

Washington State Student Completion Initiative

Project Overview

The Washington State Board for Community and Technical Colleges (SBCTC) proposes a partnership between the Washington State Community and Technical College System (CTC) and the Bill and Melinda Gates Foundation to improve access to and completion of higher education for low income young adults in Washington State. This project directly impacts the strategic goals of the State Board to strengthen the economy by providing an educated and skilled workforce, increase educational attainment for Washington residents and apply technology and innovation to the improvement of student success.

The SBCTC requests \$5.295 million to implement the Washington State Student Completion Initiative (WSSC). This initiative includes four multi-college student completion projects that will yield long term results by breaking down key barriers to completion throughout the Washington community and technical college system. The four foci of the WSSC include expanding access and success in high enrollment gatekeeper courses, reforming developmental mathematics, and building new integrated career programs (I-BEST) and providing institutional incentives to increase completion via the Washington Student Achievement Initiative. The Washington Student Achievement Initiative is co-founded with the Ford Foundation for Education with their investment of \$800,000 and the Washington State Legislature.

Project Description

The four components of the Washington State Student Completion Initiative are:

1. Online Course Access and Success:

- a. **Goal:** Redesign 80 high enrollment, gatekeeper and pre-college courses for online and blended delivery to improve course completion rates, lower textbook, time, and travel costs for students, and increase content sharing across colleges. This redesign will be accomplished using open source materials that will reduce textbook costs for students.
- b. **Rationale:** Student success in gatekeeper courses (first year college academic courses) falls below the rate of success for other higher level college courses. Instructional materials in these courses are expensive and limit students' ability to afford college. For students to get the courses they need, when they need them, at an affordable price, these disparities need to be eliminated.
- c. **Strategy:** This project will research the disparity in completion rates, create instructional improvement teams to redesign courses using open source materials, and will disseminate these improved courses

throughout Washington community and technical colleges and with the rest of the world using creative commons licensing.

2. Developmental Math Reform:

- a. **Goal:** Improve developmental mathematics outcomes that scale within and across institutions through curriculum reform by community college math faculty departments
- b. **Rationale:** Of the 13,000 full-time-equivalent students in developmental education, over 9,000 FTE are enrolled in developmental math and that enrollment has grown by 4% over the last 5 years. Mathematics continues to be the major hurdle for students' completion of certificate and degree programs.
- c. **Strategy:** This project will develop and support a coalition of community and technical colleges working collaboratively to implement substantive changes in core educational practices in developmental math. A key feature of this collaborative effort is the commitment from entire math faculty departments rather than individual faculty members. This re-design will be built on the success of Washington's Transition Math Project, national reform efforts such as Carnegie's Strengthening Pre-collegiate Education in Community Colleges (SPECC) and the course redesign work by the National Center for Academic Transformation (NCAT) and others.

3. I-BEST:

- a. **Goal:** Extend educational career pathways for low income, underprepared students by expanding Integrated Basic Skills & Training (I-BEST) programs into associate degree programs for a full-range of students without college-ready skills.
- b. **Rationale:** Begun in 2003, the I-BEST program provides an integrated, cohort model for accelerated preparation in career programs for students with low academic skills (ABE). The program has shown positive results for a population with significant barriers and has grown 122% since 2006. While effective for students in one-year certificate programs, the students do not have the I-BEST model support in higher level programs e.g. Associate of Applied Science, that would produce higher salaries. The program is also not accessible for students above the ABE skill level but who still need for substantial remediation.
- c. **Strategy:** This proposal would expand the I-BEST model within 10 colleges initially and expand to 17 in year three, and all Washington colleges within four years. Colleges would redesign both years of associate degree programs in critical workforce areas and would expand the access for those programs to all students with academic skill deficits.

4. Washington Student Achievement Initiative:

- a. **Goal:** Fully implement the Washington Student Achievement Initiative that provides financial incentives for institutions based on increases in student achievement.
- b. **Rationale:** The Washington Student Achievement Initiative is built on the study of Momentum Points completed by the Community College Research Center at Columbia University. The momentum points study has shown that students who reach key stages of completion (basic skills gains, completion of pre-college level English and math courses, completion of 15 credits and 30 credits, completion of college-level math) are more likely to be retained and earn certificates and degrees. The Washington Student Achievement Initiative provides financial incentives for colleges who see higher numbers of students who reach these key completion points.
- c. **Strategy:** While supported strongly by the Washington State Legislature, at the level of \$3.5 million, that amount will not allow full implementation at a level that will impact institutional outcomes. It is proposed that the Ford Foundation and the Bill and Melinda Gates Foundation jointly fund an additional \$1.6 million to allow the program both the reach and multi-year stability necessary to see the impact of the incentives.

Both I-BEST and Washington Student Achievement Initiative have broken new ground as national models for student completion and this project will expand and deepen the innovation and impact of higher education reform in Washington State.

All four projects include curriculum or service delivery redesign that will impact thousands of students beyond the life of the funding period, aim at systemic change rather than individual faculty or college innovation, and focus on lowering costs and improving success for low income students.

Overall Outcomes of the Washington State Student Completion Initiative

- Create broader and more extensive pathways for low skill students to move beyond the Tipping Point to degrees.
- Research and improve 80 high enrollment classes, especially math classes, to increase the number of low-income students who are successful in college and achieve the Tipping Point.
- Test an innovative performance funding system that focuses attention and rewards on overcoming the early hurdles students face that cause them to leave before completing even a year of college.

Online Course Access and Success

Last year 13,000 low income young people under age 26 took online courses through Washington community and technical colleges.

To better serve these students and all students in the CTC system, SBCTC proposes to research, redesign, assess and open 80 high enrollment pre-college and gatekeeper courses (see Appendices B and C) to

- improve completion rates through best practices in instructional design and active learning,
- increase access by reducing total student costs with open textbooks and other open educational resources, and
- increase access by making all 80 courses digital, so colleges can offer additional online or blended sections.

SBCTC proposes the first 25 courses will be funded by the Bill and Melinda Gates Foundation and the remaining 55 courses be funded by the Washington State Legislature.

This project goes beyond incremental change and addresses our system's (as well as a global) need to (a) redesign high enrollment common curriculum to improve completion rates and (b) significantly reduce textbooks costs to make college more affordable for all students.

The first 25 courses selected for redesign meet the following criteria:

- all are gatekeeper courses (some are pre-college level courses);
- the courses have high enrollments;
- low income students make up a high percentage of course enrollments;
- the completion rates for the courses are lower than average (less than 90%); and
- the courses are part of an educational pathway.

The direct beneficiaries and geographic areas impacted as a result of this effort are:

- 386,931 students enrolled in the CTC system (excluding continuing education). Of that number, 36% or 137,795 students took one or more of these 25 courses.
- The typical student took two of these 25 courses.
- 30,396 of those students took one or more of these 25 courses as an online course.
- 28,337 of the 137,795 (20%) students have the characteristics the Gates foundation focuses on – low income and under the age of 26.
- This project will scale globally as SBCTC will put creative commons licenses on all 80 redesigned courses and give them away to the world.

Measures of Success

- Completion rates increase 10% in each redesigned course. The goal is to have 95% completion rates in all redesigned high enrollment gatekeeper courses.
 - Current pass rates for the 25 courses (to be redesigned with Gates Foundation funds) are in Appendix B.
 - All 80 redesigned courses will be monitored for student completion rates. The data system is in place for tracking completion rates, student demographics, course delivery (online, blended, etc.) and multiple other data.
 - Completion rate data will be monitored for low income younger students and these courses will be iteratively redesigned over time to continuously improve the courses and, most important, move larger numbers of low income younger students through these high enrollment pre-college and gatekeeper courses.
- 80 redesigned courses are adopted by all 34 colleges in at least 20% (64,200 students) of the total sections each quarter in the 2011-2012 academic year and increasing adoptions in subsequent academic years.

Money saved by students due to not purchasing expensive textbooks. Estimate \$6.4 million in savings annually if 20% of the colleges' sections adopt the 80 redesigned courses.

The college system's annual 25% online and blended-learning growth rate (200% greater than the national average) and its commitment to shared-enterprise eLearning applications and services provides a supportive environment for sharing the redesigned 80 courses among all 34 colleges and with the world.

Milestones

<p>Milestone 1-a Build a cadre of course redesign teams comprised of college faculty, librarians, instructional designers, institutional researchers and other stakeholders.</p>
<p>Milestone 1-b Create course redesign templates using "learning 2.0" pedagogies, online learning tools and support services, instructional design and other best practices.</p>
<p>Milestone 1-c Provide broad online access to the 80 redesigned courses by enabling students to take the courses at any system college.</p>

Key Partners

- Key partners are critical to successful implementation for online course access & success:

- Washington community and technical colleges – the redesign teams will be comprised of college faculty, librarians, institutional researchers, and instructional designers. Grants will go to colleges to pay for faculty and staff release time, travel and professional development activities.
- The Sloan Consortium (Sloan-C) has offered to provide faculty professional development in their “teaching effectively online” courses to help the redesign teams learn online best practices.
- Carnegie Mellon’s Open Learning Initiative has offered to participate on the redesign teams and provide, already created, web-based blended courses for 4 of the 80 courses: biology, microeconomics, statistics and logic.
- The pre-college math courses redesigned in this project will use the pedagogy and assessment practices developed by the Developmental Math Reform project.

Why Bill and Melinda Gates Foundation Funding is Needed

SBCTC proposes 25 of the 80 course redesigns be funded by the Bill and Melinda Gates Foundation.

Without these grant funds, our system will not be able to research the state of the art pedagogy and practices to improve course completions and find and integrate open education sources, nor will we be able to hire the course redesign teams to develop the redesign templates and the courses.

With the funding, we can do all of the above and leverage that work to redesign an additional 55 high enrollment courses with money from the Washington State Legislature. The Legislature recently provided an appropriation of \$2.225 million to advance eLearning in the Washington community and technical college system, \$825,000 of which is for course redesign using open educational resources and open textbooks. These funds will be used to develop the additional 55 courses using the rubrics and methods developed in this project. This combined investment will drive our system toward changing how we think about, design, share, and continuously improve instructional resources.

Developmental Math Reform

The successful transition into college-level math coursework—both for high school students and for adult basic skills students—continues to be a major challenge for Washington community and technical colleges.

In Fall 2008, pre-college course enrollments in the state’s community and technical college system represented over 13,000 full-time equivalent students (over 34,000 headcount), with slightly over 9,000 of those FTEs in math (4% increase over the past 5 years).

Data from the Washington Student Achievement Initiative

(http://www.sbctc.ctc.edu/college/e_studentachievement.aspx) reinforce the conclusion that math continues to be the major hurdle for students to complete certificates and degrees and find family-wage employment:

In 2007-08, there were over 120,000 transfer-intent students enrolled in Washington two-year colleges, almost 80% of whom still needed to complete a college-level math course. Only a quarter of these students, 31,000, attempted a pre-college math course, and of these students, only 70% (less than 22,000) made any math-related achievement gains, and only 40% (12,400) made substantial gains (2 or more levels or completing college-level math). That means only 10% of transfer intent students made substantial progress towards completing math required to earn an Associate degree.

Measures of Success

This proposal is designed to improve these areas of math-related student achievement; the goal is to increase the overall pre-college math achievement gain at participating colleges by 15% and the substantial gain rate by 10% over the 3-year period of the grant.

Milestones

Milestone 2-a

Design new institution-wide and comprehensive models for providing pre-college math curriculum in community and technical colleges..

Milestone 2-b

Develop a statewide math faculty community of practice with emphasis on effective instructional practice geared to college readiness preparation in pre-college math programs.

Milestone 2-c

Extend a web-based math assessment resource tool for students and teachers (Washington Math Assessment and Placement, WAMAP.org) to support pre-college math programs.

Lessons Learned

Much of the prior work attempting to impact the critical need for higher and better math achievement has focused on changing student behavior or providing additional technological or out-of-class support for students, with relatively modest success.

Where effective classroom strategies do exist, they typically are implemented by individual faculty without collective ownership or sustained institutional support.

This proposal builds on and extends the successes of, and lessons learned from the [Transition Math Project \(TMP\)](#), including the College Readiness Mathematics Standards

as a central foundation, shifting the focus of intervention in high schools to the pre-college math programs in Washington community and technical colleges.

It builds on the curricular and pedagogical changes underway in Washington as part of the Transition Math Project and the small cohort of six *Achieving the Dream* colleges as well as the core principles and lessons learned from relevant national work such as

- [Carnegie’s Strengthening Pre-collegiate Education in Community Colleges project](#) (SPECC) ,
- [Colleagues Committed to Redesign \(C²R\) work by the National Center for Academic Transformation](#), and
- emerging work on developmental education being led by the Carnegie Foundation and Uri Treisman from the Charles Dana Center at the University of Texas.

In particular, the proposed project shares significant principles and core elements with the SPECC project in California, including

- the critical emphasis on the core of educational practice in the classroom,
- the focus on collaborative teacher inquiry and learning as essential to changes in practice and ultimately in student learning, and
- the insistence on grounding the work in compelling evidence about student achievement.

While in some ways building on and extending the SPECC work, the key differences between the work proposed here and the work of that project include the targeted focus on math,

- the emphasis on institutional change through engaging faculty at both the individual and departmental level,
- the foundation and momentum provided by both the Transition Math Project and the Achieving the Dream efforts in the state, and
- the effort to spread and collaborate around specific strategies across multiple colleges.

Theoretical Construct

Based on the research literature on teaching and educational change and our experience in TMP, there are several **critical design principles** central to this proposal:

1. Serious and sustained improvement in student college and career readiness in mathematics requires **an intentional focus on influencing teacher beliefs and behaviors** around what Richard Elmore refers to as the “core of educational practice”,
 - subject matter (including critical concepts and methods of inquiry related to math content),
 - student learning (especially the ways in which students’ mathematical thinking develops), and

- teaching practice (the nature of and effects of various instructional approaches).
- 2. **People support and sustain work that they “own”** by actively helping to design and refine in terms of implementation rather than having it imposed from the outside.
 - This kind of “small solutions” approach has proven to be successful in creating more ownership and energy around change work than would be possible with top-down mandates or policy levers alone, but by itself is insufficient if the ultimate goal is to influence systemic change.
 - **This proposal would combine a coordinated statewide effort supporting the college coalition in order to have as broad an influence as possible on students and teachers around the state.**
- 3. “Scaling up” innovations—creating conditions for multiple faculty and multiple colleges to adapt and implement successful improvement strategies—has proven to be one of the most complex and challenging issues facing educators in addressing long-term problems related to student achievement.

As Cynthia Coburn (“Rethinking ‘scale’: moving beyond numbers to deep and lasting change,” *Educational Researcher*, August/September, 2003, 32(6), 3-12) has noted,

- scale means much more meaningful components than just multiple sites “adopting” a particular strategy or program;
- it involves depth of understanding of core principles,
- sustainability in terms of substantive change supported over time, spread both within a school or college as well as across institutions, and
- a fundamental shift in knowledge about and capacity for extending the reform work.

As Elmore argues with respect to scaling up innovations, “Most investments in curriculum and professional development are lost because they are not actively managed.” (“Improvement of teaching at scale,” NSF Learning Network conference, January 2006).

SBCTC’s Critical Coordination and Connection Role

The coordination and connections provided by statewide oversight will allow SBCTC to leverage the work of the colleges, learning from and promoting a variety of innovative home-grown practices proven to be successful and sustainable in local contexts.

To serve in this role most effectively, SBCTC’s statewide leadership will:

- Define the framework within which the colleges will operate, ensuring a **consistent focus** on the College Readiness Standards across the projects;
- Coordinate activities and resource-sharing across the projects in order to gain greater statewide benefit from resources being used and to **extend the reach of and scope of the local projects**;

- Provide ongoing technical support and assistance by **using critical resource experts** both in and outside of Washington and building a network of leaders/resources across major Washington math initiatives;
- Maintain and promote **an electronic clearinghouse of resource materials** on designated good practices and “lessons learned”;
- **Require a sustainability emphasis** from the beginning to plan for college support after the grant;
- Include a targeted focus on data collection/evaluation for each college site focused on **consistent and clear metrics**;
- Evaluate efforts using the **Student Achievement measurement system**.

Specific Proposed Activities

This project will develop and support a coalition of seven colleges (six community and technical colleges and a Washington tribal college) focused on improving student math achievement by making substantive changes in core educational practices (curriculum, instructional practices and teacher support, assessment) and teacher beliefs and behaviors in their pre-college math programs.

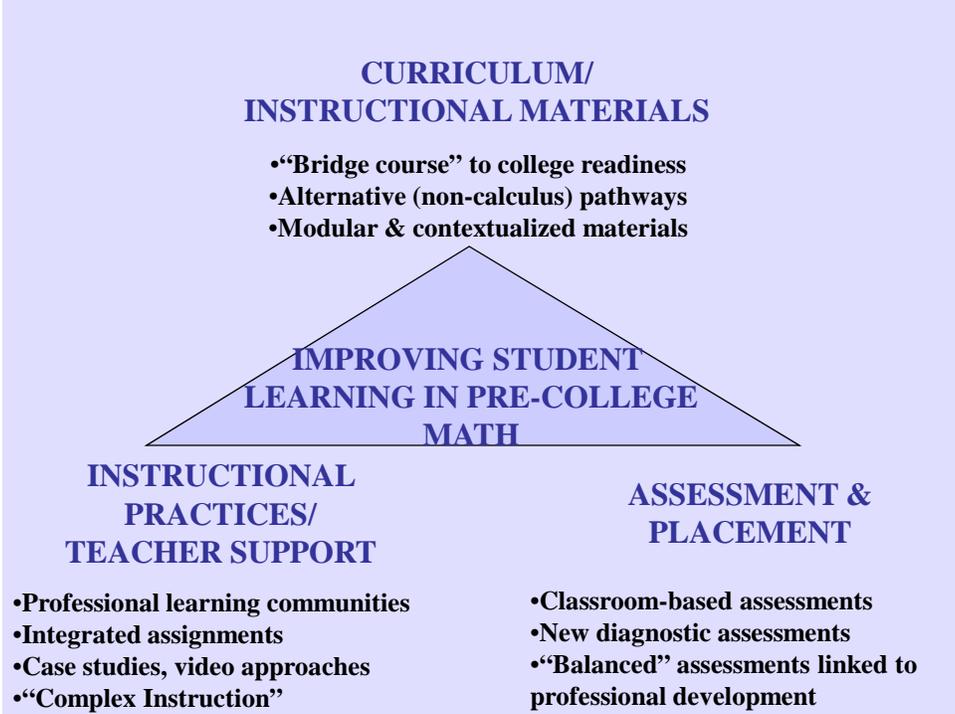
Institutions will be selected through a competitive process during 2009-2010 using key parameters, including their willingness to commit fully to the core principles of the project, assemble a credible team of faculty and instructional leaders, engage part-time faculty in the work, and strengthen relevant community partnerships (businesses, area high schools, university colleges of education).

A key feature of these college teams is that they would include a solid commitment from the math department collectively, not just from individual and isolated math faculty.

During Fall 2009, faculty from interested colleges will be guided through a review and analysis of a targeted menu of “practices worthy of attention” across the major domains of educational practice: curriculum, instruction (approaches and teacher support), and assessment (see graphic below for some examples).

The goal is to build a college/math department consensus around a set of core strategies and then implement those strategies across the full range of the pre-college math curriculum at the college, going to “scale” within the college instead of being enacted in isolated classes.

SBCTC would work with colleges implementing similar strategies to help them collaborate and learn from each other’s efforts to explore the issues and challenges related to going to scale across multiple colleges and math departments.



Planning/Capacity-building Year (2009-10)

Fall 2009,

- **convene teams from colleges interested in participating** in the project in order to **explore the latest research on practices worthy of attention in math**, especially pre-college math, select one or more primary strategies, and
- **develop their RFP proposals**
- We will be **encouraging a Washington tribal college to participate** in the project as a seventh college because of the significant math needs at these colleges and the opportunity to **collaborate with and learn from tribal college faculty** around the particular needs of the students they serve

By January 2010,

- **select seven colleges** and review/refine project proposals;
- **finalize core college teams and Faculty Learning Communities** around critical math strategies/approaches
- **conduct baseline evaluations**

Implementation and Dissemination Years (2010-12)

- **College teams pursue selected strategies** with at least quarterly technical assistance and follow-up from designated resource people

- Coalition colleges and designated Faculty Learning Communities across the colleges meet regularly (face-to-face and electronically) to **share ways of representing key mathematics concepts, strategies for solving standards-based problems, and ways to address student misconceptions**
- State leadership facilitates and manages **ongoing formative assessment** of coalition successes, challenges and coordinates state/local linkages across the colleges to maintain focus on specific action around selected strategies
- **College teams share project results statewide** through publications, studies, conference presentations (including the annual Washington State Community College Math Conference), and local institutes and seminars
- **Develop policy briefs and white papers** on key learning from coalition efforts
- **Convene a pre-college math institute** showcasing results and implementation strategies

The most immediate beneficiaries of the project are the students and faculty from the colleges involved in the coalition, but the project would include statewide dissemination in an effort to spread the impact of the coalition interventions across the Washington higher education system.

Key Partnerships

SBCTC will partner with the Washington Center for Improving Undergraduate Education. It has a long-standing track record of organizing and leading faculty-driven efforts around a variety of critical educational issues including integrated learning, pre-college instruction, and quantitative literacy. The Center leadership has worked extensively with higher education institutions both in Washington and around the country and is well-prepared to be involved in this work.

Another critical partner in this work is the Center for Learning Connections at Highline Community College, currently providing coordination and support for the TMP grant led by SBCTC designed to improve college readiness in mathematics and foster successful student transitions from high school to college and the workforce.

Areas of Similarity and Difference between the Math On-line work and Developmental Math Reform Projects

One similarity is that the Developmental Math Reform project includes Faculty Learning Communities so SBCTC could incorporate or integrate the math online redesign work team into the FLC work happening with the colleges in the Developmental Math Reform project so that there's a strong information flow between the two efforts.

In terms of differences, the On-line Math course re-design

- a) focuses on redesigning but maintaining specific existing courses while the Developmental Math Reform proposal involves re-thinking the content, pedagogy and assessment around pre-college math courses and the overall pre-college math curriculum and doesn't necessarily presume that courses like "elementary algebra" or "intermediate algebra" will continue to exist in the same format or configuration as they does now
- b) involves individual faculty working in cross-college teams while the Developmental Math Reform project involves college math departments working collaboratively as intra-college teams; and
- c) generates course products that the individual faculty involved in the design process are committed to using but that colleges can then opt to use or not, so there will need to be a separate process of engaging the colleges and encouraging them to use the products; the Developmental Math Reform proposal is attempting to build departmental and college buy-in to the strategies/products as the work is being done, at least for the colleges involved in the project.

Building Career Pathways through I-BEST

SBCTC began developing Integrated Adult Basic Education and Skills Training (I-BEST) in 2003 to improve adult basic education students' transition to certificate and degree completion. The premise of I-BEST is to provide just the right level of basic education in just the right amount for students to succeed in college-level workforce education training programs. The curricula are tailored to provide both basic skills and an occupational skills set together, so that the student is both "learning to learn" and "learning to do".

SBCTC research concluded that ABE students are among the lowest income students served by the college system and that ABE students were not transitioning to higher levels of education. "Only four to six percent of either [students starting in adult basic education or English as a Second language] group ended up getting 45 or more college credits or earning a certificate or degree within five years."¹

Measures of Success

Currently, fewer than 30% of workforce students placing into the lower levels of pre-college math complete at least two levels and significantly fewer placing into the lower levels of pre-college English complete the sequence.

Only Forty percent of workforce students needing pre-college math reach the tipping point.

¹ Building Pathways to Success for Low-Skill Adult Students: Lessons for Community College Policy and Practice from a Longitudinal Student Tracking Study (The Tipping Point Study) (Prince, Jenkins: April 2005).

The target goals for this project are to increase the pre-college math completion to 50% and increase the number of these students reaching the Tipping Point to 60%.

Milestones

<p>Milestone 3-a Select pilot colleges through a competitive process.</p>
<p>Milestone 3-b Develop a peer learning model.</p>
<p>Milestone 3-c Redesign programs based on student and program success</p>
<p>Milestone 3-d Conduct pilot implementation.</p>
<p>Milestone 3-e Evaluate impact on student persistence and performance.</p>
<p>Milestone 3-f Disseminate program and funding models.</p>

Proposed Activities

SBCTC is proposing a demonstration project that expands I-BEST further along career pathways than the initial vocational credit milestones developed in current programs.

There is strong evidence for taking these next steps at this time:

- A new Columbia University, Teachers College, Community College Research Center (CCRC) study validates the earlier SBCTC findings that I-BEST moves low skilled students further and faster in college-level work.
- Evidence provided through SBCTC Student Achievement research indicates that students with transfer goals who started out at the lowest pre-college level had lower rates of advancing than were observed in I-BEST students.
- SBCTC Student Achievement research also indicated that although math is often regarded as a foundational skill for certificates and degrees, just nine percent of workforce students in 2007-08 made math gains.

Based on the success of I-BEST, SBCTC proposes to select 10 colleges in a competitive process for a demonstration project expanding the model's success elements to new gatekeeper courses.

- The project will concentrate on furthering the pathways developed in current I-BEST programs allowing for continued support for I-BEST students further along the pathway and expand it to include higher levels of pre-college students. Courses will be designed to support student success along the pathway at any level a student enters.

- Courses will be built upon already approved I-BEST pathways (with the possible addition of a “green economy” pathway) that are at least two quarters in length to pilot strategies that continue raising student achievement toward the highest credential in the pathway.
- The model(s) will be piloted using a structure successfully used to develop and implement the current I-BEST model and the Opportunity Grant program.
- An analysis will be made to determine if the current enhanced funding model of 1.75 per each full-time equivalency (FTE) is appropriate for the model or if a new funding rate is needed. (For all other CTC programming FTEs are funded at a 1 to 1 ratio, whereas I-BEST is a 1.75 to 1 ratio.) **This enhanced funding is what allows a basic skills teacher and an occupational teacher to co-teach the class and enhanced support services.**
- Pilots will be selected based on key criteria already required of I-BEST programs including labor market information, completion rates of the program’s certificate(s) and degrees, partner involvement (employers, labor, workforce development councils), and integrated learning outcomes.
- The demonstration project would allow colleges to test differing models combining student services, curriculum design, and instructional models.
- The projects would be evaluated using the SBCTC Student Achievement measurement system.

The I-BEST application will be revised to include a description of the program cohorts (e.g. mixed developmental and adult basic education students, developmental education student only), so that appropriate data and information can be gathered.

The direct beneficiaries and geographic areas impacted are low income, working-class students and underserved populations statewide. The project would provide for ten college programs across the state representing urban, rural, large, and small colleges.

Key Partners

SBCTC also plans to partner with the Washington Center for Improving Undergraduate Education on this project. Other partners involved in I-BEST have included, The Ford Foundation Bridges to Opportunity Initiative (2003-2008) that supported system development and implementation activities for I-BEST, colleges that developed the I-BEST programs, and the Washington State Legislature by providing earmarked funding to expand I-BEST beyond the pilot stage.

The Northwest Area Foundation has indicated a strong interest in providing up to \$30,000 to support the development of resources (an “I-BEST 101”) for use by other states in order to help them implement I-BEST outside Washington state.

Student Achievement Initiative

The Board's goal to "raise the knowledge and skills of the state's residents" by increasing educational attainment across the state is a substantial challenge for all of higher education, especially for community and technical colleges.

Washington's community and technical colleges serve a wide spectrum of learning needs from adult literacy for immigrants and K-12 drop-outs through Running Start (advanced high school) students taking college credit classes. The colleges serve a predominantly working class and low income student population. The median student age is 26, 35% are students of color (compared to the state population at 24% people of color), over half are working full or part-time, one-third are parents, and over half attend college part-time.

The Student Achievement Initiative, http://www.sbctc.edu/college/e_studentachievement.aspx, is **a new performance funding system for community and technical colleges**. Its purposes are to both

- improve public accountability by more accurately describing what students achieve from enrolling in community and technical colleges each year, and
- to provide incentives through financial rewards to colleges for increasing the levels of achievement attained by their students.

It represents a significant shift from funding solely for enrollment inputs to also funding meaningful outcomes.

Through a research partnership with CCRC, the college system has been able to identify **key academic benchmarks** that students must meet to successfully complete degrees and certificates. These Achievement Points are meaningful for all students across

- demographic characteristics (race, age, income, employment status),
 - academic program or
 - entering skill levels (basic skills, remedial, workforce education, academic transfer),
 - intensity of enrollment (part-time or full-time enrollment), and
 - type of institution attended (urban, rural, large, small, community college, technical college).
- Rigorous data analysis has identified Achievement Points that once accomplished, **substantially improve students' chances of completing degrees and certificates**.
 - There are four categories of Achievement Point measures:

- Building towards college-level skills (basic skills gains, passing pre-college writing or math)
- First-year retention (earning 15 then 30 college level credits)
- Completing college level math (passing math courses required for either technical or academic associate degrees)
- Completions (degrees, certificates, apprenticeship training)

These measures **focus students and institutions on shorter term, intermediate outcomes that provide meaningful momentum towards degree and certificate completion** for all students no matter where they start.

Colleges can track student progress towards these Achievement Points each quarter, providing immediate feedback and opportunities for intervention strategies.

The college system used 2007-08 as a “Learning Year”, to understand the measures, analyze their data, and identify types of students and areas of curricula for focused attention.

The current year, 2008-09, is the first performance year and will serve as the basis of the first round of financial rewards to be distributed to colleges in Fall 2009, after the close of the current academic year.

There are no targets; colleges compete with themselves rather than each other.

Colleges will earn a set increment of reward (that is, a set dollar amount) for each Achievement Point achieved above their 2006-07 baseline. Once earned, the reward will be added to the college’s base budget.

The Board included a proposal for \$7 million in the system’s 2009-11 budget request to the Governor and State Legislature, to carry forward and provide larger rewards over the next two years. The Governor and Legislature supported a \$3.5 million proviso to expand the Student Achievement Initiative in the final 2009-11 state budget.

SBCTC believes that this initiative will create momentum for both students and colleges.

As colleges gain a better understanding of where students get stuck and successfully move them through those hurdles, they will receive financial rewards. The investment of those dollars into expansion of proven strategies will yield additional rewards that can be invested in additional strategies.

The college system is already showing gains in Student Achievement.

Between 2006-07 and 2007-08, the colleges served the same number of students but **increased student achievement by 4.6%, with the greatest gains occurring in basic skills gains (10.1% increase) and college readiness (6.7% increase).**

This means a larger cohort of students is ready for college-level work and are likely to earn college credits leading to certificates and degrees. These are early indications of the system-level momentum we are hoping to build towards greater student achievement and overall student success.

Overall Outcomes of the Washington Student Achievement Initiative

- Create broader and more extensive pathways for low skill students to move beyond the Tipping Point to degrees.
- Test and evaluate an innovative performance funding system that focuses attention and rewards on overcoming the early hurdles students face that cause them to leave before completing even a year of college.

Measures of Success

Year 1 Outcome: Increase student achievement by an **estimated 60,000 points in the first performance year paying out \$30 per point** in fall 2009. This first year is based upon two year period- 2007-09 compared to 2006-07 the baseline year.

Year 2 Outcome: Increase student achievement by an **estimated 20-25,000 points in the second performance year paying out \$40-\$50 per point** in fall 2010. This second year is based upon a one year period- 2009-10 compared to 2008-09

Year 3 Outcome: Complete an external evaluation on college achievement and the relationship between the initiative and college practices. This outcome and activities for it will be implemented alongside this grant as part of an overall set of evaluation activities.

Milestones

<p>Milestone 4-a Initiative Implemented, baseline measured, learning year finished. Provided descriptive reports analyses for colleges.</p>
<p>Milestone 4-b Establish an incentive fund to reward colleges</p>
<p>Milestone 4-c Measure and reward yearly gains in college achievement</p>
<p>Milestone 4-d Engage colleges in examining and sharing promising practices that increase achievement via dissemination of analytic tools, descriptive reports.</p>

Proposed Activities

Fully implement the Student Achievement Initiative that provides financial incentives for institutions based on increases in student achievement.

The Student Achievement Initiative is uniquely designed to reward colleges for improvement in performance for milestones that can be measured in real time. The milestones capture students' behaviors at critical points that align with subsequent success and are within the colleges' direct ability to affect.

A dataset can be accessed by each college quarterly that allows it to see every student enrolled, the system was introduced in 2006-07. The following year, 2007-08 was a "Learning Year" for colleges to talk and learn about the milestones and begin to look at their college's data. In a formative evaluation conducted by the Community College Research Center for the learning year, colleges overwhelmingly accepted the points as valuable measures.

However, in the same evaluation, the colleges continued to express reservations with the concept of performance funding. Just as critical to the initiative as selection of the milestones are a set of principles for funding. The rewards are based upon each college's self-improvement. Funding is based upon throughputs and completions. Funding earned is subsequently added to each college's base. This allows each college to sustain evidence based practices that produced achievement gains as well as to adopt promising practices learned from other colleges.

To maintain a climate for this, another principle adopted was that new money, not money taken from colleges' base funding that could be "earned back" was optimal. This perspective was validated by interviews conducted with national performance funding experts.

Adherence to these principles is essential.

Several critical risks and opportunities exist to implementing the initiative. The current economy presents a major risk that has hindered other efforts in performance funding. In hard times, moneys for performance funding generally go away.

This risk has been mitigated by the State Legislature which earmarked \$3.5 million for the Student Achievement Initiative. It demonstrates an opportunity to use accountability to increase confidence in difficult budgets. Still, colleges were given no new growth funding and there is some argument as to whether the \$3.5 million could have been new base growth, or whether without the Student Completion initiative the system would have received this funding.

Why Bill and Melinda Gates Foundation Funding Is Needed

It is important that Bill and Melinda Gates Foundation funding leverage the state contribution and send a clear signal that SBCTC policy is aligned with national policy, which is shifting toward funding higher education on outputs as well as enrollments.

Advice from national experts suggested that the dollar per point had to be high enough to incentivize performance, but not too high to incentivize gamesmanship. In the first payout year, colleges will earn \$30 per point improved with the foundation funds. Without the leveraged foundation funds, the payout will be just a little over half that amount. In the second year, the payout will increase to \$40-\$50 per point.

Demonstrating increased achievement and overcoming college resistance are the ways in which the initiative can be built into future budget requests for new funds that can support the system to build the cycle of rewarding performance, building rewards earned into budget bases and shifting from a focus on enrollment growth to performance improvement.

The most critical risk to second-year achievement goals is further unforeseen cuts to colleges' base budgets in this weak economic climate. It may not be possible to fully mitigate this risk. However, it can be countered somewhat by recognizing this is a watershed time and in tight budget times, accountability is rewarded

I. Strategy Alignment

The results of the efforts funded by this grant will have a broad reach. Not only will the work impact the community and technical college system in Washington State, but will have lessons for other state systems.

The elements of this grant directly align with two strategic plans developed by the State Board over the past three years. Adopted by SBCTC in 2006, the overall vision of the *System Direction, Creating Opportunities for Washington's Future* is to "raise the knowledge and skills of the state's residents," by enrolling more underserved populations and increasing academic achievement for all students. The *Strategic Technology Plan* adopted in 2008, is centered on "mobilizing technology to increase student success."

The initiatives outlined in this proposal test system change strategies in key problem areas. They represent a comprehensive set of strategies that focus on systemic, lasting changes to impact student success, especially among low income students.

- Improving college transitions and degree completion for low income students who start in adult basic education through expansion of IBEST;
- Improving student completions in the most challenging core subject area for students, pre-college and college level math, through curriculum reform;

- Redesigning gatekeeper, common core courses with digital, open curricula, tools and textbooks; and
- Providing incentive rewards for colleges directly related to improving academic achievement for all students.

These strategies build upon and leverage previous efforts funded by the Ford Foundation, College Spark, the Lumina Foundation, the Bill and Melinda Gates Foundation, and the Washington State Legislature. SBCTC was one of six states selected for a five-year grant from the Ford Foundation for Building Bridges to Opportunity, to build system change strategies to improve access and achievement for low income adults. We used the Ford grant to conduct research on achievement among low income students, develop a communications strategy on the value of community and technical colleges, create the IBEST model, and develop our performance funding system, the Student Achievement Initiative.

The college system's participation in Achieving the Dream is funded directly by College Spark and indirectly by the Lumina Foundation. The Achieving the Dream focus on developmental education and first year retention for low income young adults align directly with the goals of the proposed Washington State Student Completion Initiative. Our math, IBEST and online curriculum redesign strategies, and performance incentive rewards build upon the state policy work by SBCTC for Achieving the Dream.

Because we know it is a major challenge for most students, we have focused on pre-college math reform for several years. The Bill and Melinda Gates Foundation in partnership with the State Legislature funded the Transition Math Project, a three-year grant for community and technical colleges to work with high schools and universities to develop widely adopted college readiness standards in math, communication tools for students, parents and K12 educators on the importance of college readiness in math, curriculum models for intermediate algebra, and a common math readiness test for high school juniors. College Spark has recently awarded a grant to SBCTC to infuse student attributes of academic success into our college math courses.

In addition to supporting the Transition Math Project (\$1.03 million), the Washington Legislature supported SBCTC budget priorities by appropriating targeted funds to expand IBEST (\$7.4 million), eLearning technology (\$2.2 million) and Student Achievement (\$3.5 million).

II. Implementation and Results

The Washington community and technical college system has successfully implemented a number of statewide initiatives over recent years to advance the Board's vision. This grant will be used to deepen and expand upon those efforts.

These projects use a system change process that has succeeded with other initiatives. Systemwide problem areas that align with the Board's vision and goals are identified

through policy research conducted by the State Board. The policy research includes a literature review to identify successful practices used elsewhere to address the problem. Groups of highly motivated pilot colleges are selected through a competitive process to develop and test concepts that address those problem areas. Small grants are provided to the pilot colleges to fund faculty time to create and implement solutions. College and State Board staff work together to evaluate the results and to identify the key elements of success. It is proposed that this grant fund these activities for precollege math, IBEST and online curriculum redesign. The resulting models developed through this grant will be disseminated statewide and funding requested from the State Legislature using evidence from the evaluation that the model works.

Goal 1: Increase Student Access and Success

The **Online Course Access & Success** will:

- Redesign the most commonly enrolled courses for students across transfer and workforce education degree programs, to improve course completion rates using best practices in course redesign.
- Lower costs for students by eliminating expensive textbooks and replacing them with open educational resources, library resources and other low cost instruction materials.
- Create learning communities of faculty with expertise in finding, remixing and using open educational resources, sharing curriculum, assessments, and teaching strategies.
- Increase the number of high enrollment online and blended courses so students can get the courses they need when they need them.

Phase 1 will address **student success** by researching why the 25 high-enrollment, gatekeeper and pre-college courses have low completion rates.

Redesign teams, with the assistance of SBCTC and college institutional researchers, will research why completion rates are lower in these courses as compared to other courses, other disciplines and other student populations. Completion rates will be examined over time, by various populations of students, and by college to look for factors that might influence current and future redesign strategy.

In addition to data already captured, teams will look at students' retention the following quarter and success in their next course(s). Teams will also examine current data and research findings about blended vs. online courses to determine what mix of online and in-person instruction leads to greater student success.

Phase 2 will redesigning the 80 high enrollment, pre-college and gatekeeper courses using the research findings and best practices in course design from Phase 1.

Redesigning these 80 courses with open resources and 21st century instructional design pedagogies will increase **access** by:

- (1) reducing student costs through removing expensive commercial textbooks and replacing them with open textbooks, existing library resources, and other free educational resources, and
- (2) increasing the number of high enrollment online and blended gatekeeper and pre-college courses so students can get the courses they need when they need them to complete their degree or certificate.

A cadre of course redesign teams will be built comprised of college faculty, librarians, instructional designers, institutional researchers and other stakeholders (bookstore managers, [Quality Matters](#) master reviewers, etc).

- Team members will be selected through a competitive application process.
- Each team will redesign multiple courses (e.g., the “English Team” might redesign four English courses).
- SBCTC will provide spaces for communication, sharing curriculum, evaluation, and dissemination for the redesign teams during and beyond the project.

Redesign teams will create **course redesign templates** using “learning 2.0” pedagogies, online learning tools and support services, instructional design rubrics and other best practices.

All 80 courses will be **digital** so

- a) they can be offered as online or blended courses and
- b) so faculty can remix, change, and/or select parts of the redesigned courses.

Teams will learn to locate, evaluate, remix, and integrate global, open educational course content and textbooks and will leverage existing digital library resources.

Teams will weave in:

- universal design principles (we will partner with [UW DoIT](#), a leader in universal design),
- 21st century skills such as
 - information literacy,
 - global social networking,
 - team building,
 - multicultural / cultural competency (we have system experience from a recent Lumina-funded reservation-based project), and
- the Maryland Quality Matters instructional design rubric (the system will have 15 faculty certified as “master Quality Matters reviewers” by the start of this project).

The system will provide broad online access to the 80 redesigned courses by enabling students to take the courses at any system college.

- There is already the ability to “pool enrollments” from multiple colleges for any online course through the WashingtonOnline cascading enrollment system (extra seats in online courses can be made available to students at other colleges).

SBCTC will work with presidents, vice presidents and faculty with the goal of getting multiple system colleges to offer the 80 redesigned courses to any system student. Providing plenty of “seats” in these courses is key to meeting the larger access and retention goals.

SBCTC will also put Creative Commons licenses on all 80 courses and share them with the world in a global repository. SBCTC has worked with the Hewlett Foundation and Creative Commons and will follow their advice and use an [attribution only](#) CC license to maximize global use of the shared 80 courses. SBCTC has permission from Rice University’s *Connexions* project to host the 80 redesigned courses for the world.

Challenges

The biggest challenge will be to work with colleges and faculty to remix, adopt and offer the redesigned courses.

This challenge will be overcome by involving faculty and other stakeholders in every step of this redesign project. There is also an expectation that faculty on redesign teams adopt the redesigned courses that they teach.

SBCTC will further engage system leaders and faculty by sharing improved completion rate and textbook savings data, and with ongoing professional development on why sharing digital, common curriculum reduces duplicative efforts and frees faculty to create rich-learning environments and continuously improve shared courses in partnership with colleagues across the Washington CTC system and around the world.

Goal 2: Increase student Success in Pre-college and College Math

Student Achievement analysis shows that the biggest challenge for students and colleges is successful completion of pre-college and college level math.

The **Developmental Math Reform** work will address two major outcomes related to overall student completion: 1) **progress** through pre-college-level math (college readiness) and 2) **persistence** to and completion of a college-level math course.

Outcome 2.1: Pre-college math progress

SBCTC will increase the percentage of students who make an achievement gain (see http://www.sbctc.ctc.edu/college/e_studentachievement.aspx for more details about the Student Achievement Initiative) in pre-college math (that is, complete a pre-college math class) by 15% over the grant period.

Outcome 2.2: College math completion (or substantial gain)

SBCTC will increase the percentage of students making substantial math achievement (in a given year, 2 or more pre-college levels or completing a college math course) by 10% over the grant period.

In order to address these student achievement outcomes, the work proposed addresses the more intermediate range outcomes around curricular structures and teacher behaviors and beliefs that are essential levers for producing the longer-term student outcomes.

A crucial aspect of the learning anticipated from this project involves understanding more fully the processes and challenges involved in taking these changes in structures and behaviors/beliefs to scale, both within a college math department and across multiple colleges in a system.

Execution Milestones

Math departments at participating colleges **will develop new or revamp existing pre-college course offerings** in order to improve the effectiveness and efficiency of student progress toward completing a college-level math course relevant to their career goals.

- Faculty participating in the project will develop **a deeper understanding of pedagogical content knowledge in mathematics and new skills in utilizing different effective instructional approaches in math classrooms.**

The major execution milestones related to the defined outcomes address the key areas defining core educational practice in mathematics: curriculum, instructional approaches, and assessment:

Year 1 of the project will focus initially on **reviewing, analyzing and sharing existing work** around Washington and the country with respect to pre-college math curricula.

- Through this process a select cohort of colleges will be invited into the ongoing project and **will define specific strategies** to pursue within the project parameters.
- The selected colleges will implement and evaluate their strategies in **Year 2**, then **document/disseminate their work** in **Year 3**.

In addition to exploring curricular models, **Year 1** of the grant will engage faculty involved in the project in **discussions of current research on learning and pedagogical approaches in mathematics.**

- Facilitated by the Washington Center staff, faculty will form Faculty Learning Communities around targeted instructional strategies to **provide ongoing support and technical assistance** for project colleges.
- These faculty-led learning communities will become ongoing resources for the system as a whole after the grant ends. **The goal is to develop and sustain a mathematics community of practice** that supports faculty in this work and sustains the reforms over time.

In order to provide **ongoing math assessment support for students and teachers** involved in the project, Washington Math Assessment and Placement (WAMAP.org), one of the key components of the Transition Math Project, will need to be refined, promoted, and supported.

- WAMAP is a web-based resource offering an extensive library of math tasks and items that teachers can use in a variety of ways to diagnose and assess math competence.
- **The goal in this project is to utilize the existing WAMAP “power users” as resources for integrating the platform more fully into the pre-college math curriculum at the cohort of colleges involved.**

Challenges

Issues potentially undermining the institutional capacity to engage in and sustain this work include the ongoing state budget crisis, leadership turnover at the participating colleges, and the complexities of developing and maintaining math faculty ownership of changes related to curriculum and instruction.

SBCTC can minimize these challenges by working closely with colleges in the first year of the grant to understand potential approaches and provide them the opportunity to identify and select, within project parameters, the strategies most suited to their specific context.

In addition to gathering institutional data on Student Achievement points, student course completion, and math achievement, **SBCTC will monitor progress on these milestones and grant outcomes** by working with the Washington Center staff and using a combination of periodic site visits, web surveys, and qualitative interviews to identify successes and challenges over the course of the grant period.

SBCTC also plans to **conduct in-depth case studies** that would begin as soon as the colleges are selected for the project cohort in order to more fully understand the implementation issues related to substantive curricular and pedagogical changes in pre-college math programs.

Goal 3: Expand IBEST Along Career Pathways

The goal is to accelerate student achievement and degree completion by combining and condensing pre-college and college level academic skills and occupational skills instruction using the IBEST model. This project will expand IBEST further along career pathways than the initial vocational credit milestones developed in current programs.

The current IBEST model has seen a 122% growth in students since Fall 2006. A similar growth rate for these new projects is anticipated.

Currently,

- less than 30% of workforce students placing into the lower levels of pre-college math complete at least two levels, and
- less than 30% placing into the lower levels of pre-college English complete the sequence.
- Just 40% of workforce students needing pre-college math reach the Tipping Point

Measures of Success

OUTCOME 3.1 The first target for this project is
<ul style="list-style-type: none"> ▪ increase the Pre-College Math completion to 50% and ▪ increase the number of these students reaching the Tipping Point to 60%.

Intermediate Outcomes

- A peer support faculty learning model will be utilized to develop the program model(s).
- In the first project year, the ten selected colleges will begin to redesign the first year of their program in Summer and Fall Quarters and begin program delivery of the program in Winter Quarter.
- In the second project year, the ten selected colleges will redesign the second year of their program in Summer and Fall Quarters and begin program delivery in Winter Quarter.

Long-term Outcomes

- The program models will be **evaluated for effectiveness** using a combination of Student Achievement gains and qualitative analysis to determine an effective model(s) for system wide adoption.
- **A cost analysis** will be conducted to identify system-wide funding model(s).
- SBCTC will move to **system-wide implementation in Year 3 with at least 17 colleges** offering programs using the new model(s).

- System-wide implementation will continue into **Year 4** with **the remaining colleges adopting the new model(s)**.

Goal 4: Fully Implement the Washington Student Achievement Initiative

The goal is to increase the number of students completing key intermediate academic benchmarks, certificates and degrees.

Proposed Activities

The Student Achievement Initiative is uniquely designed to reward colleges for improvement in performance for milestones that can be measured in real time. The milestones capture students' behaviors at critical points that align with subsequent success and are within the colleges' direct ability to affect.

A dataset can be accessed by each college quarterly that allows it to see every student enrolled. The Student Achievement Initiative was approved by the State Board in 2006-07. The following year, 2007-08 was a "learning year" for colleges to learn about the milestones and to look at their college's data.

In a formative evaluation conducted by the Community College Research Center for the Learning Year, colleges overwhelmingly accepted the points as valuable measures. However, in the same evaluation, colleges continued to express reservations with the concept of performance funding. The principles for funding are just as critical to the initiative as selection of the right measures:

- The rewards are based upon each college's self-improvement.
- Funding is based upon the net increase in throughputs and completions.
- Funding earned is subsequently added to each college's base budget.

This allows each college to sustain evidence-based practices that produced achievement gains as well as to adopt promising practices learned from other colleges.

To maintain a climate for this, another principle adopted was

- New money, not money taken from colleges' base funding that could be "earned back"

This perspective was validated by interviews conducted with national performance funding experts.

Funding from the Bill and Melinda Gates Foundation and the Ford Foundation are critical to rewarding colleges with new money.

Adherence to these principles is essential.

Several critical risks and opportunities exist to implementing the initiative. First, the current economy presents a major risk that has hindered other efforts in performance funding. In hard times, moneys for performance funding go away. This risk has been mitigated by the state legislature which earmarked \$3.5 million for the Student Achievement Initiative. It demonstrates an opportunity to use accountability to increase confidence in difficult budgets. Still, colleges were given no new growth funding and there is some argument as to whether the \$3.5 million could have been new base growth, or whether without the Student Completion initiative the system would have received this funding.

This leads to the importance of foundation funding to leverage the state contribution and demonstrate the policy shift that is building for funding higher education on outputs and well as enrollments.

Another risk is the dollar value that will be paid out per point for improvement. Advice from national experts suggested that the dollar per point had to be high enough to incentivize performance, but not too high to incentivize gamesmanship. In the first payout year, colleges will earn \$30 per point improved with the foundation funds. Without the leveraged foundation funds, the payout will be just a little over half that amount. In the second year, the payout will increase to \$40-\$50 per point.

Demonstrating increased achievement and overcoming college resistance are the ways in which the initiative can be built into future budget requests for new funds that can support the system to build the cycle of rewarding performance, building rewards earned into budget bases and shifting from a focus on enrollment growth to performance improvement.

Measures of Success

Outcomes

- Year 1- Increase student achievement by an estimated 60,000 points in the first performance year paying out \$30 per point in fall 2009. This first year is based upon two year period- 2007-09 compared to 2006-07 the baseline year.
- Year 2- Increase student achievement by an estimated 20-25,000 points in the first performance year paying out \$40-\$50 per point in fall 2010. This second year is based upon a one year period- 2009-10 compared to 2008-09. The most critical risk to second year achievement goals is further unforeseen cuts to colleges' base budgets in the economic climate. It may not be possible to fully mitigate this risk. However, it can be countered somewhat by recognizing this is a watershed time and in tight budgets accountability is rewarding.

- Year 3- Complete a quantitative and qualitative evaluation of the increase achievement in colleges and examine the linkage of that achievement to policies and practices. This evaluation will be funded separate from this grant project but coordinated to coincide with this grant’s funding period. It is one of three evaluation activities that will be conducted.
- A second activity will be the continuation of point tracking, reporting and descriptive analyses and reports by SBCTC and the colleges.
- The third activity will be the inclusion of Washington State’s Student Achievement Initiative in a national evaluation of performance funding in states, also funded separate and apart from this grant.

III. Organizational Capacity

SBCTC has been a leader of innovation and improvement efforts in Washington State and nationally. SBCTC’s IBEST and Student Achievement Initiative have broken new ground as national models for student completion, and this project will expand and deepen the innovation and impact of higher education reform in Washington State.

SBCTC has demonstrated success in implementing large, multi-year foundation grants from the Bill and Melinda Gates Foundation (Transition Math Project), the Ford Foundation (Bridges to Opportunity), College Spark and Lumina Foundations (Achieving the Dream). Washington’s community and technical college system has enjoyed support from the State Legislature to implement new targeted statewide programs including Worker Retraining (job training for unemployed and dislocated workers), WorkFirst (basic skills and job training for welfare clients), Opportunity Grants (financial aid and support services for low income students to complete credentials in high demand occupations) and Running Start (dual credit for college ready high school juniors and seniors).

SBCTC has an excellent statewide, student enrollment and transcript data base, and a strong track record of evidence based decision making for system priorities and budget priorities, public accountability and program evaluation especially for new initiatives.

IV. Budget

This grant will primarily fund college-level activities. To ensure widespread college adoption of new strategies, the Board has been successful at identifying early adopters, and generating college and faculty buy-in for delivering education differently to students with improved results. The bulk of the grant funds are for faculty time, travel to intensive work sessions and statewide colleague meetings, and to bring state and national experts in to work with pilot college faculty and staff.

SBCTC is not requesting indirect funds for this project and will be providing in-kind staff support. Colleges will also be contributing in-kind staff support. SBCTC staff support (salary, benefits, travel) for the duration of this grant will total \$350,000, and colleges will be contributing an additional \$165,000 in staff support.

Funding provided by the Bill and Melinda Gates Foundation will leverage private and public funds provided by other Foundations and the State Legislature for these projects, including:

- \$13.1 million in 2009-11 from the State Legislature for eLearning (\$2.2 million), IBEST (\$7.4 million), Student Achievement (\$3.5 million)
- Previous three-year grant of \$3 million from the Bill and Melinda Gates Foundation for the Transition Math Project
- A new grant at \$50,000 from College Spark for math reform
- \$800,000 pending from the Ford Foundation for Student Achievement Initiative rewards
- \$30,000 pending from the Northwest Area Foundation for IBEST dissemination to other states
- Evaluation for IBEST and Student Achievement is planned by the Community College Research Center, Columbia University with separate funding.

The official budget form reflects the overall proposal and scope of work; for the sake of clarity, the information below is a summary by Foundation categories of the budget proposal for each project.

Online Course Access & Success Two-Year Budget

Budget Narrative

The \$80,000 in Year 2 in consulting & professional fees will be used to hire a full-time project manager to manage the logistics of the redesign teams as they redesign 80 courses. The conferences, conventions, meetings funds will be used as follows: Year 1: \$45,000 = 3 in-state training meetings; Year 2: \$25,000 for one in-state wrap up meeting and travel to send SBCTC eLearning Director to national conference(s) to disseminate the project's findings and products. The sub-grants (Year 1: \$250,000; Year 2: \$375,000) will be provided to colleges for release time for faculty, librarians, institutional researchers, and instructional designers to participate on the course redesign teams.

The Washington State legislature recently provided an appropriation of \$2.2 million to advance eLearning in the Washington community and technical college system, \$825,000 of which is for course redesign using open educational resources and open textbooks. These funds will be used to develop the additional 55 courses (beyond the 25 courses that Bill and Melinda Gates Foundation is being asked to fund) using the rubrics and methods developed in the Online Course Access and Success project.

Online Course Access & Success

Direct Costs Summary	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	Totals
Consulting & Professional Fees		80,000		80,000
Conferences, Conventions, Meetings	45,000	25,000		70,000
Sub grants to Orgs & Higher Education	250,000	375,000		625,000
Total Subgrant Costs	0	0		625,000
Overall Total	0	0		775,000

Developmental Math Reform Three-Year Budget

Budget Narrative

The funds requested from Bill and Melinda Gates Foundation are essential to providing the space and time for the colleges involved to re-invent their pre-college math programs and become leaders in moving the broader state two-year college system toward significant improvements in student math achievement across the system.

The funds will be used to address four primary areas: supporting colleges through local grants in buying faculty time and implementing selected strategies; offering technical assistance and access to critical resources across the full coalition of colleges to maintain a cohesive and sustained focus; providing management and evaluation support for the overall project and individual colleges; and convening/connecting the full coalition in order to encourage cross-college learning and influence.

While the challenges of tackling math improvements at a departmental level are daunting, we believe this budget request is reasonable and realistic because we are building on significant momentum established across the system by the Transition Math Project (providing clear learning targets in the College Readiness Standards), the Achieving the Dream project (offering a heavy emphasis on pre-college math as the key issue for colleges to address), and the Student Achievement Initiative (establishing a consistent focus on student progress through the system toward the “tipping point” of substantial college-level work and credentials). This budget includes \$120,000 for a tribal college to participate in this process.

Developmental Math Reform

Direct Costs Summary	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	Totals
Personnel and Benefits Total	0	0	0	0
Consulting & Professional Fees	100,000	100,000	100,000	300,000
Materials & Supplies	7,500	7,500	7,500	22,500
Computers & Equipment	0	0	0	0
Printing & Publications	7,500	7,500	7,500	22,500
Travel & Accommodations	30,000	30,000	30,000	90,000

Conferences, Conventions, Meetings	75,000	75,000	75,000	225,000
Direct Facilities	0	0	0	0
Other Direct Costs	0	0	0	0
Total Direct Costs	220,000	220,000	220,000	660,000
Subgrants to Orgs & Higher Education	295,000	505,000	510,000	1,310,000
Subgrants to Schools				0
Total Subgrant Costs	295,000	505,000	510,000	1,310,000
Overall Total	515,000	725,000	730,000	1,970,000

I-BEST Two-Year Budget

Budget Narrative

Ten colleges will be selected competitively and would each receive grants of \$80,000 per year for the two funding years of this portion of the grant. The funds provided through the grant will provide for faculty release time to develop curriculum, instruction, professional development opportunities, consultant time, and dissemination.

Career Pathways through I-BEST

Direct Costs Summary	Year 1	Year 2	Year 3	Totals
Personnel and Benefits Total				0
Consulting & Professional Fees	50,000	50,000		100,000
Materials & Supplies	5,000	5,000		10,000
Computers & Equipment				0
Printing & Publications	5,000	5,000		10,000
Travel & Accommodations	5,000	5,000		10,000
Conferences, Conventions, Meetings	10,000	10,000		20,000
Direct Facilities				0
Other Direct Costs				0
Total Direct Costs	75,000	75,000		150,000
Subgrants to Orgs & Higher Education	800,000	800,000		1,600,000
Subgrants to Schools				0
Total Subgrant Costs	800,000	800,000		1,600,000
Overall Total	875,000	875,000		1,750,000

Washington Student Achievement Initiative

Student Achievement rewards will be allocated to colleges entirely on the basis of net increases in student achievement points over each college’s 2006-07 baseline. Gates funding assures the stability of funding the initial rewards. Earmarked funding from the State Legislature was included in the college system’s 2009-11 budget that also included a 10.7% overall reduction in state funds. While one could argue that the budget cut could have been bigger had it not been for the Student Achievement earmark, the colleges view this appropriation as earmarking and redistributing base budget funds. The earmarked state funds will partially fund the 2009 and 2010 college rewards. Funding from the Ford Foundation will provide important, new dollars to enhance 2009 Student Achievement rewards. Funding from the Gates Foundation will enhance Student Achievement rewards in 2010. These two years of new flexible dollars are essential to providing real incentive rewards to the colleges and essential to testing the concept of incentive rewards to stimulate systemic change.

Washington Student Achievement Initiative

Direct Costs Summary	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	Totals
Personnel and Benefits Total				
Consulting & Professional Fees				0
Materials & Supplies				0
Computers & Equipment				0
Printing & Publications				0
Travel & Accommodations				0
Conferences, Conventions, Meetings				
Direct Facilities				0
Other Direct Costs				0
Total Direct Costs	0	0		0
Sub grants to Orgs & Higher Education		800,000		800,000
Subgrants to Schools				
Total Subgrant Costs	0	0		800,000
Overall Total	0	0		800,000

V. Risks

These projects focus on curriculum reform in the principle areas where students get stuck: precollege courses, gatekeeper freshmen courses, math, and transitions from basic skills to college. We believe that we will be successful in developing new models of curricula, students learning resources including textbooks, pedagogy and assessment for our faculty and students. The principle risk is adoption of these curricula and practices across colleges and faculty. This risk is mitigated by selecting highly motivated colleges, faculty and staff through competitive processes, by creating

faculty and staff teams within colleges and across colleges working on common problems and committed to implementing solutions, and by utilizing established system faculty and administrator colleague groups to disseminate models created and implemented by their peers.

A second risk is state funding. The Student Achievement Initiative is very visible in the college system. Some presidents view performance funding as a strategy to increase per student state funding from the Legislature for the colleges. After Foundation grant funds expire, it will be important for the State to make an additional investment, and to continue funding rewards for further increases in student achievement. We are mitigating this risk by using the 2009-11 biennium to implement the reward system, show achievement gains for the college system, and identify and disseminate successful, evidence based college practices that improve results for students.

VI. Lessons Learned and Evaluation

Overall the Washington State grant is designed to increase student completion, of precollege and gatekeeper courses, the first year of college, and degrees and certificates. Evaluation will be both quantitative and qualitative.

The Student Achievement measurement system will be used to track whether or not the models implemented by colleges for all four projects are impacting achievement for students, and change over time. The State Board manages a comprehensive statewide student database that includes demographic characteristics of students including financial aid awards, family income and socioeconomic status; college locations; courses attempted including college level academic courses and workforce training, precollege courses and adult basic education courses; grades earned and credentials awarded. All these data will be used to evaluate the impact of the projects on students by type and course patterns. Data matches with universities and unemployment insurance data files allow analysis of transitions to further education and work. The Board employs an experienced Policy Research team that has worked on a number of research projects with the Community College Research Center at Columbia University for the past six years. We intend to conduct the quantitative evaluations in house.

An important element of change processes used by the State Board is not only using data analysis to track results, but to also qualitatively evaluate results with college faculty and staff. Understanding why results were achieved is as important as moving the numbers. Identifying the key elements of successful practices is essential for building models for statewide funding and dissemination. This portion of the evaluation is included in meetings for the college participants. Both quantitative and qualitative evaluation is built into each project.

CCRC conducted Phase One evaluations of IBEST and the Student Achievement Initiative, and plans to conduct Phase Two evaluations for both initiatives with support from the Bill and Melinda Gates Foundation.

A role for the Washington Center for Undergraduate Education is documenting progress and lessons learned and conducting the qualitative analysis for the math project.

VII. Sustainability

The State Board is committed to its overall vision to “raise the knowledge and skills of the state’s residents” by increasing educational attainment across the state for the long term. This project will advance the significant efforts already underway on state policy and practice. SBCTC sees this grant as a stepping-stone to future efforts to improve the higher education success of low-income and working-class students

This project is designed specifically so that the colleges involved will develop and implement fundamental improvements in such a way that they own and sustain the work after the grant ends. The plan is to invest the resources provided by the grant in ways that will help change not only policy, but practices and behaviors around course design, teacher beliefs and practices. Those changes will lead to and support teacher-initiated institutional changes not dependent on grant funds for continued implementation and success. Once proven concepts and have identified, SBCTC will seek budget enhancements for dissemination to the community and technical colleges system.

The transformation to Open Education will also foster sustainability since the 80 course re-design and the other improvements and innovations from this grant will be stored and on the Learning Object Repository and maintained at no further cost. This will also facilitate dissemination since all the learning objects are accessible to the world.

External factors that might negatively influence the institutional capacity to engage in and sustain this work include the ongoing state budget crisis, leadership turnover at the participating colleges, and the complexities of developing and maintaining faculty ownership of changes related to curriculum and instruction. These potential challenges can’t fully be eliminated, but SBCTC will work to minimize them by working closely with colleges in the first year of the grant to understand potential approaches and provide them the opportunity to identify and select, within project parameters, the strategies most suited to their specific context.

Appendix A

<i>On-line Course Access and Success</i>	<i>Current Status/ Baseline</i>	<i>Anticipated Progress or Completion Year 1</i>	<i>Anticipated Progress or Completion Year 2</i>	<i>Anticipated Progress or Completion Year 3</i>
GRANT OUTCOME 1: Completion rates increase 10% in each redesigned course. The goal is to have 95% completion rates in all redesigned high enrollment gatekeeper courses.	No classes redesigned; completion rates in 25 target courses less than 90%	Researched why the 25 courses have low completion rates. Redesign templates created.	25 target courses are redesigned and field-tested; Completion rates in field test show 10% increase. Adjustments made to redesign templates. Remaining 55 courses redesigned.	80 redesigned courses are adopted system-wide in 20%+ of course sections; Completion rates increase by 10%
Milestone 1-a Build a cadre of course redesign teams comprised of college faculty, librarians, instructional designers, institutional researchers and other stakeholders.	Presidents and Provosts briefed. No redesign teams created	Team members selected; form discipline teams; learn to locate, evaluate, remix and integrate open content into courses; plan course redesigns.	Teams redesign all 80 courses, (i.e., 25 courses + additional 55 courses paid for by WA Legislature).	
Milestone 1-b Create course redesign templates using “learning 2.0” pedagogies, online learning tools and support services, instructional design and other best practices.	15 system faculty completing Quality Matters training. Discussions with Carnegie Mellon OLI and SLOAN.	Redesign teams create templates with the assistance of Carnegie Mellon OLI, SLOAN professional development.	Templates used by redesign teams and shared globally along with the 80 open courses.	
Milestone 1-c Provide broad online access to the 80 redesigned courses by enabling students to take the courses at any system college.	Existing capability through our WashingtonOnline cascading enrollment system.	Professional development on why ongoing sharing digital, common curriculum reduces duplicative efforts & frees faculty to create rich-learning environments.	Work with colleges to offer multiple sections (goal: 20% of all redesigned course sections) of the 80 redesigned courses to any student.	80 redesigned courses are adopted system-wide in 20%+ of course sections... growing that percentage every year

(Anticipated) External Factors or Challenges	The biggest challenge will be to work with colleges and faculty to remix, adopt and offer the redesigned courses. We will overcome this challenge by involving faculty and other stakeholders in every step of this redesign project. We will further engage system leaders and faculty with ongoing professional development opportunities and showing colleges improved completion rate and textbook savings data.			
Developmental Math Reform	<i>Current Status/ Baseline</i>	<i>Anticipated Progress or Completion Year 1</i>	<i>Anticipated Progress or Completion Year 2</i>	<i>Anticipated Progress or Completion Year 3</i>
<p>GRANT OUTCOME 2 Improve these areas of math-related student achievement; the goal is to increase the overall pre-college math achievement gain at participating colleges by 15% and the substantial gain rate by 10% over the 3-year period of the grant.</p>	<p><i>In 2007-08, across the system 21,640 transfer-intent students (70% of those attempting) made a pre-college math achievement gain; 12,366 (44%) made a substantial gain (2 levels or college math)</i></p>	<p><i>Finalize implementation plans, refine achievement data to track and conduct additional baseline college-level data-gathering</i></p>	<p><i>At the participating colleges increase overall pre-college math achievement gain by 10% (382 students) and substantial gain by 5% (109 students)</i></p>	<p><i>At the participating colleges increase overall pre-college math achievement gain by 15% (630 additional students) and substantial gain by 10% (229 students)</i></p>
<p>Milestone 2-a Design new institution-wide and comprehensive models for providing pre-college math curriculum in community and technical colleges..</p>	<p>Some work underway at cohort of Achieving the Dream colleges</p>	<p>Recruit and provide sub-grants to six colleges committed to goals and parameters of grant project.</p>	<p>Conduct pilot implementation of strategies and evaluate impact on student persistence and performance.</p>	<p>Document and disseminate successes and lessons learned from implementation process.</p>
<p>Milestone 2-b Develop a statewide math faculty community of practice with emphasis</p>	<p>Nothing in place</p>	<p>Convene series of discussions of key research findings and</p>	<p>Initiate faculty inquiry groups from project colleges</p>	<p>Establish faculty inquiry groups as support/resource</p>

on effective instructional practice geared to college readiness preparation in pre-college math programs.		practices worthy of attention around math curriculum, instruction, and assessment.	focusing on specific targeted strategies or practices.	network for college faculty across the system.
Milestone 2-c Refine and extend web-based math assessment resource tool for students and teachers (WAMAP.org) to support pre-college math programs.	Convene college faculty user groups to identify ways WAMAP can improve support for pre-college math courses.	Support programming enhancements to web site assessments.	Incorporate WAMAP use for assessment purposes across project colleges.	Promote WAMAP implementation more widely across Washington colleges and high schools.
(Anticipated) External Factors or Challenges	<ul style="list-style-type: none"> • <i>Quickly developing a close alignment between the College Readiness Standards and the pre-college curricular offerings at participating colleges.</i> • <i>Overcoming learning curve involved in faculty taking full advantage of WAMAP resources.</i> • <i>Finding sufficient time for faculty to integrate WAMAP into their pre-college courses.</i> • <i>Faculty finding time and energy to develop quality inquiry groups</i> • <i>Shifting culture and practice so that other faculty utilize the inquiry groups as supports and resources in ongoing learning process</i> • <i>Student life changes and difficulties, financial aid concerns, economic conditions could all influence student progress toward these college-level “momentum points”</i> • <i>Time frame for collecting and tracking these data will extend beyond the grant time frame (but should continue as part of the Student Achievement Initiative regardless)</i> • <i>Getting math faculty in colleges across the system to engage in inquiry and exploration process during year 1</i> • <i>Recruiting colleges with interest in and capacity for full commitment to institution-wide implementation</i> • <i>Faculty finding time and energy to develop quality inquiry groups</i> • <i>Shifting culture and practice so that other faculty utilize the inquiry groups as supports and resources in ongoing learning process</i> 			
<i>Building Career Pathways through IBEST</i>	<i>Current Status/ Baseline</i>	<i>Anticipated Progress or Completion Year 1</i>	<i>Anticipated Progress or Completion Year 2</i>	<i>Anticipated Progress or Completion Year 3</i>
GRANT OUTCOME 3	30% of workforce students placing into	Increase the pre-college math	Increase the pre-college math	Increase the pre-college math

Expand I-BEST further along career pathways than the initial vocational credit milestones developed in current programs	the lower levels of pre-college math complete at least two levels	completion to 35%	completion to 40%	completion to 50%
	40% of workforce students needing pre-college math reach the tipping point.	Increase the number of these students reaching the Tipping Point to 35%.	Increase the number of these students reaching the Tipping Point to 50%.	Increase the number of these students reaching the Tipping Point to 60%.
Milestone 3-a Select pilot colleges through a competitive process.				
	Utilize existing pilot processes as basis for this process.	Meetings are already underway with system groups.		
Milestone 3-b Develop a peer learning model.	Convene selected colleges to support a peer learning model as was developed for the existing I-BEST model and Opportunity Grants.	Ongoing	Ongoing	
Milestone 3-c		Begin the redesign of the first year of 10 programs.	Conclude the second year redesign of 10 programs.	
Milestone 3-d Conduct pilot implementation.		Implement and provide technical assistance including quarterly campus visits in collaboration with the Washington Center.	Provide technical assistance including quarterly campus visits in collaboration with the Washington Center.	
Milestone 3-e Evaluate impact on student persistence and performance.		Evaluate student progress using Student Achievement measures.	Evaluate student progress using Student Achievement measures. Develop final report of observations.	

Milestone 3-f Disseminate program and funding models				Identify system approved program and funding model(s) for implementation at 17 colleges year 3 and implementation at remaining colleges year 4.
Student Achievement Initiative	<i>Current Status/ Baseline</i>	<i>Anticipated Progress or Completion Year 1</i>	<i>Anticipated Progress or Completion Year 2</i>	<i>Anticipated Progress or Completion Year 3</i>
GRANT OUTCOME 4 Increase Student Achievement <ul style="list-style-type: none"> • Create broader and more extensive pathways for low skill students to move beyond the Tipping Point to degrees. • Test an innovative performance funding system that focuses attention and rewards on overcoming the early hurdles students face that cause them to leave before completing even a year of college. • Complete a quantitative and qualitative evaluation of the increase achievement in colleges and examine the linkage of that achievement to policies and practices. This evaluation will be funded separate from this grant project but coordinated to coincide with this grant's funding period. It is one of three evaluation activities 	increased student achievement by 4.6%, greatest gains occurring in basic skills gains (10.1% increase) & college readiness (6.7% increase). Student Achievement Initiative tested and implemented	Increase student achievement by an estimated 60,000 points in the first performance year paying out \$30 per point in fall 2009. Rewards active	Increase student achievement by an estimated 20-25,000 points paying out \$40-\$50 per point in fall 2010 Rewards active	

<p>that will be conducted.</p> <p>A second activity will be the continuation of point tracking, reporting and descriptive analyses and reports by SBCTC and the colleges. The third activity will be the inclusion of Washington State's Student Achievement Initiative in a national evaluation of performance funding in states, also funded separate and part from this grant.</p>				
<p>Milestone 4-a Initiative Implemented, baseline measured, learning year finished.</p>	<p>Completed prior to grant period</p>			
<p>Milestone 4-b Establish an incentive fund to reward colleges</p>	<p>Legislature has made a proviso for \$3.5 million in system appropriation to be awarded to colleges for achievement.</p> <p>Grant funds will be added to increase the pool.</p>	<p>Legislature has made a proviso for \$3.5 million in system appropriation to be rewarded to colleges for achievement.</p> <p>Grant funds will be added to this to increase the pool.</p>		
<p>Milestone 4-c Measure and reward yearly gains in college achievement</p>	<p>First performance year ends June 2009.</p> <p>First performance payout in Oct 2009. Project that system wide achievement will</p>	<p>Second performance year ends June 2010.</p> <p>Second performance payout in Oct 2010. Project</p>	<p>Third performance payout in Oct 2011.</p> <p>Third performance</p>	

	<p>increase by 60,000 points* compared to 2006-07 baseline.</p> <p><i>*Note: The points in this period reflect the accumulation of two years of points (the 2007-08 "Learning" year and 2008-09 1st Implementation year).</i></p>	<p>that system wide achievement will increase by 25,000 points*.</p> <p><i>Note: The point estimate is based on flat or reduced funding for the period.</i></p>	<p>payout in Oct 2011. Project that system wide achievement will increase by 25,000 points*.</p> <p><i>Note: The point estimate is based on flat or reduced funding for the period.</i></p>	
<p>Milestone 4-d Engage colleges in examining and sharing promising practices that increase achievement</p>	<p>No analysis tools are being developed and will start to be used in summer 2009.</p>	<p>System sharing will increase as dollars become real.</p>		
<p>(Anticipated) External Factors or Challenges</p>	<ul style="list-style-type: none"> • Biggest challenges are to grow the incentive reward pool with new dollars that can be permanently added to colleges' base. 			

Appendix B: 25 Key High Enrollment Gatekeeper and Pre-College Courses to be Redesigned

25 Community and Technical College educational pathway courses with high enrollments, with below 90% completion rates and significant % low income students.

Dept	Number	Course Title	Course Pass Rate	% low income students *	Pathway
ACCT&	201	Principles of Accounting I	83.6%	23%	Transfer to business major, preparation for accounting tech
BIOL&	100	Survey of Biology	87.3%	27%	Liberal arts transfer (non - science majors)
BIOL&	160	General Biology w/Lab	87.1%	25%	1st biology for allied health majors
BIOL&	241	Human Anatomy and Physiology 1	85.9%	22%	RN and other allied health programs
BIOL&	260	Microbiology	89.1%	23%	allied health majors
BUS&	101	Introduction To Business	87.1%	23%	Business tech workforce program, explore transfer to business major
BUS&	201	Business Law	89.0%	26%	Transfer to business major
CHEM&	121	Introduction to Chemistry (inorganic)	86.3%	23%	Chemistry for allied health majors
ECON&	201	Microeconomics	88.4%	17%	Transfer to business major, econ majors, engineering (take micro OR macro)
ECON&	202	Macroeconomics	89.4%	16%	Transfer to business major, econ majors, engineering (take micro OR macro)
ENGL	9Y	Pre College English (highest level)	83.6%	38%	Remedial class preparation for ENGLISH Composition
ENGL&	101	English Composition I	82.8%	22%	All pathways
ENGL&	102	ENGLISH COMPOSITION II	84.9%	25%	Most transfer pathways
MATH	9X	Elementary Algebra (pre-college course)	79.8%	27%	Remedial class preparation for Intermediate Algebra
MATH	9Y	Intermediate Algebra (pre-college course)	79.8%	27%	Remedial class preparation for college math
MATH&	107	Math in Society	85.3%	22%	Second most common math course for transfer not in science, engineering Single most common math course for all transfers, required for science, engineering majors not
MATH&	141	Precalculus I	83.2%	16%	ready for calculus
MATH&	142	Precalculus II	85.0%	15%	Precalculus is a 2 course series
MATH&	146	Introduction to Statistics	86.8%	20%	Required for many allied health and social science transfers and for business majors
MATH&	151	CALCULUS I	86.1%	15%	Required for science, computer science and engineering/engineering tech majors
PHIL&	106	Introduction To Logic	86.9%	23%	General transfer course
POLS&	202	American Government	86.5%	11%	General transfer course
PSYC&	100	General Psychology	85.1%	27%	General transfer course
SOC&	101	Introduction To Sociology	89.0%	28%	General transfer course
SPAN&	121	Spanish I	84.2%	22%	General transfer course

* using economic disadvantage code as a proxy for low income

Appendix C: All 80 High Enrollment Courses to be Redesigned

Abnormal Psychology	Introduction to Business	Principles of Accounting I
American Government	Introduction to Chemistry (inorganic)	Principles of Accounting II
American Sign Language I	Introduction to Communication	Principles of Accounting III
American Sign Language II	Introduction to Criminal Justice	Public Speaking
Art Appreciation	Introduction to Literature I	Research for the 21st Century
Business Calculus	Introduction to Logic	Social Problems
Business Law	Introduction to Mass Media	Spanish I
Calculus I	Introduction to Oceanography	Spanish II
Calculus II	Introduction to Philosophy	Spanish III
Calculus III	Introduction to Physical Geology	Survey of Anthropology
Cultural Anthropology	Introduction to Political Science	Survey of Astronomy
Elementary Algebra	Introduction to Sociology	Survey of Biology
Engineering Physics I	Introduction to Statistics	Survey of Environmental Science (no lab)
English Composition I	Introduction to Theatre	Technical Writing
English Composition II	Lifespan Psychology	US History I
French I	Macroeconomics	US History II
French II	Majors Biology - 1st in series	US History III
General Biology w/Lab	Majors Biology - 2nd in series	Western Civilization I
General Chemistry with Lab I	Majors Biology - 3rd in series	World Civilizations I
General Chemistry with Lab II	Math in Society	
General Chemistry with Lab III	Microbiology	
General Physics I	Microeconomics	
General Physics II	Music Appreciation	
General Psychology	Nutrition	
Health and Wellness	Pacific NW History	
Human Anatomy and Physiology 1	Physical Anthropology	
Human Anatomy and Physiology 2	Physics: Non Science Majors	
Intermediate Algebra	Pre-Calculus I	
International Relations	Pre-Calculus II	
Interpersonal Communication	Pre-College English	
Introduction to Astronomy		

Appendix D



Washington State Board for Community & Technical Colleges

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I-BEST PROGRAMS

Bates Technical College	Electronics
Bates Technical College	Industrial Trades
Bellevue Community College	Infant Toddler Care Program for ESL
Bellevue Community College	Integrated Office Assistant for ABE & ESL
Bellevue Community College	Nursing Assistant Certified (NAC) for ESL
Bellingham Technical College	Allied Health
Bellingham Technical College	Appliance Repair
Bellingham Technical College	Basic Industrial Technology Certificate
Bellingham Technical College	Business and Computer Information Systems
Bellingham Technical College	Child Development (CDA) Essentials Program
Bellingham Technical College	Pastry
Bellingham Technical College	Vehicle Service Technician
Bellingham Technical College	Welding Technology
Big Bend Community College	Commercial Driver's License
Big Bend Community College	Early Childhood Education
Big Bend Community College	Medical Assistant
Big Bend Community College	Welding
Cascadia Community College	Office Skills Integrated with ESL
Cascadia Community College	Technical Support Specialist Certificate
Centralia College	Early Childhood Education
Centralia College	Nursing Assistant Certified
Clark College	Initial Child Care Certificate
Clark College	Office Clerk Level 1
Clark College	Nursing Assistant Certified
Clark College	Certificate of Achievement in Wire Feed & Advanced Arc Welding Processes
Clover Park Technical College	Allied Health Aide
Clover Park Technical College	Architectural CAD Drafting Certificate
Clover Park Technical College	Nursing Assistant Certification for ESL Program
Columbia Basin College	Child Development Associate I (2 Quarters)
Columbia Basin College	Child Development Associate II (4 Quarters)
Columbia Basin College	Medical Assistant
Columbia Basin College	Medical Secretary Proficiency with NAC Training
Columbia Basin College	Medical Secretary Short-term Certificate
Columbia Basin College	Nursing Assistant Certificate
Columbia Basin College	Phlebotomy
Columbia Basin College	Receptionist Program
Edmonds Community College	Allied Health

For additional I-BEST information including program summaries and application:
http://www.sbctc.ctc.edu/college/e_studentsuccess.aspx

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I-BEST PROGRAMS

Edmonds Community College	Basic Medical Office Certificate of Completion
Edmonds Community College	Construction Industry Training
Edmonds Community College	I-BEST for Electronic Technology
Edmonds Community College	Parent Mentor Certificate
Everett Community College	Advanced Manufacturing
Everett Community College	Nursing Assistant
Everett Community College	Welding/Fabrication
Grays Harbor College	Automotive Technology
Grays Harbor College	Commercial Driver's License
Grays Harbor College	Diesel Technology
Grays Harbor College	I-BEST Carpentry
Grays Harbor College	Welding Technology
Green River Community College	Administrative Assistant (General Office Assistant)
Green River Community College	Auto Body
Green River Community College	Aviation
Green River Community College	Child Development Associate Preparation with ESOL
Green River Community College	Community Forestry
Green River Community College	Early Childhood Education Assistant Teacher
Green River Community College	Fundamentals of Caregiving
Green River Community College	Welding
Highline Community College	Business Technology Certificate: Introduction to Business Technology
Highline Community College	Certificate in Customer Service: Tourism & Hospitality
Highline Community College	Early Childhood Education Certificate: Childcare Assistant
Highline Community College	Family Home Child Care Certificate
Highline Community College	Fundamentals to Allied Health
Highline Community College	Introduction to Print
Highline Community College	Nursing Assistant
Highline Community College	Phlebotomy
Highline Community College	School Age Care Certificate
Lake Washington Technical College	Accounting Assistant Certificate
Lake Washington Technical College	Business Applications Support
Lake Washington Technical College	General Service Technician
Lake Washington Technical College	Web Maintenance Certificate
Lower Columbia College	Administrative Support
Lower Columbia College	Early Childhood Education
Lower Columbia College	New Certificate: MFG Skills Certificate
Lower Columbia College	Health Occupations Core for the Unemployed Worker
North Seattle Community College	HVAC Service Certificate

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North Seattle Community College	IT for Healthcare
North Seattle Community College	Nursing Assistant Program Certificate
Olympic College	Early Childhood Education
Olympic College	Manufacturing
Olympic College	Nursing Assistant Program
Olympic College	Welding Program
Peninsula College	Administrative Office Systems Certificate
Peninsula College	Automotive Technology Short-term Certificates
Peninsula College	Composite Structures Program
Peninsula College	I-BEST Chemical Dependency Counselor Proficiency Certificate
Peninsula College	I-BEST Early Childhood Education Certificate
Peninsula College	Medical Assistant Certificate
Peninsula College	Welding Technology Certificate
Pierce College-Ft. Steilacoom	Language Interpreter
Pierce College-Ft. Steilacoom	Integrated Business Technology Certificate
Pierce College-Ft. Steilacoom	Correctional Specialist
Pierce College-Ft. Steilacoom	Early Childhood Education
Pierce College-Puyallup	Increased Access to RN Education in Highly-skilled, Culturally Competent Healthcare Providers
Pierce College Puyallup	Integrated Business Technology Certificate
Pierce College-Puyallup	Language Interpreter
Renton Technical College	Central Service Technician
Renton Technical College	Early Childhood Careers
Renton Technical College	Licensed Practical Nursing
Renton Technical College	Paraeducator/Bilingual Assistant
Renton Technical College	Pharmacy Technician
Renton Technical College	Phlebotomy Technician
Renton Technical College	Surgical Technician
Seattle Central Community College	Child Development Associate
Seattle Central Community College	Information Technology Applications Support
Seattle Central Community College	Nursing Assistant Certified
Shoreline Community College	Automotive General Service Technician-ABE/ESL
Shoreline Community College	Bilingual Office Assistant
Shoreline Community College	CNC Machinist
Shoreline Community College	Nursing Assistant Certified
Skagit Valley College	Early Childhood Education Certificate
Skagit Valley College	Light Maintenance Technician Certificate
Skagit Valley College	Patient Registration Representative
Skagit Valley College	Welding

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I-BEST PROGRAMS

South Puget Sound Community College	Customer Service Specialist
South Puget Sound Community College	Landscape Horticulture Technician
South Seattle Community College	C.N.A. to LPN Pathway with Multiple Starting and Stopping Places
South Seattle Community College	General Service Technician
Spokane Community College-IEL	Clerical Assistant
Spokane Community College-IEL	I-BEST Integrated Trades Training
Spokane Falls Community College	Basic Office Skills
Spokane Falls Community College	Social Services Technician
Tacoma Community College	Accounting Office Associate Certificate
Tacoma Community College	Case Aide Certificate
Tacoma Community College	Corrections Worker Certificate
Tacoma Community College	Medical Office Clerk
Tacoma Community College	Receptionist Clerk 1 Certificate/Office Assistant
Tacoma Community College	Early Childhood Education Development Specialist
Tacoma Community College	Transportation & Secure Logistics
Walla Walla Community College	Corrections Officer
Walla Walla Community College	Early Childhood Education
Walla Walla Community College	Pre-Nursing Assistant and Nursing Assistant
Wenatchee Valley College	Early Childhood Education I-BEST Program
Whatcom Community College	Accounting Support Specialist Training Endorsement
Whatcom Community College	Medical Front Office Reception and Medical Billing and Coding
Whatcom Community College	Nursing Assistant Certified
Yakima Community College	Business Technology
Yakima Valley Community College	Child Development Associate
Yakima Valley Community College	Nursing Assistant Certified
Total Colleges = 34	Total Programs = 138