schools or school districts within Oregon), or *intrastate* college and university comparisons (between Oregon universities and colleges).

Education is a highly labor-intensive activity, so trends in total compensation deserve a separate, in-depth focus. Not all of the labor cost drivers made apparent in a transparent budget are subject to an easy fix, but it is advantageous to know what they are in order to avoid policy decisions that make them worse and to understand how they might be addressed.

In support of the state's K-12 biennial budget, the Oregon Department of Education and the Department of Administrative Services develop so-called current service level (CSL) assump-

tions. In developing the CSL, staff summarizes recent compensation trends and forecasts future levels. Table 4 reports the compensation assumptions used in the development of the 2005-07 Oregon Budget — that salaries and retirement benefits increased roughly at the rate of inflation since 1999-00. By contrast, costs associated with health and other contract benefits (primarily employer-provided health insurance) increased at more than 10 percent annually.

Looking forward, three key trends are notable:

- ▶ Retirements of baby-boomers will reduce the average tenure of Oregon's teaching corps, which lowers average salaries and payroll taxes.
- ▶ The average per-teacher cost of retirement benefits will increase sharply beginning in the 2005-06 school year driven by unfunded liabilities in the Public Employees Retirement System (PERS).
- ▶ Health-related benefits are expected to continue their rapid increase.

While these compensation forecasts formed the foundation of the state's \$5 billion recommended K-12 budget, they were never clearly presented to policymakers or discussed widely in public. Without these compensation trends in hand, policymakers and advocates arguing for \$5 billion or more in biennial K-12 spending were implicitly, unknowingly blessing double-digit growth rates in teacher benefits.

Table 4: Actual and Projected Compensation for K-12 Teachers, 1999-00 to 2006-07

School Year	Salaries and Payroll Taxes	Retirement	Health and Other Contracted Benefits	Total Compensation
1999-00	47,207	5,372	6,929	59,507
2000-01	48,489	5,734	7,441	61,664
2001-02	49,684	5,875	8,151	63,710
2002-03	51,093	6,042	9,317	66,453
1999-00 to 2002-03 Average Annual Growth	2.7%	4.0%	10.4%	3.7%
2003-04 Estimated	51,775	5,343	10,650	67,769
2004-05 Estimated	52,402	5,408	12,181	69,991
2005-06 Estimated	53,323	7,475	13,593	74,391
2006-07 Estimated	54,397	7,625	15,175	77,197
2003-04 to 2006-07 Forecasted Average Annual Growth	1.7%	12.6%	12.5%	4.4%

Source: ECONorthwest calculated using projections of the Oregon School Finance Revenue Committee

Without compensation trends in hand, those arguing for \$5 billion or more in biennial K-12 spending were implicitly, unknowingly blessing double-digit growth rates in teacher benefits.

A transparent budget would report similar tables for non-teaching K-12 staff, as well as professors and staff of Oregon's colleges and universities.

At the higher education level, background budget materials should also clearly display the dynamic interrelationship of general state support, need-based aid, and tuition described in the companion white paper Affordability. Put simply, an institution's cost of providing a program minus the general state support should equal the tuition amount. Students can reduce their out-of-pocket tuition costs through need-based aid and scholarships. These simple relationships rarely, if ever, play out in reality. Rather, colleges and universities move resources from one program to another, subsidizing one at the expense of another. None of these complex trade-offs is well understood outside of university or college finance offices. The transparent budget would break down the costs of lower, upper, and graduate-level

In higher education the budget should clearly display the dynamic interrelationship of state support, need-based aid, and tuition.

Table 5: Illustrative Revenue Report for Institutions of Higher Education

	State	Tuition and Fees	Sponsored Research: Indirect Cost Allocated	Sponsored Research: Direct Cost	Private	Auxiliaries	Total
School A							
School B							
School C							
Support Units							
President's Office							
Academic Affairs							
Etc.							

Source: Adapted from *Accountability Handbook*, University of Florida, 1996, page 4.

Table 6: Illustrative Expenditure Report for Institutions of Higher Education

	Salaries	Benefits	Direct Expenses	Equipment	Data Processing	Other	Total
School A							
School B							
School C							
Support Units							
President's Office							
Academic Affairs							
Etc.							

Source: Adapted from *Accountability Handbook from the University of Florida*, 1996, page 4.

Table 7: Illustrative Productivity Report for Institutions of Higher Education

	Effort (FTE Staff)					Credit Hours			
	Instruction	Academic Advising	Research	Public Service	Academic Administration	Lower Division	Upper Division	Graduate	Thesis, Dissertation
School A									
School B									
School C									
Support Units									
President's Office									
Academic Affairs									
Etc.									

Source: Adapted from *Accountability Handbook from the University of Florida*, 1996, page 4.

programs within and across institutions. Tables 5 through 7 are drawn from the University of Florida's Quality Evaluation Project and provide simple examples of the type of information that should be routinely shared but is not.*

Table 5 breaks down the resources available to each school and department within a higher education institution and illustrates the differences in funding generated from external grant money, private funds, tuition and fees, and state dollars. Table 6 distributes school- and department-level expenses and isolates staff salaries and benefits, direct benefits, equip-

*The following discussion and framework draws heavily from Lombardi, John V. and Elizabeth D. Capaldi. 1996. *The Accountability Handbook from the University of Florida*, Gainesville, FL.

ment, and data processing. Table 7 measures productivity indicating the number of full-time equivalent faculty associated with key university functions, as well as, the number of credit hours awarded by each school or department.

The University of Florida uses data like these to maximize the effectiveness of faculty resources. The data illustrate which schools and departments focus on research and rely on a high share of external funding versus those with a teaching focus and high reliance on state funds.

If captured across all campuses in Oregon, data like these would illustrate how institutions apply state dollars, combine with other revenue, and generate an education product. Then when asking for additional dollars, higher education officials could use the same template to illustrate how the supplemental dollars would translate into teaching and research, as well as the number of credit hours completed. Finally, by reviewing identically structured tables across institutions, policymakers could compare how prices differ for similar education products.

3. Develop and Test Performance Outcomes for Each Program

Under current practice, spending on sizable programs is buried within the larger accounting framework. The state makes no attempt to determine whether spending supports a program's goals. And, in some cases, no distinct goals exist except to support overall education achievement or attainment.

Table 8 lists candidate performance benchmarks for each of the recommended PreK-20 programs. As with the programs themselves, this list of benchmarks represents a proposal that should be amended and expanded by education stakeholders. The K-12 benchmarks for elementary, middle, and high school regular education could use existing state assessment scores as its foundation. However, rather than comparing the performance of different groups of students passing through grade levels (e.g., this year's third graders compared with last year's third graders), analyses would focus on cohorts of students moving through the system, producing comparisons of, say, third and fifth grade assessment scores for the same students.

In some areas, the benchmarking exercise would shed light on programs that have received little scrutiny to date. For example, state and local governments spend \$65 million on English as a Second Language and only recently have released reports on how many students enter the system each year, how many exit, and how their English skills improved over time.⁹ Moreover, there is little in the way of routine reporting of achievement gaps between English-language learners and English speakers. Similarly, policymakers lack routinely reported information on how many special education students enter or exit the system each year or how their scores compare to their counterparts without disabilities.

Universities and colleges track the shares of incoming students who persist year-to-year, advance through the system on schedule, and ultimately graduate. However, these key indicators rarely enter the budget debate. Oregon's higher education list could be expanded

Despite large state expenditures in English as a Second Language and special education, costs and outcomes in these programs are not routinely available to policymakers, so they have no way to think about appropriate investments in these and other programs within the larger budget.

to less common but useful indicators of quality and efficiency. For example, the University of Florida tracks “excess credit hours,” which is the number credits taken by students in excess of those necessary to complete a degree. Officials expect some excess credits as students change majors or drop/fail classes. Too many excess credits impede access for other students at a university with limited physical and staff resources.

Developing and testing appropriate performance expectations for each program will take considerable time and effort. Before any indicator is adopted, it must be thoroughly vetted and measured over time. Most importantly, the indicator must have acceptance and relevance at the classroom, department, and school levels.

In developing the set of PreK-20 indicators, Oregon should draw from the Oregon Progress

Table 8: Candidate Performance Expectations for Selected Pre-K 20 Programs

Program	Performance Expectation
PreK-20 Stand-Alone	
Pre-kindergarten/Head Start	XX% of students showing learning gains in literacy, language, mathematics, science, creative arts
Early intervention for children under five years old	XX% reduction in the proportion of K-12 students identified as needing special education
Grades K-5 regular instruction, administration, and support	XX% of students with math and reading learning gains in grades 3-5; XX% of students proficient in reading, math, and writing in grades 3 and 5
Grades 6-8 regular instruction, administration, and support	XX% of students with math and reading learning gains in grades 6-8; XX% of students proficient in reading, math, and writing in grade 8
Grades 9-12 regular instruction, administration, and support	% of students with math and reading learning gains in grades 9-10; XX% of students proficient in reading, math, and writing in grade 10; percentage graduation rate among starting ninth grade cohort
Alternative education programs	Alternative schools held to grade-specific outcomes described above
Special education outside the regular school setting	Reduced achievement gap between students with and without severe disabilities by XX%, with raised achievement by both groups
Remedial programs/developmental education	XX% of students moving out of remediation and moving to lower division or professional training; XX% of adult basic education students earning literacy completion points
Community college lower division and professional training	XX% of entering AA students completing degree; XX% of AA graduates earning >\$XX/hour; XX% of students graduating within 2 years and transferring to a four-year college or entering the workforce
OUS baccalaureate, lower division	XX% second-year retention of incoming freshmen
OUS baccalaureate, upper division	XX% freshman cohort graduation rate within six years; XX% graduating within four years; XX% of graduates with starting employment paying at least \$XX per hour
OUS graduate programs	XX,000 master and doctoral degrees within four years
OUS professional programs	XX% of first-time entrants graduated; XX% of graduates obtaining professional licenses
PreK-20 Supplements to Regular Education	
Special education in regular school settings	XX% reduced achievement gap between students with and without disabilities, with raised achievement of both groups; XX% of special education students graduated
English as a Second Language	XX% making progress on ACTFL; XX% of Level X students exiting from ESL within X months
K-12 student transportation (regular students)	Provision of safe and reliable access to school while improving student attendance
K-12 student transportation (special education students)	Provision of safe and reliable access to school while improving student attendance
Oregon Student Assistance Commission undergraduate need grant	XX% of low-income students attending OUS institutions

Source: ECONorthwest

Board's expertise and from similar efforts in other states. Performance indicators should be:¹⁰

- ▶ *Student-success focused.* Indicators should assess individual performance or progress of all students.
- ▶ *Actionable.* Teachers, principals, professors, and department chairs should perceive that they can affect the performance on selected indicators through frontline policies.
- ▶ *High quality and inexpensive to assemble.* Indicators should be reliable, trusted across institutions, and relatively inexpensive to collect.
- ▶ *Measurable over time.* Indicators should permit consistent tracking over a number of years.
- ▶ *Simple.* For any given program, indicators should be few in number, easy to calculate, and easy to explain to non-experts.
- ▶ *Aligned.* Indicators should align and complement other performance measures and support coordinated systems from pre-kindergarten through graduate school.

4. Frame the Budget Debate in Terms of Results Rather Than Inputs to Education

Under the existing budget process, policymakers focus on who's expected to show up at Oregon's schools, colleges, and universities - as opposed to the skills they will acquire once they are there. In the K-12 arena, the budget process identifies the number and types of different enrollees (e.g., total, special education, English learners, low-income, pregnant and parenting students) and funds them subject to an overall state-determined budget constraint. Similarly at the higher education level, the state's Resource Allocation Model (RAM) assigns funding based on the number of anticipated enrollees in a variety of low-cost (e.g., liberal arts), medium-cost (e.g., business management), and high-cost (e.g., engineering) programs.

In both the K-12 and higher education funding models, receiving institutions (a school district or university) are very clear about *who they will serve* but silent about *what those students will achieve*. For example, in K-12, local school districts can document precisely how many ESL students they enroll, but few districts indicate how many of their ESL students will speak English at a certain level by when. Likewise in higher education, universities are well versed in enrollment but have less reliable information about the well being of students once they have entered the workforce or continued to higher-level degrees.

Despite its focus on inputs, the state has the building blocks to monitor the results of the education system. The Oregon Progress Board, through its pioneering benchmark work, periodically updates indicators of Oregon's wellbeing and economic progress. Under the benchmarking exercise, the Department of Education, the Department of Community Colleges and Workforce Development, and Oregon University System are deemed lead agencies for key education outcomes (e.g., K-12 student achievement, share of Oregonian's with bachelor's degrees).¹¹ While valuable, the benchmarks work does not hold lead agencies accountable for failing to achieve targeted outcomes and is not integrated into the budget process.

"The reality is that (the benchmarks) had been virtually irrelevant as far as the budget and where we put the money."

— Senator Kurt Schrader (D-Canby) and Chair of the Oregon Senate Budget Committee.
The Oregonian,
April 19, 2005

"What performance budgeting does is allow decision-makers to have more information at their disposal. It means decisions can be made on something other than anecdotes."

— John Kamensky,
Director of PricewaterhouseCoopers' managing for results practice, Government Executive magazine,
May 15, 2002

The degree to which states link performance data and budgetary decisions falls along a continuum. In his surveys of higher education funding, Joseph Burke identifies three ways states pull performance into their policymaking processes:¹²

- ▶ *Performance reporting.* States and institutions develop and report key indicators of education quality and efficiency. The system relies on publicity to push institutions to pursue state priorities and improve institutional performance.
- ▶ *Performance budgeting.* Policymakers explicitly consider achievement on performance indicators as one factor in determining allocations for institutions. Performance budgeting concentrates on budget preparation and presentation and usually stops short of explicitly earmarking funds for good or improved performance.
- ▶ *Performance funding.* Policymakers tie state funding directly and tightly to institution performance on individual indicators. The relationship between funding and performance is tight, automatic, and formulaic.

The Oregon Progress Board's benchmarks are an example of performance reporting. The Governor embeds the K-12 and higher education benchmarks into the Recommended Budget; however, one key legislative policymaker admits they play little — if any — role in funding decisions (see adjacent comment, box).

Oregon's Quality Education Commission (QEC) took a step in the direction of performance-based budgeting in its development of a K-12 funding model. Rather than focusing exclusively on educational inputs, the QEC focused first on a desired level of student performance. The QEC established a goal of bringing 90 percent of students to statewide standards in reading and mathematics and then estimated the cost of a program (the Quality Education Model or QEM) to achieve the goal. Full implementation of the QEM would cost an estimated \$1.1 billion in 2006-07.¹³ So, the QEC has essentially married a budget request (\$1.1 billion) with a performance outcome (90 percent of Oregon students meeting standards in reading and mathematics). Regardless of one's view of the details the QEM's recommendations, the model's explicit links between funding and achievement levels should be commonplace in the education budget process.

The Oregon University System similarly tied performance expectations to specific appropriations during the 2005-07 Legislative Session. In testimony before the Joint Committee on Ways and Means, OUS Chancellor George Pernsteiner showed how variations from the state's Recommended Budget would affect three key performance indicators — bachelor's degrees awarded, graduation rates, and percent of bachelor graduates employed or continuing with their education (see Table 9).¹⁴ As with the QEM example, the OUS projections provided high-profile benchmarks that could be revisited in future years.

The wider use of performance budgeting is the logical extension of the Oregon Progress Board's pioneering benchmark work. To advance performance budgeting, Oregon PreK-20 stakeholders should build on the QEM and OUS examples and also learn from the national experience. To date, performance budgeting systems have typically served only high-level policymakers: governors, legislators, chancellors, university presidents, and superintendents. The associated indicators that support the systems are well known to policymakers but un-

known to frontline educators such as department chairs and instructional staffs. With little awareness of the indicators, or what they can do to affect them, teachers have yet to respond to the performance systems in ways that improve quality or efficiency at the classroom level. With these experiences in mind, Oregon education policymakers should:

- *Develop performance indicators that are relevant and actionable at the classroom level.* If classroom teachers and professors are not discussing the performance indicators and how they can affect them, a performance-driven budget will fail. Some indicators are more useful as broad statewide measures of quality or effectiveness while others lend themselves to class-level detail. To make indicators relevant in the classroom, teachers, professors, and their supervisors may have to devise classroom indicators that are not identical to the statewide measures but support them.

Table 9: Alternative Higher Education Budget Levels and Projected Performance

	Governor's Recommended Budget	Expand to Meet Enrollment De- mands	Reduce Budget
Biennial Funding Level (in millions)	\$685.4	\$740.4	\$616.9
Program Outcomes (by 2010-11 School Year)			
Bachelor's Degrees Awarded	13,500	14,700	11,700
Graduation Rate (within 6 Years)	56.5%	59.5%	53.5%
Percent of Bachelor Graduates Employed/Continuing School	91.0%	92.0%	90.0%

Source: OUS, Connecting Outcomes to State Investment, March 15, 2005 Testimony to the Education Subcommittee of the Joint Committee on Ways and Means

- *Establish reasonable relationships between funding levels and performance outcomes.* Oregon's Quality Education Commission and the Oregon University System have taken the courageous step of telling legislative appropriators what they would get in return for increased funding and conversely what they would lose with decreased funding. Until those relationships are established for all Pre-K 20 programs and reported routinely, policymakers will be making funding decisions in the dark — increasing or decreasing funding without a notion of how their choices affect the statistics that matter the most: achievement, graduation, and rates of job entry and graduate enrollment.
- *Determine a review schedule when policymakers would critically assess the relationships between funding and past and future performance.* Education investments take time to produce results. Performance budgeting may function better through a multi-year, but more rigorous, review of investments and performance. Rather than tracking spending and performance year to year, policymakers might consider a four-year span between reviews. While less frequent, the reviews would take on greater importance.

5. Incorporate Performance Funding Into Education Budgets

"State budgets for public colleges and universities fund student enrollment and ignore degree completion. This sends the wrong message — that access is everything — at a time when anything less than a certificate or degree has diminishing value in a workforce that is growing ever more sophisticated."

— Joseph Burke
from *Achieving Accountability in Higher Education*
(2004)

The ultimate goal of the transparent, performance-driven budget is to reshape the process from one focused on procuring enrollment slots to one focused on procuring higher rates of achievement, retention, and graduation. On its face, the logic of paying for desired outcomes — rather than inputs or enrollment — appears straightforward. Rather than distributing resources based on student counts, the state would pay per student who achieved the state's standards on mathematics and reading, who acquired English-speaking skills, who graduated from high school, or who obtained a certificate or degree. The importance and challenge of achieving such outcomes are outlined in the companion white paper *Preparation*.

A movement in this direction could greatly diversify the ways Oregon educates its children and young adults. Under today's budget method, the state procures nearly identical education products for each of its students. For its K-12 students, the state buys roughly 6 hours of instruction daily spread over 175 to 180 days a year. For its higher education students, the state buys 15 hours of instruction weekly spread over 36 weeks a year. If rather than buying "seat time" or "credit hours," the state simply procured student proficiency, a host of alternative educational approaches would appear. Schools might discover that self-directed mathematics labs work well for some students. Online or distance learning courses may work well for others. Changing the appropriator's focus from process to outcomes would recast the budget debate in a revolutionary way.

While its logic is compelling, the details of performance funding implementation are exceedingly complex. Public schools, colleges, and universities are open to range of students with a broad array of characteristics and abilities. Not everyone who enrolls in Oregon's public schools can be expected to meet state- or institution-specific performance goals. And schools often spend disproportionate resources on those students who do not achieve or attain a degree.

Because public education has a broad mandate to provide educational opportunities for citizens regardless of ability — or even willingness — to learn, performance funding may never constitute the majority of appropriations. Too many determinants of student success simply fall outside the reach of teachers or institutions.

But difficulty in design and implementation is no excuse to ignore performance entirely in education funding. The stakes are too high. In this highly competitive global economy in which Oregon's children will compete for jobs with youth from India, China, and elsewhere, the need for our education institutions to perform efficiently and effectively is higher than it has ever been. Performance funding is feasible, but it needs at least two conditions to succeed.

First, as with budgeting, performance funding requires a meaningful set of indicators that teachers and professors recognize and believe they can affect at the classroom level. South Carolina provides an example that failed in this respect. Nearly 90 percent of university presidents and vice presidents were aware of the state's performance funding system for higher education, but over 40 percent of the academic deans and over 60 percent of the department

chairs were unfamiliar with the system.¹⁵ In short, South Carolina's performance-funding program was essentially invisible at the classroom level and consequently ineffective.

Second, the resources must be large enough to provide incentives for strong performance. Fortunately, because incentives tend to work at the margin, a little incentive within a budget goes a long way. Experience shows that if 5 to 10 percent of budgets are tied in some way to a particular subset of performance objectives, departments and schools will exert themselves to achieve those objectives.

If Oregon were to adopt performance funding, this is how it should start:

At the higher education level, the state could allocate a share of operational budgets (3 to 5 percent) to actual degree or certificate completion. Once the state determined the share of resources linked to performance, individual campuses would design and operate the funding systems internally. Performance funding would be a campus-based program.

At the K-12 level, the state could fund school-based performance awards (SBPA). In this approach, the state would identify targeted measures of achievement- and participation-oriented student performance, and if targets are met, the entire school would receive a bonus award. Usually, everyone in a school — from professional to classified staff members — is eligible. Successful SBPA systems are clear about the performance that is most valued (e.g., student achievement, student and teacher attendance, parent satisfaction) and base the performance standard for each school on improvement over some historic base.

6. Maintain Local Control Over Spending Decisions

While the transparent budget will provide improved information about the amount of revenue appropriated to various programs (e.g., K-5 regular education, ESL, lower division undergraduate), state policymakers should resist the urge to earmark or dictate that every dollar appropriated to a particular program is spent on that program. Spending decisions are best left to local school boards and higher education administrators. The state should give local administrators flexibility in designing a comprehensive education package with their full allotment of state and local funding. In exchange for that flexibility, the state should hold local administrators accountable for the performance goals specific to each program. If, for example, an administrator believes she can meet a program's goals with half the resources appropriated for the program by the state, she should take the remaining funds and invest them strategically in other educational areas.

Over time, state policymakers should learn from local allocation decisions. If administrators are routinely spending less on a program than the state is appropriating, but nonetheless meeting the program goals, then policymakers might consider reallocating those appropriations to other areas of the PreK-20 budget.

Conclusion

Oregon's schools, colleges, and universities account for their expenditures in extraordinary detail. However, education officials have not put the wealth of spending data to full use. Today's budget debates rely on highly aggregated, multi-year, incomplete accountings of education activities. Moreover, education budgets remain in their traditional stovepipe formats with pre-K, K-12, community college, and university funding unnecessarily segregated from one and other. Lacking clear and concise information, policymakers allowed per-student spending to drift during the past decade with some programs expanding and others contracting. Presented with the spending trends at the end of the period, many policymakers and education observers were surprised by the findings.

This paper calls for improved transparency in budget presentations. Education budgets should span the pre-K 20 continuum, isolate programs with goals and purposes, and reveal all associated spending regardless of its source. A finite set of easily measurable performance indicators, developed by frontline educators, should accompany each program. And as each of the performance goals gains reliability in the classroom and in Salem, policymakers should strengthen the ties between performance and the budget process. In the short run, policymakers should use performance indicators more rigorously in their budget debate. In the long run, performance funding should evolve into a key change agent for education policy.

The creation of a transparent, performance-driven budget is a necessary first step for more substantive reforms to Oregon's pre-K to 20 education continuum. Armed with better information about how scarce resources are allocated, policymakers can create a system that supports students in acquiring essential skills at their best pace, provides a wide range of learning options that makes transitions from grade to grade easier, and responds quickly to the needs of employers for skilled and innovative people.

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