

Research Report No. 07-1

**Washington State Board for Community and
Technical Colleges**

DRAFT MEETING WASHINGTON STATE'S NEEDS FOR AN EDUCATED CITIZENRY AND VITAL ECONOMY: AN INITIATIVE FOR MEASURING COLLEGES AND AWARDING FUNDS FOR IMPROVING STUDENT ACHIEVEMENT AND SUCCESS

October 2007

Introduction

More than ever before, demographic changes in Washington combined with increasing workforce skill demands require an educated citizenry in our state. Community and technical colleges are poised to contribute considerably to raising the educational attainment of Washington's residents to ensure our state's long-term economic vitality and competitiveness. The State Board for Community and Technical Colleges believes in the critical role that the colleges have in increasing student achievement and raising educational attainment of Washingtonians.

This paper describes a new State Board Initiative aimed at measuring colleges and awarding them funds for improvements in the significant steps students take towards higher achievement. The promising practices that emerge from these efforts are an important part of the initiative. How colleges use the information on campus and share it with each other will be vital to the strategies they employ. The sections that follow describe the initiative in detail and address the following questions regarding the initiative:

- How were the measures developed?
- How will the measures be used to show annual improvement?
- How can the measures support learning and sharing promising practices and strategies that promote improvements?
- How will colleges learn in more detail about the measures and how to use them, i.e. what is the learning year?



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The following is a summary of key points covered in the document:

- Increasing attainment for Washingtonians is a critical goal for Washington's regional economies and the economic well-being of their area residents.
- The initiative will measure incremental improvements in student achievement using "momentum points" that were empirically identified.
- The momentum points count nearly all students, *regardless of their program or fund source*.
- Colleges can use the momentum points to measure their year-to-year improvements. Each college is compared to itself. 2006-07 data are used for the first year baseline.
- Colleges and the system can use the momentum points as supporting evidence for their promising practices and to develop strategies for improving achievement.
- 2007-08 is designated a learning year for colleges to become familiar with and adopt the new measures in preparation for the first performance year in 2008-09. The learning year is built around a series of interactive television meetings for colleges to convene campus teams.
- Key documents and resources related to the initiative will be available on the web (under construction). These documents include a background literature review, summary of promising practices submitted by Washington colleges in 2006-07 and other current information and links.

Raising educational attainment is a critical goal

Do Washington's residents have the skills they need for the state to be competitive? Where will tomorrow's workforce come from? Many experts point out that to meet the demand for skilled workers with college certificates and degrees; we will have to improve attainment for both young and current workers. One-third of all current workers have at most a high school education. Growth in non-English-speaking adults adds an additional dimension to preparing workers and increasing attainment.

Is there a reason for community colleges to focus on raising attainment as a critical goal? Yes, with their open doors, two-year colleges are entry ways to post-secondary education for a wide variety of students. The potential is strong to move them to higher levels of attainment in a system that is intrinsically student-centered and focused on student success. Every year, nearly eight in ten of all new (younger and older) Washington community and technical students start with at most some college, including many with a high school diploma and others with far less.¹ While colleges make a significant contribution to raising attainment, there is room for improvement if we are to keep pace with the state's needs.

How the measures were developed

In September 2006, the State Board directed staff to develop an initiative to measure and reward colleges for improving student achievement. A task force comprised of board members, college presidents, college trustees, and faculty representation established a set of principles to frame and guide the initiative. It should measure incremental gains and progress that leads to improved

¹ This includes students attending for workforce and transfer goals. New transfer students, being younger than other students, typically entered with no prior experience (65 percent). Almost half of the new workforce students enter the colleges with no prior college education. Another one-fourth has at most some college, but no college degree. When adults with limited English and low basic skills are included, the percentages of students needing to reach at least 1 year of college in order to raise attainment levels in the state population is considerably higher. Source: SBCTC.

college level achievement in all missions without favor. It should focus on student achievement improvements that can be influenced by colleges and allow colleges the maximum flexibility to improve according to the diverse needs and characteristics of their local communities and area residents. The measures should be straightforward, simple and readily understandable points in students' educational progress. The measures should be able to quantify each college's annual improvement and help each college to develop and share with other colleges the practices and strategies that are most effective in advancing student achievement.

The measures were designed over a series of meetings in which a large system advisory committee assisted the data analysis. The Columbia University Community College Research Center assisted in empirically testing the measures. National experts on performance funding also weighed in via telephone interviews to further inform the group meetings and measures development.

Measuring “momentum” towards certificates, Associate Degrees, apprenticeships and beyond

National research concludes that students make progress when they have academic momentum irrespective of background characteristics and without regard to issues of social or academic integration. Some students enter college with momentum, such as those with college level skills in reading, writing and math. Community and technical colleges serve students with a wide range of academic skills, from illiteracy to strong college preparation in high school, including many who enter with dual enrollment credits earned while still in high school. One of the jobs of colleges is to help students, from the least prepared to the most college-ready, to build and maintain their academic momentum towards higher achievement.

To make progress toward their educational goals, students must remain enrolled and accumulate college-level credits long enough to achieve a certificate or degree. Research shows that students need to complete at least one year of college-level work to begin to realize meaningful earnings gains and to meet employer needs for skilled workers. State research identified completing at least one-year plus a credential as the “tipping point” for students. Research to date indicates that momentum gained in the first year explains the bulk of the differences in student persistence and success.

How improvement will be measured

The new initiative sets forth six “momentum” points that represent critical steps in student progress. Two of the points directly measure 1st year college-level progress, which are earned for earning the 1st 15 and the 1st 30 college level credits. Another point is earned for the 1st 5 college-level credits in a math class that meets the requirement for computation (applied degree) or quantitative reasoning (transfer degree). These points presume levels of college readiness.

However, not all students are college-ready. In fact, students who are less than or even far from college-ready may take longer to build momentum. In keeping with the guiding principles, students from all missions must be measured and not disfavored by the measures. Two momentum points are measured for advancing through adult basic education and English as a Second Language and completing pre-college English and math to become college-ready. The former is measured for pre and post test score gains on a standard test (CASAS). The latter is for every level of instruction with a grade that qualifies the student to advance to the next highest

level. Both advancing through basic skills and becoming college ready are measured and counted for each level of instruction a student completes and points can be garnered multiple times.

The last momentum point is gained for earning a degree, completing apprenticeship training or completing a certificate (and having at least 45 credits).

All of the momentum points can be influenced by the colleges. Two commonly mentioned outcome measures are not included for college transfer and employment results. These measures, while extremely important, typically can be affected by external factors (the economy and 4-year transfer policy). They will continue to be accounted in outcomes resulting from college education and training, but are not included in the achievement measures.

Which students count?

All students² are included, *regardless of their program or fund source*, recognizing that student goals need to be shaped throughout the college experience. A recent national study noted that student intent can be misleading. Student goals in college data systems can be shaped and re-shaped by their college experiences and colleges themselves can play a role in influencing student goals.³ To this end, the colleges need to consider all students regardless of their initial reasons for attending for maximizing the potential opportunity available.

Momentum Points Leading to Higher Post-Secondary Education Attainment Using the Points to Measure Year-to-Year Improvements

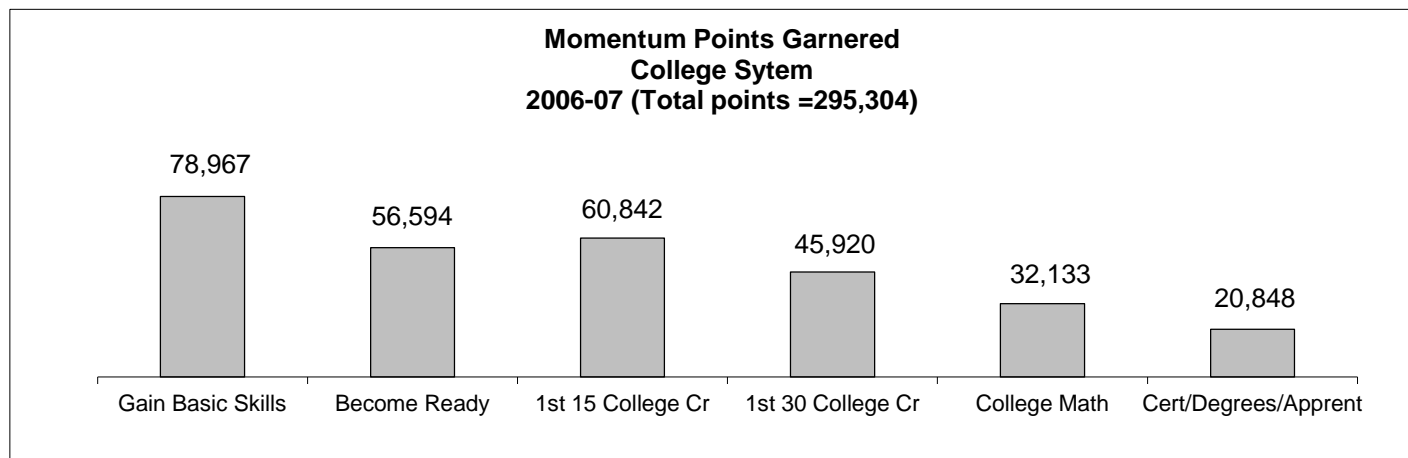
Year-to-year improvement is measured by the total point gain between the performance year and the previous highest year. Performance measurement begins in 2008-09. The initial baseline year is 2006-07, the most recent year for which data are available.

Increase Basic Skills	Become College Ready	Earn 1 st 15 College Credits	Earn 1 st 30 College Credits	Earn 5 college credits in college level computation (technical programs) or quantitative reasoning (math/logic) class	Advancement to tipping point and beyond (certificates degrees)
Multiple-every time a student makes a significant test gain in math, listening or reading on CASAS or earns a GED/HS diploma.	Multiple- every time a student completes a level in pre-college English and/or math with a qualifying grade for advancement.	The first time each point is achieved.			Single count for earning degree, certificate or completing apprenticeship during the year. Certificates counted if 45 or more credits also earned.

² All students for whom the State Board has a college transcript are measured for points. The only exception is international students who are excluded. State corrections students are included and assigned to the college administering the state corrections program.

³ In a national study that examined community college student success in relationship to student goals, the researchers found that student goals are not fixed, initial clarity or lack thereof was not totally predictable of success, and regardless concluded that colleges themselves have a role to play in shaping students' goals. (Bailey, Leinbach and Jenkins,2006)

The total points garnered in the system were 295,304 in 2006-07. The graph below shows the points garnered in each momentum point. College points for each year are provided in the appendix. Points garnered in 2005-06 are also in the appendix for information only.



College FTE enrollments can affect the point measures. If FTE enrollments decline, colleges will garner fewer points. The measurement system can take this into account and adjust for FTE enrollment in years of significant change, thereby mitigating enrollment declines as a variable affecting total points.⁴

How colleges can use momentum points to implement an achievement strategy

The following two sections describe two ways colleges can directly use momentum points to develop and implement achievement strategies. The first way to use this information is as supportive evidence to compare and then share promising practices with other colleges. The second way colleges can use the information is to slice and dice their evidence for different student characteristics and programmatic features that can help implement new and change existing practice. Both of these ways are modeled below. The data in the examples are for TRIO and Pell students in one college.

Using momentum points as supporting evidence for best practice

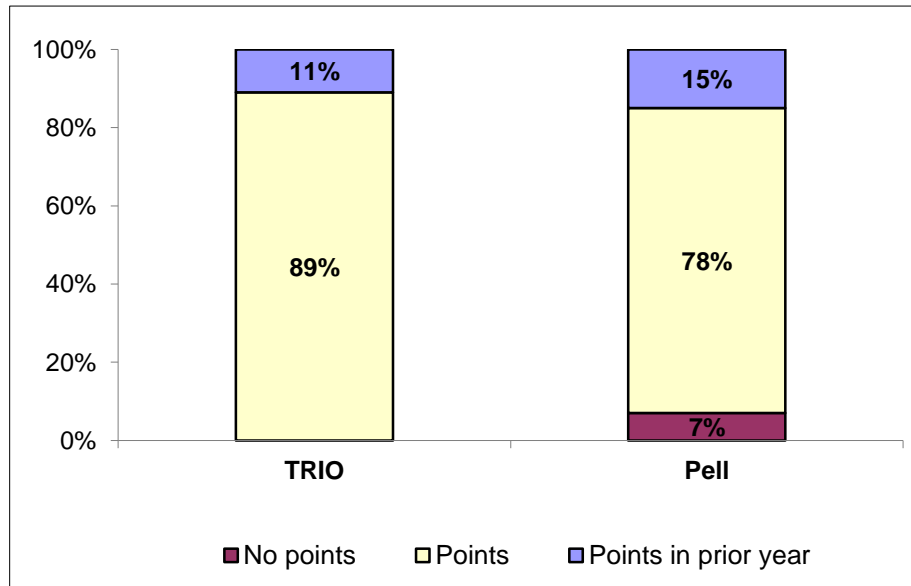
The momentum points can be used for supporting evidence of the contributing gains to achievement made with different practices and strategies. Efforts to improve student achievement based on momentum point data is consistent with the Retention Framework that the Instruction and Student Services Commissions began last year and goes along with the promising practices being compiled as a common measurement system for vetting and adding new practices to them.

Two measures that can be used as evidence of best practice are: the percentage of students who earned points (gained momentum) and the percentage of students who earned specific points (where are they gaining momentum).

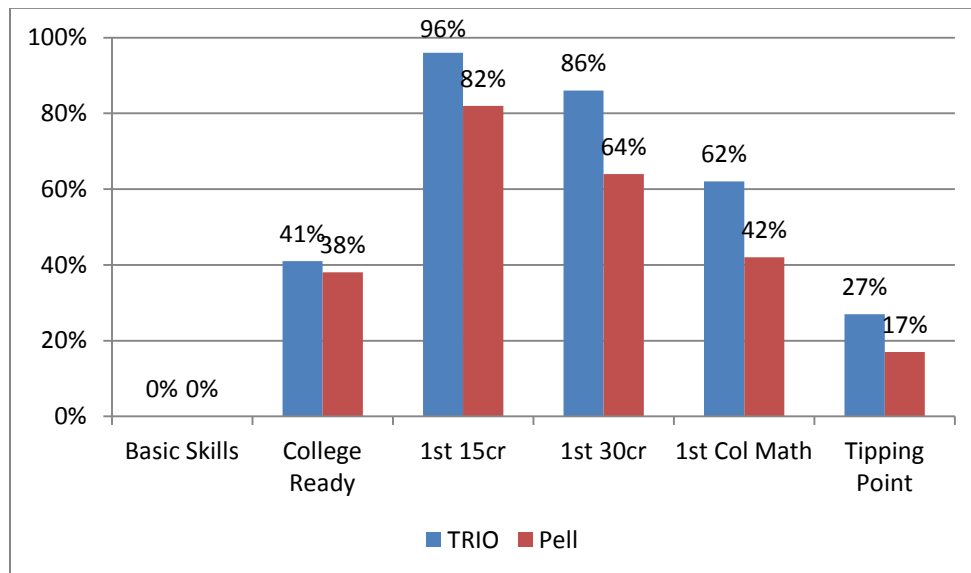
The example below is for TRIO and Pell students at one college.

⁴ While separated in this measurement system, colleges' base FTE allocations already are subject to target bands and penalties for failing to meet them.

Example 1-- Using Momentum Points to Provide Evidence for Best Practice: Percent of TRIO and Pell Students Earning Any Points



Example 2-- Using Momentum Points to Present Evidence for Best Practice: Percents of TRIO and Pell Students Completing Different Types of Points



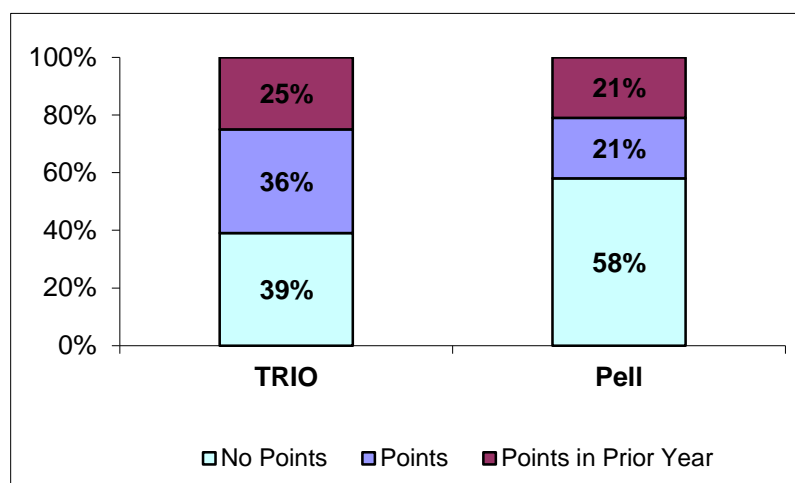
Both examples demonstrate that in comparison, TRIO increases momentum in students more than Pell alone, although both are good strategies. One hundred percent of TRIO students gained points compared to over 90% of Pell. TRIO is especially successful in adding momentum above Pell for college-level credits, math and getting students to the tipping point during the year measured. (Neither TRIO or Pell involved basic skills. A slightly higher percent of TRIO earned college ready). As data for subsequent years are added, colleges can look at this longitudinally.

Using momentum points to identify potential students and areas colleges can target to improve their achievement

In addition to their use in supporting and learning best practices, momentum points can also be used by colleges to analyze their own data for college discussion and planning to improve achievement (and increase point totals). During the Learning Year, the college teams will develop and share those analyses that appear most useful to colleges. Again using TRIO and Pell, two example analyses are provided below.

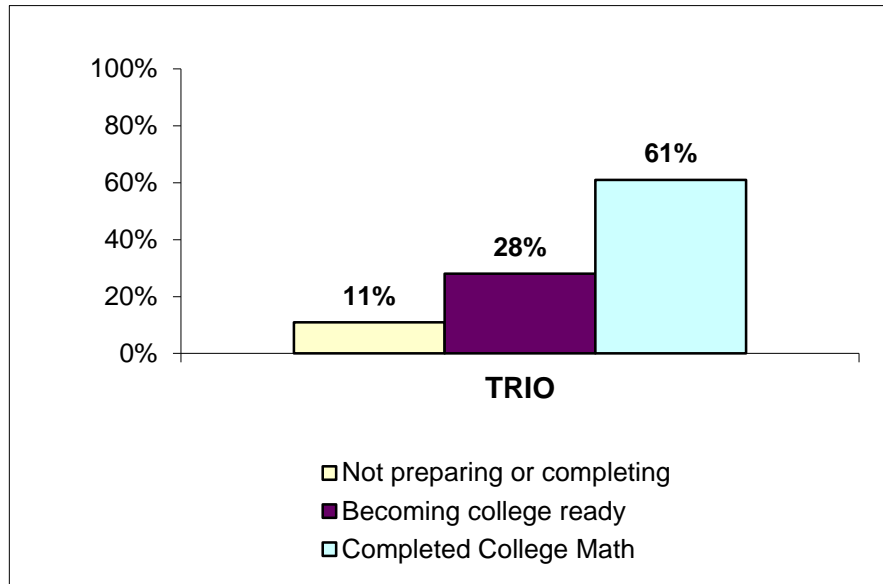
The results in the initial analysis of points (example 2), present significant differences in the evidence for how TRIO and Pell earn college quantitative points (62% compared to 42% respectively). What further information could this college analyze to begin to learn more and what next steps could the college take based upon this additional evidence? The first analysis looks at quantitative points for TRIO and Pell students. The evidence suggests that TRIO students gain more quantitative momentum than Pell alone.

Example 3 -- Using Momentum Points to Analyze Specific College Students: Gaining Quantitative Momentum for Younger and Older TRIO and Pell Students



What do we know about the students who have not completed college math? Looking at TRIO, the analysis below finds that 61% of TRIO have completed college math. Another 28% are becoming college ready (taking pre-college courses). About 11% are not doing any math related work. This college might want to learn more about the students becoming college ready and to find out more about why the others are not preparing at all.

Example 4-- Using Momentum Points to Analyze Specific College Students: Percent of TRIO Students Completed, Preparing for and Not Preparing for College Math



Conclusion: The Learning Year in 2007-08

Over the next 10 years, Washington State faces challenges in preparing both new entrants and a large portion of the current workforce for higher levels of educational attainment. With this view of Washington State’s economy and workforce in mind, the State Board directed staff to develop an initiative for rewarding colleges for increasing post-secondary attainment for Washingtonians.

This paper describes the new initiative being launched to further student achievement. The initiative takes into account all students. While the measures appear simple and intuitive, using them is more complex requiring broad acceptance and understanding of them by each college. 2007-08 is a learning year for the system. The goals for this year are to:

- Ensure colleges’ access to and ability to use their own data about students and momentum points.
- Complete a year’s experience monitoring points – in real time and at the end of each quarter.
- Provide means for colleges to share practices that increase the number of students achieving momentum points.
- Lead to an actionable plan for the first “performance year”.

The state board and the colleges will need to work together to adapt and use the new measures for the three purposes of measuring incremental gains; learning and sharing best practices, and developing strategies to increase student progress.

Four interactive television meetings will be scheduled for each college to assemble their team and meet throughout the year with State Board staff. In each session, SBCTC will provide each college a database for the momentum points accumulated by each student. In addition, the database will have information on student demographics and other characteristics (for example, there will be an indicator for students who receive Opportunity Grants, Pell Grants and State

Need Grants). In these sessions and through the year, the ITVs will focus on ways to analyze and use the data to develop and implement achievement strategies locally in preparation for 2008-09, the first performance year.

For further and more current information on the initiative that includes a literature review and beginning inventory of promising practices go to:

http://www.sbctc.ctc.edu/college/e_studentachievement.aspx.

Acknowledgements

The Washington State Board for Community and Technical Colleges wishes to acknowledge the College Spark Foundation, for supporting the Washington State research and work that frames the initiative. In addition the State Board wants to acknowledge and thank work done as part of Achieve the Dream and the Ford Foundation's Bridges to Opportunity that has helped inform the initiative.

College Baselines 2006-07

2006-07	Basic Skills	College Readiness	1st 15 Cr	1st 30 Cr	Quantitative/ Computation	Certificate, Degree, Apprenticeship	06-07 TOTAL POINTS
BATES	919	654	2,280	1,631	125	413	6,022
BELLEVUE	2,137	2,813	4,079	3,012	2,490	1,192	15,723
BELLINGHAM	555	143	733	548	349	336	2,664
BIG BEND	1,167	924	780	513	439	339	4,162
CASCADIA	841	844	847	637	622	257	4,048
CENTRALIA	2,096	1,009	946	716	600	336	5,703
CLARK	3,711	4,169	2,807	2,200	1,561	1,000	15,448
CLOVER PARK	1,258	1,100	1,214	1,130	425	381	5,508
COLUMBIA BASIN	2,935	1,444	2,069	1,564	1,252	754	10,018
EDMONDS	4,919	2,910	2,478	1,832	1,609	854	14,602
EVERETT	4,024	2,630	2,449	1,769	1,357	830	13,059
GRAYS HARBOR	2,938	773	692	502	477	281	5,663
GREEN RIVER	2,747	2,369	2,720	2,117	1,423	774	12,150
HIGHLINE	4,007	444	2,170	1,755	1,176	803	10,355
LAKE WASHINGTON	2,431	1,111	1,259	907	477	375	6,560
LOWER COLUMBIA	1,034	1,408	976	692	410	374	4,894
OLYMPIC	1,258	2,468	2,353	1,763	1,179	978	9,999
PENINSULA	2,302	708	1,238	767	227	246	5,488
PIERCE FORT STEILACOOM	1,890	2,233	2,989	2,163	1,857	738	11,870
PIERCE PUYALLUP	744	1,135	1,259	1,046	849	341	5,374
RENTON	5,493	90	867	703	342	609	8,104
SEATTLE CENTRAL	3,078	2,159	2,522	1,984	1,260	879	11,882
SEATTLE NORTH	2,332	627	1,897	1,175	1,267	476	7,774
SEATTLE SOUTH	2,220	1,053	2,028	1,366	740	303	7,710
SHORELINE	1,750	1,553	1,756	1,406	911	639	8,015
SKAGIT VALLEY	1,112	2,351	1,584	1,135	773	536	7,491
SOUTH PUGET SOUND	1,556	1,778	1,785	1,308	962	669	8,058
SPOKANE COMMUNITY	9	2,420	2,452	1,993	1,387	1,162	9,423
SPOKANE FALLS	7,114	2,588	2,681	2,111	1,394	816	16,704
TACOMA	1,983	2,921	1,835	1,452	1,166	723	10,080
WALLA WALLA	3,000	1,245	1,287	958	550	593	7,633
WENATCHEE VALLEY	1,679	1,231	1,128	879	701	537	6,155
WHATCOM	1,061	2,797	1,327	1,056	1,064	620	7,925
YAKIMA VALLEY	2,667	2,492	1,355	1,130	712	684	9,040
SYSTEM	78,967	56,594	60,842	45,920	32,133	20,848	295,304