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How I-BEST Works: Findings from a Field Study of Washington State's Integrated Basic Education and Skills Training Program

by John Wachen, Davis Jenkins, and Michelle Van Noy

with Kristen Kulongoski, Suma Kurien, Amanda Richards, Laurel Sipes, Madeline Weiss, and Matthew Zeidenberg

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About the Authors

John Wachen is a senior research assistant at CCRC. He is involved in research on developmental education summer bridge programs, community college performance funding policies, developmental education assessment and placement practices, and the Achieving the Dream initiative. He holds a B.S. from Pennsylvania State University and an M.A. from the University of Maryland.

Davis Jenkins is a senior research associate at CCRC. A key focus of his work is finding ways to strengthen the capacity of community colleges and other public postsecondary institutions to educate economically and educationally disadvantaged individuals for gainful employment in a knowledge economy. He holds a doctorate in public policy analysis from Carnegie Mellon University.

Michelle Van Noy is a research associate at CCRC. She conducts research on the workforce development role of community colleges. She holds an M.S. in public policy from Rutgers University. She is a Ph.D. candidate in sociology and education at Columbia University.

Kristen Kulongoski, Ed.M., is a senior research associate at MPR.

Suma Kurien, Ed.D., is director of the Center for Immigrant Education and Training at LaGuardia Community College; she also oversees a New York State Education Department pilot I-BEST program for English language learners.

Amanda Richards, M.P.P., is a senior research associate at MPR.

Laurel Sipes, M.P.P., is a research associate at MPR.

Madeline Weiss is a database programmer and senior research assistant at CCRC.

Matthew Zeidenberg, Ph.D., is a senior research associate at CCRC.

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Community College Research Center
Teachers College, Columbia University
525 West 120th Street, Box 174
New York, NY 10027

http://ccrc.tc.columbia.edu

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Executive Summary

Integrated Basic Education and Skills Training (I-BEST) is an innovative program and strategy developed by the Washington (WA) State Board for Community and Technical Colleges (SBCTC) in conjunction with the state's 29 community colleges and five technical colleges. Its goal is to increase the rate at which adult basic education and English-as-a-second-language students advance to college-level occupational programs and complete postsecondary credentials in fields offering good wages and career advancement.

The promising results from preliminary analyses of I-BEST have generated interest in replication of the I-BEST model. Nationally, over 2.5 million students take adult basic skills courses at community colleges, high schools, and community organizations; only a fraction of these go on to pursue and earn college credentials.

Despite the growing interest in I-BEST, not much is known outside Washington State about how the program works. This study, conducted by the Community College Research Center (CCRC), examines how I-BEST operates in Washington's community and technical colleges. Researchers conducted telephone interviews with I-BEST faculty, staff, and administrators at all 34 colleges, and also observed I-BEST classes and interviewed faculty in-depth at four colleges.

I-BEST Program Characteristics

I-BEST was developed in response to the recognition that although adults with a high school education or less could benefit from postsecondary occupational education and a credential, too few such individuals enter and succeed in college-level training. This includes students in adult basic skills programs, which in Washington State are offered by the two-year colleges. Few such students make the transition to college-level programs. I-BEST seeks to address this problem by combining basic skills and professional technical instruction so that basic skills students can enter directly into college-level coursework. In the I-BEST model, basic skills instructors and professional-technical faculty jointly design and teach college-level occupational classes that admit basic skills-level students. I-BEST courses must be part of a coherent program of study leading to college credentials and jobs in demand, thus providing a structured pathway to completion and career-path employment so students do not have to "find their way on their own."

I-BEST Students

All I-BEST participants must qualify as basic skills students. Washington State's only requirement for I-BEST eligibility is that students score below a certain cutoff on a standardized basic skills assessment. Individual colleges, however, often have additional academic and personal criteria for student participation.

I-BEST students are, on average, more likely than other basic skills students to be older, female, to have a GED or high school diploma, and to be enrolled in college full time. Further, a higher percentage of I-BEST students are in the lowest quintiles of socioeconomic status.

Colleges recruit students for I-BEST from their own basic skills courses and through partnerships with outside organizations and businesses. Still, I-BEST programs have varying degrees of success in recruiting enough students to be able to offer all their courses every quarter.

A key impediment to student participation is the cost of I-BEST courses, which is the same as tuition for college courses, and much more expensive than basic skills courses; which only charge a nominal fee. Nearly a third of I-BEST students take advantage of the state Opportunity Grant, which provides flexible financial aid for non-traditional students in occupational programs, but a large number of I-BEST students do not get support from any source.

I-BEST Instruction and Student Support Services

The SBCTC requires that I-BEST courses have both a basic skills and a professional-technical instructor in the classroom together for at least 50 percent of the instructional time. The extent and nature of instructor training varies across the colleges, but pairing instructors who work well together is considered crucial to program success. Often, several quarter-length terms are needed for teaching teams to develop into cohesive, comfortable units.

A common approach to the joint curriculum planning process is to modify existing professional-technical curriculum by integrating basic skills instruction into the course content. In practice, the degree to which instruction is integrated in the I-BEST classroom varies considerably, and fully integrated instruction is difficult to achieve and therefore rare.

Providing I-BEST students with needed support is a key college retention strategy. The amount and intensity of support services varies, however. About a third of the colleges designate a main point of contact for students, but most I-BEST staff and faculty offer support as needed. Most I-BEST programs also include support courses or labs in addition to the content courses.

Managing I-BEST Programs

At the majority of colleges, I-BEST is housed in the basic skills division. Yet, regardless of where I-BEST fits within the organizational structure of the college, the model requires strong coordination between the basic skills division and professional-technical departments. Developing such coordination has proven challenging, but it has also led to greater awareness of the needs of basic skills students. Half the colleges have designated an I-BEST coordinator to help recruit students; liaise with financial aid officers; manage the collection and reporting of student data; handle registration, advising, and career exploration; and manage budgets.

In our interviews, the colleges all asserted that careful planning, well-defined staff roles, buy-in by both the basic skills division and professional-technical departments, and support from senior leaders have been critical to successful implementation because of the interdepartmental nature of I-BEST.

Funding and Sustaining I-BEST

All colleges receive state funds for I-BEST, but some reported that the funds do not fully cover expenses. Most colleges find additional grant monies to support I-BEST programs. Thus, many program administrators were unsure about the financial sustainability of I-BEST programs. More than a third of the colleges believed that the programs could be sustainable if there were a strong commitment from senior administrators, continued state financial support, and strong enrollments. In spite of the difficult task of funding I-BEST, many colleges indicated that they were planning on offering new I-BEST programs.

Conclusion

Overall, the 34 colleges agreed that I-BEST is an effective model for increasing the rate at which adult basic skills students enter and succeed in postsecondary occupational education. But it is expensive to operate, and determining how to fund its programs is a major concern. Not surprisingly, therefore, there was no consensus among the colleges about the sustainability of I-BEST, although they all acknowledged its significant benefits.

1. Introduction

1.1 The Rationale for I-BEST

Integrated Basic Education and Skills Training (I-BEST) is an innovative strategy developed by the Washington (WA) State Board for Community and Technical Colleges (SBCTC) in conjunction with the state's community and technical colleges to increase the rate at which adult basic skills students[1] enter and succeed in postsecondary occupational education. In the I-BEST model, basic skills instructors and professional-technical faculty jointly design and teach college-level occupational classes that admit basic skills-level students. By integrating instruction in basic skills with instruction in college-level professional-technical skills, I-BEST seeks to increase the rate at which adult basic education and English-as-a-second-language students advance to college-level programs and complete postsecondary credentials in fields offering good wages and opportunities for career advancement.

1.2 The Conception and Development of I-BEST

I-BEST was conceived when Washington State was emerging from the "tech bust" of 2001. As the state's economy recovered, employers reported having difficulty finding workers with at least some postsecondary education and training. At the same time, the state had a large number of adult workers without postsecondary training and the requisite basic skills for many of the jobs in demand.

Washington's 29 community colleges and five technical colleges are the state's main provider of adult basic skills education, serving nearly 60,000 students per year. A study by David Prince of the SBCTC and Davis Jenkins of the Community College Research Center (CCRC) that tracked the educational and labor market outcomes of the system's basic skills students found that students who went on to earn at least one year of college-level credit and a credential within a five-year period earned substantially more than students who did not make it to that "tipping point" (Prince & Jenkins, 2005). The study also found, however, that few basic skills students advance to college-level courses, much less reach the tipping point.

In 2004-05, the SBCTC funded pilot programs at ten colleges to test different approaches to increasing the rate at which basic skills students advanced to college-level occupational programs.[2] An evaluation of these pilots by SBCTC researchers found promise in those where a basic skills instructor team taught college-level professional-technical education courses that were open to basic skills students. Based on this finding, the SBCTC created the I-BEST program model and developed a funding model to enable students who qualified for basic skills instruction (based on scores on the Comprehensive Adult Student Assessment Systems [CASAS][3] test used by the state for basic skills students) to take college-level occupational courses that are team taught by a basic skills instructor and a professional-technical faculty member.

To be approved by the SBCTC for I-BEST funding, colleges must show that I-BEST courses are part of a "career pathway," a sequence of courses that leads directly to a postsecondary credential and to jobs that are in demand in the local labor market (SBCTC, 2005). In 2005, the SBCTC approved enhanced funding of programs that meet the I-BEST program criteria at 1.75 times the normal reimbursement rate per full-time equivalent (FTE) student to compensate colleges for the increased costs of running I-BEST programs. I-BEST students pay the same tuition for I-BEST courses as they would for any other college-level course (and they do receive college-level credit), whereas basic skills students pay only a modest fee to enroll in basic skills courses (for which they do not receive college-level credit).[4] By 2007-08, all 34 community and technical colleges in Washington State were offering I-BEST programs.

[1] Adult basic skills students are adults who lack high school-level skills. Basic skills instruction may include Adult Basic Education (ABE), English as a Second Language (ESL), and Adult Secondary Education (ASE) or General Education Development (GED) programs.
[2] See Bloomer (2008) and Bridges to Opportunity (2008) for more details on the history of I-BEST.
[3] For more information on the CASAS, see www.casas.org.
[4] Note that in most cases, I-BEST courses also enroll students who are not basic skills students. Colleges receive the regular state FTE reimbursement for these students, just as they would for students enrolled in any college-level professional-technical class.

Initial descriptive analysis by SBCTC researchers has shown promising results for I-BEST students (SBCTC, 2008). Last year, CCRC published results of a quantitative analysis indicating that I-BEST students were much more likely to complete occupational certificates than were other basic skills students, including those who took at least one college-level occupational course on their own (Jenkins, Zeidenberg, & Kienzl, 2009). In a companion paper to this report, CCRC reported results of more recent quantitative analyses using data on the outcomes of more I-BEST students over a longer time period (Zeidenberg, Cho, & Jenkins, 2010). That study also found that I-BEST students had superior educational outcomes compared with other basic skills students who took at least one college-level occupational course. In addition, the same study provides evidence that the effects observed were causal, not merely correlational.

1.3 The Purpose and Contents of this Report

The promising results from evaluations of I-BEST programs have generated interest in the I-BEST model in adult education, workforce development, and postsecondary education communities in other states.[5] Nationally, over 2.5 million students take adult basic skills courses at community colleges, high schools, and community organizations, and there are many more educationally disadvantaged, working age adults in the population at large. Thus, the large number of students who could potentially benefit from this model has inspired further interest in understanding I-BEST, and funders such as the Bill & Melinda Gates Foundation and the Annie E. Casey Foundation have expressed interest in replicating the model.

Quantitative analyses of the I-BEST model indicate that it is effective in improving educational outcomes, but few people in the larger higher education community outside of Washington's two-year colleges fully understand how I-BEST programs work. Therefore, the study reported on here examines how the 34 community and technical colleges in Washington State are implementing the I-BEST model and how I-BEST programs operate. Specifically, it addresses the following research questions:

- How is I-BEST being implemented across Washington State's community and technical colleges? What elements and approaches are common across programs? What accounts for variations in approach and organization?
- What does I-BEST look like in the classroom? To what extent and in what ways are technical and basic skills instruction in I-BEST courses integrated?
- What is the nature of the I-BEST student population? How do students get into I-BEST programs? What support services do colleges offer I-BEST students?
- What costs are involved in operating I-BEST programs? Are I-BEST programs sustainable financially?
- What are key challenges and promising practices for implementing I-BEST programs? What advice can be offered to other colleges and state systems interested in implementing similar programs?

To answer these questions, we conducted telephone interviews with faculty, staff, and administrators involved with I-BEST at all 34 Washington State community and technical colleges. We also observed I-BEST classes and interviewed faculty in-depth at four colleges. We present our findings in this report, which is organized as follows:

Section 2: Research Methods
Section 3: I-BEST Program Characteristics
Section 4: I-BEST Students
Section 5: I-BEST Instruction and Student Support Services
Section 6: Managing I-BEST Programs
Section 7: Funding and Sustaining I-BEST
Section 8: Lessons for Other States and Colleges and Future Research

[5] See, for example, the description of Wisconsin's Regional Industry Skills Education (RISE) initiative in Strawn (2010).

2. Research Methods

This report is based on information about I-BEST programs at all 34 Washington State community and technical colleges. CCRC researchers collected data using a variety of research methods.

We first reviewed approved applications for all I-BEST programs at each college: approximately 140 applications. We used a template to record major features for all I-BEST programs at each college, including general program information, courses included in the program sequence,[6] program length, credentials earned in I-BEST and as part of an educational pathway, and potential program completion wages.

Next, over the period of November 2009 to January 2010, researchers conducted interviews with personnel at all 34 colleges in the Washington State community and technical college system, using a structured interview protocol. A total of 126 individuals were interviewed, representing the following categories: the I-BEST program administrator; two I-BEST instructors (professional-technical and ABE/ESL instructors who co-taught I-BEST), typically in a joint interview; and a student services staff member or administrator.[7] Interviews with I-BEST instructors focused on one I-BEST program at the college. Notes were taken for all interviews and most were also recorded.

In addition, during November 2009, researchers conducted site visits to four of the colleges. Selection of the four colleges was based on location, size, and type (technical or comprehensive), with input from the SBCTC. We visited one technical college and three comprehensive colleges. Visits included classroom observations, interviews with instructors after classroom observations, focus groups with I-BEST students, and in-depth follow-up discussions with program administrators and student services staff. Researchers used a structured interview protocol in which notes were taken, and all interviews were also recorded.

Lastly, researchers analyzed enrollment data from the SBCTC. We used data on students' actual course taking (including I-BEST courses) at community and technical colleges to get counts of I-BEST students and to identify characteristics of I-BEST students and comparable groups of basic skills students.

3. I-BEST Program Characteristics

I-BEST was developed in response to the recognition that although adults with a high school education or less could benefit from postsecondary occupational education and a credential, too few such individuals enter and succeed in college-level training. This includes students in adult basic skills programs, which in Washington State are offered by the two-year colleges. Few such students make the transition to college-level programs. I-BEST seeks to address this problem by combining basic skills and professional-technical instruction so that basic skills students can enter directly into college-level coursework. In the I-BEST model, basic skills instructors and professional-technical faculty jointly design and teach college-level occupational classes that admit basic skills-level students.

An I-BEST program consists of a series of these integrated courses in a particular professional-technical field that leads to a credential, often a college-issued certificate, and prepares students for employment in jobs in demand and further college-level education leading to degrees. Thus, I-BEST provides a structured pathway to college credentials and career-path employment so that students do not have to "find their way on their own." The number of courses in the I-BEST sequence varies by program, as does the credential that students receive at the end of the sequence. In addition to enrolling in the sequence of integrated professional-technical courses, many I-BEST students also take I-BEST support classes that provide supplemental instruction and support (vocabulary or math review, study skills) in both the content area and basic academic skills.

[6] The I-BEST program administrator at each college reviewed our course sequence listings for accuracy.

[7] The instructor teams we interviewed were selected based on program administrator recommendations. Some colleges did not designate a student services administrator to be interviewed. Some substituted another administrator, and in some cases the I-BEST coordinator answered questions about support services for I-BEST students. We were not granted all the interviews requested at three colleges in the system.

For approval of proposed I-BEST programs, colleges must submit applications to the SBCTC that provide information on entry criteria, courses in the program, anticipated learning outcomes, teaching and student success strategies, targeted educational and career pathways (see accompanying boxes), and credentials and potential salaries for program completers. There were 140 approved I-BEST programs at the 34 Washington State colleges as of fall 2009, covering a wide range of professional-technical training. The specific characteristics of individual I-BEST programs vary across the colleges. In this section, we describe the variation within the I-BEST model and highlight key common features.

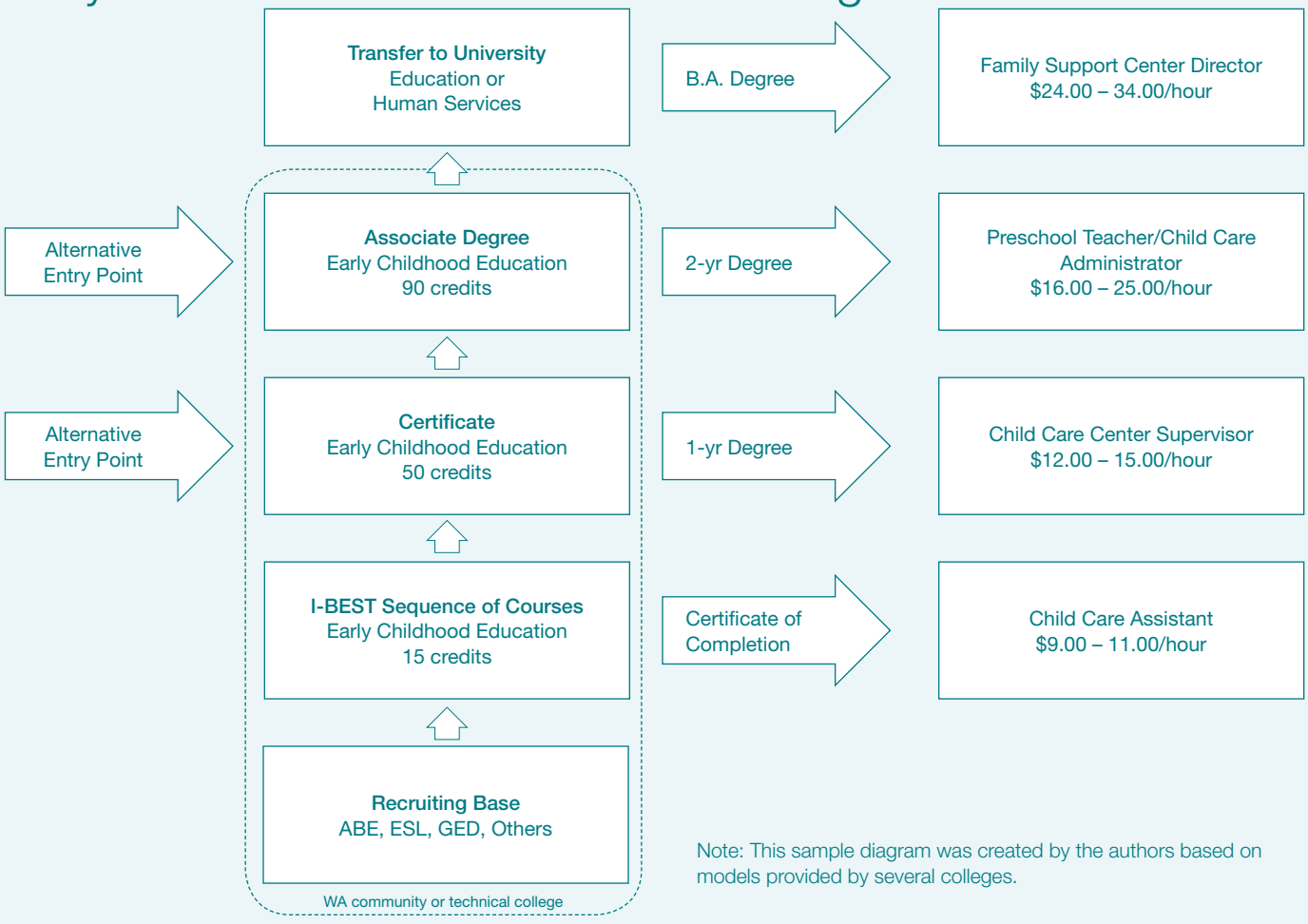
Educational and Career Pathways

As explained in the SBCTC's I-BEST program application, an educational and career pathway "begins with adult basic education ABE/ESL and continues to a one-year certificate and beyond" with "multiple access points for students.... Each level of attainment in the educational pathway prepares students to readily engage in the next level."

3.1 Student Composition

Every I-BEST participant must qualify as a basic skills student (based on scores on the CASAS basic skills test). Some colleges offer I-BEST programs only to full classes of adult basic education students. However, many colleges combine a cohort of I-BEST students with regular professional-technical students in the same class. Of the 34 colleges in Washington State, 27 reported having at least one I-BEST program whose courses enroll both

Sample Pathways Diagram for an Early Childhood Education I-BEST Program



Note: This sample diagram was created by the authors based on models provided by several colleges.

I-BEST and non-I-BEST students. These colleges include a mix of students in their I-BEST programs for a variety of reasons. Several indicated that mixing students in the classroom provides opportunities for stronger students to support weaker students and that such mixing better integrates I-BEST students into the college environment. Some colleges admit non-I-BEST students into the courses out of necessity. Programs that have difficulty recruiting a full cohort of I-BEST students can meet enrollment requirements by allowing non-I-BEST students into the courses. Only I-BEST students generate the richer FTE funding, however.

3.2 Fields of Study and Employment Preparation

I-BEST programs are designed to prepare low-income students for further education and jobs in high-demand, high-wage industries. As shown in Table 1, health care, manufacturing, education, and business are the most common fields of study for I-BEST programs, accounting for 88 percent of the I-BEST programs.

Table 1
I-BEST Programs by Field of Study

Field of Study	Number of Programs	Percentage of Programs
Health Care	44	32%
Nursing/Nursing Assistant	18	
Medical Assisting	6	
Medical Technology/Technician	5	
Other Health Occupation	15	
Manufacturing, Construction, Repair and Transportation	32	23%
Education	24	18%
Business	20	15%
Secretarial Services	10	
Administration and Management	5	
Other Business	5	
STEM	10	7%
Computer and Information Systems	5	
Engineering and Engineering Technology	3	
Other STEM	2	
Protective Services – Corrections	3	2%
Foreign Languages – Interpreter	2	1%
Communications – Print	1	1%
Consumer Services	1	1%
Total	**137**	**100%**

Source: I-BEST program applications submitted to the SBCTC.
Note: N = 137.

In addition to targeting fields of study with plentiful employment opportunities, I-BEST programs prepare students for jobs with high wages. In fact, I-BEST program applications must include information on potential wages for completers based on state labor market data and information from local employers, as shown in Table 2. The median potential hourly wage across the programs is $14.25, with a minimum median wage of $8.51 (in child care[8]) and a maximum median wage of $27.31 (in electronics manufacturing). Programs with the lowest median wages include child care, home care, and education. Those with the highest median wages include information technology; nursing; and heating, ventilating, and air conditioning. Findings on actual wages earned by I-BEST students are presented in a companion quantitative analysis (Zeidenberg et al., 2010).

3.3 Program Duration

Figure 1 shows that the majority of I-BEST programs (79 percent) are three quarters or less in length, and more than half (54 percent) are two quarters or less.[9] Some program staff believed that shorter I-BEST programs are

Table 2
Potential Wages for I-BEST Completers

Field of Study	Median Hourly Wage, in Dollars
Language Translation	20.00
Protective Services	17.46
STEM	17.13
Manufacturing, Construction, Repair and Transportation	16.30
Consumer Services	13.22
Health Care	13.20
Communications	13.00
Business	12.37
Education	9.62

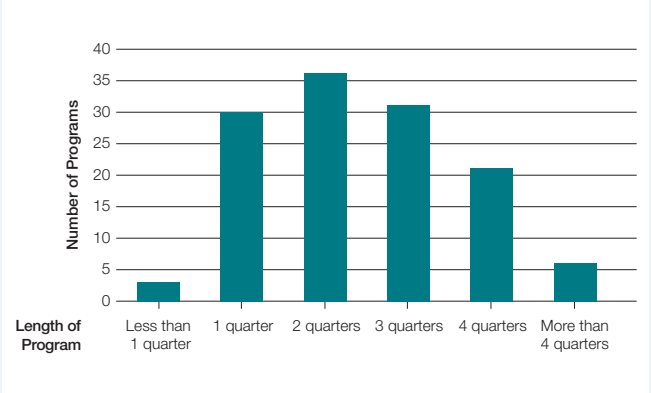
Source: I-BEST program applications submitted to the SBCTC.
Note: Program applications were submitted over several years. Median wages were identified at the time of submission.

[8] The SBCTC requires all I-BEST program proposals to provide labor market data showing evidence of jobs for I-BEST completers at a minimum of $13 per hour. Child care is an exception to this requirement because of the state interest in this occupation.
[9] The Washington State community and technical colleges operate on a quarter system.

better suited to the target student populations because students eager to earn a credential for additional job opportunities may want to complete a program quickly. Also, longer programs can initially seem overwhelming. A program administrator at a college with both longer and shorter I-BEST programs argued, "One year for people who have not taken college-level classes and have not paid full tuition before is too long. It is a lot more realistic to expect more retention and better outcomes with one quarter to two quarters."

Table 3 shows the number of students who enrolled in each type of program during the 2006-07 and 2007-08 academic years.

Figure 1
I-BEST Program Length



Source: I-BEST program applications submitted by colleges to the SBCTC.
Note: N = 127. Ten programs were missing data.

4. I-BEST Students

4.1 Characteristics

To better understand the characteristics of I-BEST students, we distinguished them from two mutually exclusive comparison groups taken from the more general population of basic skills students. Table 4 shows characteristics of three groups of basic skills students in the 2006-07 and 2007-08 academic years: (1) I-BEST students, (2) non-I-BEST workforce students, and (3) non-I-BEST non-workforce students.[10] In 2006-07 and 2007-08, there were 2,025 I-BEST students across the 34 colleges. Over the same time period, there were 7,933 basic skills students who did not enroll in I-BEST but took at least one professional-technical course on their own, referred to as non-I-BEST workforce students. This group of students is most comparable to I-BEST students because enrolling in a professional-technical course indicates a desire to pursue occupational training. The third group, referred to as non-I-BEST non-workforce students, consisted of basic skills students who did not enroll in I-BEST or take a professional-technical course. There were 79,104 students in this group.

Some noteworthy similarities and differences emerge when comparing I-BEST students with the two larger groups of basic skills students. As shown in Table 4, I-BEST and non-I-BEST workforce students were much more likely to have come from ABE/GED courses (as opposed to ESL) than the larger population of non-I-BEST non-workforce students. This is interesting because, as illustrated in Figure 2, the majority (86 percent) of I-BEST programs were designed for both ABE/GED and ESL student populations while only a few programs were designed specifically for ESL students (12 percent) and even fewer specifically for ABE/GED students (2 percent). One possible reason for the low percentage of ESL students in I-BEST programs is ESL students' self-perception that they lack the English language proficiency needed to succeed in the professional-technical courses.

I-BEST students were, on average, more likely than other basic skills students to be older, female, and to have a GED or high school diploma. Table 5 shows the means for the earliest CASAS assessment scores of the three groups of basic skills students. I-BEST students had CASAS scores that were slightly higher but similar to non-I-BEST workforce students (slightly higher on math and reading, with a more notable difference on listening). Both these groups scored higher than the larger population of non-I-BEST non-workforce students (particularly on reading and listening). These differences may be a result of the requirements for different I-BEST programs, which, in

[10] The term "workforce students" is used here to refer to professional-technical education students. "Non-I-BEST workforce students" are basic skills students who took at least one professional-technical course on their own (i.e., not through I-BEST) during the study period.

Table 3
I-BEST Student Enrollments by Program Concentration, Grouped by Field of Study

Field of Study	Number of Students, by Year		Total Number of Students, 2006-08	Percentage of Students, 2006-08
	2006-07	2007-08		
Health Care				25.5%
Nursing/Nursing Assistant	83	248	331	
Medical Assisting	95	144	239	
Medical Technology/Technician	6	10	16	
Dental Technology/Technician	1	0	1	
Other Health	34	65	99	
Manufacturing, Construction, Repair, and Transportation	143	252	395	14.7%
Education	61	181	242	9.0%
Business				8.5%
Administration and Management	35	68	103	
Secretarial Services	20	65	85	
Other Business	14	28	42	
Protective Services – Corrections	49	52	101	3.8%
STEM				2.1%
Computer and Information Systems	8	34	42	
Engineering and Engineering Technology	0	14	14	
Mathematics and Science			0	
Other STEM	1	1	2	
Communications	5	5	10	0.4%
Foreign Languages – Interpreter	2	6	8	0.3%
Consumer Services				0.1%
Cosmetology	0	0	0	
Other Consumer Services	0	2	2	
Other Fields of Study	69	137	206	7.7%
No Instructional Program Classification Given	275	474	749	27.9%
Total	**901**	**1,786**	**2,687**	**100.0%**

Source: Program enrollment data from SBCTC.

some cases, required students to score in a higher sub-range of scores on the CASAS than non-I-BEST students (see section 4.2 below for additional information on I-BEST program eligibility requirements).

Program staff and instructors noted that many I-BEST students have had poor experiences with (or long absences from) previous education endeavors and that they are self-motivated but lack self-confidence. Respondents identified several characteristics of students who tend to do well in I-BEST programs. They were described as being mature and motivated, having few personal and life problems, having experience in the job market, and being clearly aware of the demands of the I-BEST program and feeling able to meet them — qualities much like those of successful students generally.

Table 4
Characteristics of Basic Skills Students, 2006-07 and 2007-08

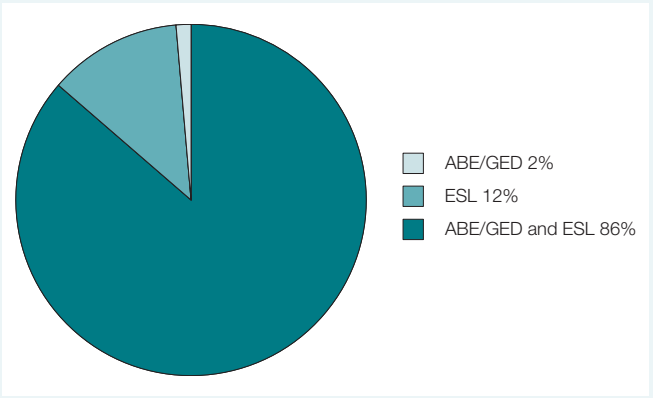
Student Characteristics	I-BEST	Non-I-BEST Workforce	Non-I-BEST Non-Workforce
Number of Students in Program	2,025	7,933	79,104
Program Classification			
I-BEST Student	100%	0.0%	0.0%
ABE/GED Student	77.0%	79.4%	45.6%
ESL Student	23.1%	20.7%	54.4%
Non-IB Workforce Student	0.0%	100.0%	0.0%
Social Characteristics			
Mean Age	32.1	27.7	30.7
Female	66.3%	62.3%	54.3%
Hispanic	18.8%	16.4%	36.2%
Black, Non-Hispanic	9.8%	11.0%	7.4%
Asian/Pacific Islander	10.1%	8.6%	12.2%
Single w/ Dependent	21.4%	21.0%	13.2%
Married w/ Dependent	23.8%	15.0%	23.8%
Disabled	7.2%	7.7%	3.6%
Current Schooling Characteristics			
Intent is Vocational[a]	75.1%	51.5%	19.7%
Intent is Academic	7.5%	9.6%	7.2%
Enrolled Full Time	66.8%	57.8%	28.3%
Previous Schooling			
Mean College Credits	7.6	4.1	0.5
Mean Vocational Credits	4.0	2.5	0.3
GED	12.2%	9.8%	4.1%
High School Graduate	29.6%	19.2%	15.0%
Some College	10.3%	6.8%	4.0%
Certificate	3.9%	2.5%	1.5%
Associate Degree	2.4%	1.8%	1.4%
Bachelor's Degree	3.5%	2.4%	3.5%
Running Start (dual enrollment) student	1.9%	2.4%	0.3%

Source: Program enrollment data from SBCTC.
[a] Vocational and academic intent indicates the type of college program that the student intends to pursue. If vocational, the student would pursue workforce training; if academic, the student would pursue a program that leads to a degree and/or transfer to a four-year institution. Students do not always follow their stated intent, and students' intent can change over time, sometimes in response to their educational experience (see Bailey, Jenkins, & Leinbach, 2006).

4.2 Program Eligibility Requirements

The SBCTC's only eligibility requirement for I-BEST is that students must score below 256 (the same cut score for placement into adult basic education) on the CASAS assessment, leaving other eligibility decisions to be made at the local level in order to best ensure students' success. Additional eligibility requirements imposed by colleges can make recruitment more complex, by further delineating CASAS score ranges, instituting other measures of academic preparedness, and mandating background checks.

Figure 2
Student Population Focus of I-BEST Programs



Source: I-BEST program applications submitted to the SBCTC.
Note: N = 133. Four programs were missing data.

In fact, some I-BEST programs require potential participants to complete a program application covering information about a student's career goals, ability to attend classes, and willingness to pay tuition or apply for financial aid. Thus, a college's I-BEST eligibility requirements often influence program enrollments.

Eligibility requirements have evolved over time as the colleges better identified the skill levels that students need to be successful in I-BEST. A common change at many of the colleges was to raise the minimum score requirement on the CASAS assessment to increase the skill level of students enrolling in I-BEST programs. In these cases, colleges outlined a sub-range of CASAS scores representing higher skill levels that students must meet to qualify for I-BEST.

Some colleges reported that faculty feedback resulted in changes to eligibility requirements. At one college, I-BEST instructors found that large numbers of their students were unable to successfully complete the sequence of I-BEST courses, so they worked with program staff to develop proficiency levels with specific minimum cut scores to ensure that students entering the programs are adequately prepared to succeed in the I-BEST program and transition to the next level of education and training. Students who do not meet the minimum test score requirements are either referred to additional basic skills coursework or placed into a pre-I-BEST program to refresh their skills. The text box on p. 14 (Pre-I-BEST Programs) describes college support for student transitions. Also at this college, I-BEST faculty and staff recognized that students were having difficulty completing their GED tests after they enrolled in I-BEST. The college thus decided to institute an additional eligibility requirement, that students must complete at least three of the five GED tests before they can enroll in I-BEST.

4.3 Recruitment and Screening

A major recruitment source for I-BEST programs is each college's own basic skills courses. On-campus recruitment strategies include structured in-class presentations by I-BEST staff, basic skills instructors' talking about the program with their students, I-BEST informational sessions for interested students, flyers and brochures, referrals from counselors and advisors, and word-of-mouth. I-BEST program staff reported that there are several advantages to recruiting from basic skills classes on campus. Recruiters are able to target classes at the appropriate skill levels and work with instructors who help to identify students who could benefit from I-BEST. Respondents also reported that students currently enrolled in regular basic skills courses might be more receptive to the concept of I-BEST than potential participants from outside

Table 5
Means of Earliest CASAS Scores: Basic Skills Population, 2006-07 and 2007-08

Test	I-BEST		Non-I-BEST Workforce		Non-I-BEST Non-Workforce	
	N	Median Score	N	Median Score	N	Median Score
	2,025		7,933		79,104	
CASAS Math	1,450	227	3,399	225	24,360	222
CASAS Reading	1,782	237	3,986	235	57,143	218
CASAS Listening	432	219	926	213	29,910	205

Source: Program enrollment data from SBCTC.
Note: When tests were taken multiple times by students, the scores used here were the earliest on each test.

Pre-I-BEST Programs

Helping students make the transition from ABE and ESL classes to college-level coursework takes considerable planning and support from college personnel. Moreover, not all students who are interested in enrolling in I-BEST meet the program eligibility requirements. One strategy for preparing students for this transition is placing them into a pre-I-BEST program. Six of the Washington State colleges have implemented such programs, which are designed to prepare students for I-BEST by providing focused academic support and student services support prior to the start of the I-BEST sequence of classes.

The academic support may include refresher courses or labs for basic math, reading, and writing skills, and instruction in basic computer skills. The support services include assistance with applying for financial aid, registering for classes, and developing academic plans. An advantage of this strategy is that the services that these students need are centralized, more structured, and offered prior to enrollment in college-level courses. Pre-I-BEST programs are effectively a one-stop resource for the various steps involved in the transition to college-level coursework.

the college because they are already somewhat familiar with the college campus and faculty and, by having taken the initiative to enroll in classes, have already revealed a desire to further their education.

Partnerships with outside organizations — such as community-based organizations, local businesses, and One-Stop Career Centers — provide another recruitment source. Program administrators effectively recruit students through professional and personal contacts in the industries associated with I-BEST programs (targeting employees in lower skill jobs); they frequently mentioned attending meetings and forums in the community to "spread the word" about I-BEST. Recruiting from community-based organizations also allows colleges to reach target populations that are particularly underserved or disadvantaged. For example, one college reported working with a local rescue mission to transition adult basic education students from the mission to the college's I-BEST programs. Another college promotes I-BEST at an annual Latino career fair.

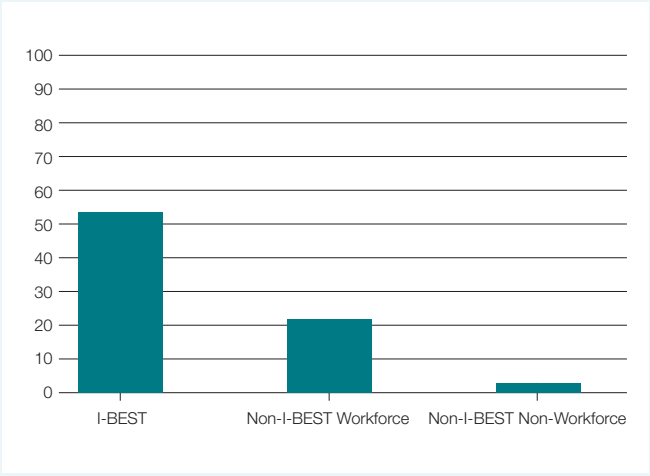
Seven of the colleges identify potential participants for at least one of their programs by using a different approach. Rather than reaching out to students in the basic skills population on campus and in the community, the programs assess students who are already enrolled in the professional-technical courses to determine which of them are in need of basic skills instruction. When program staff determine that enough students qualify for I-BEST (based on their CASAS scores), an I-BEST section is added and a basic skills instructor is placed in it. Both I-BEST and non-I-BEST students (whether or not they need basic skills instruction based on test scores) in these programs receive the integrated instruction.

Colleges indicated that it is necessary to invest significant resources in recruitment to reach and inform their target populations. Even with a variety of strategies in place, different programs within each college often experience varying degrees of success in recruiting enough students to make the programs feasible. Some of the colleges have I-BEST programs "on the books" that either have never been offered or have been offered only sporadically because of difficulty in recruiting enough students.

Even so, because of the demands of I-BEST programs, more than a third of the colleges have implemented a selection or screening process as part of I-BEST student intake. I-BEST staff at many of these colleges realized that some students were not gaining a good understanding of the program requirements and were often surprised by the academic rigor and time commitment involved. Students did not always understand the importance of attendance, turning in assignments on time, and being able to commit to the entire length of the program, all of which contributed to lower retention. The screening process has helped potential program participants understand expectations and has also helped program staff determine candidate readiness. Screening varies across the programs in terms of the degree of structure and formality that are

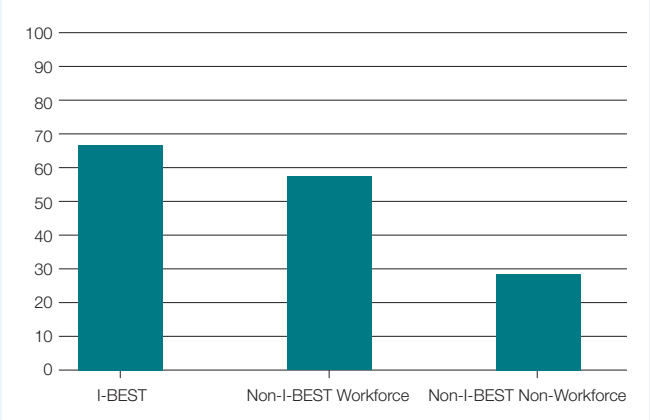
involved; screening may include interest or commitment checklists, educational interviews, skills assessments, visits to I-BEST classes, previewing of curricula and textbooks, enrollment in pre-I-BEST programs, and student contracts. In some sense, many of the regular intake activities, such as attending I-BEST meetings and completing financial aid forms, are also screens to identify serious, motivated students.

Figure 3
Percentage of Basic Skills Students Receiving Any Financial Aid, 2006–07 and 2007–08



Source: Program enrollment data from SBCTC.
Note: "Any financial aid" includes federal, state, and local financial aid.

Figure 4
Percentage of Basic Skills Students Enrolled Full Time, 2006–07 and 2007–08



Source: Program enrollment data from SBCTC.

4.4. Financial Aid

One of the most critical aspects of recruiting students and maintaining I-BEST programs is helping students attain financial aid. In Washington State's two-year colleges, there are several potential aid sources, but the complicated process of demonstrating eligibility for them can be a deterrent for both the students and colleges.

Because basic skills courses are offered for only a very modest fee ($25 per term), basic skills students making the transition to college-level courses are faced with the adjustment of having to pay tuition for the college-level portion of I-BEST programs. Since many I-BEST students are part of low-income families, the tuition for college-level classes can be a prohibitive expense. An I-BEST program coordinator stated, "Students who do not qualify for financial aid have a very hard time paying for tuition. Sometimes we have to drop them before they even begin or within the first ten days. About half of the students who are interested do not qualify for financial aid. This is the major barrier."

In 2006-07 and 2007-08, a substantial number of I-BEST students received a Pell Grant,[11] a State Need Grant, or an Opportunity Grant, and, as shown in Figure 3, a larger percentage of I-BEST students than non-I-BEST workforce students and non-I-BEST non-workforce students received some type of financial aid. Of these types of aid, the Opportunity Grant was most frequently mentioned by respondents as being linked to I-BEST programs. While 30 percent of I-BEST students received this grant, only about two percent of non-I-BEST workforce students and less than one percent of non-I-BEST non-workforce students did so (this last group of students probably received very little aid because they did not take any college-level courses and therefore were not eligible for aid).

Figure 4 shows that a higher percentage of I-BEST students enrolled full time when compared with both

[11] The Federal Pell Grant program provides need-based grants to low-income students. For more information on Pell Grants, see http://www2.ed.gov/programs/fpg/index.html.

Opportunity Grants

In 2007, the Washington State Legislature appropriated $11.5 million per year to the SBCTC for the Opportunity Grant program to support low-income adults participating in training for high-wage, high-demand careers. The goal of the program is to help low-income adults increase their job skills and receive a credential by providing participants with funds to cover tuition and fees for up to 45 credits of coursework. Student support services are also provided, which may include tutoring, career advising, child care, and transportation. All 34 community and technical colleges in Washington offer educational programs that are approved for Opportunity Grants. Approval from the SBCTC is given to programs that meet the following four criteria (which closely align with the I-BEST model).

(1) Evidence of local labor market demand.
(2) Part of an educational and career pathway.
(3) High wage job opportunities for program graduates.
(4) Active community partnerships.

In 2008, the program served almost 5,000 full- and part-time students.

Source: SBCTC website: http://www.sbctc.edu/college/s_opportunitygrants.aspx

non-I BEST workforce students and non-I BEST non-workforce students, which may be related to the higher percentage of I BEST students who received financial aid.

The Opportunity Grant program is particularly important because it is designed specifically for students in approved career pathway programs in Washington State, and all I-BEST sequences are grant-eligible (see accompanying box for more information on Opportunity Grants). Each college in the state has a designated Opportunity Grant coordinator[12] who manages the program and provides additional support services to students. Students in I-BEST programs who can document financial need qualify for the Opportunity Grant, which covers tuition and mandatory fees and offers up to $1,000 per academic year for books and supplies. All 34 Washington State community and technical colleges use Opportunity Grant funding for their I-BEST programs, and many colleges view the I-BEST strategy and the grant as going hand-in-hand. As one administrator remarked, "When you take the I-BEST program and combine it with the Opportunity Grant program, that provides more financial aid, plus a student services person who can support those students — you really have a fully comprehensive approach to student success."

Opportunity Grants are also a key resource for I-BEST programs because students can be approved for funding more quickly than with many other aid options. One administrator stated that his college could approve a student for an Opportunity Grant in less than 24 hours, possibly because eligibility requirements for receiving a grant for an initial quarter of funding are minimal: Students must make a formal application to the Opportunity Grant program (each college has the authority to create the application, within certain guidelines), be a Washington resident, and enroll in an Opportunity Grant-eligible program (of which I-BEST is one). In order to continue to receive Opportunity Grant funding in subsequent quarters, students are required to document financial need by submitting a Free Application for Federal Student Aid (FAFSA). Another important feature of this grant program is that students who are ineligible for other types of aid (for example, students who do not pass ability-to-benefit tests[13]) might still be eligible for Opportunity Grant funding.

During the period of this study, many students (22 percent) in I-BEST programs received State Need Grants. The State Need Grant program serves the state's lowest income students. Table 6 shows that a high percentage of I-BEST students (58 percent) were in the lowest quintiles of socioeconomic status. Also, a significant number (37 percent) of I-BEST students participated in

[12] Colleges whose students receive Opportunity Grants receive funding through the program to provide case management and support services for grant recipients.
[13] Postsecondary students who have not earned a high school diploma or GED must pass a federally approved ability-to-benefit test to qualify for federal financial aid.

Table 6
Socioeconomic Status and WorkFirst Participation

Basic Skills Students, 2006-07 and 2007-08	I-BEST	Non-I-BEST Workforce	Non-I-BEST Non-Workforce
Percentage of students in bottom two quintiles of socioeconomic status[a]	58%	55%	57%
Percentage of students who participated in WorkFirst (WA TANF)	37%	38%	20%

[a] These figures are based on the quintile of the average socioeconomic status of the Census block group in which each student's residence was located. For details, see Crosta, Leinbach, Jenkins, Prince, and Whitakker (2006) and SBCTC (2006).

WorkFirst (Washington State's welfare reform program funded through the federal TANF block grant), which, like the Opportunity Grant program, provides services and resources for participants.

Opportunity Grants, State Need Grants, and other forms of aid do not appear to completely solve the problem of I-BEST students' difficulty in affording tuition. Some students do not qualify for Opportunity Grants or other types of aid (one reason specifically mentioned for students' ineligibility was having a family income just above the qualifying level). A dean at one college stated, "[These students] just couldn't get any funding. Every hoop we took them through, we couldn't find funding for them to take the professional-technical classes. So we were building up a list of students who wanted to be in the I-BEST program but didn't qualify for funding." This funding lapse required colleges to find other sources of money for students. One college, for example, was able to use grant money from the local Workforce Development Council to pay for tuition for students who did not qualify for financial aid, but the approach solved the financial aid issue for only one cohort of students, leaving administrators wondering how they would meet this challenge in the future.

In addition to the issue of individual student ineligibility for financial aid, some colleges have encountered barriers to providing federal financial aid for groups of students in low-credit I-BEST programs. To be eligible for federal aid under Title IV of the Higher Education Act, certificate programs must consist of at least 28 credits. As shown in Figure 1 (p. 10), a number of I-BEST programs are one quarter term in length or less and therefore — on their own — consist of less than the required 28 credits. However, because every I-BEST program is part of a longer educational pathway (and the pathways do meet the requirements of Title IV), the I-BEST portion also does meet the requirements. Confusion about program length at some campuses may have led uninformed staff (particularly financial aid officers) to determine, mistakenly, that students in I-BEST programs did not meet the minimum number of credits required for federal aid. This problem highlights the need for consistent communication across departments, particularly as I-BEST programs are being developed.

Because some I-BEST programs impose additional eligibility requirements, and because many I-BEST students need financial aid in order to pay tuition, it is not surprising that recruitment for I-BEST was often mentioned as a challenge, one that requires significant resources from the college. When I-BEST programs are not reaching adequate enrollments, it becomes more difficult for administrators to justify support for them, given limited budgets and resources.

5. I-BEST Instruction and Student Support Services

Instruction and student support services are the foundation of the I-BEST model. As discussed previously, I-BEST is designed to contextualize the teaching of basic skills to allow adults with basic skills deficiencies to succeed in college-level technical courses and to enter a coherent program of study leading to college credentials and employment. Because many I-BEST students have not been successful in education previously and because they are often unfamiliar with the culture and demands of college-level study, they may need special supports to help them

succeed. In this section, we discuss the integrated instructional model and the support services that are integral to the successful implementation of I-BEST.

5.1 Instruction

I-BEST programs follow an instructional model that pairs a basic skills instructor with a professional-technical instructor in the classroom to provide instruction in both the professional-technical content area and basic skills. The SBCTC requires that I-BEST courses have both instructors in class together for at least 50 percent of the instructional time in order to qualify for the enhanced FTE funding.

Overall, the colleges were very positive about the I-BEST instructional model when it was implemented successfully. Factors influencing the degree of success of the model — including faculty selection and training, instructor characteristics, co-planning and team teaching strategies, and professional development — are discussed below.

Faculty selection and training. Of central importance to the I-BEST instructional model, according to many program administrators, is the selection and training of faculty. The primary consideration for selection at many colleges is the instructor's willingness and ability to work with a co-instructor. In addition, program administrators at five of the colleges look for basic skills instructors with some background, content knowledge, or interest in the professional-technical field in which they may be co-teaching. For the professional-technical faculty, administrators seek instructors who are interested in receiving additional support for their students and are open to the team-teaching model. There are often fewer instructors to select from on the professional-technical side, however, especially in smaller departments with only one or two full-time instructors, so in some cases selection necessarily becomes a matter of who is available and willing to participate.

There was a strong consensus among those we interviewed that pairing instructors who could work well together is crucial to the success of I-BEST. Instructors indicated that it could take several quarters for teaching teams to develop into cohesive, comfortable units. In fact, we were told of instances in which colleges were forced to put programs on hold or discontinue them altogether because instructors were not able to work together. Team teaching requires an extensive, time-consuming process of selecting instructors, training them, and developing the co-teaching relationship. Thus, finding replacements to accommodate faculty turnover can be difficult. When an instructor leaves the program, the process of finding a new instructor who is the "right fit" for the program starts over again, and the teaching team must again go through the process of becoming comfortable with each other.

The following qualities of successful I-BEST instructors were frequently mentioned by those we interviewed: flexibility, good communication skills, a willingness to embrace new ways of approaching instruction, experience with learning communities or other team teaching strategies, confidence and willingness to give up some control in the classroom, strong organizational skills, enthusiasm for the model, and sensitivity to the needs of students with basic skills deficiencies and other barriers to success in college. Flexibility, in particular, was emphasized by respondents as an essential quality of successful instructors.

The amount of training provided for I-BEST instructors varies across the colleges. Some colleges direct new I-BEST instructors to sit in on existing I-BEST courses to learn about the team-teaching model from experienced faculty. The SBCTC offers training sessions for I-BEST faculty, and instructors who have attended them reported that they were very beneficial for understanding the I-BEST model and developing strategies for team teaching. Highline Community College has created an I-BEST instructional resources Web site that includes a series of integrated teaching training modules (developed at Skagit Valley College) covering team-teaching strategies. The modules are also used by other colleges as a training tool, and several colleges have modified them or created their own for internal college use. Also, informal training opportunities and on-the-job training are common. Nevertheless, program administrators at some of the colleges reported that faculty training is an area that could be improved upon, but improvement efforts have thus far been mostly cursory due to budget and time constraints.

Co-planning and team teaching. Colleges reported that joint planning is important, both for initial curriculum development and subsequent revisions to instruction. However, like faculty training, the amount and timing of co-planning are often dictated by available resources. Given limited budgets, one strategy colleges use is to prioritize (and use resources for) the initial, pre-program planning time necessary for establishing the core curriculum of the I-BEST sequence of courses. With or without additional compensation, most instructors indicated that they continue co-planning throughout each quarter to address student challenges. In some instances, these discussions also lead them to modify the curriculum, choose new textbooks, and review the tests and exams used to assess student learning. Aligning schedules and finding time for co-planning is often a challenge; instructors indicated that they communicate frequently by email and in brief meetings prior to or after teaching I-BEST courses.

Another aspect of the joint planning process is the development of the curriculum for the course. While this activity varies across the colleges, a common approach is to integrate basic skills instruction into the existing professional-technical curriculum rather than to develop a new curriculum incorporating both basic skills and professional-technical content. Interestingly, a few professional-technical instructors expressed concerns about the integration of basic skills content, stating a reluctance to "water down" the curriculum for students who were not "college-ready" or expressing the view that the curriculum should be delivered the same way to all students.

The I-BEST instructional model requires at least a 50 percent overlap of both instructors' time in professional-technical courses designated as part of the I-BEST sequence. In practice, this intense team teaching model is challenging for both instructors, and facility with it often develops on the job, slowly, over a period of time as the instructors learn how to collaborate. When asked about the team teaching model, one instructor stated, "That has taken over a year of [my co-instructor and I] doing this together and getting used to our styles and how we approach these courses." Basic skills instructors often mentioned that they only begin to feel comfortable with the content in the professional-technical courses after they teach in the program for one or two quarters. Similarly, the professional-technical instructors often indicated that they begin to incorporate more theory from adult basic education into their content and delivery only after several quarters of working as part of the teaching team. The team teaching process, particularly in the early stages, was described by instructors as being like a "marriage"—building trust, negotiating roles, and sharing responsibilities and control in the classroom.

Implementing a fully integrated I-BEST program in which the curriculum reflects both ABE/ESL and vocational area learning outcomes jointly taught by the basic skills and professional-technical instructors requires a significant commitment of time and effort. Our interviews with program administrators and instructors suggests that, across the colleges, the degree to which instruction is integrated in the I-BEST classroom varies considerably. It was reported that in many cases, as the relationship between the two instructors solidified over time, the level of integration and amount of joint instruction increased. (See the text box on the following page for additional explanation about the levels of integration in the I-BEST model; the box on p. 21 presents additional comments from the interviewees about the four models.) It is important to note that while the majority of I-BEST instructors were extremely positive about their experiences teaching within the model, a common caveat was that this approach to teaching is "not going to work for all teachers" and that "if you can't find the right instructors, [I-BEST] won't work."

Our interviews and observations provided information on a broad sample of implemented programs. From our findings, the model describing partially integrated instruction (Model Three) seems to be the most common type of integration in I-BEST courses. Fully integrated instruction seems to be rare. However, as noted earlier, many respondents indicated that team teaching and integrated instruction typically develop over time.

While the level of integration varies across I-BEST programs, and while fully integrated instruction is uncommon, several I-BEST instructors nevertheless described activities and team teaching strategies that did reflect a successful integration of basic skills into the content course and a highly collaborative delivery of instruction (Model Four). In one professional business technology I-BEST program, for example, the teaching

Levels of Integrated Instruction

Based on our observations of I-BEST courses during four site visits and interviews with program administrators and faculty, we developed the following typology of integration to explain the various levels of integrated instruction that exist in I-BEST classrooms.

Model One: Non-Integrated Instruction

The professional-technical instruction is delivered as it normally would be. The basic skills instructor assumes a support role and assists students who are struggling with the professional-technical content.

Model Two: Non-Integrated Instruction with Separate, Contextualized Basic Skills

As in Model One, the professional-technical instruction is delivered as it normally would be with no change in the curriculum. The professional-technical and basic skills instructors jointly identify the basic skills that are needed to succeed in the course, which are then taught separately. The basic skills instructor assumes a support role and focuses on these skills.

Model Three: Partially Integrated Instruction

The professional-technical and basic skills instructors jointly modify the existing professional-technical course to accommodate the needs of basic skills students. The basic skills instructor still assumes a support role, but the course content now includes more focus on basic skills in addition to the professional-technical content.

Model Four: Fully Integrated Instruction

The professional-technical and basic skills instructors work together to revise the content of the existing course more extensively (or, in some cases, to develop a new curriculum) to accommodate basic skills students. The basic skills instruction is interwoven fully into the professional-technical content.

team for an office procedures and automation course described the development of a class project to create a business plan portfolio. According to the instructors, creation of the portfolios involved integrated instruction on how to draft a description of the proposed business (basic writing skills and use of a word processing program) and integrated instruction on how to create a budget and inventory (math skills and use of a spreadsheet application). The instructors noted that they took turns assuming the lead role in the classroom and spent planning time thinking about how to combine their strengths and adapt the instruction to the needs of the students.

At several colleges, the basic skills instructors played an instructional support role in the classroom. In some instances, their position was reflected in the language used by program staff, who referred to the basic skills instructor as the "I-BEST instructor" or the "support teacher." This situation may have occurred, at least in part, because the basic skills instructor was frequently learning the professional-technical content along with the students during the initial quarters of the course (and the basic skills instructors were often only in the classroom 50 percent of the time). It is more difficult for basic skills instructors, without the background and work experience in the technical area, to provide instruction on certain topics until they become more comfortable with and knowledgeable about the technical content. As one basic skills instructor stated,

> It was frustrating at first because it is so technical and I had no background in it. But now I feel like we are a team. The nice thing is that it is always changing. The more I learn, the more help I can be with [the technical content].

In the same vein, it was broadly acknowledged that professional-technical instructors need to learn the value of incorporating multiple delivery methods into their instructional styles, as well as how to effectively teach students who are on average more educationally and economically disadvantaged than the students they teach in their regular classes.

Benefits for students. The integrated teaching model was universally seen as beneficial for the students. It provides students with different perspectives and methods of learning the content and also doubles the

Comments from the Field about the Different Models of Integration

Model One: Non-Integrated Instruction

A professional-technical instructor explained, "I teach the I-BEST class just as I would a traditional class, except that there is [the basic skills instructor] at the back…. I feel that I-BEST students need to get a college-level course like what the others get and just receive additional support. I try to maintain the same integrity and keep the I-BEST class the same as the traditional class."

Model Two: Non-Integrated Instruction with Separate, Contextualized Basic Skills

In describing this process, a professional-technical instructor stated, "[The basic skills instructor] writes up lessons for what she is doing and shows me, and I give her feedback to make sure that it is relevant to the discipline." The instructor added, "We do two entirely different classes in the shop."

Model Three: Partially Integrated Instruction

A basic skills instructor explained the process of modifying the course curriculum, stating, "[The professional-technical instructor and I] have made changes. We got a new textbook, reorganized the way the curriculum is laid out … and moved topics around."

Describing how she accommodates the needs of basic skills students, a professional-technical instructor stated, "I used to lecture a lot, but since I started teaching I-BEST I've gone a lot more to small group presentations, role-playing, that sort of thing. I've tried to hit the different learning styles."

Model Four: Fully Integrated Instruction

A professional-technical instructor described how team-teaching in her I-BEST class works: "We define the roles together that work best for us. For instance, I am really good with PowerPoint and learning styles. So I take the curriculum and put visual images to it. [My co-instructor] is at the front of class with me, and he picks words apart, deals with pronunciation, the history of words. So as I go through the images and talk about the terms, he is breaking apart the words and showing connections."

Explaining the integration in her classroom, a basic skills instructor stated, "It's not like basic skills only happens on, say, Wednesdays. It's happening the whole time. Just like content is always happening, the basic skills instruction is always happening throughout the course. You have to really marry the two."

opportunities for them to form relationships with their instructors. Faculty at several colleges indicated that students are more comfortable reaching out to the basic skills instructor, possibly because a common instructional strategy used by basic skills instructors in I-BEST classes is modeling "successful student" behaviors, including asking for clarification of difficult concepts, asking questions about content-specific vocabulary, and using effective note-taking strategies. Students may view the basic skills instructor as a peer in learning the course content.

Students also benefit from more one-on-one interaction with the instructors. Two sets of eyes and ears in the classroom increases the likelihood that instructors will identify and assist struggling students. Increased student-instructor contact was seen as useful for advising and counseling support in addition to academic support. An instructor who learned that a student was struggling with tuition noted, "Usually, when I'm a one-person instructor, I'm so busy I wouldn't even hear that from the student."

Benefits for instructors. The team teaching approach also has benefits for the instructors. They can provide each other with constructive feedback about the curriculum, instructional methods in the classroom, assessments, and course materials. For example, a professional-technical instructor described her co-instructor as a "visual person" and noted that this different perspective was beneficial for developing lesson plans that accommodate students with lower reading

Promising Approaches to Professional Development

While professional development opportunities for I-BEST instructors are difficult to provide on a consistent basis because of limited resources, several colleges have developed promising approaches to meet this need, two of which are highlighted below.

Yakima Valley Community College

The I-BEST professional development support at Yakima Valley Community College is designed to help basic skills instructors work within the I-BEST model of integrated instruction. The department head of basic skills and transitional studies mentors basic skills faculty on how to work with professional-technical faculty in I-BEST programs. Specifically, she helps the instructors develop basic skills activities that complement what students are learning in the content courses. During the first quarter of team teaching, she meets with faculty six to eight times. During the second quarter, she meets with them mid-quarter, at the end of the quarter, and also as needed. After these first two quarters, the support continues as needed or as requested by the dean of basic skills or the professional-technical faculty.

Renton Technical College

The Curriculum and Technology Specialist at Renton Technical College is responsible for working with I-BEST faculty. Initially she met one-on-one with faculty to discuss I-BEST, but over time saw the need to provide a way for instructors to collaborate and share information about I-BEST. She applied for an SBCTC grant in fall 2009 to develop a faculty learning community for I-BEST instruction. Still in its initial stages of development, the learning community is designed so that faculty determine what topics are covered and so that they have opportunities to learn from colleagues who have had success in implementing I-BEST. The learning community includes faculty from Renton Technical College and neighboring colleges, with both basic skills and professional-technical faculty participating.

skills. Team teaching can also influence instruction beyond the I-BEST program. Several professional-technical instructors said that they apply in their non-I-BEST classes strategies they have developed for I-BEST students in conjunction with their basic skills co-teachers. Examples cited by faculty include revising vocabulary in tests given to students in non-I-BEST classes to increase the level of comprehension of questions, and adapting an instructional style to include multiple methods of teaching the content.

Professional development opportunities. The SBCTC professional development (PD) workshops for I-BEST instructors were mentioned frequently and considered beneficial, especially for new instructors teaching in I-BEST programs. According to respondents, the purpose of the first state workshop was primarily to provide information about I-BEST, with subsequent workshops focusing more on curriculum development and strategies for team teaching. There have also been coding workshops for program staff to learn how to flag I-BEST students for reporting to the SBCTC, so that their colleges receive the enhanced funding for I-BEST students.

Generally, professional development opportunities at the local level are limited, but colleges are working on offering more such opportunities and increasing resources for them. Many I-BEST staff and faculty members indicated that they would like more professional development, but that offerings are limited by budget cuts. As one dean noted, “One of the biggest problems with the program is the professional development for faculty and the opportunity to plan, etc. But the reality is that this is a very expensive program and we can’t get enough students, so it is difficult to put out additional funds.” The accompanying box describes two colleges’ approaches to professional development.

5.2 Support Services

Student support services are a vital component of the I-BEST model. Because I-BEST serves a basic skills population that may lack knowledge about college

culture and how to succeed in college programs, many I-BEST students are not familiar with the variety of academic, financial, and personal supports available on campus, and many do not know how and where to seek help when they need it.

Providing I-BEST students with the needed support (or providing opportunities to connect students to the needed support services) is a key retention strategy for the colleges. These services might be offered through a variety of methods, including I-BEST support courses, I-BEST coordinators and designated advising staff, and financial aid programs. The amount of support that I-BEST students receive varies across the colleges and sometimes across programs within the same college.

I-BEST support courses. Most I-BEST programs include support courses or labs in addition to the integrated basic skills/professional-technical courses. Support courses are not mandatory but are typically well attended by students because they focus on improving study skills and providing supplemental instruction for the integrated courses. These courses also often orient students to college life, much like a student success course. In most programs, they are taught by the basic skills co-instructor and provide an opportunity to review basic reading, writing, and math in the context of the professional-technical content. This additional class time is also an opportunity for students to complete assignments and stay on track with the work for the content courses. Professional-technical instructors participate in the courses to varying degrees across the colleges.

Support services staff. At some of the colleges, I-BEST students receive additional advising and support services from staff dedicated to the strategy. The services are provided by the I-BEST coordinator or a designated advisor who promotes retention through case management for students and also acts as a liaison to the various departments that provide additional support for the students. About a third of the colleges have a designated main point of contact to support I-BEST students. One I-BEST coordinator summed up her role in providing support to students by stating, “Basically, whatever the student needs, I am the main point of contact for them.”

The intensity of the support services offered to I-BEST students varies depending on the number of students enrolled in the programs and the amount of time that staff has to dedicate to the services. A few of the colleges have developed a proactive approach to delivering support, with individual advising sessions for students to create academic plans and mandatory advising sessions prior to registration for the next quarter. Other colleges offer support to I-BEST students as the need arises.

At colleges that do not have the resources for dedicated support staff, support is often offered informally by I-BEST instructors and through referral to the services that are available to all students on campus. Support is frequently provided during I-BEST and I-BEST support courses, when students seek assistance from instructors. Many of the colleges have also instituted informational sessions to introduce students to the services available on campus.

I-BEST students who are part of the Opportunity Grant or WorkFirst programs receive case management support from staff associated with these programs. Support through the programs appears to be especially important at colleges lacking the resources to appoint student services staff specifically for I-BEST. As noted earlier, a large portion of I-BEST students participated in the Opportunity Grant program (30 percent) or WorkFirst (37 percent) during the study period.

6. Managing I-BEST Programs

Colleges reported that planning and implementing I-BEST programs requires a significant amount of time and effort — various elements need to be coordinated, in place, and functioning well for the programs to be successful. We observed three different approaches to structuring the administration of I-BEST programs: (1) I-BEST is housed in the basic skills division (21 colleges), (2) I-BEST is jointly administered by the basic skills division and the professional-technical departments (6 colleges), and (3) I-BEST is housed and managed in professional-technical departments (7 colleges). At more than half of the Washington colleges (21 out of 34), then, the administration of I-BEST is the responsibility of

the basic skills division, which handles the recruitment, coordination, and management of the programs. Regardless of where I-BEST fits within the organizational structure of the college, the model requires communication and coordination between the basic skills division and professional-technical departments. At several colleges, an administrator encourages and facilitates this communication by acting as a liaison between the basic skills department and the professional-technical departments. Other colleges have created an I-BEST coordinator position to foster communication and manage the programs.

6.1 The I-BEST Coordinator

Because coordination and shared ownership can be time consuming and arduous, half of the colleges designated an I-BEST coordinator (sometimes called a "case manager") to help manage the programs. Responsibilities of this position may include organizing recruitment; liaising with financial aid officers; managing the collection and reporting of data on I-BEST students to the college and the SBCTC; handling registration, advising, and career exploration; and managing budgets. In the words of one coordinator, the position is "a jack-of-all-trades kind of job." An administrator acknowledged, "There is a lot more to it than just sitting behind a desk and telling students, 'You need to fill out this paperwork.' You have to be empathetic and you have to go work with other departments and be aggressive."

The I-BEST coordinator position is often filled by a member of the college staff with a background in adult basic education or workforce education. Colleges reported that it is beneficial to have someone in this position who is familiar with student services and support systems on campus and in the community. However, due to budget cuts at community colleges in Washington State, some colleges have had to cut the position, thereby leaving administrators, often from basic skills divisions, to absorb these responsibilities. It is also important to note that at seven of the colleges without an I-BEST coordinator, program staff expressed interest in creating such a position should funds become available to do so.

Although coordination between basic skills and professional-technical departments is a major challenge, this sharing of responsibilities is viewed as an important positive outcome of I-BEST for raising campus awareness of basic skills students. Many college administrators recognize the importance of breaking down barriers that basic skills students face when trying to transition to college-level programs. Some we interviewed indicated that the I-BEST model, which requires communication and coordination among many offices and departments on campus, creates a broader awareness of the needs of these students. As one program administrator noted,

> Overall, I-BEST has really helped give some momentum to what basic skills is and how it fits in the community college system. Initially, it would come up in conversations with various people at the college saying "Do we really belong in the business of basic skills? I don't know if this fits at the community college." I-BEST has been a great way to push that conversation forward and help people realize that it does fit and that this is part of what we do.

6.2 Planning for Implementation

The interdepartmental nature of the I-BEST model creates challenges for organization and administration. Some colleges have struggled to determine who should be responsible for I-BEST programs, particularly in the early stages of development. In some cases such indecision impeded implementation and frustrated faculty and staff. A dean at one college remarked, "The unfortunate part of this is how many revisions we keep going through and how it bounced from one dean over to another dean and now back to me." Our analysis of the interviews indicates that several factors could contribute to uncertainty about responsibilities for implementing I-BEST programs: (1) a lack of clearly defined roles for departments or staff members; (2) a failure to include all of the key departments in the conversations about planning and implementation (program implementation often involves input from assessment services, the financial aid office, the admissions office, WorkFirst and Opportunity Grant coordinators, and the workforce programs' advisory boards); and (3) a lack of commitment and interest from departments or staff members (or, where interest does

exist, a lack of capacity to commit to the program). As one administrator noted, "If you don't have the foundation first where people are really willing and motivated to undertake this and really share the responsibility, it is not going to work very well."

Careful planning also was noted by respondents as being critical to successful implementation. I-BEST program staff stated that it took anywhere from 3 to 12 months of planning time to develop each program, and they stressed the importance of allowing plenty of time for this phase. One I-BEST administrator stated, "Start talking now and don't offer any classes until next year instead of talking and developing at the same time. Plan ahead." Planning is also crucial because the I-BEST model is designed to be a bridge to additional credentials in professional-technical education. As discussed above in Section 4, the I-BEST sequence of courses must clearly connect to further education as part of a career pathway, and the planning process needs to account for the transition.

6.3 Department Buy-In

To develop and implement I-BEST programs, colleges must identify professional-technical departments that are willing to participate. The colleges reported examples of professional-technical departments that were reluctant, for various reasons, to get involved. For instance, faculty and staff of some popular programs with waitlists at one college did not see the value in changing what they were doing to accommodate basic skills students. At another college, a professional-technical department lost several faculty members and simultaneously had a spike in enrollment due to the economic downturn. According to an administrator at this college, the professional-technical department was "barely staffed enough" to handle their regular students and did not have the resources to devote to I-BEST students.

Professional-technical departments are more open to participating in I-BEST when department faculty and administrators recognize the need for additional support for their students or when departments experience low enrollments. At one college, for example, the dean of basic skills presented the professional-technical department heads with data on the percentage of students in their programs who were at the basic skills level based on test scores. The percentages ranged from 40 percent to 85 percent, which was a powerful argument for participating in I-BEST and which led to greater commitment from the departments. In other examples, professional-technical instructors recognized that many of their students had low academic skills and initiated discussions about creating I-BEST programs as a way of providing additional support to their students.

6.4 Support from Senior Leaders

The planning and delivery of I-BEST is complex, time-consuming, and expensive, so it is necessary to have advocates at all levels, from the college's senior leaders to the faculty teaching the integrated courses.

Among the 34 colleges in the system, 28 reported that senior leaders were supportive of I-BEST, and many noted that this support was strong even with diminishing resources and low enrollments. One program administrator explained, "Our senior leaders have been very supportive. When we first started to get the I-BEST programs off the ground, we had to run sections with really low numbers, and we were given the go-ahead to do that. They have been flexible with letting us try different things and using some resources to get things going." Of the few colleges that reported a low level of support from senior leaders, the reasons given include the following: a lack of support because of the costs involved, inaction from senior leaders when departments are reluctant to cooperate, and a general sense that I-BEST is not a focus or priority at the senior administrative level.

While support from senior leadership is important, it seems that an equally important element for implementing and sustaining strong programs is having a champion for I-BEST. The support of a determined, committed dean or administrator appears to be especially critical in the early stages of developing I-BEST, when colleges are faced with challenges such as a lack of ownership, possible reluctance of faculty, and finding financial aid for students.

7. Funding and Sustaining I-BEST

Determining how to fund I-BEST programs was reported as one of the biggest concerns among the colleges.

7.1. State Funds for I-BEST

All colleges receive state funds for their I-BEST programs according to the enhanced FTE model described in Section 1 above. In this funding model, the colleges are reimbursed at 1.75 times the normal rate per full-time-equivalent student. However, there is no requirement that the colleges apply the FTE funds to I-BEST programs. Therefore, I-BEST programs do not necessarily directly benefit from the extra funds. Some colleges reported that the FTE funding did not fully cover I-BEST expenses. Furthermore, the enhanced funding model for I-BEST was only an incentive when colleges were in danger of not meeting enrollments. In the study-period environment in Washington, when colleges were overenrolled, the incentive did not exist. Therefore, similar to the challenge of helping students get financial aid, colleges were faced with finding creative ways to fund the programs.

7.2 Additional Funding Sources

During the study period, many colleges secured additional grants to help pay for elements of I-BEST, including Perkins grants (for curriculum development and other start-up costs), Fund for the Improvement of Postsecondary Education grants (to improve program selection, registration, and support processes), Workforce Investment Act funds (to support a part-time coordinator), and American Recovery and Reinvestment Act stimulus funds (for general program costs). Administrators often draw from different pots of money to fund I-BEST, which creates a challenging undertaking for program staff, who need to be knowledgeable about the different requirements for each funding source. In spite of the recession in the state of Washington and the difficult task of funding I-BEST programs during the study period, 24 of the 34 colleges stated that they were either preparing applications for new I-BEST programs or in discussions with administrators and faculty about potential programs. Not surprisingly, those colleges that were not planning to offer new programs cited cost as the limiting factor.

7.3 Financial Sustainability

Many program administrators are unsure about the financial sustainability of I-BEST. Respondents at over a third of the colleges indicated that the programs are (or could be) sustainable, but cited a variety of stipulations, among them the need for a strong commitment from senior administrators, continued financial support through enhanced FTEs, institutionalization of program costs, and strong enrollments. The economic climate in Washington State caused an enrollment surge in the two years preceding the study period (colleges reported as much as a 25 percent increase in full-time equivalent student enrollments during that time), which may have impacted decisions to sustain I-BEST programs with low enrollments. As one administrator explained,

> In this environment, if you are running low-enrolled I-BEST and [other programs are] looking for spaces for more students, I don't think it is sustainable because you will have ill will build up on campus. You might have a waitlist of 40 students for another class. So I think I-BEST is sustainable for programs that have high enrollments.

The enrollment surge also limits the potential benefit of increasing enrollments in professional-technical programs through I-BEST. As part of an educational pathway moving students on to additional college-level coursework in professional-technical areas, I-BEST has the potential to boost enrollments in these programs. Yet, in professional-technical programs that are already fully enrolled or oversubscribed, there is little need for such increases.

The reason most frequently stated for why I-BEST might not be sustainable is the expense of running its programs. Some respondents indicated that the I-BEST model, while beneficial for the students who participate, might not be cost-effective, especially when serving only a small number of students. The issue of cost was heightened in the study-period environment in Washington State, in which state funding to colleges was being cut, making it more difficult to justify funding an expensive strategy like I-BEST.

Several colleges specifically mentioned the required 50 percent overlap in the classroom of basic skills and professional-technical instructors as one aspect of the model that makes I-BEST difficult to sustain and bring to scale. Respondents who mentioned this reason indicated that the colleges would benefit from more flexibility in the amount of overlap in the classroom. As an I-BEST coordinator noted, "The 50 percent overlap isn't one size fits all." Some argued that in courses where the 50 percent overlap is not needed, faculty hours could be reallocated for additional planning time and curriculum development. However, a few respondents indicated that the basic skills instructor is needed in the classroom more than 50 percent of the time, and yet there is not sufficient funding to allow that to happen.

Overall, colleges reported that, assuming that funding is available, the I-BEST strategy is effective and worthwhile. The director of basic skills at one college commented, "It is wonderful. Five years ago, we didn't really have a pipeline or a place for our higher level basic skills students to go."

8. Lessons for Other States and Colleges and Future Research

Washington's experience with I-BEST provides some lessons for policymakers and practitioners in other states. It also points to areas where additional investigation would be illuminating.

8.1 Accomplishments and Challenges

Significant variation exists among the approximately 140 I-BEST programs in the Washington State community and technical college system. Still, our research revealed some key challenges around I-BEST implementation as well as strategies for addressing them. I-BEST continues to gain momentum in Washington, and interest in the model is increasing around the country. Respondents highlighted several major challenges for other states and colleges interested in adopting this model, including the following.

Student financial support. Financial aid is one of the most significant barriers to the sustainability and growth of I-BEST. Many I-BEST students are recruited from basic skills programs, where they pay only a very modest fee for courses. Therefore they require financial assistance when making the transition to college-level courses. Colleges have benefited greatly from the Opportunity Grant program, which provides financial aid for low-income adults to cover tuition and fees and funding to colleges to strengthen student support services for such students.

Integration of instruction. The amount of integration of basic skills and professional-technical instruction in I-BEST classrooms varies considerably, and it typically develops over time. Many respondents pointed out that I-BEST instructors need professional development on how to team-teach in an integrated fashion.

Program staffing. I-BEST coordinators and other dedicated staff help to facilitate program management, but this can add to the cost of running I-BEST programs. Recruitment, screening of potential students, registration, and student support services are time-consuming, labor-intensive aspects of the model. As I-BEST programs grow and new programs are developed by Washington's community and technical colleges, providing dedicated staff for I-BEST will be increasingly important.

Student recruitment and enrollment. Some I-BEST programs struggle with low enrollments, highlighting the importance of active recruitment and forcing colleges to make tough decisions about whether to continue programs with few students.

Faculty recruitment and support. The relationship between the basic skills and professional-technical faculty is critical to the success of the I-BEST instructional model. Administrators, program staff, and faculty all emphasized the importance of finding instructors who work well together in the team-teaching model and noted that the relationship often takes time to develop. Given the importance of this relationship, a system of supports for faculty, particularly in the early stages of collaboration, would likely facilitate implementation of effective I-BEST instruction.

College planning and collaboration. Implementing the I-BEST model requires a cultural change at the college, and therefore necessitates a significant amount of planning and collaboration among many different

departments and offices on campus. I-BEST is often jointly administered by the basic skills division and professional-technical departments, which can result in confusion about ownership and responsibility for program management, particularly during the early stages of program operation. Colleges can limit this confusion through: consistent, clear communication between the basic skills and professional-technical departments; a strong link between staff involved in student services and instruction; and careful consideration of the various other departments (e.g., financial aid) that need to be engaged in the implementation process from the beginning.

College faculty and leadership buy-in. Successful implementation also requires buy-in and commitment at the beginning of the process from the faculty and senior administrators.

8.2 Conclusions from the Research

Overall, I-BEST is regarded an effective model for increasing the rate at which adult basic skills students enter and succeed in postsecondary occupational education. But it is expensive to operate, and determining how to fund I-BEST programs is a major concern of the colleges. It is therefore not surprising that there was no consensus among the colleges about the sustainability of I-BEST, although they did agree that I-BEST has significant benefits. Thus, despite the challenges, Washington's State Board and its 34 community and technical colleges remain dedicated to the successful operation of I-BEST and have, laudably, devoted significant resources to its implementation and expansion.

8.3 Future Research

To provide more information about effective practices among I-BEST programs, CCRC will continue to study the operation and impacts of I-BEST through research funded by the Bill & Melinda Gates Foundation. In the next phase of this research, to be conducted in spring 2011, CCRC will conduct in-depth site visits to I-BEST programs identified through quantitative analysis as having superior outcomes compared with other I-BEST programs. We will also examine in more depth the costs involved in running effective I-BEST programs, and we will further assess the sustainability of the model. A report and research brief on the findings is expected in fall 2011.

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