
HIGHER EDUCATION AND THE OREGON ECONOMY

***Report of the Governor's Task Force
on Higher Education and the Economy***

December 15, 1997

The Task Force recommends a fundamental overhaul of Oregon's higher education policy framework and governance.

- *This includes developing a broader perspective on the State's interests in higher education, centered on the needs of individual learners and the economy, and recognizing a broad array of resources within and beyond Oregon to address these needs.*
- *It includes recognizing competitive market forces and encouraging competition as well as collaboration among providers.*
- *It includes integrating the State's investment in, and purchase of services from, state universities, community colleges, and private colleges and universities.*
- *It also includes decentralizing the Oregon State System of Higher Education and shifting more policy authority, responsibility, and accountability to each institution.*

CONTENTS

| | |
|---|----|
| Summary | i |
| 1. Introduction | 1 |
| 2. The Need To Rethink Higher Education | 5 |
| 3. The Vision for Learner-Centered Higher Education | 19 |
| 4. Capability of Oregon Higher Education To Meet Emerging Market Demands | 23 |
| 5. Barriers to Progress | 31 |
| 6. Principal Recommendations: A Framework for Achieving Our Vision | 43 |
| 7. Additional Recommendations | 53 |

APPENDICES

| | |
|--|---|
| Task Force Charge | A |
| Bibliography | B |
| Higher Education Leaders Interviewed by the Task Force | C |
| Presenters to the Task Force | D |
| Summary of Responses to a Call for Ideas | E |

SUMMARY

Higher Education Matters To Oregonians and to Oregon's Economy

Oregonians are entering a new era in their requirements for higher education services. A growing economy and changing workplace are intensifying the skill and knowledge levels demanded by employers. For recent graduates looking for employment and for workers already employed, higher education is the key to greater job security, higher pay, and expanded career opportunity.

Changes in the economy, in the workforce, and in higher education itself suggest a need to rethink what we get and want from higher education. To take a fresh look at this issue, Governor Kitzhaber formed the Governor's Task Force on Higher Education and the Economy.

Six Trends Affect Higher Education in Oregon

The Task Force has found at least six distinct trends that have a direct bearing on the state's institutions of higher learning.

Trend 1. As Oregon's knowledge-centered economy continues to evolve and grow, higher education is becoming critical to the economic security of Oregonians and the

long-term health of our economy. Across nearly every sector, demand is growing for highly skilled professional and technical employees — and the pay for such employees is climbing. There is a significant clamor for employee capabilities nurtured by the liberal arts. In today's workplace, employers value workers with historical perspective, critical thinking skills, and competence in mathematics, speaking, writing, listening, and collaborative effort. They lament that too many Oregon college graduates are deficient in these attributes.

There is a significant clamor for employee capabilities nurtured by the liberal arts.

Trend 2. Shortages in critical skills and specialties are impeding growth in Oregon industries right now, and they loom even larger in the near future.

Employers are having difficulty filling skilled high-wage positions even while many Oregonians with less education struggle to earn reasonable incomes.

Employers are having difficulty filling skilled high-wage positions even while many Oregonians with less education struggle to earn reasonable incomes.

Trend 3. A surge of highly educated newcomers is dramatically changing the educational profile of Oregonians, competing successfully with Oregon graduates for good jobs, and taking jobs for which other Oregonians don't qualify because they lack

necessary education and skills. Too many of the new, high paying jobs are going to well educated newcomers. While this job-education mismatch is not unique to Oregon, it suggests an opportunity if Oregon can better align its higher education offerings with the needs of Oregonians and the Oregon economy.

Trend 4. Learning and work are blending as never before, and that blend is lasting a lifetime. The market for higher education has grown well beyond young, post-high school adults going off to school for a traditional four-year program. A large and growing segment is made up of working adults who are either enhancing their job skills or retooling for new positions and careers.

Trend 5. The Oregon market for higher education is being scrambled by increased competition among existing providers, competition from new entrants, and new learning technologies. Many of Oregon's

private colleges and universities are becoming more competitive for students. Outside providers of advanced education see opportunities to meet the new demand for instructional services, and a number of them are beginning to establish a presence here.

Higher education is becoming a buyer-defined market. Buyers want programs that provide what they need, when they need it, and how they need it delivered.

Even large companies are offering instruction to employees to fill needs unmet by traditional institutions or new providers. Also, more organizations and more individual employees are using new interactive technologies to tap higher education resources beyond Oregon's borders, including the Internet.

In this changing environment, higher education is becoming a buyer-defined market. Working students especially say they want learner-centered instructional services, particularly programs that provide what they need, when they need it, and how they need it delivered. Institutions that hope to meet such market demands must be responsive, flexible, results-oriented, accountable, and entrepreneurial.

Trend 6. State funding is declining even while the total demand for higher education and its value to individuals and the economy are growing. In passing tax limitations,

Oregon voters have expressed a determination to impose limits on the spending growth of State Government. Within this framework, the voters have also directed more dollars to such costs as prisons, in effect reducing what is available for higher education. As the State has reduced its investment in higher education, it has shifted much of the cost to students in the form of higher tuition. State funds now account for less than 20 percent of the

As the State has reduced its investment in higher education, it has shifted much of the cost to students in the form of higher tuition.. State funds now account for less than 20 percent of the operating budgets of Oregon's seven public universities.

combined operating budgets of Oregon's seven public universities (down from 41 percent in 1960), and student tuition is now the largest source of operating income. This shift raises the question of how much direct authority the State, as a secondary funder, should exercise over individual institutions as they are forced to seek other sources of revenue to fulfill their missions.

The Vision for Learner-Centered Higher Education

As the first four trends above make clear, higher education is a central resource, a key to Oregon's aspirations for a prosperous, knowledge-based economy. Given the importance of higher education, the Task Force believes that Oregon needs to reshape its vision and expectations of higher education. Learners and their needs at every stage of adult life must lie at the heart of this renewed vision. At a minimum, schools must pay more attention to several things:

There is evidence that Oregon institutions are taking steps to become more learner centered, to extend their market reach, and to form new alliances and delivery arrangements.

- Providing younger students not only with up-to-date knowledge in particular disciplines, but also skills in critical thinking, problem solving, communication, and teamwork
- Providing younger students a smoother transition from school to the workplace, particularly through such learning experiences as internships
- Anticipating and serving the lifelong academic needs of adult learners with degree and non-degree instructional offerings in a variety of learning models and settings
- Focusing the resources of the university's instructional programs and research and development capabilities on the strategic needs of the economy.

The Way Oregon Thinks About and Governs its Higher Education Resources Impedes Their Ability To Serve Learner Needs

Recent developments suggest that established colleges and universities see the changes coming and are moving in these directions, particularly in making younger students more job ready and in serving the continuing education needs of adults. Such responsive service confirms the Task Force's belief that many leaders and faculty within the schools of higher education want to reach out to learner markets and meet their needs. Unfortunately, leaders who want to pursue such initiatives must do so in a policy and governance framework that hasn't kept pace with technological and competitive changes in higher education, that in some cases impedes initiative to serve learners, and in other cases does not reward such initiative. Structures that impede or fail to reward market responsiveness have also grown up in the individual institutions themselves.

The Task Force finds six principle barriers to progress in Oregon higher education:

Barrier 1. At the highest level of State policy making and governance, we compartmentalize the way we think about higher education and thereby limit our opportunities to better serve students. Oregon governs its universities and community colleges separately from each other, and it rarely recognizes the valuable resources represented in private and out-of-state schools.

As institutions become increasingly learner centered and market oriented, we envision a revolution in higher education delivery in the decade ahead through a proliferation of alliances among institutions within Oregon and throughout the globe. Such alliances are already forming. In this environment, the lines between institutions will blur and service territories will expand.

State policy and governance need to accommodate these shifts or they will get in the way. As such alliances grow, there must be a consistent funding policy so such joint ventures can grow with market demand. As community colleges and university offerings become more integrated, so should the State's support and governance role.

By focusing on what learners need and what resources -- all resources -- are available to meet those needs, State Government will play a more constructive role in supporting the education of citizens.

State Government also needs to broaden its view of higher education to encompass more than public institutions. Higher education is increasingly becoming available from a range of sources both in and out of state. By focusing on what learners need and what resources — all resources — are available to meet those needs, State Government will play a more constructive role in supporting the education of citizens. At the same time, Oregon's schools of higher education should think of the world — not just Oregon — as their market. Our schools should be able to market their best offerings widely, to help cover fixed costs and stay competitive.

Barrier 2. Protectionist policies that assign particular schools exclusive rights to geographic territory and program offerings constrain initiative and opportunities to serve customers.

Laced throughout the structures of Oregon higher education governance today are laws and regulations to review and potentially restrict the program offerings of individual campuses. These review requirements were put in place to assure

quality control and to avoid duplication of services by State System schools. Unfortunately, efforts to prevent duplication inhibit program initiative and choice, which must be central characteristics in the new higher education market. The State System should encourage all institutions to explore vigorously new markets inside and outside

Efforts to prevent duplication inhibit program initiative and choice.

of Oregon (as long as those outside are not subsidized by Oregon taxpayers). Creating this kind of climate will spark the kinds of new learning opportunities Oregonians need, and it will enable Oregon schools to be competitive in the emerging global market for higher education services.

Barrier 3. The State's higher education budgeting and finance system is unwieldy, and it severely limits incentives for schools to respond to new needs. The leaders of Oregon's public and private colleges and universities and its community colleges are all adapting to the new competitive environment in higher education. However, they do not all enjoy the same incentives to compete. State universities are saddled with a ponderous budget process that involves at least three levels of review, and the incentives for expansion into new areas often are limited. Community colleges, under a new distribution formula have stronger incentives. Private schools have the strongest incentives of all to adapt to new needs.

A State System campus attempting to meet new needs today essentially has three routes to fund new programs. First, it can seek additional dollars beyond the base budget in a special request to the Legislature. Second, it can cut dollars from an existing program and redirect it elsewhere. Third, it can offer the new program, in hopes that it will attract additional dollars in tuition and other support to cover the costs.

Right now, pursuing any of these choices is more difficult than it needs to be. In a time of scarce dollars, seeking additional funds for new programs rarely is successful. Even when successful, such efforts can take months or even years. The system, by design, is slow to respond. Cutting funds from older programs to move into new areas is also very difficult. This is one reason why engineering education, which has clearly been a high priority need throughout the decade, has received limited additional support. Entering new markets with the hope that additional dollars will follow is risky as well as difficult. Most of the State general fund dollars and nearly all tuition revenue generated by State System campuses are allocated to schools using the Basic Allocation System (BAS) model. The model is biased to fund existing programs. It is inflexible in addressing needs for new programs, or existing programs in new locations.

Barrier 4. The State Government process for financing higher education obscures the State's understanding of the services it is buying and their cost. The State's process for financing the State System, despite its complexity and detail, actually obscures a clear understanding of the services that the

The State's process for financing the State System, despite its complexity and detail, actually obscures a clear understanding of the services that the State is buying and what they cost.

State is buying and what they cost. The process also fails to provide comparative data for programs elsewhere, which would enable the State to determine if similar services are available from private or out-of-state sources at better quality or cost. As demand for higher education expands, more of the costs for services will be borne by individuals, employers, and federal subsidies. In this environment, the State will need to be clearer about what specific services it chooses to support, and at what funding levels.

By one estimate, for example, a dental student in Oregon receives over seven times more State support per year (about \$35,000) than an undergraduate student (less than \$5,000). In another case, the State has no direct way of comparing the tuition support per student at community colleges (about \$2,600 in State dollars plus \$800 in local property taxes) with the support it provides for undergraduates in the State System during the first two years, primarily because there is no ready way to calculate the State System number.

Such implicit choices are not necessary bad, but they are being made without good data, without a clear understanding of the trade-offs and alternatives, and without benefit of public discussion. This lack of clarity also hampers institutions trying to serve market needs by creating inflexibility in pricing services.

Barrier 5. The State System's focus on central authority requirements detracts from a necessary focus on the customer. The cumulative impact of the State System budget and program approval process is that too much management time by college and university leadership is focused on central governance issues. This robs school leaders and faculties of the time, energy, and staff support they need to stay in touch with learner markets and make program improvements. No one in particular is at fault for this problem. It is built into the system.

Oregon Health Sciences University, which recently spun off from the State System, reports enormous savings in senior management time that was spent in attending to State Board reporting requirements and meetings, as well as addressing executive and legislative branch requirements. In important ways the Legislature and the State System have addressed some of the cumbersome red tape created by State executive requirements. In SB 171, passed in the 1995 session, the Legislature exempted the State System from various State agency procurement and personnel rules. This is a helpful step, but the larger problem remains.

Barrier 6. The flexibility and market responsiveness of individual institutions are hampered by significant internal constraints. As demand grows for degree and non-degree services, individual institutions will need to rethink their offerings in light of

market opportunities. For some campuses, this will also require review of internal budget and management processes, tenure policy, and faculty governance. Although the Task Force has not focused directly on these issues, many Task Force members believe these internal organizational barriers to be as significant, if not more significant, than state-level barriers. However, in context of the overall recommendations of the report, addressing barriers within individual campuses is more appropriately a matter for each local school rather than a statewide issue. The state framework is designed to encourage a review of mission and process by each institution.

**Possible Solutions to Barriers
That Keep Oregon Higher Education
from Responding Adequately to Learner Markets
and the Needs of the Knowledge Economy**

| Barriers | Recommended Solution |
|--|---|
| State Level | |
| 1. Compartmentalized governance | <ul style="list-style-type: none"> • Merge higher education funding streams under one board responsible for defining service needs and contracting for services • Establish one authority responsible for all program certification • Think worldwide about sources of higher education services for Oregon students and markets for Oregon institutions |
| 2. Institutional protectionism | <ul style="list-style-type: none"> • Change State policy to open markets for providers of higher education |
| 3. Weak incentives to focus on customer needs | <ul style="list-style-type: none"> • Redesign financial allocation models to tie dollars directly to student enrollments |
| 4. Budgeting processes that obscure what specific services the State is buying | <ul style="list-style-type: none"> • Develop a budget that specifically identifies the kinds of higher education services the State wants to buy and that budgets specific dollars for those services as a matter of conscious policy choice |
| 5. Excessive focus on State System governance and requirements at the expense of a focus on the customer | <ul style="list-style-type: none"> • Grant semi-autonomous and possibly autonomous status to each state university; use performance contracting to purchase services in which the State has an interest |
| Institution Level | |
| 6. Institutions have significant internal constraints on market responsiveness. | <ul style="list-style-type: none"> • Let institutional autonomy and competition in the marketplace create incentives to become more responsive to learner needs and market demands • Encourage institution-level boards of directors to create a policy framework for responsiveness to market opportunities |

Policy Perspective Makes a Great Difference

The State of Oregon's policy framework is a key point of leverage in addressing these questions. The Task Force believes the State should reconsider basic assumptions that it makes on 1) what is needed from higher education, 2) how individual institutions can be empowered to constantly assess and meet educational demands in a timely way, and 3) how to support access to higher education services by Oregonians. We believe Oregon can begin to make progress by changing two perspectives:

First, policy makers should expand their horizons when considering the higher education resources that are available to Oregonians. They should think beyond our public higher education institutions and also consider the private resources inside Oregon as well as other resources worldwide that could team up with our public institutions to give Oregonians access to a wide array of learning opportunities.

Second, State policy makers and public officials should stop thinking of Oregon public universities as State agencies under their direct control. They should give our public institutions the freedom and flexibility to reach beyond traditional markets with a wide variety of new learning services. These include markets outside Oregon and markets for services in Oregon that are not necessarily supported by State dollars. State Government should view individual institutions more as independent entities from which services can be contracted than as State agencies.

These changes in perspectives will dramatically enhance the opportunities for Oregonians and their education institutions to thrive in the global economy and the global higher education market that will emerge in the 21st century.

With these two perspective in mind, state-level policy making should encourage free entry of competitive public and private institutions into the market subject to quality review. State policy should define with much more precision the specific services State Government chooses to support, and then develop mechanisms for procuring those services from our institutions through contractual relationships.

Principal Recommendations: Conform Public Policy To Support a More Learner-Focused and Competitive Higher Education Environment

The Task Force recommends a fundamental reorganization of Oregon's higher education resources, in particular by decentralizing the Oregon State System of Higher Education and shifting more policy and budget authority, responsibility, and accountability to each institution in the system. The Task Force specifically proposes the following:

1. Change the State's role to strategic guide and buyer of services. The principal role of the State boards in higher education should be to identify special and long-range

needs for higher education, to advocate for resources to address those needs, and to allocate State funds to purchase particular services provided by public, and, in some cases, private institutions. For example, the State Board of Higher Education should not regulate or micro manage institutions that now comprise the State System, but should instead propose to the Legislature and contract the services in which Oregon has a public interest: student education, research, and community service. In purchasing services from individual campuses, the State Board may decide to establish tuition policies and performance requirements as a contract condition.

2. Make each State System campus semi-autonomous. The Task Force believes that each State System institution should have the freedom and flexibility to meet the needs of its markets and compete for market share on its own merits. To do this, each campus should have the latitude, if it chooses, to establish its own governing and policy structures in accordance with its mission, including its own governing board, much as private institutions (and community colleges) do today. Each institution would continue to receive a share of share of State resources as now, but those resources would be distributed on a per-student basis according to the number of students the institution is able to attract in market competition with other providers of higher education. State subsidy might be adjusted for differences in costs among programs (but not among schools) where such costs are quantifiable and reasonable based on a sampling of similar programs. Centralized support services now provided through the Chancellor's Office might still be purchased by individual institutions, but at their discretion.

The Task Force believes the state's public institutions of higher learning, with new-found freedom and flexibility, should be challenged to grow into new markets with new services, under the financial discipline that comes with autonomy. Each campus should periodically review its strategy and operations. This review should examine new means of delivery as well as internal personnel policies, budgeting, and other practices in order to make the institution more responsive to learner needs.

State-assigned service territories and program offerings are becoming less relevant and more tenuous as learners gain more say in what they want from higher education and as new forms of distance and interactive learning technologies come into play.

3. Encourage all Oregon institutions of higher learning to form alliances to serve the needs of Oregon learners. As a matter of policy, Oregon should encourage both its public and private institutions to seek out and form the alliances that competitive organizations often find advantageous in serving growing markets. State-assigned service territories and program offerings are becoming less relevant and more tenuous

as learners gain more say in what they want from higher education and as new forms of distance and interactive learning technologies come into play. Alliances between and among State System schools, community colleges, private institutions, on-line providers, and new entrants to Oregon should be welcomed. If they make sense to the partners and to learners, they will make sense for Oregon.

Recommended Intermediate Steps in Reforming Higher Education Governance

The Task Force recognizes that many issues need to be addressed as Oregon pursues the directions recommended here. Full implementation will take a number of years, and require legislation. However, there are four steps that should be taken right away.

1. *The State System should explicitly grant each of Oregon's public universities greater autonomy.* While the specifics need to be carefully considered, we believe each school should be afforded flexibility to expand program offerings (subject to approval by accreditation boards), to offer programs in new geographic locations, and to form alliances with other institutions to serve learner needs.

2. *The State System should rebuild its model for funding State schools.* The BAS model should be replaced with a performance-contract based system. The new model should allow the Board to decide explicitly what higher education services it wants to buy or what investments it wants to make on behalf of Oregonians, and then to buy those services or make those investments through performance contracts with schools. The State will determine what services it wishes to purchase, and individual schools will become, in effect, independent suppliers receiving dollars for performing those services.

3. *The State should encourage each State System campus to set its own course.* The Governor should ask the Board of Higher Education to appoint an advisory board for each institution in the State System. The board and president of each institution should work together to develop strategy, policies, and plans in the context of institutional autonomy. The State Board should regard this grant of partial autonomy as the foundation upon which each institution in the State System can later request greater or full autonomy.

4. *The Governor should create a new budget model for funding higher education.* The Governor should ask the State System to prepare two funding models for deliberation for the 1999-2001 budget. One would be based on current practices. The other would be based on the State purchasing services or making investments through a contract-for-services process.

Additional Recommendations the State System Can Act on Immediately

To complement this new governance and budgetary framework, the Task Force recommends four steps to strengthen the connections between higher education and the economy.

1. Require institutional accountability for higher learning among graduates. Each school receiving State funds should systematically measure the proficiency of graduates to assure that all of them can write and speak well, apply scientific methods, demonstrate mathematical skills,

Graduates should be measured for the ability to write and speak well, apply scientific methods, demonstrate mathematical skills, think critically, and demonstrate other core knowledge.

think critically, and demonstrate other core knowledge the school deems to be essential for all graduates. These measures should complement skill and knowledge standards of the Proficiency-based Admission Standards System (PASS), which is currently being developed by the State System to govern admission of first-year students.

2. Expand internships and practicums. Many Oregon institutions are expanding internships and practicum experiences to provide additional context for learning and to prepare students for life and careers beyond school. Employers find students with such experiences to be better prepared for work. Employers and schools should join together to expand internships at all levels.

3. Expand engineering and technical education offerings. Oregon businesses are reporting shortages in engineering and technical fields across many industrial sectors, especially in the growing high technology sector. As one of its first initiatives, the Task Force developed a strategy aimed at enhancing engineering education, both to address industry need and to learn how schools respond to a direct initiative to meet a market requirement. The Governor and Legislature supported SB 504, which creates an Engineering and Technology Industry Council to allocate a \$5 million fund in engineering education in public and private institutions. Using the initiative for engineering education as a model, we recommend turning to another critical problem: insufficient capacity to train technicians for the semiconductor industry. The lessons learned from addressing this need should be studied and applied to other higher education needs.

4. Apply higher education resources to K-12 school transformation. Oregon colleges and universities educate most of the new teachers entering practice in Oregon. The way these professionals are prepared is critical in transforming Oregon's K-12 schools to a standards-based mode of educating children. The K-12 reforms under way in Oregon will insure that students have high academic and work-ready skills when they leave high school. All public and private colleges and universities should be asked to

thoroughly and jointly review their teacher training programs and work with the state School Transformation Advisory Council (STAC) to align these programs more effectively with school transformation. Not only will this benefit K-12 education, it will ultimately reduce the need for freshman-level remedial classes for students who leave high school unprepared to do college-level work.

Guiding the Transition That Will Encompass all of Higher Education

The steps above will address some of the most pressing problems in the State System, but they won't resolve all of Oregon's needs in higher education, particularly issues that transcend the State System. The Task Force vision for higher education will involve a transformation that goes beyond the State System and that will, by itself, require broader perspective and guidance. The Task Force recommends that the Governor create a Higher Education Transition Council made up of civic and business leaders, and representatives from the Board of Higher Education and the Board of Education. This panel, which would sunset in a specified period, would be staffed to carry out the technical work of redesigning the way that the State of Oregon invests in and governs higher education. In particular, the Transition Council would:

- Propose measures to ease the transition to autonomy by schools in the State System.
- Design new finance, budgeting, and tuition policies consistent with the recommendations of this report and the Governor's Task Force on Higher Education Access.
- Recommend new policies and governance procedures for program authorization and certification.
- Recommend a permanent structure for higher education governance, including roles and structures for State agencies that represent Oregon's public interest in higher education. This would include the State System, the Office of Community College Services, and the State Office of Degree Authorization, and it would indicate whether and how the State's now-separate functions of funding its interest in community colleges and public universities should be aligned or merged. It would also recommend the State's role in utilizing the resources of private colleges and universities.
- Consider whether Oregon should have an advisory council to guide State investment in science and technology instruction and research, and, if so, recommend the structure and function of this body.

1. INTRODUCTION

The Charge

The Governor's Task Force on Higher Education and the Economy was created in August 1996, and charged to develop a strategy to better connect higher education with the economy. The Task Force represents a mix of Oregon business leaders as well as present and former higher education administrators and faculty members. (See Appendix A, Task Force charge and membership.)

Governor Kitzhaber asked the Task Force to consider broadly Oregon's current and long-term needs in higher education, the full range of the State's higher education resources, and how these resources might be configured to meet the needs identified. The Governor asked the Task Force to think "outside of the box" as it conducted its work, and to think boldly about how Oregon can attain the mix of higher education resources that will enable it to prosper in the 21st century.

Oregonians must possess education and skills that exceed those of people elsewhere, and Oregonians must have the opportunity to apply these advantages to the task of producing great products and services at competitive prices.

The task force approached its assignment in two phases. After an initial orientation, the Governor asked the Task Force to identify specific opportunities for making progress on higher education in his budget to the 1997 Legislature, and in proposed legislation. In response, the Task Force chose to focus on developing recommendations on enhancing engineering education in Oregon, an issue of great importance to Oregon's high technology sector as well as to many other industries at a time when there is a worldwide shortage in engineers.

The Task Force created a subcommittee which developed a white paper on engineering and conducted a series of workshops with higher education leaders to develop recommendations for enhancing engineering education. The results presented to the Governor and the Board of Higher Education were incorporated into an engineering budget package that was ultimately adopted by the Legislature. SB 504, which accompanied that budget package, set out a policy framework for investing in engineering education that was consistent with the Task Force recommendations.

The engineering education work was valuable on two levels. The Task Force believes the results will contribute to Oregon's engineering resources and programs, and it gave the Task Force a first-hand experience in working with public and private education in Oregon, which proved helpful for reaching broader conclusions about higher education policy and governance.

With this initiative complete, the Task Force then turned to the larger task of developing a strategy for better matching higher education to Oregon's economic goals. It reviewed various reports produced in Oregon and elsewhere on employer needs from higher education. It solicited a "Call for Ideas," inviting industry and higher education perspectives on the issue (Appendix E). Individual Task Force members interviewed 14 public and private college presidents (Appendix C) and heard from a series of experts in Task Force meetings (Appendix D).

The Task Force benefitted from work completed earlier this year by two solution teams appointed by the Chancellor of the Oregon State System of Higher Education. A team of business and education leaders concluded its examination of research and graduate education in March. In September, another such team concluded its look at the Chancellor's Office and its role in State System strategy and services. The findings and recommendations of the two solution teams and the Task Force are similar in several important respects. All see a critical connection between higher education and the economy in Oregon. All see fundamental deficiencies in the responsiveness of public higher education to the emerging needs of Oregon's workers and businesses. All see a similar need to decentralize public higher education and accord more autonomy to the campus level so schools can respond to the market with minimum State System interference. However, the Task Force, unlike the solution teams, was charged to consider higher education beyond the State System. As a result, it considered a broader array of governance issues and has made recommendations that cut across a wider span of higher education, including community colleges and private colleges and universities.

A Note on Task Force Perspective

The Task Force recognizes that many in higher education deeply suspect a view of their community from the perspective of the economy and market forces. We understand and in some ways share this concern. Higher education serves vital needs beyond preparing students for careers. Study of history, science, literature, and other disciplines have intrinsic value. They enrich our understanding, expand our horizons, and strengthen our capacity to function well as individuals, family members, and citizens.

We do not believe economic goals are in conflict with the intrinsic benefits of higher education.

For two reasons, however, we do not believe economic goals are in conflict with the intrinsic benefits of higher education. First, the basic knowledge and capabilities needed for success at work are closely associated with a liberal arts education, including intellectual curiosity, historical perspective, critical thinking skills, and the ability to communicate and work with others. Indeed, the Task Force specifically encourages

higher education to become more focused on assuring that all graduates have these strengths. While there is a crying need for more professional and technical education, this should not come at the expense of the fundamental knowledge and competencies associated with the liberal arts. Second, we fully expect individual Oregonians to make intelligent decisions for themselves, and to appreciate the value of seeking a broad education. We expect that well-run schools providing a rich menu of educational opportunities will thrive in the environment we foresee.

The Task Force also acknowledges that a strong K-12 education system is the foundation for meeting Oregon's knowledge and skill requirements, and, further, that the transformation of K-12 embodied in the Oregon Educational Act for the 21st Century must be the top priority for the state. Once the Act is implemented successfully, Oregonians' levels of knowledge and skills will be considerably higher than today, and high school graduates will have a deeper appreciation of opportunities throughout the community as school-to-work initiatives take hold. Students will be better prepared to go on to post-secondary education or directly to work from high school. The Task Force believes that higher education can and must be enlisted into that initiative. The final recommendations of the report suggest how.

Beyond K-12, it is also clear that access to education beyond high school years will be ever more essential for Oregonians. To achieve our economic aims, we envision Oregon as a state distinguished by a rich array of educational services which provide not only excellent education opportunities for young people, but life-long learning services for all adults, as well. These services will give Oregonians the lifelong competitive edge essential to economic prosperity.

How This Report is Organized

Section 2 reviews trends in the economic, social, and political environment that are impinging on higher education. In particular, it examines six trends that impact higher education. Based on these trends, Section 3 presents a vision for Oregon's economy and for higher education. Section 4 describes Oregon's higher education resources and how they are responding to the changing environment. Section's 5 and 6 are the heart of this report. Section 5 analyzes the barriers that impede higher education from keeping up with market demand. Section 6 recommends a governance structure that frees Oregon's public universities to aggressively pursue new missions and learner markets. Section 7 contains additional recommendations to strengthen the relationship of higher education to the Oregon economy.

What we see in Oregon are smaller, more adaptive institutions that may be well-suited for the intensely competitive higher education marketplace we anticipate in the decades ahead.

These recommendations are only a starting point. We expect that as individual institutions become more customer centered, they will become much more adept at identifying and meeting customer needs than this or any report could anticipate.

Reasons for Optimism

For years, Oregon has bemoaned its higher education resources as a competitive disadvantage. The traditional argument is that we have too many institutions with too little funding that are too disconnected from our largest economic center. The Task Force has a more optimistic view. What we see in Oregon are smaller, more adaptive institutions that may be well-suited for the intensely competitive higher education marketplace we anticipate in the decades ahead. Already we see institutions forming new alliances, reaching out to their communities to find new ways to deliver service, using new technologies, and using the community as a place for learning. If we can give our institutions the incentive and the freedom to compete for learners and serve them, we believe we can leap-frog economic regions wedded to older models of higher education.

2. THE NEED TO RETHINK HIGHER EDUCATION

Despite its aura of stability, higher education in Oregon rests on shifting ground. Changes in the economy, in the workforce, and in higher education itself suggest a need to rethink what we get and want from higher education.

The Task Force has found at least six distinct trends that have a direct bearing on the state's institutions of higher learning.

Higher education is now critical for the economic security of Oregonians and the long-term health of our economy.

- As Oregon's knowledge-centered economy continues to evolve and grow, higher education is becoming critical to the economic security of Oregonians and the long-term health of our economy.
- Shortages in critical skills and specialties are impeding growth in Oregon industries right now, and they loom even larger in the near future.
- A surge of highly educated newcomers is dramatically changing the educational profile of Oregonians, competing successfully with Oregon graduates for good jobs, and taking jobs for which other Oregonians don't qualify because they lack necessary education and skills.
- Learning and work are blending as never before, and that blend is lasting a lifetime.
- The Oregon market for higher education is being scrambled by increased competition among existing providers, new competition from new entrants, and new learning technologies.
- State funding is declining even while the total demand and value of higher education is growing.

Trend 1. Higher Education Is Becoming Critical to Oregon's Growing Knowledge-Centered Economy

Knowledge-centered economies depend on higher education for undergraduate and graduate education, applied research, technology transfer, and continuing professional education. Oregon is no exception. Oregon's economy is on a trajectory wherein the knowledge and skills of the workforce shape our economic destiny.

In his book *Transforming Higher Education*, Michael G. Dolence, a nationally recognized expert on higher education and a consultant to the Task Force, advances the thesis that the Industrial Age concept of a "job," defined by fixed responsibilities, is giving way to Information Age arrangements in which fast, flexible organizations require "individuals who can learn, apply information and knowledge, deal with uncertainty, and solve problems." Table 1 illustrates what Dolence calls the new world of work and learning.

Table 1. New World of Work and Learning

| | Industrial Age | Information Age |
|-------------------------------------|---|---|
| Nature of Jobs | Tightly defined positions within an organization | Knowledge workers who are mobile |
| Nature of Organizations | Rigid, formula-driven | Fast, fluid, flexible |
| Source of Organizational Value | Physical assets | Intellectual assets, group-centered knowledge |
| Pattern of Living | Time out for training | Fusion of work and learning |
| Competitive Advantage for Education | Virtually exclusive teaching franchise – clustering of instructional resources is a major competitive advantage | Network scholarship, the measurement of competence, and certification of outcomes establish competitive advantage |
| Defining Educational Roles | Provider | Facilitator, knowledge navigator, and learner/service intermediary |

Apart from changes in the nature of work, demand for skilled, knowledgeable employees is growing. The proportion of Oregon jobs that are technical, professional or managerial has been increasing steadily for decades. Within these broad categories are hundreds of individual occupational categories which typically require initial specialized training as well as continuing education to stay abreast of the field. In Oregon, this trend is accentuated by the rise of the high technology industry, now our largest manufacturing employer, which especially relies on professionally and technically trained people for competitive success.

The impact of these changes in job and skill requirements is compounded by Oregon's strong economic growth and the expectation that that growth will continue. The result of these changes for individual Oregonians is profound. Thirty years ago, it was possible for a young Oregonian to leave high school with a strong body and a good work ethic and earn solid middle class wages with few formal academic skills. Today such successes are the exception. Job security and higher incomes are more closely intertwined with education.



Figure 1. Growth in skilled occupations places a premium on higher levels of education. (U.S. Census Bureau)

Not only must people bring to the job market higher levels of knowledge and specific skills, they must also acquire new knowledge and skills while they are there. Changes in jobs and job requirements are all but guaranteed by new technologies, products, and services, by shorter life cycles of existing products and technologies, by changes in production processes, by outsourcing, and by the reorganization and resizing of enterprises. While some jobs are disappearing in Oregon, far more are being created, yielding a net gain of 50,000 jobs per year. At the same time, existing jobs and skill requirements are undergoing dramatic redefinition. For example, the skills required to be a technician in the high technology industry have changed completely over a ten-year period. In that same period, the knowledge and skills required in almost every other occupational field have changed as well.

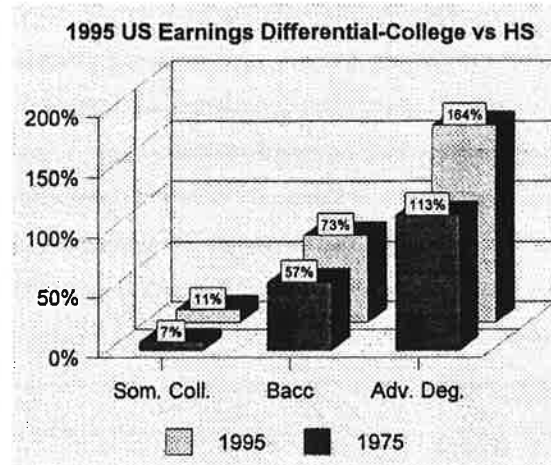


Figure 2. The superior earning power of those with higher educations has grown over time. The disparity in Oregon is smaller than in the nation, but still significant. (U.S. Census Bureau)

Higher education is important to the economy in another way, as well. The research and ideas germinating in schools can be a source of new products that fuel economic growth. Oregon State University, for example, has long-standing ties with the forestry and agriculture industries, and is the source of many crop strains and many ideas to enhance forestry practices. The founder of Tektronix first envisioned the possibilities of the oscilloscope, Tek's initial signature product, as a student at Reed College. In areas as wide ranging as biotechnology, software engineering and metallurgy, higher education research can be a source of future products and production process improvements for Oregon companies. *Oregon's Entrepreneurial Environment*, a recent report on the climate for new enterprise in Oregon, underscores this point.

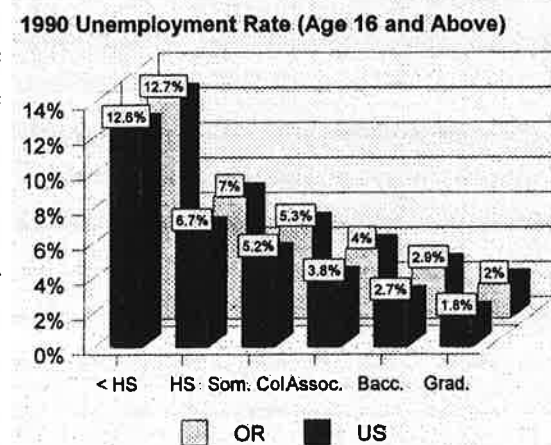


Figure 3. Well educated workers suffer much lower levels of unemployment. (U.S. Census Bureau)

The Importance of Education To Individuals. The proof of the value of a higher education is evident from a study of incomes and unemployment at different levels of education, as shown in Figures 2 and 3. Figure 2 in particular illustrates dramatically

the growing gap in earnings for those with different levels of education.

Figure 4 illustrates a related trend, the rise of high technology in Oregon, which is now Oregon's largest employer. High technology, especially in electronics and software, is growing more rapidly in Oregon than in any other place in the nation, and Oregon has the opportunity to become one of the leading centers for high technology. The industry has grown in Oregon because of the quality of the workforce already here, and because of Oregon's quality of life, which has enabled industry to recruit the talented professionals critical to success. The Task Force has found that substantially greater investment in engineering and technical education will be required to solidify Oregon's place in high technology. This industry generates incomes 90 percent above the Oregon average, so this is an investment worth making.

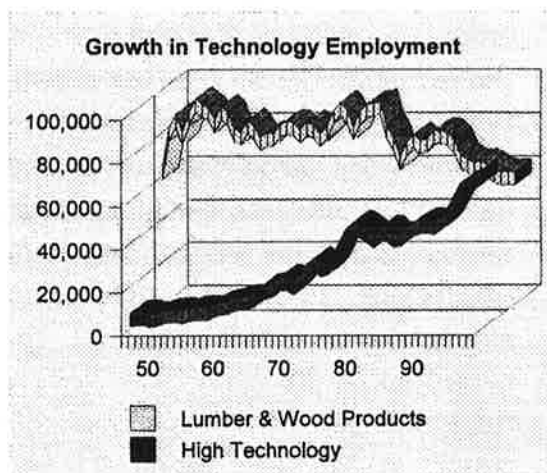


Figure 4. The rise of high technology in the Oregon economy signals a major shift in skill demands. (Oregon Progress Board)

While high technology is Oregon's most visible example of an industry that needs more skilled workers, it is not alone. Professional services jobs (engineering, accounting, architecture, software design, consulting, marketing, and law) have been a major source of growth in high-income occupations. In fact, jobs requiring technical skills are growing in nearly every sector of the economy.

Trend 2. Skill Shortages Are a Significant Economic Impediment

Over the past decade employers have reported serious shortages of skilled labor. This poses a worrisome problem because it impedes business growth, requires out-of-state recruiting that adds to company costs, and results in out-of-state applicants filling higher paid positions instead of Oregonians. A 1996 report issued jointly by a coalition of business interests* highlighted the current shortage in engineering and technician positions in the high technology industry. Oregon schools are turning out only one of every five new hires for electrical engineering positions, and only one out of ten new hires for technician positions. This educational mismatch is more pronounced in high technology, but not unique to it. Technicians are in short supply across all industries. And in other studies and testimony before the Task Force, employers repeatedly

* Oregon Business Council, Associated Oregon Industries, the Portland Metropolitan Chamber of Commerce, the American Electronics Association of Oregon, the Oregon Metals Council, and the Oregon Software Association

stressed the need for Oregon to better align its educational resources with the skill needs of the job market.

Recent surveys and interviews corroborate this view. Employers consistently raised concerns about the quality of Oregon graduates. In fact, Oregon employers cite the same negatives about graduates of Oregon schools that employers have expressed about college graduates in national studies by the Business-Higher Education Forum and the National Science Foundation. They are troubled by inadequate skills in basic communications, mathematical reasoning, working in teams, and problem solving. A 1989 survey of 300 Oregon business executives sponsored by the Oregon Business Council found serious concern about the quality of graduates of post-secondary education. Executives said they want — but can't get enough — people who can "communicate, calculate, compute, analyze, reason, solve problems and understand global issues."

Oregon schools are turning out only one of every five hires for new electrical engineering positions, and only one out of ten new hires for technician positions.

Similar themes emerged in 1996 in focus groups conducted by the Oregon Business Council among 30 prominent Oregon employers:

Focus group participants repeatedly expressed concerns about the knowledge and capabilities of graduates. Employers say they want people who are hard working and dependable, who write and speak well, who are skilled in math and problem solving, who are creative and flexible, eager to learn, and able to work in teams. At the same time, they say that too many graduates do not have these capabilities.

These findings may surprise those who expect employers to focus on narrow technical and professional workforce needs. Across the board, employers describe the need for employee competencies that are strengthened by liberal arts education.

Employers themselves must assume part of the responsibility for the mismatch between higher education output and their own workforce needs. Employers need to develop clearer ways to communicate opportunities and expectations to schools and students.

Employers themselves must assume part of the responsibility for the mismatch between higher education output and their own workforce needs.

Employers have proposed several ideas about how to accomplish this. One way is through industry associations. Organizations like the Oregon Software Association, the

Oregon Metals Council, and the Semiconductor Consortium have been effective in working with higher education institutions statewide to build programs for meeting industry needs. In addition, employer advisory committees with individual schools can provide further opportunities for identification of needs.

However, a key recommendation from employers is to increase the number of internships among faculty as well as students to more directly bridge the gap between school and careers. In fields such as health care, where internships have been integral to the education process for decades, we find employers reporting greater ease in finding the talent they need. Oregon State University's MECOP internship program for engineers was frequently cited as an excellent program attuned to meeting employers' needs. The program was praised for its success in helping students land career-track jobs directly from school.

Learner profiles. Despite labor pool skill shortages, the education and skill profile of the Oregon workforce is generally positive. Since 1960, according to U.S. Census data, the proportion of Oregon adults with higher education degrees has tripled (Table 2), and Oregonians are better educated than the national average (Table 3). In fact, adult literacy levels are among the highest in the nation.

Table 2. Oregon's Rising Educational Attainment

| | 1960 | 1980 | 1996 |
|-------------------|------|------|------|
| High school | 48% | 76% | 91% |
| Some college | 20% | 39% | 60% |
| College graduates | 9% | 18% | 29% |

1960, 1980 U.S. Census; 1996 Oregon Population Survey

Table 3. Comparative Education of Oregon Adults

| | Oregon | U.S. | Wash. | Calif. | Minn. | Wisc. | Idaho |
|----------------------------|--------|------|-------|--------|-------|-------|-------|
| Graduated from high school | 82% | 75% | 84% | 76% | 82% | 79% | 80% |
| Some college | 53% | 45% | 56% | 54% | 49% | 42% | 49% |
| College graduates | 21% | 20% | 23% | 23% | 22% | 18% | 18% |
| Graduate degrees | 7% | 7% | 7% | 8% | 6% | 6% | 5% |

1990 U.S. Census

The value of higher education is not lost on young Oregonians. Sixty percent of high school graduates attend two- or four-year colleges or universities directly after high schools, and about a quarter have received a college degree by age 25. These attendance rates parallel national trends. About 13,500 Oregon high school graduates (44.6 percent) go on to a school within Oregon, but about 4,700 have been leaving the state. About 3,900 out-of-state high school graduates have been coming to private and

public colleges and universities in Oregon, resulting in a net loss of roughly 800 high school graduates each year to out-of-state schools. According to recent news reports, this deficit could increase. Lately, there has been a significant drop in out-of-state students coming to Oregon campuses, particularly from California.

Increase in adult students. The market for higher education has grown well beyond young, post-high school adults going off to school for a traditional four-year program. In the State System, for example, nearly 25 percent of undergraduates are older than 24, and more than half of the system's graduate students are over 30. Among Oregon's private colleges and universities, 37 percent of the students are older than 24.

Projected demand for higher education. While Oregon has been able to meet part of its labor market needs through in-migration, there is reason to believe that growth in Oregon-based higher education services will be critical over the next decade to meet the demands of the economy, and of Oregonians desiring higher education.

First, the children of the post-war baby boom are coming of age. As illustrated in Figure 5, the cohort of population in the traditional college years is growing, and presuming that historic college participation trends continue, demand for community college and undergraduate enrollment will grow. While some Oregonians choose to leave the state

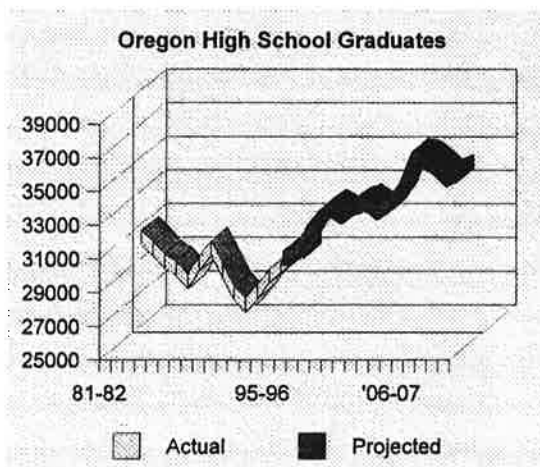


Figure 5. Demand for undergraduate education is likely to grow as the "baby boom echo" comes of age. (OSSHE Fact Book, 1994)

for college, we expect many others to stay in Oregon if good choices are available. Second, there is a good chance that in-migration may slow among footloose professionals due to such deterrents as climbing housing prices, greater congestion, and lower K-12 spending. Finally, the demand for continuing lifelong learning is likely to accelerate. As demand for higher knowledge and skills grows among adults, institutions will need to meet the academic needs of these demanding learners: offering them both degree and specialized non-degree courses, accommodating their busy schedules, and even bringing instruction to or near the students' place of work.

Trend 3. In-migration Is Changing Oregon's Workforce Profile and Its Competitive Dynamics

In-migration of well-educated workers has raised the skill level of the Oregon work force. These same newcomers are competing successfully with Oregon graduates for

higher paying jobs, and they are taking jobs for which other Oregonians do not qualify because they lack necessary education and skills.

In its 1996 Oregon Population Survey, the Oregon Progress Board found that among adults 25 years and older, 42 percent of in-migrants (those who have come to Oregon within the past five years) have a baccalaureate degree or higher, compared to 28 percent of Oregonians of longer residence. These indicators are up significantly since 1990, when 32 percent of in-migrants had a baccalaureate degree or higher, and 22 percent of resident Oregonians were comparably credentialed.

In fact, Oregon's attractiveness to professionals from throughout the nation explains in large part the ascendancy of high technology and other knowledge-based industry here. Chris Ertel, author of an insightful PhD thesis on the Portland area and higher education, could be speaking about much of the state when he concludes

(w)ith the growing importance of knowledge-based industries, it has been the inflows of *smart minds* ... that has driven much of Portland's economic growth. Fortunately, well-educated persons from other states have found Portland to be an attractive place to live, work, and raise a family ...

Ertel identifies 1975 as a watershed year, when the U.S. Environmental Protection Agency rated Portland as the only region in the nation ranking outstanding in five key categories — and also the year Intel Corporation and Hewlett Packard Company chose to locate major facilities in the region. He argues that "those decisions set in motion the creation of a critical mass in the high technology and electronics industries — of skilled labor, suppliers, specialized infrastructure, etc. — which continues to reap benefits for the region to this day."

The boom in high technology and other industry during the 1990s has been fed by the ability of industry to attract talented people from within and outside the state. As the 1990s began, Oregon attracted knowledge-centered enterprises with a talented workforce and income levels below the national average. Since 1990, the economy has boomed. While this boom has employed Oregonians, it has also drawn an enormous number of well-educated people to the state. Between 1990 and 1996 about 240,000 people have come to Oregon, 148,000 of them working age.

In addressing higher education policy Oregon should recognize that it is not isolated. Talented people move freely in and out of the state, and Oregon-educated graduates compete with people educated elsewhere. This has several implications. First, for

native Oregonians who wish to compete for jobs in Oregon, access alone isn't enough: the quality of degree programs will be important to prepare for the best jobs. Second,

Oregon's quality of life, which includes environmental amenities, K-12 education, higher education, and cultural amenities is a magnet for attracting high income people and industry. One of the most important amenities to knowledge workers is likely to be access to lifelong learning. Third, because of the mobility of the people, Oregon does not necessarily need to provide curricula in every professional or technical area. In some cases, it may be preferable to rely on out-of-state programs, especially in areas that require considerable investment. Indeed, especially in the professional fields, the education market is national or at least regional. In certain fields, Oregon institutions may not be able to compete on the basis of quality or price, and should not try to do so.

One of the most important amenities to knowledge workers is likely to be access to lifelong learning.

Trend 4. Learning and Work Are Drawing Together And Lasting for a Lifetime

As mentioned above, both workers and employees, more than ever before, embrace education as a necessary investment in success. This is blurring the separation of schooling and work at both school and work settings. Internships and other student work experiences are becoming more valuable and prevalent for students (and employers, too). Although some workers still take distinct breaks from employment to return to school full time, a great deal more of them are blending further education into their lives as they continue to work. Some of this education takes place at work, some at classroom settings evenings and weekends, and even some at home through computer ties to the Internet. Continuous changes in what workers do and need to know suggest that such continuing education will continue over the length of a career, and, in fact, a lifetime.

The Oregon Business Council's 1996 focus group sessions with employers reveals that advanced schooling blended with work entails very different learner demands and markets than higher education is used to serving. Given the demands of work and family, learners often need classes at different times and places, and in different formats, than faculties are used to providing, say, one of the company's training rooms from 3 to 5 p.m., Tuesdays and Thursdays, and in workshop, not lecture, format. Sometimes learners want non-degree programs. Sometimes they want just-in-time modules (only what is needed on a subject, only when it is needed).

Flexible instructional services for employed adult learners in Oregon are not even on the policy radar of higher education.

Not only is the traditional operating mode of higher education not used to providing such instructional services, these services are not even on the policy radar of higher

education. Tuition support, for example, is aimed at learners in full-time degree programs. Assumptions, philosophies, and policies in higher education need to be reexamined in light of the continuing education needs of our employed workforce.

Lifelong higher education will also challenge the *capacity* of higher education. In *Transforming Higher Education*, Michael Dolence has laid out some daunting math on the probable magnitude of skilled workforce education. Futurists, he notes, estimate that each individual in the U.S. workforce will need to accumulate new learning equivalent to 30 credit hours of instruction every seven years. Given a workforce size of 141 million anticipated in the year 2000, this would equate to over 20 million FTE learners from the workforce. With a labor force of 1.9 million, Oregon's share of this demand would be 273,000 FTE learners.

Trend 5. Competition Is Increasing; Technologies Are Altering Delivery Systems

Providers of higher education services (particularly instruction) are becoming intensely competitive. As a part of this competition, new technologies are making geographical boundaries obsolete. Traditional service patterns wedded to geographic areas and program specialties are becoming scrambled.

In Oregon and elsewhere, increased demand for higher education services has triggered a host of competitive offerings and choices for learners, particularly working adults. Oregon already has a foundation for such competition in seven state universities, 16 community colleges, and more than a dozen small private colleges and universities.

Now the ante is being raised. Among established Oregon institutions, private schools such as Marylhurst College and Concordia

University, which have traditional day programs for full-time students, are making a point of helping working adults achieve new skills through flexible degree and non-

Over 10,000 courses are estimated to be available on line.

degree programs. Besides offering classes on campus, Marylhurst also offers courses on line. City University, a Bellevue, Washington, enterprise offers master's-level programs for more than 125 working adults out of its new Vancouver, Washington, facilities. The University of Phoenix, one of the nation's largest private schools dedicated to higher education for working adults, is now setting up operation in the Portland area to offer baccalaureate and master's programs in a number of business and professional fields. Phoenix claims a national enrollment of over 40,000 students, and "more degree seeking students in business and management than any other private accredited business and management college or university in the nation." Like many other adult-oriented schools, Phoenix draws many of its faculty members from among credentialed real-world practitioners. It has the added advantage of negligible capital

investment in facilities and the use of interactive instruction through new technologies. This university without walls can draw faculty from virtually anywhere — and keep its costs low and its prices competitive. Heald College based in San Francisco recently set up a campus in downtown Portland to offer training for the growing technician market.

The Portland area has attracted competitors, too, from among out-of-state public institutions. In 1996 Washington State University completed its Vancouver, Washington, campus and now offers nine baccalaureate and six master's programs to an enrollment of more than 1,100 students. The University of Oregon, Oregon State University, and Oregon Institute of Technology have all established instructional programs in the Portland metropolitan market.

Within individual companies, in-house learning opportunities are flourishing, too. Companies such as Intel and Hewlett Packard provide employees substantial instructional choices, drawing on the expertise of their own managers and professionals as well as education and training resources in the nearby community and from throughout the world. Both of these high technology companies have satellite television links to the National Technological University, which offers 13 master's degree programs and more than 500 advanced technical and managerial courses through 47 leading engineering schools. Company wide, Intel alone spends roughly \$30 million a year on the continuing education and technical training of its workforce.

The Internet is also becoming a significant education resource. Over 10,000 courses are estimated to be available on line. Some traditional colleges and universities, for example offer on-line writing labs. Dozens of "virtual schools" dedicated to on-line learning have sprung up. Some offer credits and degrees, others are still applying for accreditation. In the virtual school learners can register and pay course fees on line, download portions of textbooks and lectures, work on problems and simulation assignments, ask questions in a real-time chat room, correspond with faculty by email, and take tests and essay exams in a controlled format. These capabilities of on-line learning, may seem rudimentary in just a few years with the convergence of advancing computer, telecommunications, and television technologies.

Oregon's public universities have for some time used the distance learning facilities of ED-NET to reach learners in remote Oregon communities, but now they are also beginning to reach students beyond Oregon's borders. Oregon State University provides courses to Boeing Corporation in Seattle through the distance education facilities of the Oregon Center for Advanced Technology Education (OCATE). Portland State's School of Business provides MBA-level courses throughout the world.

Trend 6. State Support for Higher Education Is Shrinking

State support for higher education in Oregon has been declining since 1930, when the State provided approximately 66 percent of total revenue for State-supported schools. By 1960 State support had declined to 41

percent, and by 1995, about 16 percent. It has since come up to about 20 percent, but the overall trend is still down and there is no reason to believe it will be halted or reversed. In passing Measure 5 tax limitations in 1990, Oregon voters

As the State has reduced its investment in higher education, it has shifted much of the cost to students in the form of higher tuition..

expressed a determination to impose limits on the spending and growth of State Government. Within this framework, the voters, through the initiative process, have also directed more dollars to such costs as prisons, in effect reducing what is available for higher education. (In the 1995-97 biennium, the State made \$445 million in capital investments in prison facilities, compared to \$10 million for higher education.) As the State has reduced its investment in higher education, it has shifted much of the cost to students in the form of higher tuition, which is now the largest source of operating income for State-supported schools.

As State support declines even in the face of growing demand, Oregon's public institutions find themselves in the position of needing to compete more aggressively for learners (tuition revenues) and other sources, including grants and alumni contributions.

The Implications of These Trends

The Task Force is compelled to ask what these trends portend for Oregon learners, for Oregon's schools of higher education, and for State Government policy.

It is in the interest of four-year schools and community colleges to become obsessively learner centered, nimble, and results oriented.

Several conclusions seem obvious. First, as summarized in Table 4, the climate and nature of higher learning has changed dramatically from previous decades.

Second, it is in the interest of Oregon learners to assertively acquire as much education as possible, both before and during their working years. It is equally important for employers 1) to help their employees advance their skills, and 2) to work with schools at all levels to provide internships and other experiences that enable students to build bridges between school and careers. In particular, students and employers both should value studies in the liberal arts as much as technical and professional preparation.

Table 4. Fundamental Changes in Oregon Higher Education

| | Where We Have Been | Where We Are Going |
|-----------------------------------|---|---|
| Learners | Mostly recent high school graduates in traditional degree programs | Adults of all ages, in degree and non-degree programs |
| Place of learning | College and university campus | On campus, but also at homes, at work, and at other settings enhanced by distance learning and new information technologies |
| Time of learning | Once to three times a week in quarterly blocks | Learning modules customized to needs of learners |
| Financial support | State subsidized tuition for Oregonians, both under-graduate and graduate | Growing market demand supported by mix of state, federal dollars, and by individual and corporate support |
| Connection with employment | Most education preceded employment | Education both precedes and runs concurrent with employment; more education is employment based |
| Competition | Among established institutions | New entrants threaten established order |
| Key policy goals | Access for young Oregonians, stable public institutions | Access to best learning opportunities in world for all Oregonians, responsive public institutions |

Third, these trends suggest a number of opportunities for Oregon colleges, universities, and community colleges. They have an opportunity to expand their instructional offerings, particularly professional and technical courses for working adults. They have an opportunity to package these offerings in new ways that appeal to learners and that may bring in additional revenue, including some funded directly by employers on behalf of their employees. Through distance learning technologies and alliances with other institutions both inside and outside Oregon, they have an opportunity to compete for out-of-state learners and for Oregon learners who are not being served or who are not being served sufficiently.

To take advantage of these opportunities, it is in the interest of four-year schools and community colleges to become persistently learner centered, nimble, and results oriented. To do that, they must become entrepreneurial in their approach to the market. This implies that they should constantly assess market needs, regularly develop new offerings on a timely basis, and employ whatever alliances and technologies are appropriate to deliver instruction attuned to learner needs. All programs must be accountable for program quality to validate the value of the educational experience to whomever is paying the tab, whether students, employers, the State, or the federal government (through tax credits).

There are several policy implications to this new competitive environment. First, the place-bound arrangements of higher education are becoming a thing of the past. In this

new environment, it is impossible, and probably not even desirable for the State to assign particular schools exclusive rights to certain geographic territory or program offerings, nor to maintain a programmatic wall between four-year schools and community colleges. The market does not care about such artificial distinctions. At the

Oregon must recreate a vision of the role higher education plays in relation to the economy of the state, and then it must re-examine its policies, structures, and operating principles in the light of this new vision.

same time, the arbitrary assignment of geographic or programmatic responsibility to any particular state institution by the State System may actually keep that institution from making more successful market-oriented arrangements of its own. Like individual institutions, the State must become far more oriented to learner needs and less concerned about institutional convenience and prerogatives.

Second, in an era when individuals, companies, and federal tax credits are covering a greater part of education needs, the Governor and the Legislature need to be able to pinpoint clearly what services scarce State dollars are buying, and at what cost.

Finally, for Oregon policy makers, this is the most fundamental implication: to compete successfully in the new knowledge economy, Oregon must recreate a vision of the role higher education plays in relation to the economy of the state, and then it must re-examine its policies, structures, and operating principles in the light of this new vision. The next section presents the Task Force vision for Oregon higher education. The section immediately following addresses our capacity to achieve that vision.

3. THE VISION FOR LEARNER CENTERED HIGHER EDUCATION

Building a comprehensive vision for all aspects of Oregon higher education is outside the charge of the Task Force. The charge is to focus on the connections between higher education and the economy. Our vision therefore concentrates on 1) what Oregonians must know and be able to do to prosper in a knowledge economy, and 2) the nature of the higher education services required to help Oregonians learn at higher levels.

Oregonians must possess education and skills that exceed those of people elsewhere, and Oregonians must have the opportunity to apply these advantages to the task of producing quality products and services at competitive prices.

Tying Higher Education to our Economic Goals

In creating a vision for higher education and the economy, we need to be clear about our economic goals. The Task Force embraces the core economic benchmarks set by the Oregon Progress Board as an outgrowth of *Oregon Shines*, the state's strategy for economic prosperity:

- *More Family Wage Jobs.* Increase the percentage of individuals earning wages or salaries at 150 percent of the poverty level.
- *Higher Incomes.* Increase per capita income to 110 percent of the national average by 2010.

The Task Force also subscribes to the Progress Board's perspective that education is the key to higher personal incomes. In order to command higher wages and salaries in the knowledge-centered economy, Oregonians must possess education and skills that exceed those of people elsewhere, and Oregonians must have the opportunity to apply these advantages to the task of producing quality products and services at competitive prices. Today Oregon is blessed with a vibrant economy creating high-wage job opportunities. Too many of those opportunities are being filled by individuals recruited from out of state. If, through our education systems, we can qualify more Oregonians to take those jobs, the incomes of Oregonians will rise, and the knowledge economy in Oregon will continue to grow. Improving the skill level of the Oregon workforce will also help keep more knowledge industry employers committed to Oregon as a place to maintain and grow their operations.

The Vision for Oregonians at Work

Oregon will be known as a state of exceptionally talented people whose education and

skills are equal to workers anywhere in the world, and who produce quality products and services valued in the marketplace. Oregon will enjoy this reputation because:

- Oregonians will possess high levels of mastery in communications, mathematics, critical thinking, problem-solving, and teamwork, and many will have mastered specific technical and professional fields which are important to economic prosperity.
- Oregonians will be flexible and self-reliant, with the confidence to tackle new challenges.
- Oregonians will take responsibility for their own careers, and continuously refresh and enhance their knowledge and skills to stay competitive.

As a result, Oregonians will enjoy higher-than-average incomes than people elsewhere, and Oregon products and services will be competitive worldwide.

Learning Services and the Place of Learning

Higher education will provide the learning opportunities that give Oregonians their distinctive capabilities and competitive edge. Oregonians will benefit from a diverse set of higher education institutions that provide excellent learning services at every stage of life. Oregon institutions will be world renowned for providing lifelong learning. Learning programs will be offered in a variety of settings and formats: traditional undergraduate and graduate classes, degree and non-degree offerings, full-time and part-time attendance, on campus and off, in class and in the community, teacher paced and learner paced.

The driving force in education will be the needs of the learner rather than the preferences and convenience of the teacher and the institution. In short, education will become learner defined and learner centered. Standardized, structured classes will remain, but students will draw on those and other resources (such as technology) to meet individual learning objectives. Students will learn from each other as well as from faculty.

The driving force in higher education will be the needs of the learner rather than the preferences and convenience of the teacher and the institution.

Higher education service providers will be responsive and adaptive, forming alliances with providers worldwide to bring the highest quality learning opportunities to Oregonians.

Starting in high school and continuing into higher education, the lines between school and work, the classroom and the community will become blurred. Students often will

learn from practical experience, such as internships, as much as classroom instruction. They often will solve problems and gain insight from team projects. Some courses will be taught by teachers working in teams. Computers and the Internet will be a routine part of the learning process. And students will be urged to develop skills in critical thinking, communications, problem solving, and adaptability to change.

Degrees and Accountability

Traditional degrees will be available, but other forms of certification will also evolve to affirm learning outcomes and competencies. Demonstrated knowledge, skills, and abilities will mean more to employers and learners than traditional degrees.

Oregon will be a leader in setting education standards and assessing competencies. This will start with certificates of mastery for high school students and will extend through post-secondary education programs and industry training for both young and older adults. As students achieve higher fundamental knowledge and skills in high school, post-secondary institutions will be relieved of remedial education burdens, enabling them to focus more on higher level learning and skill-building. Assessments will include standardized tests but new performance-based assessments will be developed, such as portfolios of student work samples and evaluations of work-based or community-based projects and activities.

Research and Ideas

Higher education will be an engine for research and ideas that can be translated into products and improved production processes of economic benefit. Oregon will boast more than its share of entrepreneurs, many of whom will be educated in Oregon institutions.

4. CAPABILITY OF OREGON HIGHER EDUCATION TO MEET EMERGING MARKET DEMANDS

Given the trends, implications, and vision just explored, the Task Force has tried to determine 1) the extent and operation of Oregon's higher education resources, 2) the changing market requirements that envelop them, 3) how well they are addressing these requirements, and 4) how well our public policies and governance support institutions in meeting evolving market needs, particularly the needs of learners and the economy. This section addresses these issues.

The Extent and Operation of Oregon's Higher Education Resources

Oregon is blessed with a diverse set of higher education resources, both public and private. Table 5 summarizes the size of our higher education systems, and Figure 6 shows their location.

Table 5. Oregon's Higher Education Resources (full-time students)

| | Campus | FTE Enrollment | Budget |
|--------------------|-----------|----------------|------------------------|
| State System | 7 | 46,800 | \$830 million |
| Community colleges | 16 | 66,900 | \$370 million |
| Private colleges | 17 | 21,000 | \$345 million |
| Total | 40 | 134,700 | \$1.545 billion |

* Note: State System figures exclude Oregon Health Sciences University; budget figures cited for State System and private colleges include public service and research costs. The community college budget figure does not include these costs.

Broadly speaking, Oregon higher education can be grouped into three broad categories: private colleges, the schools of the Oregon State System of Higher Education, and community colleges. Schools in each category contribute greatly to meeting Oregon's needs. Schools in each category are governed very differently.

Private Schools. Oregon has 17 private colleges and universities accredited by the Northwest Association of Schools and Colleges. Although they are all governed independently, they do receive state licenses from the State Office of Degree Authorization, under relatively strenuous standards compared with other states. These standards are intended to protect students from unqualified "degree mills." Beyond this, independent colleges have great freedom to design program offerings. The Office of Degree Authorization also administers a statute which requires public institutions to consult with other schools before offering new programs, and which gives the office authority to bar new program offerings if it anticipates adverse impacts on existing programs. The law is intended to prevent subsidized state programs from competing unfairly against unsubsidized private programs.

With rare exceptions, private schools receive no direct State support, but they do receive indirect support through limited dollars available to students through the State Scholarship Commission. An important recent exception spawned by this Task Force and others is SB 504, which emerged from the recent Legislature to address Oregon's inadequate output of engineering graduates. Oregon's plan for meeting engineering needs draws upon the independent Oregon Graduate Institute. Even without substantial State financial support, private higher education serves a substantial portion of Oregon higher education demand.

The Oregon State System of Higher Education. The seven universities under the State System of Higher Education are owned by the State of Oregon, and receive substantial but historically declining contributions directly from the State to fulfill their missions. Governed by a board appointed by the Governor and subject to Senate confirmation, public universities are State agencies. While they are managed somewhat differently than other State departments today, their operating procedures and budgeting systems are rooted in the evolution of State Government and policy making. Because of the support they receive from the State, these schools typically charge substantially lower tuition than private schools.

State System operating procedures and budgeting systems are rooted in the evolution of State Government and policy making.

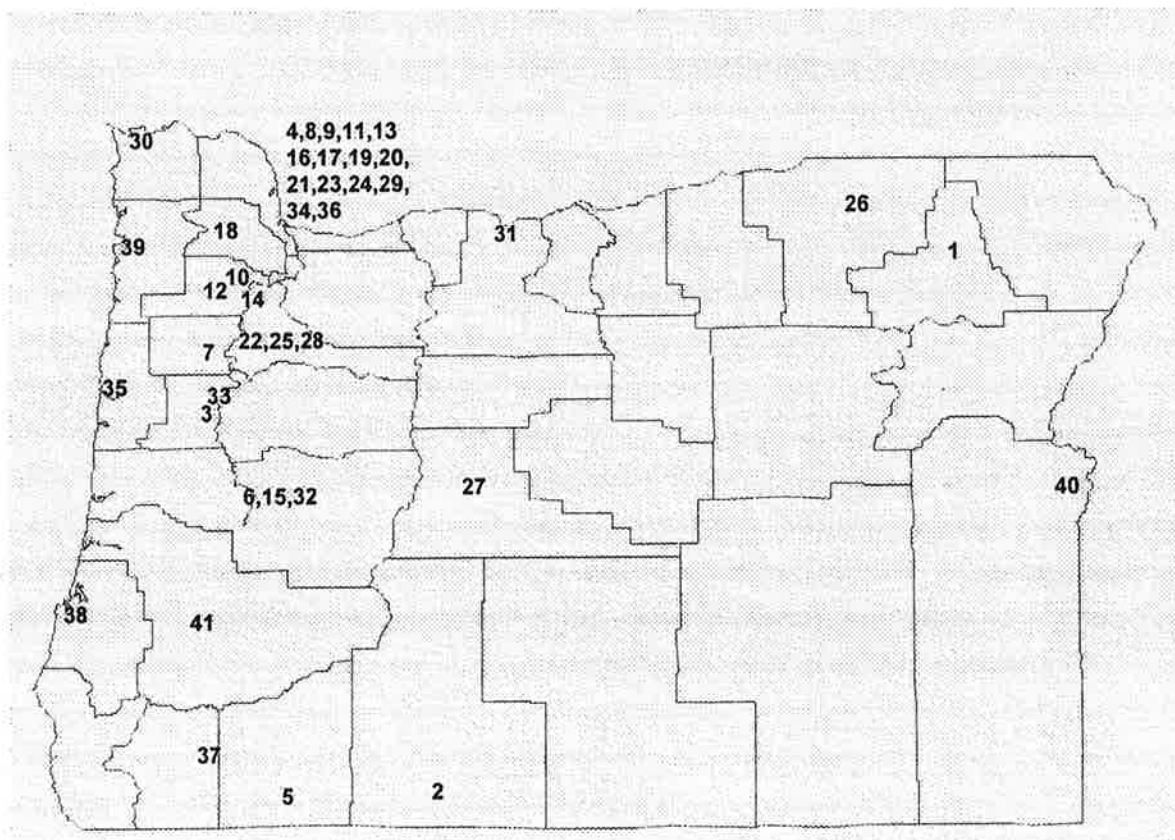
The State System was created in the 1930s for the purpose of governing under one umbrella what were then independent public colleges and universities. Concerned that individual campuses were competing for State funding without a coherent framework, the Legislature designed the State System to assign program responsibility to individual campuses, and it created a single State budget appropriation to the State System, which, in turn, would allocate dollars to individual schools.

While creating central control over programs assignment and budgets through the State System, the Legislature did not merge the schools into a single university. Presidents are individually appointed by the State Board. The schools, in turn, hire faculty and develop programs at the campus level. Along with allocating budgets and approving programs, the State Board also exerts central policy authority over tuition levels for degree programs and it sets salary levels. It also manages several operating functions centrally, including payroll, telecommunications, and some purchasing. Oregon's model falls somewhere between highly centralized and highly decentralized. The following responsibilities define the framework of State System governance:

- Divide responsibilities among campuses
- Review and approve new program directions

- Develop budget allocation system to pay for designated programs
- Add programs with incremental State dollars.

Figure 6. Location of Oregon Universities, Colleges, and Community Colleges



State universities: Eastern Oregon University, 1; Oregon Institute of Technology, 2; Oregon State University, 3; Portland State University, 4; Southern Oregon University, 5; University of Oregon, 6; Western Oregon University, 7; Oregon Health Sciences University, 8. **Private colleges and universities:** Concordia University, 9; George Fox College, 10; Lewis and Clark College, 11; Linfield College, 12; Marylhurst College, 13; Mt. Angel Seminary, 14; Northwest Christian College, 15; Oregon Graduate Institute, 16; Pacific Northwest College of Art, 17; Pacific University, 18; Reed College, 19; University of Portland, 20; Warner Pacific College, 21; Western Baptist College, 22; Western Seminary, 23; Western Evangelical Seminary, 24; Willamette University, 25. **Community colleges:** Blue Mountain CC, 26; Central Oregon CC, 27; Chemeketa CC, 28; Clackamas CC, 29; Clatsop CC, 30; Columbia Gorge CC, 31; Lane CC, 32; Linn-Benton CC, 33; Mt. Hood CC, 34; Oregon Coast CC, 35; Portland CC, 36; Rogue CC, 37; Southwestern Oregon CC, 38; Tillamook Bay CC, 39; Treasure Valley CC, 40; Umpqua CC, 41.

Community Colleges. Oregon's community colleges have a different history and governance from the State System. They are chartered locally, through locally approved tax bases and are governed by locally elected boards. Community colleges historically have received the bulk of their funding through local property taxes and local tuition, and program levels could be determined by local voters through tax bases and levies.

Financing for community colleges was turned upside down with passage of Ballot Measure 5 in 1990, which reduced property taxes for community colleges and restricted the ability to raise additional local dollars except for capital projects through

bond issues. As a result, the Legislature decides the level of funding community colleges receive, and it contributes about 60 percent of the operating support taken in by institutions. Nonetheless, they remain locally governed, and the State's Office of Community College Services has no authority over hiring or budget allocations or tuition policies of individual schools. The main function of the office is to provide policy leadership through the distribution of State dollars and approval of new degree offerings by individual institutions.

State governance of Oregon's community colleges contrasts markedly with State governance of public universities through the State System. Even though the State covers about 60 percent of the operating costs of community colleges today, it exerts virtually no authority over the governance, budgets, or tuition policies of individual schools. In contrast, the schools within the State System, which receive on average less than 20 percent of their support from State general funds, are governed under a state-level board, are guided by common State policies on tuition and faculty salaries, share central support services, and must present comprehensive budgets to the Legislature.

State governance of Oregon's community colleges contrasts markedly with State governance of public universities through the State System.

Another important difference between our community colleges and State System schools is the way they are allocated funding. Community colleges receive State allocations based on student enrollments. State System allocations are determined by program and facilities costs, as well as student enrollment.

Our Schools and Leaders Are Responding

In light of the trends and needs identified earlier for both the Oregon economy and higher education, Oregon is fortunate to have schools whose leaders are pushing forward on change. In the past few years, we have seen new partnerships between two- and four-year schools. We have seen new collaboration among public universities and between public and private schools to expand and improve engineering education. At Portland State the undergraduate curriculum has been revamped to include more interdisciplinary course work and community-based education. Oregon State has been a pace-setter with engineering internships, while Eastern Oregon has pioneered the use of distance learning technology. Community colleges throughout the state have focused on meeting a growing market need for technicians. Many private schools have redefined their missions. Some are focusing on the growing adult learning market, while others are strengthening their undergraduate liberal arts base. And the State System of Higher Education has supported several measures to streamline operations to enable schools to be more responsive to changing needs. In particular, the Higher Education

Efficiency Act, SB 171 passed in the 1995 session of the Legislature, removes the State System from general State personnel and administrative requirements, enabling it to follow procedures more appropriate to its structure and mission. The Chancellor has also supported greater flexibility and autonomy among State System schools. He commissioned the two solution team studies, mentioned earlier, as a step in that direction.

Following is a brief review of ways in which Oregon higher education is responding to changing conditions. This is organized according to undergraduate, technical, continuing, and graduate education, as well as research and development. This account is intended only to characterize the kinds of initiatives taking place, so it is not comprehensive. Despite the progress this review illustrates, Oregon's schools still have a great deal more to do.

Undergraduate Education

What we have going for us. Oregon is fortunate to have a diverse set of institutions serving nearly all parts of the state. Learner choices range from open accessible community colleges to State-aided universities to highly selective four-year liberal arts schools. Nearly all regions of the state have some higher education available through community or four-year schools. Regional access has been improving as community colleges partner with four-year institutions to provide four-year programs, and as Eastern Oregon and Oregon State have expanded distance learning opportunities in rural communities. For example, the University Center at Central Oregon Community College operates as a gateway for students to four-year program offerings from five public and private campuses through distance learning. Eastern Oregon has recently partnered with Blue Mountain and Treasure Valley community colleges to offer four-year programs at those campuses, sharing faculty to provide the offerings. In addition, Eastern Oregon University and Oregon State University have expanded distance learning opportunities in rural communities.

These schools are also responding to changing programmatic needs. The State System is conducting pioneering work to establish student entry and exit performance standards to help assure quality of education. In addition, practicums and internships are being vigorously promoted throughout the system, including the highly popular MECOP program for engineering and the promising international internship program.

Private colleges have also taken important steps to enhance their capacity. Several are leading in the field of adult education and distance learning, while others are fortifying their traditional liberal arts programs. The resulting diversity of offerings is a strength for the state.

The work ahead. We foresee five challenges facing undergraduate education in Oregon still ahead.

- **Capacity.** Nearly two-thirds of high school graduates go directly to some form of higher education today, and many working adults return to school to earn degrees. With the post-World War II Baby Boom "echo" generation coming of age, and with more adults returning to school, we can expect increased demand in the decade ahead.
- **Quality assurance.** While schools are beginning to develop ways to measure student undergraduate student performance, much work still remains.
- **Career relevance.** Many schools are introducing practicums and internships as part of their curriculum. As they do so, employers will need to step up to offer experiences for faculty and students. Organizing these opportunities is a major - though very worthwhile -- logistical challenge.
- **Engineering.** We will need to make major adjustments to meet the demand for electrical and software engineers needed in high technology and other industries.
- **Technicians.** Technicians are even in greater demand, and we need to find ways to rapidly respond to market conditions in many different industrial sectors. If Oregon could supply technician needs of industry, we would simultaneously provide many Oregonians opportunities for family wage jobs and give industry a tremendous competitive advantage.

Graduate and Professional Education

What we have going for us. The nation's most prominent graduate degree programs tend to be housed at very large universities. Because Oregon is a relatively small state, and spreads its higher education across several institutions, only a few of its professional programs have gained national prominence. As regional institutions, however, many are adapting very well to changing needs. The University of Oregon Business School, for example, has completely revamped its MBA program, winning national recognition for its innovations. The Willamette University Masters in Private and Public Management is unique in management education. Still, resource constraints make it difficult for Oregon schools to gain the stature of schools in other states.

The work ahead. The opportunity and the challenge is most acute in engineering. The rise of Oregon's high technology industry justifies an engineering program in the state that is among the best in the world. Oregon industry is attracting some of the best electrical and software engineers in the world. To keep Oregon attractive, we need to offer engineering opportunities to those people, and we need to create opportunities for Oregonians to be trained to work in these companies.

Otherwise, growth of this high-wage, knowledge based industry could stall. Progress has been made to identify and address needs in this area through the creation of an Engineering Council under the Board of Higher Education. The Council will need to create a bold vision — and public and private resources will need to pull behind the vision to establish the engineering presence in Oregon that solidifies Oregon's high technology industry.

Beyond engineering, Oregon's other professional schools must continue to grow. Our professional schools have strong leadership now. They must also have great flexibility to meet needs for degree and non-degree service. They should be able to capture all additional revenues they generate from a growing student base, and to form partnerships with other programs inside and outside the state.

Lifelong Learning

What we have going for us. Several private schools, including Marylhurst, Concordia and George Fox have been highly focused on the lifelong learning market for some time. They are being joined by the University of Phoenix, which has recently entered the Portland market. The entire community college system is geared to provide services to adult learners, and has recently begun to focus on including more advanced studies. Portland State University is perhaps most prominent among the State System schools in reaching this market.

Beyond these individual Oregon-based institutions, Oregon employers are tapping resources all over the world to meet their employee needs. It is not at all unusual for employers in Oregon to sign contracts with faculty of major universities outside the state to address specific education needs.

The work ahead. Lifelong learning is an emerging market. If Oregon could develop services that help working adults access excellent training resources within the state and throughout the world, we would do much to help Oregonians and our economy prosper. This market is likely to be highly competitive. Our challenge is to find a way for our public universities and community colleges to draw on their considerable strengths in serving this market, without unfairly undercutting private competitors already entering. In many cases employers are not looking for subsidies. They are willing to pay full cost for quality services. We must create a way for public institutions to fully enter the field to the benefit of Oregonians and Oregon schools alike.

Research and Development

What we have going for us. Although Oregon does not have a research university on the scale of the University of California Berkeley or the University of Washington, it does have excellent research programs sprinkled throughout its campuses, and the

cumulative research activity is impressive. Generally, research grants are not tied directly to industry, but they do create incomes and jobs for Oregon. Where research and development have been tied to industry, particularly forestry and agriculture, the relationship between higher education and industry has been long-standing and successful. Many of the strains of Oregon crops, for example, were developed by the Oregon State University school of agriculture and promoted through the Agriculture Extension Service. Biotechnology is an emerging and promising field, through the work at Health Sciences University and elsewhere.

There are opportunities for better ties with industry. In the late 1980s, the Governor's Science Council identified opportunities that sparked some initial work, but momentum has been lost on these initiatives. Oregon's key industry program provides a framework for facilitating discussions among industrial sectors about research and development, and could be used in conjunction with the Board of Higher Education to focus on emerging opportunities.

The work ahead. As a first step to strengthening research ties between higher education and industry, higher education should convene industry panels to identify research needs, and then match resources with industry. The Governor might also create a commission on science and technology to identify and follow up on opportunities to tie higher education research to industry needs.

In identifying a need for stronger research relationships between industry and higher education, the Task Force does not wish to overlook the importance of basic research and its role in advancing knowledge for its own sake. Basic research lies at the heart of the pursuit of higher knowledge, and it also often leads to breakthroughs which find their way into the economy.

5. BARRIERS TO PROGRESS

As schools move ahead to meet Oregon's higher education needs, we see outdated policy perspectives, governance structures, and budgeting systems as barriers to progress. This conclusion is based on interviews with public and private college presidents and deans, and on a review of higher education trends with consultants in the field. This Task Force is hardly alone in this conclusion, and the impediments we see are not unique to Oregon. Throughout the nation, states are struggling with how to adjust higher education policies to take advantage of the promise of new providers and new technology to meet growing demand for services.

At the highest level of State policy making and governance, we compartmentalize the way we think about higher education and thereby limit our opportunities to serve students.

This report, for two reasons, focuses primarily on the state-level barriers to progress rather than the barriers within individual institutions. First, the Governor, as recipient of this Task Force work, has greatest leverage over state-level systems. Second, an appropriate State policy framework should create the incentives for individual institutions to re-examine internal governance on their own. As Oregon revamps its governance and budget structures to match our new needs, we expect individual schools will do so as well. In fact, many have already begun.

We find six principle barriers to progress in Oregon higher education:

Barrier 1. At the highest level of State policy making and governance, we compartmentalize the way we think about higher education and thereby limit our opportunities to better serve students. Oregon governs its universities and community colleges separately from each other, and it rarely recognizes the valuable resources represented in private and out-of-state schools.

As institutions become increasingly learner centered and market oriented, we envision a revolution in higher education delivery in the decade ahead through a proliferation of alliances among institutions within Oregon and throughout the globe. In the world of the Internet and distance learning, we can, for example, imagine a curriculum developed in Boston being delivered by experts scattered around the globe, with local instructors coaching individuals on material and administering exams. The array of possibilities are nearly endless. These kinds of alliances are already forming and will surely grow. For example, several community colleges are teaming up with four-year institutions to offer courses on community college campuses. Eastern Oregon has partnered with Lewis and Clark College to offer classes in La Grande. The Oregon Graduate Center and Portland

State University are working out arrangements to share facilities to serve engineering needs. These alliances will not remain isolated within state borders. Stanford University is offering courses directly to Oregon employers to meet employees engineering needs. The proposed Western Governor's University is designed to draw on university resources throughout the Western United States.

In this environment, the lines between institutions will blur and service territories will expand. State policy and governance need to accommodate these shifts or they will get in the way. For example, funding for the new

public university alliances with community colleges is being secured in an ad hoc fashion with special support arrangements worked out through allocations by the Office of Community Colleges and the State System. This is laudable, but as such

As community colleges and university offerings become more integrated, so should the State's support and governance role.

alliances grow, there will need to be a consistent funding policy so such joint ventures can grow with market demand. Because funding between community colleges and the State System come from separate pots of dollars and are administered in very different ways, it is not at all clear who will pay for what part of joint services. The growth of services could be starved over such funding issues — or over controversies about which school is eligible to offer what services at what locations. As community colleges and university offerings become more integrated, so should the State's support and governance role.

State Government should broaden its view of higher education to encompass more than public institutions. Higher education is increasingly becoming available from a range of sources both in and out of state. By focusing on what learners need and what resources — all resources — are available to meet those needs, State Government will play a more constructive role in supporting the education of citizens. By focusing on our own institutions, for example, we may miss opportunities. Currently, as a case in point, the State System is encouraging schools to offer distance learning opportunities over the Internet to Oregon students. Oregon public institutions may be the most logical candidates to do this, but we should also be asking what other providers around the globe could provide those services, and whether the Oregon-based offerings are competitive in quality, price, and value.

At the same time, Oregon's schools of higher education need to think of the world — not just Oregon — as their market. In a global higher education market, our schools should have the confidence and the opportunity to market their best offerings widely to help cover fixed costs and stay competitive. They should be encouraged to find a role in a much larger higher education market.

Similarly, private college resources can play a growing role in meeting higher education needs. For example, in the course of its work, the Task Force concluded that the Oregon Graduate Institute could play an important role in meeting Oregon's critical engineering education needs. In response, the Governor and the Legislature, with the support of the Chancellor, included OGI in its framework for delivering engineering education. While this could be a model for the future, this inclusive approach is all too rare today.

In the past, when institutions delivered their programs on their own campuses within defined territories, it was possible to govern and fund the various institutions separately. Today, a reliance on any set of institutions is likely to divert our attention from bigger possibilities.

Barrier 2. Protectionist policies that assign particular schools exclusive rights to geographic territory and program offerings constrain initiative and opportunities to serve customers.

Laced throughout the structures of Oregon higher education governance today are laws and regulations to review and potentially restrict the program offerings of individual campuses. These review requirements were put in place to serve two purposes. One purpose is quality control. Approval of new degree programs by the State Office of Degree Authorization is such an example. For new degrees offered by private colleges, the office assess not whether a program is needed (the market makes that determination), but whether it meets minimum quality standards. The purpose is to protect students from "diploma mills." In this regard, Oregon's regulation of new programs is more restrictive than many states.

The second purpose is to avoid duplication of services by State System schools, particularly in cases where another program is already meeting the need for a specific geographic area or for the state as a whole.

The Board of Higher Education, for example, reviews new degree program proposals by individual campuses, while the State Office of Degree Authorization monitors new State

Efforts to prevent duplication also inhibit program initiative and choice.

System offerings to determine whether private schools are offering similar services already.

Unfortunately, efforts to prevent duplication also inhibit program initiative and choice — two features which must be central characteristics in the new higher education market. While the State System will probably need to review and approve new program offerings at least for a while longer, it should encourage all institutions to explore vigorously new markets inside and outside of Oregon (as long as those outside are not

subsidized by Oregon taxpayers). Creating this kind of climate will spark the kinds of new learning opportunities Oregonians need, and it will enable Oregon schools to be competitive in the emerging global market for higher education services.

The argument for flexibility should not be misconstrued to mean that all systems to prevent duplication should be eliminated. It does suggest the need to scrutinize the review process critically with the aim of simplifying the creation of new offerings.

Whatever the merits of State System program approval, they must be weighed against at least three trade-offs. First,

The time to approve a new program in the State System can take three to four years.

program approval takes time. The time to approve a new program in the State System can take three to four years, when internal campus review is added to review at the Chancellor's level. These processes can be streamlined (indeed the State System is focusing on this right now), but still in a world in which new instructional programs, such as software engineering, are in extraordinary demand right now, even months matter to the potential customers.

Second, program approval restricts student choice. For example, the State System has for years restricted PhD offerings at Portland State University in fields where other schools offer programs. For Portland-based students, family or work ties in the Portland area may render offerings at other campuses inaccessible. Alternatively, Portland State's offerings in, say, engineering may not match the needs of a Portland-based student who would rather take a course from Oregon State University through distance learning.

Third, restrictions on a school's market reach can inhibit it from fully utilizing its capacity. New degree programs in related fields may help to build off existing faculty resources, and entry into to new geographic markets directly or through distance learning may better utilize school capacity.

The State System is now reviewing its policies for approving programs, with an eye toward streamlining the process and granting greater autonomy to campuses. As it conducts this review, it should think about how its policies on the entry of schools into new markets are tied to its policies on subsidizing those schools. If the State is directly paying for programs of schools entering new markets, it has reason to ask whether alternative providers are available. On the other hand, if State dollars are directed more to individual students, who in turn choose where to attend school, the market itself will safeguard against unnecessary program expansion.

Similarly State System institutions should have flexibility to provide a range of degree and non-degree programs in-state and out, so long as the programs cover their costs.

Competitors may not like the idea of State System schools reaching broader markets, but our public institutions can contribute greatly to meeting learner needs through unsubsidized services, and they should be encouraged to do so. While marketing policies may need to be tempered somewhat for programs with State subsidies, flexibility should be encouraged as much as possible. In this light, the role of the office of Degree Authorization will need to be reviewed.

Barrier 3. The State's higher education budgeting and finance system is unwieldy, and it severely limits incentives for schools to respond to new needs. The present higher education funding system was conceived to direct dollars to worthwhile programs

within a fairly stable, often growing resource environment. Today, this top-down budget

process is out of touch with needs in the learner market and can't respond rapidly enough to changes in that market. This budget process offers little or no incentive for schools to stay in touch with learner markets and serve them well because program budgets do not necessarily grow

The budget process offers little or no incentive for schools to stay in touch with learner markets and serve them well because program budgets do not necessarily grow along with demand for services.

along with demand for services. If campuses and programs were responsible for their own finances, they would have an incentive to stay attuned to learner markets, build responsive program offerings, and keep expenses in line.

The leaders of Oregon's public and private colleges and universities and its community colleges are all adapting to the new competitive environment in higher education. However, they do not all enjoy the same incentives to compete. State universities are saddled with a ponderous budget process that involves at least three levels of review, and the incentives for expansion into new areas often are limited. Community colleges, under a new distribution formula have stronger incentives. Private schools have the strongest incentives of all to adapt to new needs.

We should emphasize that State System leadership recognizes the obstacles and is trying to address them. But this issue extends beyond the State System. The Governor and the Legislature as well should revamp the finance system to remove barriers to initiative and a strong market focus on the part of public institutions.

A campus attempting to meet new needs today essentially has three routes to fund new programs. First, it can seek additional dollars beyond the base budget in a special request to the Legislature. Second, it can cut dollars from an existing program and redirect it elsewhere. Third, it can offer the new program, in hopes that it will attract additional dollars in tuition and other support to cover the costs.

Right now, pursuing any of these choices is more difficult than it needs to be. In a time of scarce dollars, seeking additional funds for new programs rarely is successful. But even if it were, the time between inception and budget approval can take months or even years. Both the Governor and the Legislature take about six months to prepare a budget, and schools must prepare for State System review before that. For example, our new, widely acclaimed software engineering program must wait two years for funding, even though there has been a desperate need for the program from the beginning. The delays are no one's fault. The system, by design, is slow to respond.

The second course of action is to cut funds from other programs to meet new needs. However, in an era where budget cuts are routine, generating additional cuts to move into new areas is very difficult. This is one reason why engineering education, which has clearly been a high priority need throughout the decade, has received limited additional support.

The third way to respond is to enter a new market and hope that dollars will follow. The budget system, again, impedes this kind of response. Most of the State general fund dollars and nearly all tuition revenue

generated by State System campuses are allocated to schools using the Basic Allocation System (BAS) model. Exceptions are special programs such as the agricultural extension service or special allocations, as

The BAS model is inflexible in addressing needs for new programs, or existing programs in new locations.

described above, or fully compensatory non-degree offerings. The underlying structure of the BAS model is complex, but its net effect in the face of enrollment increases is that it often fails to deliver any additional revenues for the school in the near-term, and it seldom adds enough to cover costs. The bias built into the model is to fund existing programs. It is inflexible in addressing needs for new programs, or existing programs in new locations. Another shortcoming of the model, as discussed below, is that it either fails to provide or employ mechanisms for determining, as a matter of policy, the cost to educate students in various disciplines and how much of these costs the State should subsidize.

The workings of the BAS model can be summarized as follows. State general fund allocations plus nearly all tuition revenue are aggregated by the Chancellor's Office to be allocated to schools. About one-third of the dollars are allocated to individual schools to cover the costs of facilities, based on cost estimates that consider such factors as square footage of space. The remainder of the dollars are allocated to schools based on estimated program costs and the enrollment expectations in the particular programs that a school offers. Each campus is granted a two-year budget allocation, which is fixed unless enrollments fall outside a fairly wide band that allows

for a certain degree of variation in total enrollment estimates. If enrollment is above or below the band, schools keep (or lose) the tuition dollars associated with that allowed variance, but no other adjustments are made. Additional funding for increased enrollments can be picked up in future biennial allocations.

At its heart, the underlying philosophy behind the model appears to be to fund the facilities and programs that are already established — under the assumption that new programs will be financed with incremental dollars. While some adjustments are made on the margins when enrollments fall above or below allowed variations, as a practical matter these incentives are slight within the model. Enrollment increases can be factored into subsequent biennial funding allocations, but, at least in the short-term, the model is insensitive to enrollment.

From the perspective of a dean, the net result of the BAS model is that program expansion to meet new needs will not typically lead to additional dollars, even if additional dollars generated by tuition exceed the incremental costs. This is because typically the additional tuition dollars flow to the State System and do not get back to the campus, much less the program within the campus. If, for example, a State System school chooses to offer degree programs on a community college campus, there is no automatic way for the tuition dollars or State dollars to flow to that new program area, no matter how popular with students. Fortunately, the State Board of Higher Education is committed to re-examining the BAS model.

In contrast with State System allocation of funds, community college funding is a model of simplicity. With some modification to accommodate local tax levies, State dollars are allocated based on enrollments using a three-year rolling average. Individual schools set tuition levels and keep all tuition dollars generate. Prior to a change in formula three years ago, State allocations were set based on historic funding patterns. Since the new allocation system has been put in place, schools report a new enthusiasm for marketing and customer service.

In contrast with State System allocation of funds, community college funding is a model of simplicity.

Private colleges typically receive no direct State support, but are funded through tuition, grants, and charitable donations. Both the State and the federal government provide support to students of private schools through loans and occasionally direct aid (in the case of the federal government). Performance contracting presents a possible model for using State dollars to provide services to Oregonians through private schools. The State System has made a commitment to negotiate a performance contract with the Oregon Graduate Institute for engineering services under the authority of SB 504,

which passed in the past Legislative session.

Barrier 4. The State Government process for financing higher education obscures the State's understanding of the services it is buying and their cost. The State's process for financing the State System, despite its complexity and detail, actually obscures a clear understanding of the services that the State is buying and what they cost. The process also fails to provide comparative data for programs elsewhere, which would enable the State to determine if similar services are available from private or out-of-state sources at better quality or cost. As demand for higher education expands, more of the costs for services will be borne by individuals, employers, and federal subsidies. In this environment, the State will need to be clearer about what specific services it chooses to support, and at what funding levels, in order to use limited budget resources most judiciously.

Right now the budget process for the State System is aimed at providing funds to support the entire system, not to fund specific services. What becomes obscure in this process is the level of State support for

various categories of service. State support for instruction, for example, can be defined conceptually as the cost of service less tuition revenue. The costs of service vary among types of programs at various levels. Because tuition paid by students is fixed across all public universities, the amount of

By one estimate, a dental student in Oregon receives over seven times more state support per year than an undergraduate student.

support each student receives from the State varies widely. By one estimate, for example, a dental student in Oregon receives over seven times more State support per year (about \$35,000) than an undergraduate student (less than \$5,000). Whether the State wishes to lavish such support on dental students is not a policy issue that can readily be addressed in the current budget process. In another case, the State has no direct way of comparing the tuition support per student at community colleges (about \$2,600 in State dollars plus \$800 in local property taxes) with the support it provides for undergraduates in the State System during the first two years, primarily because there is no ready way to calculate the State System number.

Such implicit choices are not necessary bad, but they are being made without good data and a clear understanding of the trade-offs and alternatives. When the State was heavily supporting undergraduate and graduate education for Oregonians through low-cost services, the choice was relatively easy: all Oregonians received support. In an era of fewer State dollars and far more demand for services, some Oregonians will not receive State support, so the choices will be harder, and individual program subsidies will need to be reviewed carefully. For example, engineering professionals who work

for large companies and are enrolled in graduate engineering programs are charged a low-cost, subsidized tuition. Employers, who are willing to support that course work, place a higher priority on quality and quantity than on tuition subsidy. It may not make sense to support advanced engineering education that employers and many employed engineers would be willing to purchase at unsubsidized cost. Whether the State is making the right choice in this case is less important than the need to make such choices based on continuous review of budgeting and pricing policies using reliable data.

This lack of clarity also hampers institutions trying to serve market needs by creating inflexibility in pricing services. Because the State budget process supports all services, the State sets fixed tuition levels across all campuses and programs. In theory, costs are covered through the BAS allocation model. In fact, because of State funding shortfalls, only part of the true costs are covered. Yet institutions have no flexibility to adjust prices to make up the difference. This diminishes each school's options to offer different levels of service at different tuition prices.

If the State explicitly decided how much it is willing to support various categories of students, schools could then develop proposals for service that factor in State support along with tuition revenue. In the current budget environment, such considerations don't occur. In a world of scarce public resources and growing demand, it is essential to create a framework that facilitates a dialogue about such issues.

Barrier 5. The State System's focus on central authority requirements detracts from a necessary focus on the customer.

The cumulative impact of the State System budget and program approval process is that too much management time by college and university leadership is focused on central governance issues. This robs school leaders and faculties of the time, energy, and staff support they need to stay in touch with the learner markets and make program improvements. No one in particular is at fault for this problem. It is built into the system.

The State System budget and program approval process robs school leaders and faculties of the time, energy, and staff support they need to stay in touch with learner markets and make program improvements.

Oregon Health Sciences University, which recently spun off from the State System, reports enormous savings in senior management time that was spent in attending to State Board reporting requirements and meetings, as well as addressing executive and legislative branch requirements. In important ways the Legislature and the State System have addressed some of the cumbersome red tape created by State executive requirements. In SB 171, passed in the 1995 session, the Legislature exempted the

State System from various State agency procurement and personnel rules. This is a helpful step, but the larger problem remains: in the fast-paced environment we foresee in higher education, central control keeps institutional leaders from focusing on program improvements and customer needs.

Barrier 6. The flexibility and market responsiveness of individual institutions are hampered by significant internal constraints. As demand grows for degree and non-degree services, individual institutions will need to rethink their offerings in light of market opportunities. For some campuses, this will also require review of internal budget and management processes, tenure policy, and faculty governance. Although the Task Force has not focused directly on these issues, many Task Force members believe these internal organizational barriers to be as significant, if not more significant, than state-level barriers. However, in context of the overall recommendations of the report, addressing barriers within individual campuses is more appropriately a matter for each local school rather than a statewide issue. The state framework is designed to encourage a review of mission and process by each institution.

As a prelude to the recommendations which follow in the next section, the Task Force has developed the following table to summarize the barriers above and how each might be addressed to improve higher education in Oregon.

**Table 6. Possible Solutions to Barriers
That Keep Oregon Higher Education
from Responding Adequately to Learner Markets
and the Needs of the Knowledge Economy**

| Barriers | Recommended Solution |
|--|---|
| State Level | |
| 1. Compartmentalized governance | <ul style="list-style-type: none"> • Merge higher education funding streams under one board responsible for defining service needs and contracting for services • Establish one authority responsible for all program certification • Think worldwide about sources of higher education services for Oregon students and markets for Oregon institutions |
| 2. Institutional protectionism | <ul style="list-style-type: none"> • Change State policy to open markets for providers of higher education |
| 3. Weak incentives to focus on customer needs | <ul style="list-style-type: none"> • Redesign financial allocation models to tie dollars directly to student enrollments |
| 4. Budgeting processes that obscure what specific services the State is buying | <ul style="list-style-type: none"> • Develop a budget that specifically identifies the kinds of higher education services the State wants to buy and that budgets specific dollars for those services as a matter of conscious policy choice |
| 5. Excessive focus on State System governance and requirements at the expense of a focus on the customer | <ul style="list-style-type: none"> • Grant semi-autonomous and possibly public corporation status to each state university; use performance contracting to purchase services in which the State has an interest |
| Institution Level | |
| 6. Institutions have significant internal constraints on market responsiveness. | <ul style="list-style-type: none"> • Let institutional autonomy and competition in the marketplace create incentives to become more responsive to learner needs and market demands • Encourage institution-level boards of directors to create a policy framework for responsiveness to market opportunities |

6. PRINCIPAL RECOMMENDATIONS: A FRAMEWORK FOR ACHIEVING OUR VISION

To achieve its economic goals for the 21st century, Oregon needs to excel in all aspects of education, including higher education. Oregonians need higher education that is learner-centered with

programs that adapt to the needs of working adults as well as students just out of high school. Oregonians need both degree and non-degree programs delivered through a variety of formats and schedules that accommodate the

The Task Force favors State Government conferring more autonomy on individual institutions and getting out of central institutional management by becoming a contractor of higher education services.

learner. The Oregon economy needs schools to rapidly develop programs that produce well-qualified graduates in technical and professional specialties for which there is strong job market demand. The economy needs higher education research programs that turn research and ideas into useful products and services.

Our schools are taking steps in these directions, but as the two preceding sections of this report illustrate, they have a distance to go and they face a number of significant impediments. So, how do we cover that distance and overcome those impediments?

The State of Oregon's policy framework is a key point of leverage in addressing these questions. The Task Force believes the State should reconsider basic assumptions that it makes on 1) what is needed from higher education, 2) how individual institutions can be empowered to constantly assess and meet educational demands in a timely way, and 3) how to support access to higher education services by Oregonians. We believe Oregon can begin to make progress by changing two perspectives:

First, policy makers should expand their horizons when considering the higher education resources that are available to Oregonians. They should think beyond our public higher education institutions and also consider the private resources inside Oregon as well as other resources worldwide that could team up with our public institutions to give Oregonians access to a wide array of learning opportunities.

Second, State policy makers and public officials should stop thinking of Oregon public universities as State agencies under their direct control. They should give our public institutions the freedom and flexibility to reach beyond traditional markets with a wide variety of new learning services. These include markets outside Oregon and markets for services in Oregon that are not necessarily supported by State dollars. State

Government should view individual institutions more as independent entities from which services can be contracted than as State agencies.

These changes in perspectives will dramatically enhance the opportunities for Oregonians and their education institutions to thrive in the global economy and the global higher education market that will emerge in the 21st century.

With these two perspective in mind, state-level policy making should encourage free entry of competitive public and private institutions into the market subject to quality review. State policy should define with much more precision the specific services State Government chooses to support, and then develop mechanisms for procuring those services from our institutions through contractual relationships. After that, the State should get out of the way.

Why Favor Such a Departure From Current Arrangements?

Behind these recommendations is a perspective that higher education needs in Oregon can best be met through individual actions of thousands of faculty and administrators responding to market demands more than from centralized directives by the State. The strategy we suggest proposes that all institutions, public and private, be challenged to meet these needs under broad guidelines and financial incentives created by State Government.

Oregon's complex and rapidly evolving economy is beginning to create unprecedented demands on higher education. With thousands of jobs in hundreds of occupations, any attempt to detail labor market needs today, much less in the future, is a staggering and ultimately futile undertaking. While

broad market needs can be identified at the state level, no centralized authority could ever comprehend, let alone respond to, all of the needs for advanced education in Oregon's

A centrally managed system of higher education constrains institutions from responding to learner markets.

complex economy. Centralized planning for the economy's higher education needs works no better than centralized planning for the economy as a whole. Similarly, we can hardly imagine the pace of innovation that is likely to occur in the delivery of education services over the next two decades. Again, we should encourage innovation through application of new technology and alliances with others in response to market needs.

These labor market characteristics and the limitations of a centrally managed education system provide the rationale for the principal recommendation of this report: decentralize higher education and unleash the capabilities of individual institutions to

define and serve their markets. To serve Oregonians' needs for higher education, our institutions will work best if they are given great flexibility in defining and achieving their missions, with clear financial incentives for successfully meeting identified needs. We need adaptive institutions in which the entire organization is tuned to learner needs, adopting new learning approaches, and reorganizing programs to meet them. We believe that higher education demand will grow substantially in the decades ahead, but that it also will become intensely more competitive with customers demanding customized services.

Decentralize higher education and unleash the capabilities of individual institutions to define and serve their markets.

Principal Task Force Recommendations

The Task Force recommends a fundamental overhaul of Oregon's higher education policy framework and governance. This includes developing a broader perspective on the State's interests in higher education, centered on the needs of individual learners and the economy, and recognizing a broad array of resources within and beyond Oregon to address these needs. It includes recognizing competitive market forces and encouraging competition as well as collaboration among providers. It includes integrating the State's investment in, and purchase of services from, state universities, community colleges, and private colleges and universities. It also includes decentralizing the Oregon State System of Higher Education and shifting more policy authority, responsibility, and accountability to each institution. The Task Force proposes the following for broad restructuring of State governance of all higher education in Oregon:

1. *Change the State's role to strategic guide and buyer of services.* The principal role of the State boards in higher education should be to identify special and long-range needs, to advocate for resources to address those needs, and to allocate State funds to purchase particular services provided by public, and in some cases private, institutions. For example, the State Board of Higher Education should not regulate or micro manage institutions that now comprise the State System, but should instead propose to the Legislature and contract the services in which Oregon has a public interest: student education, research, and community service. In purchasing services from individual campuses, the State Board may decide to establish tuition policies and performance requirements as a contract condition.

While this recommendation departs from current practice in State System governance, we do not need to look far to find a similar model already at work in Oregon. Since passage of Measure 5, Oregon's community college system has basically been governed with this approach. The State funds community colleges based on student enrollment, and it contracts with each school for other specific needs that are

considered to be in the public interest. The Task Force proposal simply extends the model to all of public higher education. This extension would eliminate a glaring incongruity between the two systems. The State now contributes nearly 75 percent of public revenues to community colleges, which are self-governing. It finances roughly 20 percent of the operation of its universities, which have neither the autonomy nor flexibility of community colleges.

2. Make each State System campus semi-autonomous. The Task Force believes that each State System institution should have the freedom and flexibility to meet the needs of its markets and compete for market share on its own merits. To do this, each campus should have the latitude, if it chooses, to establish its own governing and policy structure in accordance with its mission, including its own governing board, much as private institutions (and community colleges) do today. Each institution would continue to receive a share of State resources as now, but most of those resources would be distributed on a per-student basis according to the number of students the institution is able to attract in market competition with other providers of higher education. State subsidy might be adjusted for differences in costs among programs (but not among schools) where such costs are quantifiable and reasonable based on a sampling of similar programs. Centralized support services now provided through the Chancellor's Office might still be purchased by individual institutions, but at their discretion.

Each campus should have the latitude, if it chooses, to establish its own governing and policy structure in accordance with its mission, including its own governing board.

The Task Force believes the state's public institutions of higher learning, with new-found freedom and flexibility, should be challenged to grow into new markets with new services, under the financial discipline that comes with autonomy. Each campus should periodically review its strategy and operations. This review should examine new means of delivery as well as internal personnel policies, budgeting, and other practices in order to make the institution more responsive to learner needs.

3. Encourage all Oregon institutions of higher learning to form alliances to serve the needs of Oregon learners. As a matter of policy, Oregon should encourage both its public and private institutions to seek out and form the alliances that competitive organizations find advantageous in serving learner markets. Exclusive service territories and program offerings are becoming less relevant and more tenuous as learners gain more say in what they want from higher education and as new forms of distance and interactive learning technologies come into play. Alliances between and among State System schools, community colleges, private institutions, on-line providers, and new entrants to Oregon should be welcomed. If they make sense to the partners and to

learners, they will make sense for Oregon.

Contract Service Budgeting

Under restructuring, the Task Force envisions the State's budgeting for higher education support allocated in four broad categories that could look like the incomplete, hypothetical Table 7 below. The table is intended to suggest how the State might procure higher education services from autonomous institutions in a way the enables policy makers to understand more precisely what services they are buying with public dollars.

Ultimately, we envision this kind of budget approach applying to public and private four-year schools and community colleges in a comprehensive way, although it could be developed in stages.

Table 7. Hypothetical State Contracting Budget for Higher Education

| TUITION SUPPORT POOL | | | |
|--|------------------------------------|-----------------------------------|---------------------------|
| | Number of Oregon Resident Students | State Tuition Support Per Student | Total State Cost Per Year |
| First two years: associate of arts; technicians; fresh., soph. | 80,000 | \$4,000 | \$320 million |
| Junior, senior | 20,000 | \$5,000 | \$100 million |
| Graduate | 9,000 | \$6,000 | \$54 million |
| Professional | 1,000 | \$6,000 | \$6 million |
| Total Tuition Support Pool | | | \$480 million |
| RESEARCH & DEVELOPMENT SUPPORT POOL | | | |
| Field | Total | Industry | State |
| Agriculture | | | |
| Metals | | | |
| High Technology | | | |
| Forestry | | | |
| Basic Research | | | |
| Total R&D Support Pool | | | \$10 million |
| COMMUNITY SERVICE SUPPORT POOL | | | |
| Program | Service Expectations | Other Funding | State Allotment |
| Agriculture | | | |
| Extension | | | |
| Metropolitan Studies | | | |
| Forestry | | | |
| Total Community Service Support Pool | | | |
| CAPITAL INVESTMENT SUPPORT POOL | | | |
| Telecommunication | | | \$2 million |
| Infrastructure | | | |
| Total Capital Investment Support Pool | | | \$2 million |

Second, the State will be afforded greater precision in choosing what services it will buy from higher education. Currently, Oregon provides one large allocation to higher education, with only the vaguest understanding of which specific services it is buying. The result is an unexamined set of tuition subsidy policies. As the market for higher education grows, with increasing demands for degree and non-degree services at all stages of life, State Government will need to be decisive about the services it wants

We envision two important benefits from the proposed model. First, individual institutions will have greater flexibility to take risks in order to reap the rewards of creating bold, successful programs. The institutions will thrive by identifying needs and addressing them effectively. Some of those needs will be supported by State funds, while others will be financed by individual learners and their employers and through charitable donations. Schools will face the discipline and the opportunity created by the marketplace. We believe this autonomy will benefit both Oregonians and the state's institutions alike. Oregonians will benefit directly from fresh, responsive programs suited to their needs. The institutions will have a green light to serve markets both inside and outside Oregon, and both the opportunity and incentive to build regional or national programs of genuine competitive stature. The prestige and program quality that derive from such success will doubly benefit Oregon learners who enroll in the programs of these institutions.

Potential Benefits

4. *A Targeted Infrastructure and Strategic Investment Support Pool.* This would support selective new infrastructure or strategic program investments necessary to meet Oregon's higher education needs. Telecommunications and other information technology exemplify this kind of investment.

3. *A Community Services Support Pool.* This would pay for services such as the Extension Service, Metropolitan Studies, and others providing public service benefits to Oregonians.

2. *A Research and Development Support Pool.* This would support R&D initiatives of interest to Oregon, possibly in partnership with industry.

1. *A Tuition Support Pool.* This would be a per student allocation directed to Oregon schools based on Oregon student enrollment. The State Board would establish tuition support for different student levels (for example, \$4,500 for first- and second-year course work, \$5,000 for third- and fourth-year study). With this allocation, State Government would explicitly decide how much it chooses to support different levels of undergraduate and graduate education.

This is how the four components of the hypothetical budget might be allocated:

to subsidize. Already, employers and individuals are contributing substantially to higher education. The Federal role, through tax deductions and tax credits, is also growing. Under this model, the State would explicitly decide which services to support in the context of all other sources of support, and would direct funding based on customer choices to use services at particular schools.

With this model fully in place, Oregon would have a wide array of public and private institutions competing and collaborating with each other to meet our higher education needs. We expect this collaboration among Oregon institutions and between Oregon and out-of-state schools, as each campus vies to put together services to meet Oregonians' demands. We expect some institutions to focus on very specialized undergraduate and graduate niches while others will expand into the growing market for customized, lifelong learning.

We expect collaboration among Oregon institutions and between Oregon and out-of-state schools, as each campus vies to put together services to meet Oregonians' demands.

One argument against this model is that it might well lead to costly duplication of services where consolidation is warranted. In reality, there will be strong incentives for program discipline. Programs lacking scale or quality to attract students will be a financial drain on the school, and subsequent candidates for sharing or closure. With competition in the higher education market, we expect collaboration and consolidation to naturally occur in response to market forces. Under this design, each school maintains its own budget. All revenues (public, private, or tuition-generated) stay within the school. If a particular program performs poorly or cannot compete, we expect that it will suffer financially, and that the school will bear the cost. Conversely, a program well-targeted to a market may reap rewards well above the costs, either through direct tuition or through charitable donations. Under this model, all the rewards would accrue to the originating institution. This creates a powerful incentive for disciplined management and attention to well-defined needs.

Another argument may be that this system will not necessarily draw out all the higher education services needed for Oregon. If this becomes the case, there would be a straightforward means for addressing it. For example, if the State concluded it needed greater resources in engineering education, it would directly contract for more services through its investment pool. This system would enable the State to target its higher education investments strategically, based on clear public policy needs. Our earlier recommendations on engineering education provides a good model

Many policy issues remain to be addressed under this model. Perhaps the most

significant is the tuition policies of the individual institutions. Today, tuition policy is set by the State Board across all its institutions at a basically uniform rate, regardless of the cost of providing the service or the value of the service to individuals. Because of the State subsidy, the tuition rates are well below those of private schools, and the subsidy flows regardless of the economic circumstances of Oregon resident students. Higher tuition rates are charged to out-of-state students. The issue is how much flexibility campuses should have in setting tuition rates under the autonomous model.

We believe that greater flexibility is warranted but also think that the issue requires further, careful deliberation. Students will have a great deal of choice among programs under this system, and schools should have the option of putting together different packages to attract students. There may need to be some oversight of individual campus decisions, however, to assure that incentives for Oregon residents are maintained and low-cost access is assured. The discussion should include the recommendations of the Governor's Task Force on College Access.

Recommended Intermediate Steps in Reforming Higher Education Governance

The Task Force recognizes that many issues need to be addressed as Oregon pursues the directions recommended here. Full implementation will take a number of years, and require legislation. However, many steps can be taken immediately. The State System is already considering steps consistent with these directions through its own planning process. We encourage the Governor and the Legislature to work with the State System and the Office of Community Colleges to accelerate the changes.

There are four steps that should be taken right away.

1. The State System should explicitly grant each of Oregon's public universities greater autonomy. While the specifics need to be carefully considered, we believe each school should be afforded flexibility to expand

program offerings (subject to approval by accreditation boards), to offer programs in new geographic locations, and to form alliances with other institutions to serve learner needs. Each school also should be

accorded discretion to contract for services from any vendor and to build its own budget system. Any dollars raised at a campus from sources other than the State, including resident and out-of-state tuition, charitable grants, or contract services with businesses, should be allowed to remain at the campus.

Any dollars raised at a campus from sources other than the State should be allowed to remain at the campus.

2. The State System should rebuild its model for funding State schools. The BAS model should be replaced with a performance-contract based system described earlier.

The new model should allow the Board to decide explicitly what higher education services it wants to buy or what investments it wants to make on behalf of Oregonians, and then to buy those services or make those investments through performance contracts with schools that are now part of the State System. As the new model is implemented, there may need to be a transition period to soften impacts on particular campuses, but the guiding principle of the new model should be clear. The State will determine what services it wishes to purchase, and individual schools will become, in effect, independent suppliers receiving dollars for performing those services.

3. *The State should encourage each State System campus to set its own course.* The Governor should ask the Board of Higher Education to appoint an advisory board for each institution in the State System. The board and president of each institution should work together to develop strategy, policies, and plans in the context of institutional autonomy. This effort should include a definition of institutional mission, analysis of market opportunities, possible joint venture opportunities with other schools in and beyond Oregon, an internal review of budgeting, hiring and promotion policies, and any other issues that need to be considered to become learner-centered and competitive. The State Board should regard this grant of partial autonomy as the foundation upon which each institution in the State System can later request greater or full autonomy. A school's proposal for greater autonomy should describe how the institution plans to access capital, including any bonding authority it might request.

4. *The Governor should create a new budget model for funding higher education.* The Governor should ask the State System to prepare two funding models for deliberation for the 1999-2001 budget. One would be based on current practices. The other would be based on the State purchasing services or making investments through a contract-for-services process. The contract-services budget would spell out State support for 1) instruction in the form of student tuition subsidy, 2) research and development, 3) community services, and 4) strategic investments in programs or in capital improvements tied to programs. Any request for more dollars should be presented as part of the new budget framework.

Guiding the Transition That Will Encompass All of Higher Education

The steps above will address some of the most pressing problems in the State System, but they won't resolve all of Oregon's needs in higher education, particularly issues that transcend the State System. The Task Force vision for higher education will involve a transformation that goes beyond the State System and that will, by itself, require broader perspective and guidance. The Task Force recommends that the Governor create a Higher Education Transition Council made up of civic and business leaders, and representatives from the Board of Higher Education and the Board of Education. This panel, which would sunset in a specified period, would be staffed to

carry out the technical work of redesigning the way that the State of Oregon invests in and governs higher education. In particular, the Transition Council would:

- Propose measures to ease the transition to autonomy by schools in the State System.
- Design new finance, budgeting, and tuition policies consistent with the recommendations of this report and the Governor's Task Force on Higher Education Access.
- Recommend new policies and governance procedures for program authorization and certification.
- Recommend a permanent structure for higher education governance, including roles and structures for State agencies that represent Oregon's public interest in higher education. This would include the State System, the Office of Community College Services, and the State Office of Degree Authorization, and it would indicate whether and how the State's now-separate functions of funding its interest in community colleges and public universities should be aligned or merged. It would also recommend the State's role in utilizing the resources of private colleges and universities.
- Consider whether Oregon should have an advisory council to guide State investment in science and technology instruction and research, and, if so, recommend the structure and function of this body.

7. ADDITIONAL RECOMMENDATIONS

The Task Force believes that the recommendations on governance and budgeting presented in the last section are fundamental to the achievement of our vision for higher education in the 21st century. Those recommendations are intended to unleash the energies of individual faculty, programs, and schools to identify and meet learning needs that we have only begun to imagine.

Below, the Task Force has identified several specific recommendations that would make higher education a stronger contributor to Oregon's economic health. We do not pretend that these represent all the opportunities available, but they would make a good start.

1. Require institutional accountability for higher learning among graduates. Each school receiving State funds should systematically

measure the proficiency of graduates to assure that all of them can write and speak well, apply scientific methods, demonstrate mathematical skills, think critically, and demonstrate other core knowledge the

Each school receiving State funds should systematically measure the proficiency of graduates.

school deems to be essential for all graduates. These measures should complement skill and knowledge standards of the Proficiency-based Admission Standards System (PASS), which is currently being developed by the State System to govern admission of first-year students.

Oregon should pursue the following goal: By June 1998, every public college and university will complete an independent assessment of the knowledge and skills of graduates and evaluate whether the school is adequately preparing its students in the fundamentals of communications, mathematics, analytical reasoning, and other competencies.

Oregon schools already have recognized the need to assess student outcomes, and to modify curriculum practices in order to meet these outcomes. The State System of Higher Education has been piloting assessments for several year, and the 1997 Legislature, at the recommendation of this Task Force, directed the State System to report on progress on the development of a system to the next Legislature.

Oregon K-12 school reform already mandates standards-based assessment of student skills in academic fields, and the State System is pioneering a Proficiency-based Admissions Standards System (PASS) for entry into higher education, which will hold high school seniors accountable for demonstrating proficiencies in academic subjects.

These are important building blocks for an outcomes-based assessment for higher education.

The assessments we envision in such subject areas as communications, math, critical thinking, and scientific inquiry often are the cumulative results of college work. The schools, therefore, probably need to independently evaluate at least a cross sampling of graduates to assess whether broad competencies are being achieved, and make adjustments to curriculum if they are not. Like standards-based assessments for K-12, this is new for many schools, and requires commitment and budget.

The Task Force recommends that all colleges and universities independently or jointly develop measures of program outcomes. Such assessments should be mandatory for institutions receiving public dollars. Individual institutions should be given latitude to develop the assessments in the context of their educational goals, but general direction for development should come through the Chancellors Office and the Office of Community Colleges Services.

Action Recommendations for the Governor. The Governor should ask every publicly funded institution to report by October 1998 the results of pilot assessments to measure the knowledge and competency of graduates. Based on the pilot, the institution should report whether the outcomes are consistent with expectations for their students, and what program changes it is contemplating if they are not. The report should also propose what long-term assessment system the school anticipates developing.

2. *Expand internships and other forms of community-based learning (e.g. Portland State Capstone experiences) to create more opportunities for students to relate their studies to a real-world context.* Educators and employers alike suggest that learning in a community- or work-based setting can enhance understanding of academic theory, and help prepare students for life beyond academia. Internships also improve the likelihood that young graduates will be able to land attractive, well-paying jobs.

Many Oregon students already participate in some form of internships during college. The State System, for example, reports that half of its graduates experienced some form of internship, with wide variation among programs. Ninety-eight percent of those in health-related fields participated in internships compared with 36 percent of liberal arts majors. Several promising initiatives are in progress. Portland State University, for example, is building a "Capstone" experience into its undergraduate curriculum, which requires all students to explore academic work in an applied setting. Oregon State University's MECOP program provides internships for academically talented engineers, which typically leads to job offers. The State System also is building an international internship program to broaden student experiences.

Meanwhile, employers express great interest in expanding internships as a way of helping students prepare for careers, and as a way to recruit talent in areas where there are shortages.

Internships and practicums require enormous amounts of cooperation and coordination between schools and employers, and programs need to be tailored to the school curriculum. We recommend that higher education and industry leaders convene to assess what can be done to expand internships in Oregon. While each school and program will need to tailor internships to their pedagogical approaches, we recommend that Oregon employers work with higher education, with a goal to provide internships to all students who want them.

Action Recommendation for the Governor. Ask industry leaders and representatives from public and private colleges to convene a meeting to identify specific steps to expand internships and practicum experience for students and faculty in ways consistent with the educational missions of the individual schools.

3. Increase the supply of engineers and technicians, and focus on other technical and professional needs. Oregon's high technology sector faces critical shortages in electrical and software engineering and in technicians. Other sectors also face shortages of technically trained people.

There are countless examples of community colleges and public and private colleges addressing specific professional and technical needs. At the same time, during this period of rapid change in industrial make-up and occupational mix, many shortages persist. Recommendations on governance and budgeting changes to make higher education more market oriented should help.

Meanwhile, some good models for addressing specific opportunities are emerging. For engineering education, the Legislature recently approved SB 504 which creates an Engineering Council to invest State dollars in public and private institutions to meet the specific engineering needs identified by the high technology industry. Driven by industry, it could well be a model for contract purchase of higher education services in the future. In addition, several other studies have been conducted through the Economic Development Department's key industry program regarding specific industry needs. For example the Oregon Semiconductor Consortium has recently spotlighted the need for thousands of technicians, while the Oregon Metals Council has produced excellent research showing it has similar needs.

The economy is complex and professional and technical needs are constantly changing. The schools have difficulty quickly shifting programs and recruiting students into new programs to meet industry needs.

Beyond the overarching recommendations in the last chapter, there are specific steps that can address immediate needs.

- The Chancellor's office, through its Engineering Council should develop a strategic plan for increasing the supply of engineering technicians and undergraduate and graduate engineers, and to enhance continuing professional development of engineers. The process should be assessed as a possible model for addressing other professional education needs in for other industry sectors.
- The Economic Development Department, the Office of Community College Services, and the Semiconductor Consortium should develop a strategy for meeting the semiconductor industry's training needs, and it should present action recommendations to a high level meeting of industry and education leaders within the next six months. This should be assessed as a model for meeting other industry needs.

Action Recommendations for the Governor. The Governor should take three steps to support this recommendation:

1. Reaffirm the Economic Development Department's responsibility for bringing industry and educators together to develop and implement strategies to address major professional and technical education needs.
2. Ask the Chancellors Engineering Council to develop a strategic plan and to submit budget proposals for the 1999 Legislature.
3. Invite business and education leaders to a summit to identify specific steps to address the shortage of employees trained for the semiconductor industry.

4. Enlist schools of education to address critical teacher and principal education needs.

Oregon is in the midst of a far-reaching transformation of K-12 education. This transformation is raising academic and career-related standards, with the aim of preparing more young people for success in higher education and high-skilled jobs. The transformation involves setting high standards, and assessing students to see that standards are achieved. It also includes more community-based learning in high school.

Teachers and administrators are critical to the success of the transformation — and Oregon's public and private schools of education could play a pivotal role in giving them the skills they need. About 1,500 new educators come out of these programs every year in Oregon, roughly half from state-funded schools and half from private colleges and universities. More than 60 percent of these obtain employment in the K-12 system, so the way they are trained today will affect the shape of education for years to come. By educating these teachers in Oregon's new practices, K-12 schools will be better

prepared to implement a standards-based curriculum. In addition, the schools of education are a valuable resource for retraining current teachers and administrators.

Not only will this benefit K-12 education, it will ultimately reduce the need for remedial classes for students who leave high school unprepared to do college-level work.

The Teacher Standards and Practices Commission has directed all schools of education to make adjustments to curriculum to prepare teachers to implement Oregon's school reform plans. Already, many individual schools have adapted programs to prepare teachers and administrators for this new environment.

Oregon's school transformation plan is new, and many within the schools of education have not adjusted their curriculums. In addition, the opportunities for continuing professional development of existing teachers has not yet been fully developed.

The Governor's Education Reform Team Leader for the School Transformation Advisory Council should work with school superintendents, Deans of schools of education, the Teacher Standards and Practices Council, Oregon Educational Association, and others to craft a strategy for teacher and administrator education aimed at supporting teachers to teach at high academic standards.

Action Recommendations for the Governor.

1. Assign Education Reform Team Leader to develop a strategy.
2. Ask the School Superintendent and the Education Reform Team Leader to convene a stakeholder summit to agree on specific steps to enhance teacher preparation in standards-based education.

TASK FORCE CHARGE

Mission

To better match the workforce and research needs of employers with post-secondary education resources.

Charge

To develop a strategic plan for the delivery of post-secondary education services that meets the requirements of Oregon employers and gains more good jobs for Oregonians.

Members:

John Lee, Providence Health System, Portland, *Chair*

Gretchen Pierce, Hult and Associates, Eugene, *Vice-chair*

Marilyn Beem, ORCOM, Bend

Paul Bragdon, Oregon Graduate Institute of Science and Technology, Portland

Samuel Brooks, S. Brooks and Associates, Portland

John Byrne, President Emeritus, OSU, Corvallis

Tom Imeson, PacifiCorp, Portland

Barbara Karmel, The Reed Company, Portland

Randy Papé, The Papé Group, Eugene

George Passadore, Wells Fargo and Co., Portland

James Rivera, Advanced Data Concepts, Portland

Ann Rupe, Lane Title and Escrow Corp., Ontario

Don VanLuvanee, Electro Scientific Industries, Inc., Portland

Bill Williams, Bear Creek Corp, Medford

Staff:

Duncan Wyse, Oregon Business Council

Amy Moorman, Task Force Assistant

John Svicarovich, Consulting Editor

BIBLIOGRAPHY

Dolence, Michael G. and Donald M. Norris. *Transforming Higher Education: A Vision for Learning in the 21st Century*. Ann Arbor: Society for College and University Planning, 1995.

1996 Fact Book, Oregon State System of Higher Education. Eugene: Oregon State System of Higher Education, 1996.

Oregon Business Council, Associated Oregon Industries, Portland Metro Chamber of Commerce, American Electronics Association. *Gaining Competitive Advantage: The Need for Customer-Driven Higher Education*. Portland: Oregon Business Council, 1996.

1997 Oregon Blue Book.

Oregon's Entrepreneurial Environment: Expanding Horizons for Oregon Ideas. Salem: Oregon Economic Development Department, Oregon Entrepreneurs Forum, a-dec Corporation, Endeavour Capital, Oregon State Bar, Fred Meyer, Inc., 1997.

Oregon Shines II. Salem: Oregon Progress Board, 1997.

Report of the Research and Graduate Education Solution Team. Eugene: Chancellor's Office, Oregon State System of Higher Education, 1997.

Report of the Education Solution Team on the Chancellor's Office. Eugene: Chancellor's Office, Oregon State System of Higher Education, 1997.

Wingspread Group on Higher Education. *An American Imperative: Higher Expectations for Higher Learning*. Milwaukee: The Johnson Foundation, 1993.

Yerke, Ann. *The Business of Financing the Oregon State System of Higher Education: An Oregon Tax Research Special Report*. Portland: Oregon Tax Research, 1997.

**HIGHER EDUCATION LEADERS
INTERVIEWED BY THE TASK FORCE**

Dr. Robert Barber, President, Central Oregon Community College

Dr. Harvey Bennett, President, Rogue Community College

Dr. Gerard Berger, President, Chemeketa Community College

Dr. David Frohnmayer, President, University of Oregon

Dr. Bert Glandon, President, Treasure Valley Community College

Dr. Ron Hill, University of Portland

Dr. Jerry Hudson, President, Willamette University

Dr. Steven Koblik, President, Reed College

Dr. Judith Ramaley, President, Portland State University

Dr. Steven J. Reno, Southern Oregon State College

Rev. David Tyson, President, University of Portland

Dr. Joel Vela, President, Mount Hood Community College

Dr. Charles Womack, President, Northwest Christian College

Dr. Zia Yamayee, Dean, School of Engineering, University of Portland

PRESENTERS TO THE TASK FORCE

September 13, 1996

Claire Berger, Oregon Economic Development Dept.

Jim Whitty, Oregon Economic Development Dept.

Jim Craven, American Electronics Association

October 11, 1996

Joseph Cox, Chancellor, Oregon State System of Higher Education

Bruce Schafer, PC KWIK

October 29, 1996:

Engineering Subcommittee Meeting

Paul Risser, President, Oregon State University

Judith Ramaley, President, Portland State University

David Frohnmayer, President, University of Oregon

Dr. Zia Yamayee, Dean of Engineering, University of Portland

Bruce Schafer, PC KWIK

Dr. Franz Rad, Dept. of Civil Engineering, Portland State University

Larry Wolf, President, Oregon Institute of Technology

Paul Bragdon, President, Oregon Graduate Institute

January 9, 1997

Dr. Peter Kohler, President, Oregon Health Sciences University

February 26, 1997

Pat Callan, California Higher Education Policy Institute

May 28, 1997

Michael G. Dolence, Higher Education Consultant and Author of *Transforming Higher Education*

September 24 and October 6, 1997

Grattan Kerans, Oregon State System of Higher Education

SUMMARY OF RESPONSES TO A CALL FOR IDEAS

As a way of gathering opinion and stimulating discussion on higher education in Oregon, the Task Force mailed a "Call for Ideas" survey to a cross section of higher education, business, and political leaders. This is a summary of the questions and the responses to that call for ideas. It should be noted that the task force received a total of 18 responses to this call, and respondents tended to be people currently in higher education, either as professionals or as students. A couple of business people also responded.

Question 1. What are the most important areas of knowledge, skills, and abilities gained in higher education that will prepare Oregonians for work in the 21st century? How well do you think we are doing in imparting those skills?

- Communications skills;
- Analytical thinking / problem-solving skills;
- Technology / Internet skills.

The above three items recurred most frequently in the responses we received, and where these precise skill definitions don't appear, derivations or specifications of them do (e.g. one respondent writing that students need to spend more time in math classes in order to learn analytical thinking and problem-solving). For the most part, *how* we impart these skills was not addressed as often as the fact that they are in high demand, and the overall assessment is that Oregon is doing fair to poorly currently. Where the issue of computer skills comes up, it comes up vehemently, with respondents saying we need more Internet and computer access and we need the flexibility for that access to increase as needs of students increase.

The issue of team-work, interpersonal relations, and work-ethic came up almost as often as the above three items, with respondents grading Oregon higher education poorly for its apparent inattention to this skill. In the "How are we doing?" column, one respondent wrote of the teaching of interpersonal / work-ethic skills, "Not addressed as far as I know."

Question 2. As you picture Oregon higher education services in 2015, what are the three most important ways they should differ from what we have in place today in terms of content and delivery?

- Affordable distance learning and radically increased emphasis on technology

skills;

- Outcome-or proficiency-based learning, with emphasis on skills acquired and not on "seat time" (some suggestions for this include more practicum type training, wherein students are required to teach or to demonstrate their mastery of material);
- Greater emphasis on continuing education and education access at all times of year. Again, there were three principal issues recurring throughout our responses, with respondents expressing a variety of concerns with regard to these. In emphasizing the need for increased computer and distance learning, one respondent felt that "[w]e need . . . less emphasis on preparing people to work for others. We need to teach them how to work for themselves," while another respondent asserting a similar position with regard to distance learning cited the need to "facilitate student access to information, selection of information, organization and use of information, to produce knowledge." Other respondents made connections between Internet-learning and the building of self-directed education, as well as the encouragement of independent problem-solving techniques. There were clearly diverse perspectives on *which* aspect of students' educations would be improved by the use of computer and distance learning, though there was consensus that there would be significant improvement.

There was strong support overall for increased practicum training and for learning that is immediately tied to "real life," as opposed to teaching only theoretical concepts which respondents felt actually remove the student from the learning experience. Suggestions included internships, apprenticeships, corporation-funded specialized training, and project-oriented learning.

There was a call for a shift in values with regard to the way in which the current higher education system recognizes skill and merit. Together with the emphasis on increased availability of college-level curricula through the Internet, there was strong support for continuing education opportunities and opportunities to get college credit through on-site education (remote work places where training is offered), as well as through Life Experiences (Linfield and Northwest Christian Colleges cited). Respondents overall wanted a wider, more diverse learning structure which would make quality education available to the greatest number of people at the least possible cost. The message is to loosen higher education's tight definition and control of what constitutes education, and to open that field to the learners rather than to the administrators and faculty.

Question 3. Please identify examples of innovation in higher education now which are positioning us well for success in the 21st century, and which you think deserve wider application.

- Internet-accessible degrees and distance learning in general;

- Internship and apprenticeship programs that explore hands-on training (examples cited included Opt for Co-op at OIT, and the Freshman Inquiry program at Portland State);
- Community interaction at the college level: bringing experts from the outside into the classroom, as well as sending faculty into the workplace for the gathering of fresh information and perspective.

Respondents tended to focus on Internet and distance-learning. One respondent wrote about Lane Community College's development of interactive courseware in collaboration with faculty, business, and industry, which will be deliverable world-wide via Lane CC's web site. Another respondent cited satellite delivery of courses as in the cases of OCATE and Eastern Oregon State University. There was some concern, however, that distance learning be interactive: one person said that "[t]o retain integrity in the educational process, distance learning must be interactive and comprehensive. One cannot, in other words, plug in a videotape and call it distance learning."

There was some disagreement about what some respondents termed internship and apprenticeship training, and what others disparagingly termed "applied knowledge." Overall, however, the implementation of programs designed to connect the student directly with field/s of interest (in the community or over the net) were strongly supported. Again, the message is overwhelmingly to broaden the nature of experience both via technology and via on-site training, with the projected outcome being a more flexible, diversified, adaptable student body than the one we currently see graduating from Oregon schools.

Question 4. Name the two greatest changes in strategies, public policies, and funding which would advance Oregon toward the kind of public higher education you think will best meet Oregon's needs in the 21st century.

Several trends emerged in the responses to this admittedly broad question, and the areas of repeat interest were:

- Increased participation of businesses in the funding of higher education, which many respondents tied to specific training (as in the high-tech industry), while some wrote more about the tax shelter side of the issue;
- Increased focus on financial support to the learner as opposed to on the maintenance of specific schools (suggestions included State subsidies and implementation of President Clinton's plan to waive tuition entirely in the first two years of undergraduate school);
- Increased salaries for faculty, to attract the best and brightest faculty and

students from around the country;

- Focus on collaborative efforts among colleges and universities, as well as between higher education and the K-12 system. Use of the Internet and interactive programs to facilitate this;
- Creation of an Internet Backbone for all colleges and universities.

Most respondents were extremely concerned about funding issues; some respondents said in effect "Just do it," with a focus on the social implications of neglecting higher ed, and others offered suggestions on how to make funding happen. One respondent suggested returning to the funding model of 1980 - 1990, which figured funding at a percentage of higher ed's gross. This respondent also wanted a consolidation of all seven public institutions under one name, the movement of all community colleges under the jurisdiction of the State System Chancellor, and the abolition of tenure. Overall, however, respondents wanted a combination of two things: increased participation of business in funding higher education, as well as increased State subsidies of students, and *not* institutions. Respondents turned to a more "free-trade" model for the State System, emphasizing that we need to be more learner-centered and less protective of [what seems to be perceived as] a tired system which serves no one but itself. Competition among schools was seen to be a positive indicator and promoter of growth, rather than something to be avoided.

One particularly interested Oregonian wrote a lengthy response focused on the physical structure of the State System, making the following recommendations about reconfiguration of governance:

- Either, follow the OHSU model [privatization] for one or more of the campuses, or
- Appoint local governing boards for all of the campuses but retain the State Board of Higher Education as a coordinating board.

As elaboration on the latter point, the respondent writes, "The campuses operate in different markets. Continuing Oregon's one-size-fits-all tuition policy will mean that the rate is too high for some and too low for others. Price-setting decisions should be made by local governing boards with the best information about student demand." Further, "[d]ecentralization will enable each campus to be *more responsive to its own market*; pursue strategies that work best for that institution; build a stronger base of community support; and increase campus distinctiveness and quality" (emphasis added).