Postsecondary Quality Education Commission

Scenarios
for Achieving the 40% 40% 20% Goal in Oregon

Prepared by the National Center for Higher Education Management Systems

May 2010

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This brief highlights the results of the Postsecondary Quality Education Commission projection model designed to gauge the impact of improved performance in postsecondary education on Oregon's certificates and degree attainment rates. This brief provides a general sense of some key policy areas that should be considered for meeting Oregon's long-term goals. In the spring of 2010, the National Center for Higher Education Management Systems (NCHEMS) produced a "student flow" model to aid the education stakeholders in Oregon in their efforts to develop strategies by which the public systems of secondary and postsecondary education might contribute to reaching the long-term goal of 40 percent bachelor's attainment, 40 percent associate and certificate attainment, and 20 percent high school attainment among 25 to 64 year olds. The model is designed primarily to assess the impact of improved performance on a variety of educational measures – ranging from high school graduation to college completion. The performance measures are categorized as follows:

- Input rates (those impacting the numbers of students entering college) – high school graduation, college-going directly out of high school, college participation of older adults ages 20 to 24 and 25 to 49.
- Throughput rates (those impacting the numbers of students who complete college) – first- to second-year retention, transfer from two- to four-year institutions, and successful completion of certificates and degrees.

The model has a simple interface that allows users to type in the desired levels of performance and gauge the impact on enrollment, certificates and degrees produced, and the resulting costs to the state and students when operating "business as usual". It also has a mechanism to redistribute the additional new students into specific sectors of public postsecondary education – e.g. capping enrollment at the four-year institutions and accommodating the growth in the two-year institutions. The data used to drive the model come from reputable public sources (e.g. the U.S. Census Bureau and National Center for Educational Statistics) and detailed student cohort-based analyses provided by the Oregon University and Community College systems.

Given the budget constraints in Oregon, in the short-term stakeholders must select a limited number of key policy areas for possible investment; ones that are cost-effective and produce substantial results. While the options are nearly endless, NCHEMS provides a variety of scenarios in the Oregon's Student Flow Model chart. The chart captures the results of a five percent (rate) increase of the performance measures in the model (individually); the additional number of college credentials produced and the estimated cost to the state and student if the institutions were to maintain their current level of public funds per full-time equivalent (FTE) student. The second table in the chart captures the results of a variety of combinations – as opposed to focusing on just one area of improvement. The additional state cost associated with each

scenario assumes state and local tuition and fee revenues per FTE student remain the same. The additional cost to students assumes the state will not increase its investment, and students will have to pay for the additional funding needed to maintain the current level of institutional funding per FTE student. In sum, different strategies (i.e. the areas of the education pipeline they target) produce different results; both in terms of college completions and potential costs. Each of these scenarios place different burdens on the postsecondary education system – and, therefore, would require different levels of resources; assuming that state and local funding per FTE remains the same over time.

It is important to note that the model provided by NCHEMS is designed specifically to gauge the overall impact of improvements in general areas (e.g. college participation, retention, graduation rates, etc.). The model cannot assess the impact of very specific strategies within each of the broad categories – e.g. more rigorous coursework in high school, improvements in counseling and advising, etc. The last scenario provided in the chart shows that substantial improvements are needed in nearly all areas of the education pipeline in order to ultimately achieve the 40% 40% 20% goal. But without exception, the throughput measures yield the greatest results relative to increased costs – to the state and students. It is more cost-effective to improve rates of retention and graduation among the students who are already in the system than to simply add more students through increased inputs; though the latter is also necessary for long-term success.

As a result of these findings, NCHEMS proposes that, at least initially, higher education stakeholders should focus on strategies that will serve to improve retention and graduation rates in the two- and four-year institutions. The strategies should include, but not be limited to:

- Improving remedial/developmental education. Particularly in the community colleges, developmental education is one of the largest stumbling blocks for students. Substantial numbers of entering students require developmental education and relatively few successfully complete it, advance to college-level work, and complete degrees. This is a national problem as well. Tennessee is in the process of redesigning all developmental coursework in their community colleges, and would serve as a good starting point for inquiry.
- More opportunities for high school students to take college-level coursework. The provision of dual credit and advanced placement courses allows students to get a head start prior to entering college – reducing the time needed to complete a college degree. There is some evidence that these opportunities also increase the likelihood that these students will enroll in college. They also are more likely to be prepared for college – reducing the need for developmental education (above).
- Nearly a quarter of working-aged adults in Oregon (24.4%) have attained "some college but no degree" – the eighth largest percentage in the U.S. It would be both cost efficient and effective to develop strategies to bring these adults back into the fold to complete a formal award; especially those with substantial credit toward a degree. A great deal could be learned from policymakers in Kentucky and Oklahoma; who have recently implemented such policy initiatives.
- Other options include (1) improved counseling and advising, (2) more flexible class offerings – times and sequencing, (3) more creative delivery of instruction – combination of distance and face-to-face learning, (4) more clear, direct, and accelerated paths to completion, and (5) more focus on high-value certificates.

The Department of Community Colleges and Workforce Development and the Oregon University System have already begun to identify best practices for increasing degree production. Their initial lists include some of the strategies mentioned above.

Conclusion

As demonstrated here, the student flow model is a tool that can be used to enhance the long-term strategic planning process. It enables policymakers to assess the impact of improving how well the state system of postsecondary education serves its residents, and provides a framework for setting meaningful goals. The scenarios presented in the Oregon's Student Flow Model chart are just a few of many options. In the end, investment strategies that will work best are those that target a few key areas, will create short-term and measurable results, and begin to set in motion the momentum needed to achieve the 40% 40% 20% goal. Not all improvements in performance should be the result of direct investment. Ways in which institutions can improve performance in key areas without new money should be a critical part of the overall strategy.

Chart 1: Oregon's Student Flow Model

Sensitivity of the Performance Measures: The Impact of a 5% (rate) Increase*

PerformanceMeasure			Performance		Additional Credentials/Degrees			Cost to State at Current $ per FTE	Increase in Tuition Needed with No Additional State Investment: To Maintain Current Funding Levels			
			Current Performance	Projected Performance	Cerificates	Associate	Bachelor's		Public Four-Year		Public Two-Year	
Inputs		1. HS Graduation Rate	71.2%	74.8%	97	915	2,119	$12,241,229	$86	1.2%	$81	2.7%
		2. Annual GED Production	8,761	9,199	Need More Information							
		3. College Going Rate (Directly Out of High School)	60.0%	63.0%	97	915	2,119	$12,241,229	$86	1.2%	$81	2.7%
		4. First-Time Participation Rate, Age 20-24	9.7%	10.2%	110	1,008	105	$9,832,336	$5	0.1%	$135	4.5%
		5. First-Time Participation Rate, Age 25 to 49	1.04%	1.09%	138	658	18	$6,167,628	$1	0.0%	$87	2.9%
Throughputs	Public Four Year	6. First-Year Retention Rates	78.6%	82.5%	-	13	3,384	$7,328,272	$96	1.3%	$0	0.0%
		7. Six-Year Graduation Rates of First-Time Freshmen	53.1%	55.8%	-	12	3,154	$1,414,807	$18	0.3%	$0	0.0%
		8. Four-Year Graduation Rates of Transfer Students	55.4%	58.2%	-	7	1,033	$402,514	$4	0.1%	$0	0.0%
	Public Two Year	9. First-Year Retention Rates	51.8%	54.4%	285	2,403	-	$13,067,667	$0	0.0%	$185	6.1%
		10. Six-Year Graduation Rates of First-Time Freshmen	11.9%	12.5%	311	2,286	-	$803,344	$0	0.0%	$12	0.4%
		11. Transfer Rates to Four-Year Institutions	14.1%	14.8%	-	7	1,046	$924,148	$9	0.1%	$0	0.0%
		12. Annual Production of Certificates	5,184	5,443	2,203	-	-	$881,280	Not Available			

Potential Scenarios of Focus (Applying the 5% Rate Increase)	Additional Credentials/Degrees			Cost to State at Current $ per FTE	Cost to State per Degree	Increase in Tuition Needed with No Additional State Investment: To Maintain Current Funding Levels			
	Certificates	Associate	Bachelor's			Public Four-Year		Public Two-Year	
HS Graduation Rate Only (1 Above)	97	915	2,119	$12,241,229	$3,909	$86	1.2%	$81	2.7%
HS Graduation Rate and College-Going Directly Out of HS (1 and 3 Above)	198	1,862	4,312	$25,094,519	$3,938	$175	2.4%	$164	5.4%
Four-Year Performance (6, 7, and 8 Above)	0	20	4,417	$7,730,787	$1,742	$100	1.4%	$0	0.0%
Two-Year Performance (9, 10, and 11 Above)	311	2,410	1,046	$13,991,815	$3,714	$9	0.1%	$185	6.1%
HS Graduation, College Participation, Completion in Two Year (1-5, 9-12 Above)	2,982	6,089	5,496	$56,765,720	$3,897	$190	2.7%	$550	18.2%
Inputs Only	448	3,529	4,436	$41,094,484	$4,885	$181	2.5%	$373	12.3%
Throughputs Only	2,515	2,430	5,499	$22,624,504	$2,166	$109	1.5%	$185	6.1%
Five Percent (rate) Increase On All Measures	2,983	6,110	10,120	$64,917,917	$3,379	$289	4.0%	$550	18.2%
Scenario to Achieve 40% 40% 20% Goal	329,643	88,832	72,881	$738,658,103	$1,503	$1,541	21.6%	$3,827	126.4%

*Applying the same magnitude of change to each metric

Note: The "Cost to State" reflects the additional state appropriations needed to maintain current levels of institutional funding per FTE student if tuition and fees remain the same. Conversely, the "Increase in Tuition Needed" reflects the additional amount students would need to pay with no additional state investment – maintaining current levels of institutional funding per FTE student. They reflect the two extremes – the state pays or the students pay. Any realization of these targets would likely result in a finance strategy that lies somewhere in between.

Postsecondary Quality Education Commission
Proposed Best Practices for Retention and Student Success

	Proposed Action	Description	Problem Addressed	New Funding?
Input: More opportunities for high school students to take college-level coursework				
Community Colleges	Increase Dual Credit offerings in high schools.	Currently all 17 community colleges offer Dual Credit and enrollment has been increasing. However, certifying qualified HS teachers (that meet the community college OAR) instructor requirements is difficult, particularly in rural areas.	Students who are successful in Dual Credit courses are more apt to enroll in college and are more apt to persist and complete.	Yes.
Throughput: Improving remedial/developmental education				
Community Colleges	Increase the capacity to provide more developmental courses and programs for students who need additional skill development. (e.g. supplemental instruction, tutoring, intensive math preparation, developmental courses in math, writing, reading, writing workshops, ESL courses, study skills sessions, etc.)	All 17 community colleges offer Adult Basic Skills, English as a Second Language, and remedial or developmental programs. All 17 community colleges also have courses for credit that focus on study skills, reading, tutoring, etc. Five community colleges have not developed an intentional program in this area. Eight colleges have developed a credit program to meet the needs of a certain curriculum or audience.	Courses and programs that prepare students for college level classes are oversubscribed. There are waiting lists for both ESL and ABS. Additionally, more Oregonians need to increase their "secondary" academic skills in order to advance to college transfer and/or career/technical classes.	Yes.
Throughput: Student support services				
OUS	Increase need-based institutional fee-remission combined with first-year experience.	Promising, evidence-based retention initiatives such as the UO's Pathway Oregon and to some extent OSU's Bridge to Success combine need-based fee-remission with a focused first-year experience, intrusive advising and other retention programming. This action item requests financial support for these existing programs in addition to new investment in scaled/adapted programs at the other five universities.	Higher education affordability is a key issue that needs to be addressed before other student access/success strategies can be effective. Student perceptions that they can't afford college greatly hinder the creation of a college-going culture for underrepresented students; students from these groups who do make it to college are often first-generation college students who have lower degree-completion rates. Programs at UO and OSU that combine need-based aid with special retention-focused programming have shown significant promise in addressing both of these issues.	Yes.
Community Colleges	Increase staffing of financial aid at all 17 community colleges to meet the 50% increase in financial aid applications. Community colleges have not been able to keep up with the increased FAFSA applications.	The current issue is about funding, the recently imposed cut off date for OOG funding, and the actual staffing to process the larger volume of student applications.	To increase student persistence and access, students need to know when they will receive aid and know what their level of financial aid support will be.	Yes.

	Proposed Action	Description	Problem Addressed	New Funding?
Throughput: Student support services				
OUS	Refine retention performance funding measures, adding transfer retention and freshman/transfer graduation rates, adjusted for high risk student factors.	While no new funding would be needed to implement this action item per se, there is a desire among enrollment managers for increased performance funding for reaching retention and graduation performance targets. At the same time, there is concern that student risk factors at initial enrollment be taken into consideration.	Currently, critical retention-related performance metrics do not take into consideration student risk factors at initial enrollment, giving rise to concerns that metrics and target-setting inhibit institutional risk taking in serving these students.	No.
OUS	Expand peer advising, tutoring and mentoring capacity at all OUS institutions, increasing both student success and affordability.	All OUS universities currently employ students in peer mentoring capacities, and there is a growing body of evidence that peer mentoring is especially important in improving college success for underrepresented students. This action item increases the investment and expands these successful approaches.	This action item addresses the academic and social integration of students for underrepresented groups of attrition, and offers a way to increase college affordability for students employed in mentoring, advising, and tutoring positions.	Yes.
Community Colleges	Expand the learning centers for tutoring, writing/reading/math assistance, supplemental instruction, or learning activities offered in a designated area or online.	All colleges currently provide these services but cannot meet the increased demand from increased student enrollment. Three colleges need to locate in a single location to enhance student ease of access.	Learning centers are an important strategy that assist students in increasing their skills for success in the class/college and ultimately persistence to a certificate or degree.	Yes.
Community Colleges	Provide advising, counseling and support groups. Career counseling, personal counseling and referral, support groups, and personal development classes are offered by counselors.	12 community colleges have this service available (TBCC, TVCC, and BMCC are under review of when and how to offer).	With the increased enrollments, the need for more advising and support to students has reached a crisis level. First time community college students/adults, need access to advisor and counselor assistance to navigate themselves through education choices and barriers.	Yes.
Community Colleges	Expand or provide first term orientation and/or courses that focus on student success strategies.	All 17 community colleges have courses focused on student success strategies. All community colleges would like to have a program. Thirteen colleges have limited or targeted programs often funded with federal funding and two colleges (Clatsop and BMCC) have programs available to all students. In Oregon, two colleges do not have fully developed programs (OCCC and TBCC).	National research shows that providing an intentional program on college success for students is achieving results. Community colleges lose the largest amount of students at the end of the first term. Research in Oregon and nationally has shown that intentional first term courses can change this retention rate by at least 20%.	Yes.
Community Colleges	Provide one-stop enrollment services so students can access enrollment services at entry.	14 community colleges have enrollment services in one location. All but one college (OCCC) has web registration as an option for students.	Making access and enrollment tied together and not in multiple steps increases the ability to assist students more effectively.	Yes.

	Proposed Action	Description	Problem Addressed	New Funding?
Throughput: Student support services				
OUS	Provide retention intervention program evaluation.	Identifying "best practices" or even promising practices requires retention intervention program evaluation that only exists sporadically on university and community college campuses. This is understandable—scarce resources and staffing makes such evaluation less critical than hands-on service to students on a day-to-day basis. However, with resources expected to be even scarcer in the next biennium, it becomes even more critical that retention activities be assessed, so that scarce resources can be used wisely.	Institutional research activities can play a critical role by conducting research studies of the reasons students drop out of our universities and community colleges, to better design and implement retention interventions that can make a difference.	Yes. OUS could provide assessment of retention activities with an additional IR staff member.
OUS	Partner with ONWARD (Oregon NetWork for Access, Retention, and Degree Completion), a stakeholder network resulting from the work of the Board's Student Participation and Completion Subcommittee.	ONWARD will link the efforts of the Board, ASC and ICEM (Interinstitutional Council of Enrollment Managers) to sustain our emphasis on serving traditionally underrepresented students. Specific actions proposed at this time include: a. Continuing Student Participation and Completion Symposia to share effective practices and connect practitioners; b. Working with the Interinstitutional Faculty Senate (IFS) as well as on-campus programs and centers to plan, coordinate, and implement conversations and efforts to improve faculty effectiveness; c. Expanding K-12 pre-college outreach and academic preparation partnerships between OUS institutions and K-12 institutions to better prepare students for success at OUS.	This action item addresses access and student success.	Yes.