Increasing Transitions to College

For Returning Adults with Low Academic Skills

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Abstract

Increasing Transitions to College for Returning Adults with Low Academic Skills

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Recent studies have shown that students who are former Adult Basic Education (ABE) or English as a Second Language (ESL) students rarely make the transition to college-level work, even when they have a college-level goal. New programs have been designed to help these students move further, faster in their studies to help them complete credentials, such as I-BEST (Integrated Basic Education and Skills Training) in Washington State. Even though I-BEST is a successful model, Washington community and technical colleges still struggle to recruit students into the programs, even when those students are taking their ABE and ESL courses on the college campuses. This exploratory mixed-methods study used focus groups and surveys to get upper –level ABE and former ESL student opinions on what they perceived as making those transitions difficult, how they would design a 'perfect program', and specifically about their knowledge and plans related to I-BEST programs.

The focus group data was used to design questions for the survey instrument, and to pose hypotheses that were then corroborated by the survey data. The study found that:

1) Upper-level ABE students do not know enough about basic college preparation functions, such as financial aid processes, to transition when their studies have prepared them to that level.
2) Students understand little about I-BEST programs, what they are, what they could do for the student, and what their options for I-BEST pathways are at their particular college.

3) Former ESL students struggle not only with language issues, but also with understanding the American higher education system and its pathways.
4) The systems and supports that the students identified as being most important for them in transitioning show that the most worrisome areas for these Washington students are: the costs of college, concern about their own abilities as college students, their concerns about getting good advising and planning assistance.

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Dedication

To my sister, Marie, who listened ad nauseam to me while I wrote this paper.

I really could not have gotten through it without you, Sis.

Introduction

Not so long ago, only the young men from wealthy families were sent to college. Women, minorities, and the average man got by on a junior high or perhaps, for the lucky, a high school education. A college education gave 'sons of privilege' a broad background of classical education with a strong religious component, with which it was assumed they would be better decision-makers, as this would certainly be their destiny (Thelin, 2004). Over time, institutions of higher education have changed dramatically, offering much more than the classical education, and as a country we have changed our ideals from 'higher education for the privileged' to supporting the idea of 'access to education for all' (Grubb & Lazerson, 2004).

The latter half of the 20th Century saw an unprecedented increase in technology and knowledge, and added complexity of life that has left many who have not attained more than a high school education living at or below the poverty line (Prince and Jenkins, 2005). According to the recent book *Defending the Community College Equity Agenda*, "at least some college education has become the minimal entry requirement to the middle class" (Bailey and Morest, 2006). A popular argument in the literature is that access to education is not only desirable, but necessary for the health of the nation as well as for the success of the individual (Garner, 2004; Liebowitz and Combes Taylor, 2004; CAEL 2008), although it is important to note that not all experts agree that the economic power of education is the most important aspect of it (Grubb and Lazerson, 2004). However, many students are coming to community colleges with an economic goal in mind, and with good reason. It is well-documented that college degrees increase the earnings of the recipients (U.S. Census 2008).

The looming retirement of the huge "baby boomer" generation is expected to leave virtually all industries with huge skilled job replacement needs (Department of Labor [DOL], 2003). The majority of these jobs require a minimum of some formal college credential – what the DOL calls 'middle skill' jobs (Holzer & Lerman, 2007). Middle skill jobs are those that require more than secondary education, but less than a bachelor's degree, and/or significant on-the-job training. Middle skill jobs command higher wages and are more stable than low skill jobs (DOL, 2003). These factors, plus the current difficult economic climate, have increased the interest in community college education from potential students and the public and private sectors.

Public policy supporting access to education has evolved with American ideals. The names of federal policies, such as No Child Left Behind and The American Graduation Initiative, evoke images of equal opportunity for all students. The reality is, however, that not all students are served equally well by the United States (U.S.) education system – either secondary or higher education- as can be seen in lagging test scores and graduation rates for specific populations (Kirsch, Braun, Yamamoto, and Sum, 2007). One group that is particularly lagging is the low-skilled, returning adults – defined for this paper as students who have been away from formal education for a period of time and who have less than college-level academic skills. These students seldom make it into college-level classes (Prince & Jenkins, 2005). College-level is defined for the purposes of this paper as credit-bearing classes numbered 100 or above.

So how is the U.S. fairing with providing 'access to education for all'? At a time in history when there arguably should be more education offered, the U.S. is actually providing less. In an article in the Chronicle of Higher Education, Richard DiFeliciantonio remarked

"America's historical commitment to the education of its citizens is perhaps the most

> important link in the unbroken chain of our national obligation to justice, synonymous with national liberty. But today the burden of paying for higher education has shifted to students and families -- and that burden weighs most heavily on poor students and poor families. The poor are subject to a narrowing set of higher-education options, coupled with greater debt and higher rates of academic failure than their more-affluent peers…The dwindling role of the Pell Grant is a case study in how changing national priorities have resulted in fewer opportunities for the less wealthy. Not long after the program was established, in the 1970s, a Pell Grant covered more than 50 percent of a student's direct costs at a public four-year college and peaked at almost 80 percent. Today the average grant covers only about 30 percent of tuition, room, and board."

(DiFeliciantonio, 2008). In Washington State, public investment in higher education has dropped significantly as tax receipts have plummeted with the recession that began in late 2007. The beginning of the 21st century saw the end of educational dominance of the United States, as many other developed nations caught up and surpassed the average educational attainment of Americans.

Recent data showed the United States in 14th place on the world list of higher educational attainment for people ages 25-34 (Organisation for Economic Co-operation and Development [OECD], 2009). The U.S. has grown into a world economic power in large part by having a well-educated workforce (Goldin & Katz, 2008). The need for increased success of all students in higher education is seen by many as critical. A policy brief released in 2007 called "America's Perfect Storm" outlined three converging factors that are "changing our nation's future" (Kirsch et al. 2007, p. 1) – those factors being a demographic shift caused by higher immigration; inadequate literacy skills for large segments of the population; and the increased

need for a better educated workforce to work in the jobs of today. Community colleges, through foundation-funded initiatives like Achieving the Dream (funded by the Lumina Foundation) Breaking Through (funded by the Charles Stewart Mott Foundation), and Bridges to Opportunity (funded by the Ford Foundation), are being called upon to increase the overall achievement of low-skilled adults, increasing their transition rate into college-level coursework and their credential completion rates.

Chapter 1 of this paper introduces the history and so-called 'equity agenda' of community colleges, Chapter 2 describes the students the community colleges serve, and the programs designed to serve them. Chapter 3 describes the methodology of this mixed –methods study, which is designed to offer insight into the transition to college-level academic work for this important group of students. Chapter 4 provides the results of the first stage of the study, Chapter 5 the second stage, and Chapter 6 the conclusions that can be drawn from the results, and the limitations of the study.

Chapter 1

The Role of Community and Technical Colleges

Community colleges, a uniquely American invention (Ratcliff, 1993), are a relative newcomer to the higher education field. The first community college was Joliet Junior College in Illinois, started in 1901 (American Association of Community Colleges [AACC], 2003) by the superintendent of Joliet Township High School, Stanley Brown, and the president of the University of Chicago, William Rainey Harper. According to the history posted on the Joliet Community College website, Brown and Harper opened Joliet as an experimental postgraduate high school program, and offered it to students who wanted to stay in the community. The first class had six students. In 1902, the Board of Trustees [presumably of the University of Chicago] officially adopted the program and offered the postsecondary education tuition-free. The Board named the program Joliet Junior College in 1916, and the new institution was accredited as a college the following year. Joliet was a success, and continues to operate as a community college today.

Early community colleges were often mainly focused on providing liberal arts studies. Universities alone could not fulfill the demand for higher education – and states did not want to expand them (Thelin, 2004). As had happened earlier in the high school movement, local institutions of higher education began to spring up in the late 19th and early 20th Century. In *A Handbook of Community Colleges in America*, J. Ratcliff (1993) explains:

> Communities would band together to found the local college, with the citizens laying the bricks and mortar and raising funds through bake sales. If the community was predominantly Lutheran, then the college might well be affiliated with area Lutheran

> congregations. If the community had no prevailing religious denomination, then the college might be public. (p.3)

Many of these local institutions were set up as 'junior colleges', called so since they offered just the first two years of education towards a baccalaureate degree. Some started as vocational schools, designed to prepare students to enter specific fields of work. These institutions evolved into the community and technical colleges of today, or CTCs as they are called in Washington State (hereafter just referred to as Washington). The CTCs fill a sort of 'in between' position:

> …the comprehensive community college stands between secondary and higher education, between adult and higher education, and between industrial training and formal technical education. Community colleges have provided educational programs and services to people who otherwise would not have enrolled in a college or university. (Ratcliff, 1993, p. 2)

Several forces came together to make opening a local community college a popular option; first, American high schools were pumping out many more graduates who wanted to continue their education than existing institutions had the capacity to enroll; second, many families needed a less expensive option than the university; and third, staying closer to home was appealing to some students and parents alike. Many universities were happy to endorse the junior college idea, since they were more interested in teaching advanced and graduate courses (Thelin, 2004). According to American Association of Community Colleges (AACC) historical information, the rising tide of the late industrial revolution in the 1920's created a local demand for more skilled workers, and CTCs were the perfect solution. From 1901 to 1930, 259 public junior colleges were opened in the United States (Terrey, 1997). In the 1930's, unemployed

workers of the Depression learned new skills to try to get back into the workforce at community colleges. During both World Wars, CTCs assisted with the training and retraining of workers in factories that were retooling for war production, and again for the return to domestic production after the wars were over. However, the building of new CTC's between 1930 and 1950 was relatively slow as the country suffered through the Great Depression and World War II, with only 40 new CTCs, or two per year, opening across the country (AACC, 2003). The growth of CTCs in America was sporadic, but widespread, until the GI Bill of 1944 created another wave of intense demand. In 1948, the Truman Commission on Higher Education – which was engaged to determine if the existing higher education system could absorb the demand of returning veterans - suggested to the U.S. President that a network of public, community-based colleges be created to serve local needs (AACC, 2003).

In the 1960's the CTCs spread into every corner of the US, and many individual states adopted their own laws to organize community colleges into regional or state systems. Between 1960 and 1980 alone, the enrollments in community colleges across the country increased tenfold (Kerr, 2001). Some states elected to have their system supported by local tax dollars, as part of the K-12 system. Later, when the community colleges were pulled together into state systems by legislation, many, including Washington, elected to appropriate state funds to support the community colleges. Today, some states, such as Kentucky, continue to have locally supported community colleges that are tied to the K-12 systems.

Frederick Elmer Bolton, the Dean of the College of Education at the University of Washington, brought enthusiasm for the community college idea with him from Iowa to Washington State in 1912 (Terrey, 1997). The first junior college in Washington was opened in 1915 on the top floor of Everett High School (Washington State Board for Community and

Technical Colleges [WSBCTC], 2010) by a graduate student of Bolton's who also happened to be the principal of the high school. The only requirements set out by Bolton were that a) the students must be taught by a masters-prepared teacher and b) that the students must be physically separated from the high school students. Everett Junior College continued until 1923, when the School Board imposed a fee of $5 per month to attend. No one enrolled, and the doors closed (Terrey, 1997).

The next junior college in Washington opened in Centralia in 1925, and has operated continuously since then. The first few Washington junior colleges operated as part of their local school districts, under the oversight of the local school boards. For the first four decades, the number of junior colleges allowed in Washington was tightly controlled by legislation and CTCs were only allowed in communities that did not already have a college or university. The need for more higher education became so great in the early 1960's that the small CTC system was allowed to grow through new legislation that lifted both the numeric and geographic limitations (Terrey, 1997). The Community College Act of 1967, signed into law by Governor Daniel J Evans, created the foundation of the system that exists today. Currently, there are 34 community and technical colleges in Washington.

The several missions of the Washington community colleges are clearly defined in the Revised Code of Washington, as described in the WSBCTC 2008-09 Academic Year Report (2009):

> Washington's Community and Technical College Act of 1991 provides for a state system of community and technical colleges separate from both the public secondary schools and four-year institutions. The act requires that the colleges "offer an open door to every

> citizen, regardless of his or her academic background or experiences, at a cost normally within his or her economic means" (RCW 28B.50.020(1)).
>
> Each college district is required to "offer thoroughly comprehensive educational, training and service programs to meet the needs of both the communities and students served by combining high standards of excellence in academic transfer courses; realistic and practical courses in occupational education, both graded and ungraded; community services of an educational, cultural, and recreational nature; and adult education" (RCW 28B.50.020(2), p. V).

Today's CTCs are institutions designed to respond to their community through several mechanisms – the adult education programs (to be discussed in detail later), contract training and non-credit courses offered directly to local businesses, and through community member advisory committees for workforce (occupational) programs. Each college develops its own mission - firmly based upon the requirements of the law, but with subtle variation from college to college. The multiple missions outlined in the RCW above are seen as an egalitarian venture – a way to level the playing field, so to speak, for those people not able to take advantage of the traditional path through the university educational system – as well as to serve the needs of the community as a whole.

Recently, another possibility was added to the stable of services offered by CTCs in Washington – the Applied Baccalaureate Degree. Applied baccalaureates are technical degrees in fields that require more than 2 years of schooling to gain enough competency for the graduate to be employable. Four CTCs were allowed to pilot the 4-year degrees, and in 2009 all of the pilot colleges passed their accreditation as 4-year institutions. So far 141 students have enrolled in these brand-new programs, and in 2010 the Washington State Board for Community and

Technical Colleges opened the possibility of having applied baccalaureates at the rest of the CTCs.

The open-door policy of CTCs allows anyone who comes to the college the opportunity to participate in some way in the programs at the college - which has proven difficult to uphold as current state budget shortfalls have decreased state support to CTCs and the economic downturn has increased the number of new students demanding service. The equity agenda, as it is called, is described as "when low-income students have the same chance to graduate with a college degree as more privileged students" (Perin & Charron, 2006, p. 156). One set of authors has described that chance as pivoting on three types of equity – equity in preparation, equity in access, and an equal chance of success (Bailey & Morest, 2006). The first type, equity in preparation, is already questionable, as studies have shown that academically underprepared students are more likely to come from low-income homes (Cohen & Brawer, 2003). Community colleges are struggling to continue to uphold the second type, equity in access, despite the loss of funding. Increased tuition and fees, and limited seat capacities in the most popular programs are serious threats to access equity because they create barriers for less wealthy students or those who meet minimum program criteria but still can't get into a program (Bailey and Morest, 2006). The third type of equity, an equal chance of success, has recently received the attention of private funders, such as the Gates Foundation with the Student Completion Initiative, and legislatures. All three pieces of the equity agenda are critical for serving low-income students. The equity agenda, by seeking to keep the door open to all comers, even those who are underprepared for academic work, dictates the need for the large pre-college programs that CTCs offer.

Why they come to the CTCs

Students come to the CTCs to take classes for vocational preparation (known locally as workforce education), continuing education (personal enrichment or recreational and non-credit, short-term skills training), or academic preparation for transfer to baccalaureate-granting institutions (transfer education) (WSBCTC 2001). For the purposes of this paper, 'workforce education' refers to credit-bearing classes, programs, and degrees only. Left out of this definition are non-credit classes such as workshops, customized training for employers and continuing education, even though these are, for some purposes, included under the workforce umbrella. The reason for leaving these other offerings out is because they are measured, assessed, and funded differently than credit-bearing offerings. These alternative offerings don't 'count' toward any higher education credential, and thus are not the topic of this paper.

By this definition, both transfer education and workforce education classes carry college credit. The line between these two types of education (transfer and workforce) used to be quite clear, however, today many workforce degrees and classes are articulated with baccalaureate-granting institutions, so the difference between the two has become harder to distinguish. In most community and technical colleges in Washington, both types of curriculum are subject to the same process for approval from a cross-campus faculty group, the curriculum committee, whose task it is to preserve the academic standards of the institution by ensuring rigor in all educational programs.

When the prospective student enters a community college's door, he or she is most often given a placement exam of some sort, usually a standardized test to determine their skill level in English writing, English reading comprehension, sometimes English speaking, and mathematics. In Washington, it is most often one of the following tests: Accuplacer®, Compass®, or CASAS

(Comprehensive Adult Student Assessment System). The students are then given guidance as to what classes they should enroll in. Community college students very often need remedial education – anywhere from 33% to 90% of the incoming community college students have been reported with academic skills under the college level (Kasworm, 2003; Perin & Charron, 2006). This wide variance in the percentage is attributed to the fact that the definition of 'preparedness for college' is not standardized. Students with an acceptable placement test score at one community college for taking English 101 may be considered to require remediation at another college. Even at the low-end estimate of 33% , remediation needs are a huge issue at CTCs. Cohen and Brawer (2003) described underprepared students as "the thorniest single problem for community colleges" (p.236). Suffice it to say that community college students, on average, are much less prepared when they apply for admission than the average university student. This creates the need for large, comprehensive pre-college programs, most of which fall under the broad umbrella of Basic Skills Programs.

In Washington, the full-time equivalent (FTE) breakdown of the percentages of students served in Workforce, Transfer, and Basic Skills Programs are shown in Figure 1. These are annualized FTEs, with one FTE being equal to one full-time student taking classes for 3 quarters, or 45 quarter credits. This is important because the traditional way that community colleges have been funded by the State is by FTE. Both Basic Skills and Workforce Education increased as a percentage of the total FTE year to year through 2009. While Transfer Education has dropped as a percentage of FTE at the community colleges, enrollment overall has increased and the total number of students starting their baccalaureate track at community colleges has increased as well.

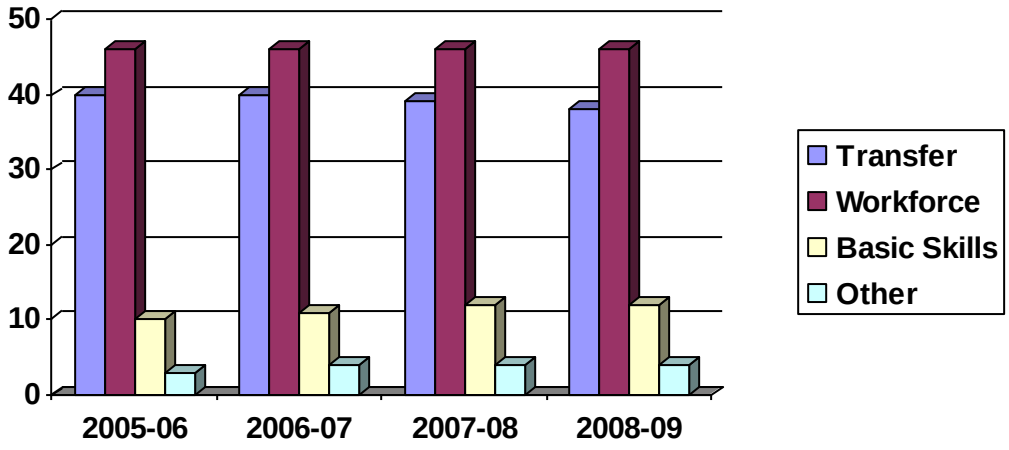


Figure 1. Percentage of students in different paths, by year. Y axis= percentage of total FTE
'Other' category includes parent/family education, and those that didn't report in any of the other three areas.
Continuing education and contract training are not included, as they do not contribute to state-funded FTEs.
Data source: WSBCTC Academic Year Report, 2008-09

In 2010-11, Washington's 34 CTCs served 455, 906 students earning over 200,109 FTEs; and over 16,000 of those FTE were in Basic Skills programs. In 2005, the number of FTE in Basic Skills was just over 13,000. By 2009, that number was 22,000 so the sheer size of the program had almost doubled in five years (see Appendix A). The enrollment in Basic Skills has dropped both as a percentage of the total and in straight numbers in the last two years. This appears to be largely due to the economic downturn and subsequent budget cuts to higher education.

Who comes to CTCs?

Last year, Washington CTCs served nearly half a million students (WSBCTC, 2009). With the CTC door open to anyone, the mix of students attending is widely varied. Local communities and their community colleges are each unique in their make up. However, in general, the student body at CTCs is more diverse in age and in academic preparation than the student body at a university (WSBCTC 2001).

Many students come for Running Start; a program designed to give high school students dual credit when they take their junior and/or senior year classes at the local CTC. Others come right out of high school after graduation – perhaps because they didn't get into a university, perhaps for financial reasons, or perhaps because attending a day school and living at home suits the maturity level of the student better (Bailey and Morest, 2006). Adults come to the CTC's for even more varied reasons. Many community members who are not particularly interested in earning credits come to CTCs to take classes in everything from Tai Chi, to cooking, to specialized art classes such as glass blowing. Another significant adult population consists of people who already have a postsecondary credential but who are coming to get trained for a specific career. The 2007-08 cohort for the nursing program at one college contained 25% with prior bachelor's or master's degrees (Whatcom Community College, 2009).

However, the fastest growing subgroup of CTC students in Washington consists of adults coming back to school after a break from formal schooling to get trained or retrained for a career. By 2004, enrollment of adults (defined as those 18-64 who did not come to the CTC directly after graduating from high school) in community colleges across the country was nearly 43% of the total full- and part-time enrollment (Center for Adult and Experiential Learning [CAEL], 2008, p 7). The majority of these adult students return with less than college-level academic skills (WSBCTC, 2009). People who dropped out of high school, people who entered the workforce only to find that they can't make a living wage, and immigrants and non-native English speakers have been going to community and technical colleges to increase their education level and upgrade their skills. Recently in Washington State, it was estimated that 57% of the adult population has less than an Associates' degree, with 24% never having attended college, and almost 10% with less than a high school diploma (CAEL, 2008). Estimates show

that nationally about 59 million, or about 30% of the adult population, have never attempted postsecondary education (p.7). A disproportionate number of people who have never attended college lost their jobs in the recent recession, and many are coming to community colleges because they can't find new employment.

Returning, low-skilled adult students start their educational journey in Basic Skills Programs (called 'adult education' in the legislation). The Basic Skills Programs look and run differently than traditional college classes. Basic Skills Programs are often physically located in isolated areas of the college or off site, with little interaction with the traditional student population. At many colleges, the Basic Skills classes begin after the first day of the college quarter, or have another mid-quarter entry date. The students are entered into and tracked in a separate data system. All in all, they are not treated the same as the 'regular' college students.

The low-skilled adult group as a whole has largely been ignored in both research and practice by the higher education community until recently. This is in part due to the fact that the programs serving these students have been kept artificially small. In Washington, every CTC is required to run basic skills classes, and these departments are always 'cost centers' for the colleges (in other words, they cost more to run than they bring in) (WSBCTC 2001). This is because there is no per-credit tuition charge for basic skills classes; students pay a flat $25 per quarter to take as many courses as they wish. Many students qualify for a waiver that allows them to attend for free. Colleges have often chosen to limit the number of sections they offer to keep the expense from being too onerous (WSBCTC, 2001). While every college is required to provide some adult education, the amount each offers is not regulated. The current budget crisis in Washington which has resulted in cuts to CTCs for several years running has taken a toll on

Basic Skills classes; many institutions have made more drastic cuts in these areas than in other instructional programs.

Chapter 2

Literature Review

Characteristics of, and programs for, low-skilled adults

Adults with low beginning academic skills have been little studied as they transition to college, but a significant amount of research has described their characteristics. In many cases, these adult students come from the lower socioeconomic stratum of the community (WSBCTC, 2001). They were often unsuccessful in U.S. or foreign secondary education systems for many varied reasons, including having been marginalized as minorities. American minority high school students may become disenfranchised by curriculum that was designed by and for the majority (Noguera, 2007). Many of these students were high school drop-outs and are only returning to formal schooling out of desperation. They come to the CTCs with low academic skills, and often even lower expectations.

Community college students as a whole tend to have more barriers to succeeding in academics. These barriers include both personal difficulties and difficulties in navigating college systems and persisting in college than traditional-aged students coming straight to college after high school graduation ('traditional students' in this study). These adult students tend to have a higher average age than traditional students, and often are specifically interested in workforce training (Goldhaber & Peri, 2007; Center for Adult and Experiential Learning [CAEL], 2008). Students in community colleges are much more likely to have dependent children, to be first generation college students, to come from lower income households, and to attend part-time and/or part-year (see Table 1). It is important to note that while more students qualify as low income at the CTCs than at universities, fewer of them receive Pell (need-based) grants. This anomaly is often attributed to the lack of knowledge and ability to navigate college

systems of the low-skilled students. CTCs, since they are funded at lower rates by the State, have fewer resources to devote to support services such as advising and financial aid offices than four-year colleges and universities, and accessing services is often inconvenient and difficult for busy adults. "These [financial aid] supports would make it two to three times more likely that they would earn a credential, but, at best, only one-third of these students receive them" (Prince and Jenkins, 2005, p 4).

Table 1
Select characteristics of students in different types of higher educational institutions

Characteristic	Community College	Public 4-year	Private 4-year
*Income:			
< $20,000	29.2	22.7	20.7
< $30,000	42.9	33.6	31.9
< $50,000	63.5	51.7	49.9
Received Pell Grant	22.6	25.7	27.1
Age (on 12/31/03)			
Under 24	47.0	71.0	66.9
24-29	18.2	15.6	12.2
30 and over	34.8	13.4	20.9
Has Dependent Children	32.5	13.2	18.3
Enrollment:			
Part-time	66.1	30.2	26.7
Part-year	46.9	23.2	27.9

Note: Source is US Department of Education, National Center for Educational Statistics, National Postsecondary Student Aid Study (Data Analysis System) Recreated from Bailey and Morest, 2006
*Parents' income for dependent students; student's (and spouse's) income for independent students.

The low-skilled, returning adults are a subset of the total group of community college students (characterized in Table 1). Research shows that low-skilled students are less likely to make the transition to college successfully, are less likely to persist, are more likely to have difficulty navigating college systems than traditional students or students who arrive with college-level skills (Prince and Jenkins, 2005; Liebowitz and Combes-Taylor, 2008), and

generally have less social capital (Bourdieu, 1977) than traditional students. In general, they begin their higher educational journey in basic skills programs because they test well below college level in math, reading, and writing skills. The three main basic skills programs (which are described in more detail in the next section) are Adult Basic Education (ABE), English as a Second Language (ESL), and preparation to take the General Educational Development (GED) test.

Table 2 shows the characteristics of over 30,000 Washington State basic skills students from 2004, disaggregated between ABE/GED and ESL. This disaggregation is critical, because the ESL students are quite different than their ABE/GED counterparts. Traditionally, Basic Skills students were described as a single group, and this was a disservice to both the subgroups (WSBCTC, 2001). The average age of ESL students for 2008 was a full 10 years higher than ABE/GED students. Sixty percent of the ESL students were female, and more than 50% were Hispanic. Both groups include a higher percentage of minority ethnic groups than the population of the state, or even the population of the community colleges in general. Many in both groups are parents, and are older than 25.

It is important to note that, first, community college students differ from the population of other higher education students (seen in Table 1), and, second, that the basic skills students are a further sub-category with their own demographics, and, finally, that the individual programs of ABE/GED and ESL each have their own unique population of students (seen in Table 2). For this last reason, distinctions should be made between each of these important populations.

Table 2
Basic Skills Student Characteristics in Washington Colleges (N=30,694)

Characteristic	Enrolled in ABE/GED (n=11,744)	Enrolled in ESL (n=18,950)
Median Age	25 yrs	35 yrs
Under 20 yrs.	25%	5%
20-24 yrs.	25%	17%
25 yrs. Plus	50%	78%
Male	48%	40%
Female	52%	60%
Parent	42%	50%
African American	11%	7%
Asian/Pacific Islander	5%	21%
Hispanic	17%	53%
Native American	6%	3%
Other	5%	5%
White	55%	14%
Welfare recipient	20%	3%

Source: WSBCTC Research Report 08-1: Increasing Student Achievement for Basic Skills Students (2008)

Basic skills students mostly come from the bottom two quintiles (by income) of the socioeconomic strata (WSBCTC, 2001). An NCES longitudinal study of high school students from 2002 clearly showed that low income students are more likely to be academically under-prepared; and under-prepared students are less likely to complete degrees than better prepared students (Strayhorn, 2006.) So even when the low-skilled students do transition to college, they struggle more to complete a certificate or degree. According to the National College Transitions Network, basic skills students arrive with gaps in math and English, and they will also:

- be poor at reading with a critical eye;
- have little familiarity with academic vocabulary;
- be very concerned about the financial side of education since they must figure out how to cover the loss of their own wages or how to go to school while working full time;

- be parents/have childcare issues (50% to 70% have children);
- be fairly new to technology;
- have difficulty navigating college systems;
- be unfamiliar with placement testing (and therefore score poorly),
- and have higher anxiety about their ability to succeed (Zafft, Kallenbach, and Spohn, 2008).

These students are, in a word, fragile. Their lives are much more complicated than the traditional student's life, and therefore they have different needs. A 2001 qualitative study which is part of the larger MDRC Opening Doors Project (Matus-Grossman & Gooden, 2002) used focus groups at six community colleges around the country to determine, from the students' perspective, the biggest issues that they face. The 131 study participants identified several key factors needed to help them to stay in college: stable child care; personal support from family and college employees; and employers who are willing accommodate their college scheduling needs. The focus group participants indicated that wage loss was a big factor as well, which is seldom covered by financial aid packages (p. ES-3). Notice that none of the above-mentioned factors are directly related to the academic classroom, and yet these non-academic issues are often what determines the students' success or failure.

To complicate things further, older students (again, overrepresented in the low-skilled group) have even less success than traditional college students:

> "Compared with community college students who enrolled soon after high school (at ages 18-24), those who start later (at ages 25-64) are more likely to earn a certificate and less likely to earn an associate degree. The late starters are also far less likely to transfer to a four-year institution and earn a bachelor's degree. Indeed, among students who

entered a [Washington] community college for the first time in 1995-96, 60 percent of older first-time students did not earn any credential or transfer to a baccalaureate program after six years, compared with 40 percent of younger, first-time students" (Prince and Jenkins, 2005 p. 2).

The WSBCTC reports that 77% of the students in pre-college courses are older than 20 years of age (Stephens, 2009). In Table 3, other differences between the older and younger returning students become apparent:

Table 3
Comparative Statistics on Selected Characteristics between Older and Younger Adult Undergraduates (2002)

Comparative Status	Older Students (≥ 25 years), %	Younger Students (< 25 years), %
Part time student	69	27
Full time work, part-time student	55	36
Full-time work, full-time student	23	23
Married or separated	56	6
Dependent children	52	4
First generation college student	55	44
Financial aid – grants	34	36
Financial aid – loans	15	21
Employer aid	9	1
Full-time student w/financial aid support	71	41
African American student representation	11	9

Note: adapted from Kasworm, Polson, and Fishback, 2002, p. 6.

Overall, these non-academic issues add up to an insurmountable package of obstacles for many people, especially given the way that higher education has traditionally been offered. While some quantitative studies have described financial barriers for adults (CAEL, 2008), issues with accessibility/availability of classes, and a 'lack of aspiration' to attend college (Mingle and Birkes, 2004), there has been little research to date that incorporates the Basic Skills students' voice with survey data to determine how to best package and deliver college programs to mitigate the significant barriers these students face. We know a myriad of detail about the

characteristics and the barriers these students face in general from the studies above, but we don't know what a program designed directly for them should look like. Particularly, there is very little information from the student's perspective.

Programs for Returning Adults with Low Academic Skills

The traditional program offerings for low-skilled adult students in community colleges, introduced above as Basic Skills, are incorporated under three main titles: Adult Basic Education (ABE), (GED) Preparation, and English as a Second Language (ESL). All of these offerings are remedial in the sense that they are considered below college-level work. Students in these programs do not fill out an application for admission to the college; they provide a very minimal amount of information that stays in the Basic Skills Department, rather than being sent to the registrar. ABE students generally have English reading or writing or math skills at less than an 8th grade level; ESL students have English skills that are also below an 8th grade level. Both ABE and ESL programs have traditionally been focused on 'life skills' gains (such as balancing a checkbook, speaking English well enough to fulfill job duties, or filling out IRS forms) in which the ultimate goal is practical application, rather than academic skills gains that would lead the students to higher education. Students that wish to move on into college classes go from the basic skills programs (if successful there) into developmental education (DevEd) classes, which cover grammar, writing, and pre-college math in a more 'academic' manner. DevEd classes, unlike ABE and ESL, carry credit and are charged at full tuition rates – although because they are less than college-level classes (numbered under 100), they do not count toward a certificate or degree. See Figure 2 for how these programs fit together:

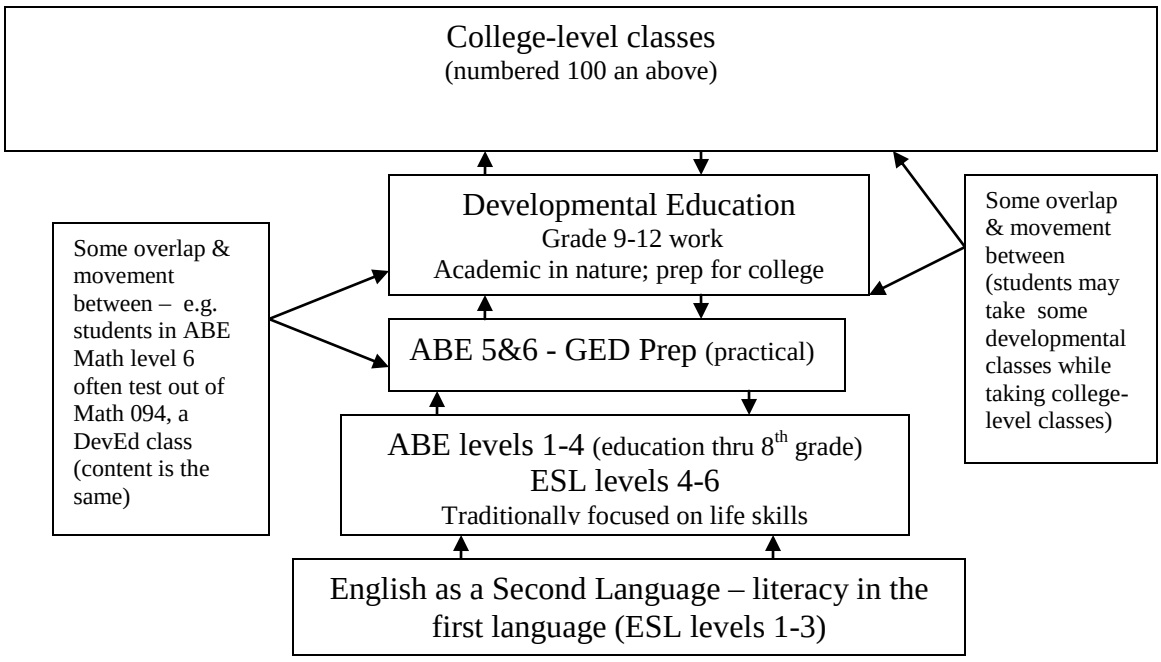


Figure 2. Building blocks of education at Washington CTC's

Students can, and often do, spend years in these pre-college programs before they ever have the opportunity to step into a college-level course. The majority actually drop out before ever attending the first college-level class (Prince & Jenkins, 2005). Studies of basic skills students to date have centered mostly upon their pre-college achievements- particularly, in their attainment of GEDs and life skills. The 'life skills' focus was an attempt to provide the kind of education that adults were thought to want and need. This was based on research (CAEL, 2000) and a set of standards that came out around the turn of the century from the National Institute For Literacy (NIFL) under the name of Equipped For the Future [EFF] (King & Bingham, 2004). The EFF standards were geared toward providing adult students with the skills to function well in society and as citizens, but did not include any standards for academic preparation. While the NIFL seems to have moved in the direction of having adult literacy prepare people for college

(no current information is available on EFF at the NIFL web site), Washington State and many other adult literacy programs are still using the EFF standards.

The GED exam has long been considered as concentrating on skills necessary for workplace requirements, rather than as preparation for continued formal education – or at least it has been seen so by researchers (Song & Hsu, 2008). Yet a national survey completed in 2004 revealed that 62% of students said they were taking the GED test to continue their education (American Council on Education [ACE], 2004). The evolution of the workplace, demographics, and the economic tie between education and income have made completing Basic Skills programs as an end goal inadequate, since it almost certainly leaves the student without the wherewithal to become economically successful, which might arguably be the most important 'life skill' of all.

Adult students often bring with them a wealth of information about life, which makes them a different type of learner. "The comparatively richer life experiences of individual adults have been cited by nearly all writers as a key factor in differentiating adult learning from child learning" (Merriam and Caffarella, 1999, p 389). The field of adult learning theory and adult teaching strategies is an evolving one. Fenwick and Tennant (2004) identify four distinct perspectives that most adult learning theories fall into:

1) Learning as an acquisitional process, where knowledge is seen as fixed and students learn from exposure to the fixed body of knowledge;
2) Learning as reflection, in which knowledge is created and is a function of personal understanding and reflection;

3) Learning as part of a practice-based community, which is a pragmatic approach that says learning happens when the knowledge has usefulness in everyday life, and can be practiced in a hands-on way;
4) Learning as an embodied co-emergent process, which contexts learning in the situational environment which dictates how and what one learns from an experience (so two students doing the same exercise may learn different things).

Underlying the last three in this categorization is the idea that both knowledge and learning are dynamic.

At this point, there is nothing that could be considered the dominant adult learning theory, although there are several areas of study that are key in the design of adult education programs. Basic skills instructors, many with master's degrees in adult education or K-12 endorsements, are 'teaching experts' with a solid background in learning theory and training in taking theory to practice (Smith & Hofer, 2003). The favored theories for adult learning are interrelated and mostly come from a constructivist world view – that is, that meaning of experience is constructed rather than fixed (Cresswell & Plano Clark, 2007). One popular core ideal of how adult learning takes place is that adults prefer self-directed learning. Andragogy, or the pedagogy of teaching adults (Knowles, 1980), is based on the assumption of their preference for self-directed learning. A teacher using andragogy in the classroom is likely facilitating the discussion, but the learner is really choosing the direction that the learning takes. Another preferred theory of learning (and good teaching) in the cognitivist/constructivist orientations of Piaget and Vygotsky posits that the teacher's role is to facilitate and negotiate meaning with the learners, and that the application can be had through experiential learning, perspective transformation, and reflective practice (Merriam & Cafferella, 1999).

This is an over-simplification of the adult education field (for the sake of brevity), but the impact of these particular learning theories can be seen in the basic skills classrooms at Washington community colleges:

1) Classes have specific, targeted outcomes, but the way that those outcomes are achieved is determined by the specific class of students and what they want to do;
2) Individual students can continue working toward the same outcomes for more than one quarter;
3) The classroom door is (figuratively) open – students can come and go as other obligations allow;
4) Students pre- and post-test each quarter, but also are very much in control of when they move on to the next level. Even if they have 'scored out' of a particular level, they can continue to attend that classroom if they don't want to leave their peer group;
5) Little homework is expected to be completed outside the classroom, because adult students are too busy. Assignments are done during class time, either individually or in groups (CAEL, 2008).

Obviously, basic skills classrooms are a very different place than the traditional college classroom, and one could speculate that this contributes to the lack of transfer from basic skills to college-level courses. The expectations of college classrooms are, in general, much more rigid. Traditional educational program pathways have mostly had students build their education one step at a time; all secondary educational learning must be mastered before transitioning to post-secondary workforce or academic classes (climbing up the pyramid of Figure 2 one step at a

time). However, for the low-skilled population, that means many years of schooling before even the most basic college-level certificate is attained, since the path starts through the ABE levels until the GED is passed, then into Developmental Education courses before these students are even allowed to take college-level classes. That slow pace is an incredible hardship for returning, low-skilled students, as can be seen by their low persistence. "For these students, simply completing basic skills is a significant challenge. Their complicated personal lives are compounded by [college-level] programs that are designed and structured in ways that don't meet the students' needs" (Bloomer, 2008, p.2). And to elaborate; "The sad truth is that many adult basic education (ABE) students don't perceive of college as a place for them. Being an older-than-average student, often with family responsibilities, creates a social barrier. Those who do enroll often find that their academic skills, while sufficient to pass the GED, or their English skills, while fine for daily life, need strengthening before they can place into courses in which they can earn credits towards graduation. And the cost of college and correlated lost wages is an ever-growing - perhaps the greatest - barrier to enrolling or persisting in postsecondary education" (Garner, 2004, p.1).

A 2005 longitudinal study of Washington ABE and ESL students, conducted jointly by the Community College Research Center (CCRC) at Columbia University's Teachers College and the WSBCTC, discovered that while many hundreds of these students come to the community colleges, few actually transition into college-level work, even when they came to the college with a college-level goal (Prince & Jenkins, 2005). This groundbreaking study of Washington State basic skills students between 1999 and 2004 found that fewer than one third (30%) of ABE students even attempted any college-level coursework during the period of the study and fewer than 6% actually attained a certificate or degree. The outcomes were even more

dismal for ESL students. Most basic skills students in the study left the college without completing any formal certification (although it is possible they had attained their personal goal); some had continued in basic skills courses for the entire span of the study; some had moved to DevEd; but few made it into college level coursework even after five years (see Appendix B for the WSBCTC's summary of the research).

This research report is called the Tipping Point research, denoting the tipping point for economic gains in education for low-skilled adults to be a minimum of 1 year of college-level credit and a credential. Students who achieved this tipping point saw a dramatic increase in their annual earnings (an average annual increase of $8,700 for a student that started in ABE, and $7,000 for someone who began in ESL). The Tipping Point research was very important because most studies prior to this lumped 'some college' and 'associate degrees' into the same group, so the economic impact of certificates was unknown. Also unknown (but widely suspected) prior to this study was the poor transition rates of students who started in basic skills. So does this indicate a failure in the basic skills programs? Looking at the EFF target outcomes and the WSBCTC adult education outcomes (see Appendix C), one would have to say no, because those outcome goals did not attach any importance to developing or achieving a college-level goal or even for transitioning into college-prep (DevEd) courses. For many years, practitioners argued that adult students were uninterested in college. However, the WSBCTC found that, when asked, most new basic skills students express that they have a college-level goal when they arrive at the college (Bloomer, 2008).

Models of Programs

ABE-to-college transition models for low-skilled adults are a new addition to educational programs across the country. Researchers from the National College Transition Network (Zafft,

Kallenbach, & Spohn, 2006) created a typology of these models, and looked at their scalability. When looking at this typology, it is important to remember that while many adult education programs exist at CTCs in Washington, both here and in other states there are other adult education centers that are completely separate from higher education institutions. According to Charles Earl, Executive Director of the WSBCTC, only about 15% of states in the U.S. task CTCs for providing adult education (2011). Many states have adult education as part of their K-12 system. Also, most of these programs are designed to mitigate some of the barriers to college entry, but do not necessarily support the student beyond the transition to college-level courses (or onto the college campus, in some cases). The four types of transitional programs for ABE adults identified by Zafft, et.al are:

The Advising Model. This model makes a point to raise student awareness of postsecondary options and entry processes, uses advisors to help students prepare to transition, provides 'skills bump' workshops, and/or provides extra developmental education. This model is expensive for students who must take several developmental classes since those bear regular tuition costs, but has had more positive outcomes (in the number of students served) than some of the other models.

GED+ Model. This model accelerates adult education for students who wish to transition to postsecondary education programs by integrating some additional academic content into the GED prep courses. This model has the potential to reach many students, but is difficult on both the instructors and students because of the amount of content that must be learned in the classes, as well as because the GED doesn't align well with the college placement tests. Students in this model were still struggling to test into college-level classes.

Career Pathways Model (I-BEST). Also known as I-BEST, or Integrated Basic Education and Skills Training, this model is a national model that was developed in Washington CTCs, based on the "Tipping Point" research mentioned earlier. Colleges pick a particular professional or technical program that has a clearly defined career pathway for students (for example, nursing), and then that specific program is integrated with the ABE content, so that students learn both the basic skills and the career skills at the same time. The basic skills outcomes are achieved by having the student learn them in the context of their chosen career, which helps with both motivation and acceleration. The model places two instructors in class for at least 50% of the class time, supporting both learning outcomes (basic skills and vocational gains). Students also receive more wrap-around support services (more advising, assistance with financial aid, more out of class assistance with non-academic issues) and usually attend a support course that is designed to reinforce the daily content of the vocational classes. This makes it difficult to tell which component(s) are most important.

The limitations identified by Zafft, et.al with the I-BEST model were that students would be 'tracked' into only the pathways that are supported, which were very limited in number when this report was written. Also, students struggle in non-integrated classes after completing the integrated portion of the program, which makes continuation difficult. Finally, this is an expensive model. A complete description of this model is in the next section.

College Preparatory Model. This model provides credit instruction to build academic skills, psychosocial and career development, and uses a cohort model. It also addresses the alignment between adult education and postsecondary systems, looking for overlaps

and gaps between the two (for example, students may be learning much of the same content in ABE level 6 math as they are in DevEd math 097, which is basic algebra). The limitations of this model are that it is expensive to run the additional classes, that there is no ownership of the program in instructional areas (because most of the service is provided by counseling/advising), and, because of the cohort model, it served very few students and would be difficult to scale up.

All of these models are working toward finding a remedy for the preparedness issues of low-skilled adults, and sometimes also to mitigate the difficulties caused by complex adult lives. What has been clearly determined is that programs that do not address the complex issues beyond the classroom through advising, counseling, or partnering with outside agencies are not successful because the students don't persist (Matus-Grossman & Gooden, 2002).

Many transitional programs have been funded by the Breaking Through Initiative, a joint venture lead by Jobs For the Future, the Mott Foundation, and several other large groups (JFF, 2010). This multi-year demonstration project funds innovative programs at community colleges, such as I-BEST, and is aggregating the data for dissemination to all. The most recent publication is *The Breaking Through Practice Guide* (2010), which identifies four areas that colleges can address for increasing their success with low-skilled adults. These include accelerating learning, providing comprehensive support services, making sure that there are real increases in wages for the graduates (as determined by the average wage for the job that can be obtained with the training) , and aligning the programming so that there is a seamless pathway for every student. The I-BEST model addresses all four of these areas.

More on I-BEST

As mentioned prior, I-BEST programs integrate different types of learning to speed up the time to completion of a certificate or degree program. These programs were created in Washington State and have gained national attention. Figure 3 is a repeat of Figure 2, but with the addition of the I-BEST concept. I-BEST puts a 'content expert' (professional/technical instructor) in the classroom for 50% of the time with a 'teaching expert' (basic skills instructor) and the two work together in the classroom to integrate instruction so that the targeted outcomes of both areas are accomplished at the same time. While there are best practices for this integration, each faculty team defines how this integration will happen in their classroom.

More intense wrap around services are offered for I-BEST students, usually through a designated advisor. Students in an I-BEST classroom earn college credits towards their degree (for the workforce-related classes), and also have been able to make measurable basic skills gains, shown through pre- and post-testing with the CASAS battery.

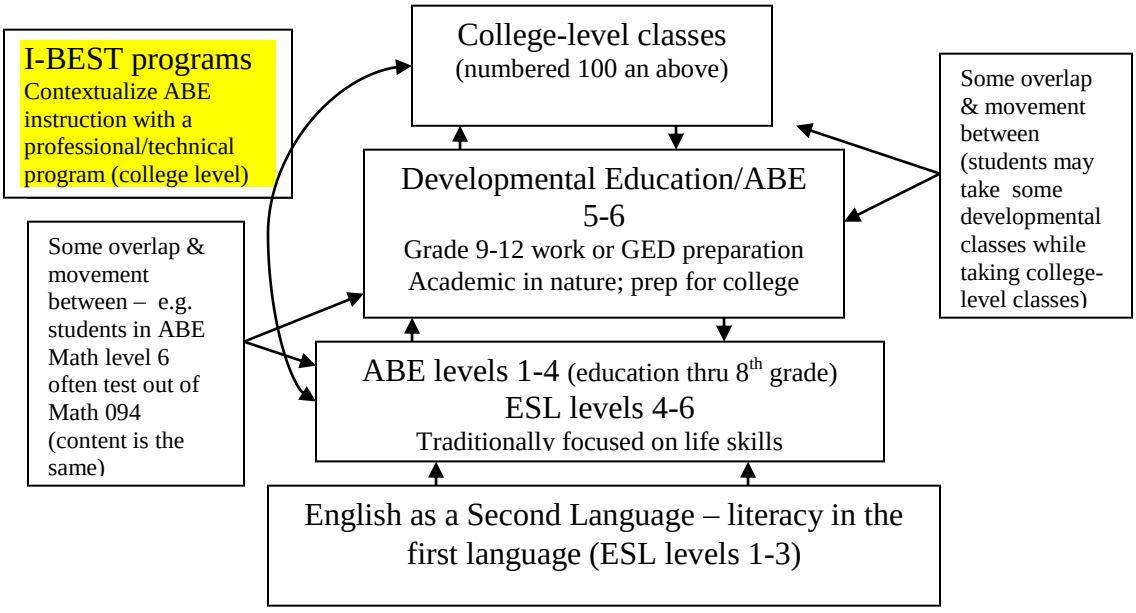


Figure 3: Pre-college programs including I-BEST

Notice that the I-BEST program 'skips' the developmental education box in Figure 3. This does not mean that the students skip learning that information – some take DevEd classes while they work toward their goal in the I-BEST program, others meet the DevEd outcomes through the integrated coursework. However, students are not prepared with these skills when they enter the I-BEST classroom. This puts the old idea that students must progress in their education in a lengthy, lock-step, building-block manner under a critical microscope. The ultimate goal of an I-BEST program is the successful passage of the college-level General Education classes (usually English 101 and a college-level math class) that show the student has obtained the background needed for success in academics.

I-BEST programs are expensive, because of the overlapping teaching and higher level of support services, but certainly less expensive than either having the students in the lengthier traditional pathway or in the cost to society of having the students leave without achieving their goals. To help offset the higher cost, the WSBCTC supports the CTCs with an enhanced FTE. Each I-BEST FTE is actually counted as 1.75 FTE, which gives colleges extra money to support the programs. The money for paying I-BEST FTE is set aside by the WSBCTC out of the general state allocation before it is distributed to the colleges in the form of a held-back incentive fund.

So who is attending the I-BEST programs? Below is a table with the differing characteristics of ABE and ESL students in I-BEST programs. Of note: the students in I-BEST are more often parents, and are more often WorkFirst (welfare) students. Also notice how few of the total population were served in the I-BEST programs as of 2008. This number increased in 2009-10, and leveled off in 2010-11.

Table 4
Basic Skills Student Characteristics in 24 Colleges with I-BEST Programs (N=33,410)

	ABE/GED			ESL		
Characteristic	Enrolled in Basic Skills Only (n=11,744)	Enrolled in College Courses (n=1,386)	Enrolled in I-BEST (n=627)	Enrolled in Basic Skills Only (n=18,950)	Enrolled in College Courses (n=430)	Enrolled in I-BEST (n=273)
Median Age	25 yrs	25 yrs	27 yrs	35 yrs	32 yrs	31 yrs
Under 20 yrs.	25%	23%	13%	5%	10%	2%
20-24 yrs.	25%	26%	26%	17%	18%	13%
25 yrs. Plus	50%	51%	61%	78%	72%	85%
Male	48%	35%	35%	40%	33%	34%
Female	52%	65%	65%	60%	67%	66%
Parent	42%	47%	57%	50%	47%	59%
African American	11%	9%	13%	7%	5%	10%
Asian/Pacific Islander	5%	6%	6%	21%	32%	26%
Hispanic	17%	12%	13%	53%	33%	34%
Native American	6%	3%	3%			
Other	5%	5%	6%	5%	4%	5%
White	55%	64%	59%	14%	26%	25%
WorkFirst*	20%	32%	33%	3%	8%	26%

*Washington State's welfare program
Notes: From WSBCTCResearch Report 08-1: Increasing Student Achievement for Basic Skills Students (2008)

Measuring the success of the programs

Measuring success has always been a difficulty for basic skills programs, as colleges have contended that many students were just coming to learn some particular thing (for example, better math skills so that they could use them in their carpentry job) and therefore would never show up as a 'completer' of any program. The result of this belief was a specific system that tracked the number of hours each student attended, and small gains in their knowledge and skill (in Washington, that system is called WABERS) so that both students and faculty could see forward progression of the students. The incremental gains were recorded through pre- and post-testing (using the CASAS test) each quarter. The WABERS system is separate from the

Washington community college data system, which is simply known as SMS (for Student Management System). Students who are input into WABERS do not get input into SMS. When they apply for regular college entry (remember the basic skills students do not get accepted to the college) there is no identifier that would indicate they were a former basic skills student or had been in WABERS. It wasn't until the Prince and Jenkins (2005) Tipping Point study that anyone really looked closely at the transition rates to college for Basic Skills students, and CTCs started talking about how to foster those transitions.

An obvious way to determine success in a transitional program is by how many students transitioned to college while or after participating, and then what the credential completion rate of those students was. Another metric to measure and relate to effectiveness is the cost of the program. Data on the outcomes of transitional programs is difficult to come by as of yet. According to a U.S. Office of Vocational and Adult Education (OVAE) literature review of studies on postsecondary transitions released in February 2010:

> Although many efforts are underway to assist youths and adults with their transitions to and through postsecondary education, led by the federal government, national foundations, and other organizations, only a few are conducting or planning to conduct rigorous evaluations of such interventions…In the absence of rigorous evidence, it was not possible for OVAE to identify research-based effective interventions (U.S. Department of Education [DOE] 2010 p.2).

Several promising programs for which there is some data available are included in the Breaking Through Practice Handbook, including Washington's I-BEST Program (DOE, 2010).

The researchers at Community College Research Center (CCRC), located at Teacher's College at Columbia University, lead by Davis Jenkins, conducted several more studies of the

Washington system, this time of the effectiveness of I-BEST programs. While the CCRC researchers continue to follow the program and students for 5 years, several interim reports have been released in 2009 and 2010 with positive program outcomes (Jenkins, Zeidenbert, & Kienzl, 2009; Wachen, Jenkins, & Van Noy, 2010; Zeidenbert, Cho, & Jenkins, 2010). In the 2010 report, the researchers did a rigorous regression analysis comparing I-BEST students to two other groups; the general Basic Skills population, and a subset called Non-IB Workforce who had been matched to the I-BEST students using a technique called Propensity Score Matching (Jenkins et.al, 2010b, p3). The Non-IB Workforce students were those that transitioned into at least one college-level workforce related class on their own, without an I-BEST program. Non-IB Non workforce students were basic skills students who did not take any career-related classes. The study used a data set obtained from the WSBCTC and included students taking classes over a 3 year period, fall 2005- spring 2008 (Ziedenbert, et.al 2010 p.6) and wage information through spring 2009. A summary of the findings is displayed in Table 5.

Table 5.
Regression-Adjusted Estimates of Probabilities of Outcomes for First-Time I-BEST, Non-I-BEST Workforce, and Non-I-BEST Non-Workforce Students

Outcome	I-BEST	Non-IB Workforce	Non-IB Non-Workforce
Received College Credit	0.57	0.18	0.01
Received CTE College Credit	0.55	0.18	0.01
College Credits Earned (for those that earned any)	18.2	9.1	1.1
CTE College Credits Earned (for those that earned any)	17.2	7.6	0.5
Persisted to Next Year	0.40	0.48	0.28
Received Award	0.26	0.03	0.00
Achieved Basic Skills Point Gain	0.53	0.40	0.33
Difference in Log Wages (Post-Prior)	-0.03	-0.02	-0.04
Difference in Adjusted Quarterly Hours Worked (Post-Prior)	-17.54	-24.06	-20.83

Note: From CCRC Working Paper # 20 (Zeidenbert,Cho, and Jenkins, 2010)

Notice, in particular, that 57% of the I-BEST students earned college credit, while only 18% of those Non-IB Workforce students earned credits. Another highly positive outcome is related to

receiving an award (certificate or degree). 26% of the I-BEST students completed, while only 3% of the Non-IB Workforce students earned a credential. Fewer I-BEST students persisted into the next year, but this is likely because many I-BEST programs are completed in one year or less. More students in I-BEST programs achieved basic skills point gains, which lends credence to the idea that contextualized learning is effective. Finally, the authors suggest that the dismal outcomes related to hours worked and wages are probably related to the economic downturn: "We believe this decline in wages is due to the unusually deep recession – the deepest since the Great Depression – that started as these cohorts of students were leaving school"(Zeidenbert, et.al 2010 p.21).

In the initial studies, authors were careful to point out that while the results look excellent, there was no definitive indication that the I-BEST programs are the cause of the outcomes, since it could have been partially due to the I-BEST program applicant selection process that the students were more successful (colleges could have screened to insure only the top performing students were accepted into an I-BEST program). However, the Zeidenbert et.al report confirmed that I-BEST programs were impacting student success by using a Differences in Differences (DID) approach to account for possible selection bias. The DID method indicated that the difference between the groups was larger post-program, showing that I-BEST was indeed making a difference. Enrollment in I-BEST programs was found to have a positive impact on the educational outcomes of earning college-level credit and making basic skills gains. Overall, the researchers concluded the outcomes of I-BEST are promising for this difficult-to-serve group.

Those who are practitioners in the field and who have been working with I-BEST were not surprised by the outcomes. They have seen the success of the students. However, the more

puzzling piece is why colleges are still struggling to fill these programs. These same practitioners report that I-BEST programs are often delayed or cancelled due to low enrollment. Currently, there are over 115 approved I-BEST programs at the 34 CTCs in Washington. Growth of I-BEST program entries can be seen in Table 6.

Table 6
IBEST FTE Growth 2006-07 through 2010-11

Year	2006-07	2007-08	2008-09	2009-10	2010-11
IBEST FTEs all funding sources	693	895	1,143	1,760	1,782
% change		27.4%	29.6%	51.6%	1.2%

Note: From SBCTC Academic Year Report 2010-11

These programs have proven successful in mitigating many of the barriers which keep adult students out of higher education by making sure that they are provided with the support they need to get financial aid, learn to navigate the systems, and be successful in their courses. While growth has been very good - by 2007-08 all 34 CTCs in Washington had at least one I-BEST program-the expected explosion of students served has not yet happened. Nearly all the programs have struggled to meet enrollment requirements to make the programs financially viable (WSBCTC, 2009). Workforce education and Basic Skills professionals at state-wide council meetings (Workforce Education Council and Council for Basic Skills) have brainstormed ways to increase the numbers of students in I-BEST pathways. Colleges report cancelling scheduled I-BEST pathways because of a lack of enrollment. Research was needed to determine what barriers are most problematic. The voice of the students was needed to determine what was keeping them from even attempting to enter the I-BEST programs

Chapter 3

Methodology

Study Design - Overview

From the above discussion it can be seen that an immense amount is known about the characteristics of low-skilled adults, the barriers they face, and that there is research to suggest there is an effective way to accelerate their education through the I-BEST model. Washington CTCs have now been offering the I-BEST programs for several years, and yet colleges continue to struggle for enrollment in these effective programs. What is needed at this time is good information about what services, delivery options, and barrier removal strategies are key in facilitating ABE student transition to college-level coursework – especially from the students' perspective. The timing is perfect, with the Gates Foundation turning its focus and dollars to certificate/degree completion of low income and underserved populations in Washington State and across the country (Gates Foundation, 2010). There is a groundswell of urgency in both the government and private sector calling for the effective resolution of the problems in serving low-skilled students in CTCs and in getting them through at least one year of college-level work and to a meaningful credential. President Obama has challenged the U.S. community colleges to produce 20 million more certificate/degree graduates by 2020. Record numbers of students have come to CTCs during this recession, many with low academic skills. What are they expecting from the community colleges? What do they need that educational institutions have not been providing? Understanding how to deliver the programs that help low-skilled adults achieve their educational goals allows the community and technical colleges to serve them better. Hearing from the students themselves about how they need to be supported in the transition from pre-college programs is valuable.

This study accessed the narrative viewpoint of a small representative group of returning adults in ABE programs about their goals, what barriers they face and are concerned about, and asked if they had plans to move into I-BEST programs. Using an exploratory mixed methods design, current, high-level ABE students who have not yet transitioned to college-level classes were asked to identify what they need to transition. The findings of this qualitative study were then expanded upon and verified through quantitative analysis of survey data. The results can be used by both practitioners and policy-makers to better understand how to help low-skilled adults be more successful in transitioning (and after they transition) to college level courses. This study ties the research on barriers for low-skilled students, what works in the classroom, and the student voices about preferred delivery mechanisms and supports together to inform colleges on how to optimize the success of these students.

Conceptualization of the Study Model

This study required use of both qualitative and quantitative data and methods, each of which is discussed in detail in the next sections. The use of both types of research methods is intended to mitigate the limitations and enhance the strengths of each; quantitative data can be limited in the variety of information that is portrayed, but can often be generalized to a population; qualitative data provides rich, thick descriptions, but is only descriptive of the exact population involved. The mixed-methods design helps compensate for the shortcomings of a mono-method approach, and is supported by the literature (Cresswell & Plano Clark 2007). The research design is based on the model described in Chapter 13 by Creswell, Guttman, & Plano-Clark, (2003) in the *Handbook of mixed methods in social and behavioral research* (Tashakkori & Teddli, eds.) as a sequential explanatory design, specifically used in educational research. This was a QUAL → QUAN analysis, with the following steps:

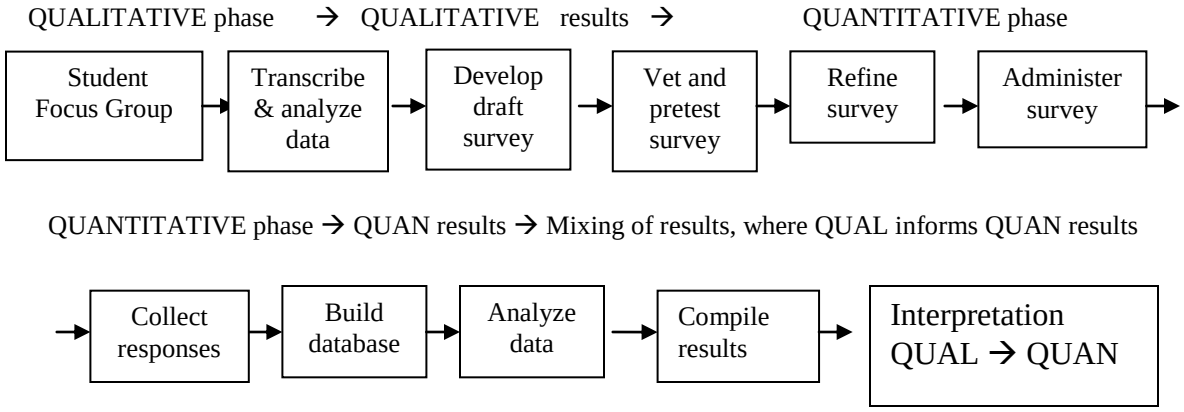


Figure 4. Visual Model. This visual model is adapted from Cresswell & Plano Clark (2007), p. 76

Research Questions

The main question is: Why don't more students participate in I-BEST programs? These successful programs have a fairly large population to draw from, but still have struggled for enrollment. The information about adult success in college and the data on the multiple barriers may explain the low enrollment in I-BEST programs. The difficulty in recruiting could have nothing to do with the content and effectiveness of the I-BEST programs, and everything to do with the logistics of the classes and the college bureaucracy. This hypothesis is supported by the research about adult students and the differences in their availability for classes because of their complex lives that include jobs, children, and financial considerations, (Kazis, Callahan, Davidson, McLeod, Bosworth, Choitz, & Hoops 2007; CAEL, 2000; Fenwick & Tennant, 2004) and the contention that colleges continue to be arranged to favor traditional college students (Kazis, et al, 2007; Garner, 2004; Matus-Grossman & Gooden, 2002). This means that services are offered in ways and at times that may not be convenient to adult students, even in I-BEST programs. For example, advising may be in person only, and offered during the day when many night students cannot access it. Applying for and receiving financial aid may take visiting

several offices on campus and having to return to campus multiple times. Financial aid checks may only be picked up before 5pm. Students studying online may have difficulty accessing tutoring, the writing center, the math center, and other resources on campus.

Solving these problems of logistics and access are all the more critical for this particular population, who are less skilled at navigating college systems, have busier lives outside of school than traditional students, and likely need more assistance with understanding the steps they need to take to be successful. How can colleges put together programs that answer all of these dilemmas?

To explore that idea, the following questions were asked:

- How should community colleges design and offer programs for low-skilled adult ABE students to best mitigate the multiple barriers to college success?
- How many students used, or plan to use, I-BEST for transitioning into college programs?
- What reasons do ABE students give for not using I-BEST programs?
- How would a perfect program be designed to best fit into the students' lives?
- When and how would it be offered? With what support services?
- Are there ABE students who are not interested in accessing college-level courses/programs? What reasons are given for this? How could these students be served?

Data collection and analysis

The data was collected in two sequential phases, with the qualitative phase first. The reasons for collecting qualitative data first was to identify specific factors important to transitioning from ABE that the students themselves revealed, and because the voices of these

students had been absent from the previous studies of them as a group. The second, quantitative phase further extended and expanded upon the qualitative phase for the purpose of checking the generalizability and representativeness of the information gathered in the focus groups. Both these phases are described in more detail in the following sections.

Qualitative Methodology

The qualitative data was collected through focus group interviews. The first stage was what Merriam (2009) labels a basic qualitative study, as she describes:

> "…Thus, qualitative researchers conducting a basic qualitative study would be interested in (1) how people interpret their experiences, (2) how they construct their worlds, and (3) what meaning they attribute to their experiences. The overall purpose is to understand how people make sense of their lives and their experiences. …The analysis of the data involves identifying recurring patterns that characterize the data. Findings *are* these recurring patterns or themes supported by the data from which they were derived" (p. 23, emphasis in original).

According to Seidman (2006), "So much research is done on schooling in the United States; yet so little of it is based on studies involving the perspective of the students, teachers, nurses, psychologists, cafeteria workers, secretaries, school crossing guards, administrators, bus drivers, parents, and school committee members, whose collective experience constitutes schooling" (p. 10). The use of focus groups for gathering data for this study was modeled after a 2001 study for the Opening Doors project (Matus-Grossman & Gooden, 2002), which asked similar questions of a group of low-income college students. Focus groups are an accepted form of getting information from a group of people who have some expertise in the subject area (Merriam, 2009), including expertise gained through experience or circumstances. In Opening

Doors, the focus group participants were purposefully chosen from candidates identified by various public agency partners or the colleges. Participants were invited first by letter to call a toll-free number if they were interested. Callers were screened, and those that met the study's criteria were invited to participate. Those that did participate were paid $50 each. The focus group size was 6-8 participants.

The present study adapted the Opening Doors protocol, with slightly different incentives. The qualitative exploration included focus groups using a semi-structured interview format with level 5/6 ABE students at three northwest Washington community colleges. The colleges that hosted the focus groups were chosen based upon the number of I-BEST programs offered, the number of I-BEST FTE served in 2008-09, the number of ABE students that they were serving (see Table 7), and the college type (urban community college, rural community college, or technical college). The college choices were determined with the assistance of the I-BEST program lead at the WSBCTC. An additional factor in the choice was the researcher's familiarity with colleagues at the chosen colleges, which helped with the interpretation of the qualitative data. The colleges were contacted once the Internal Review Board of the University of Washington approved the study. The Basic Skills Department lead at each selected CTC was questioned about their I-BEST programs to determine that they were indeed running at least one on a regular basis, that they were trying to recruit students into their I-BEST programs, and that they were struggling with enrollment. Each of the three colleges confirmed that these premises were correct, and agreed to participate.

Table 7
I-BEST & ABE FTE for Academic Year 2008-09

College	I-BEST FTEs*	No. of approved I-BEST Programs	Target no. of ABE Students*
Highline Community College	107	9	5510
Bellingham Technical College	41	8	476
Columbia Basin Community College	33	8	2787
Green River Community College	20	8	2339
Renton Technical College	87	8	3382
Peninsula Community College	140	7	839
Grays Harbor Community College	36	6	1375
Lake Washington Technical College	20	6	1491
Tacoma Community College	22	6	910
Edmonds Community College	39	5	1048
Lower Columbia Community College	29	5	736
Shoreline Community College	81	5	1347
Big Bend Community College	29	4	1414
Clark Community College	19	4	1202
Everett Community College	11	4	3154
Olympic Community College	23	4	1221
Pierce College - Fort Steilacoom	92	4	1458
Skagit Valley Community College	19	4	1824
Walla Walla Community College	20	4	1322
Bellevue College	14	3	1235
Cascadia Community College	3	3	852
Centralia Community College	7	3	1502
Clover Park Technical College	22	3	1127
Pierce College - Puyallup	19	3	1079
Seattle Central Community College	12	3	3273
Seattle North Community College	12	3	1888
South Puget Sound Community College	8	3	1205
Whatcom Community College	18	3	914
Yakima Valley Community College	27	3	3390
Bates Technical College	4	2	1003
Seattle South Community College	36	2	3101
Spokane Community College	34	2	0
Spokane Falls Community College	13	2	4074
System Total	1,097	147	60741

Note: From SBCTC Data Warehouse, as shown in 2008-09 End of Year Report.
* annualized FTE

Students for the focus groups were chosen purposively, with the assistance of the basic skills staff at the colleges. The criterion for asking students to participate was:

a) The student is in Level 5 or 6 ABE or in classes that were preparing them to transition (often called 'bridge' classes – as in, bridge to I-BEST or to college classes).

b) As a group, the students represent a variety of ages, ethnicities, and both genders.

c) The total number of students targeted for each focus group was between 6 and 8, as in the model Opening Doors study (Matus-Grossman & Gooden, 2002), but up to 20 were invited.

Once the potential students were identified, they were asked to contact the Basic Skills Director or the researcher to opt in to the study. At the focus group, the students were checked again for eligibility simply by determining which class they came from. The eligible students were accepted for the focus group on a first come, first served basis up to the maximum of 8 participants in each.

Focus Group Protocol

The questions were open-ended and flexible in wording to allow the conversation to unfold naturally and to allow for follow-up questions, clarifications, and extra comments (see Appendix D). The method was a semi-structured interview, as described by Cresswell and Plano-Clark (2007). Students were identified by a first name of their choice (an alias or their real name as they preferred). Questions for the focus group participants were:

- Do you want to continue into college-level courses? (Probe on why or why not)
- What do you know about I-BEST programs? Are you planning to use an I-BEST pathway? If not, why not?

- What factors do you think will help you transition into college-level classes? (Probe on life circumstances; support at the college; personal attributes)
- What difficulties or challenges are you facing now with staying in school?
- If you could design a program to fit your life better, how would that look? When, where, and how would it be offered? What supports would you need?

Participants in the focus groups were asked to provide their age, race/ethnicity, gender, parental status, and previous educational background.

The interviews were recorded digitally and transcribed, and then reviewed and categorized to look for themes and develop a coding system. Students did not necessarily use the same terms in the same way, so hand-coding ended up working better than using the Microsoft Word "find" function on particular words or phrases. The themes were identified and refined, and developed as possible questions for the survey. As an example, a theme in answering the third question, "What factors will help you transition to college-level classes?" was the availability of financial aid. The survey then included questions about financial aid, with answer choices that were identified from the focus group input.

The draft survey was sent for comment to several staff and faculty members (four in total) who work with the target population, refined, and finally piloted with a level 5/6 ABE student at North Seattle Community College, who took the survey using a 'think- aloud' approach to determine if the questions were being interpreted as intended (Cresswell et al., 2007). The think-aloud protocol involves someone literally thinking out loud as they take the survey, so as to check their thought process related to the question's intent. The draft survey was then revised a final time for clarity.

Quantitative methodology

In the quantitative phase, survey data was collected from a representative sample of Washington ABE students at thirteen community colleges around Washington. Surveys are an efficient and effective way to gather information from a sample that can be representative of a population that may not be easily accessible physically (Dillman, Smyth, & Christian 2009). The quantitative framework and hypotheses were finalized after the completion of the initial qualitative phase. The questions from the focus group sessions, compiled based on the research on what factors are most likely problematic for these students, were the base of the survey instrument.

Previously cited research on ABE students suggested that there are likely factors that interact together in three categories; (1) those that are related to the student's personal beliefs about their 'fit' as a college student (2) those that are related to their life circumstances and support outside of the college, and (3) their perceptions of their academic prowess, including their ability to navigate college systems. The survey data collected was analyzed with the idea of confirming and expanding upon the qualitative results, as well as to see if the suggestions from the current literature are supported.

The minimum acceptable number of returned surveys for this population was predetermined to insure a representative sample using the formula outlined on the next few pages. The population of ABE level five and six students in Washington is estimated at about 16% of the total ABE student body (Bloomer, 2008). For 2009-10, there were 43,149 ABE students, and 16% of that total is 6,904. Since this was the year during which the data was collected, this was the best estimate of population for the calculations. A population of this size can be represented by simple random sample of 367 units to have a 95% confidence interval and

5% margin of error (Dillman et.al, p.57). However, no aggregated frame (a statewide list of students with contact information) is available for this population. Each college in the system has data on their own local students. Most colleges also have their own Human Subjects approval process.

These factors make it very difficult to obtain a representative random sample across the state. Therefore, a cluster sampling method was employed, using each college with three or more I-BEST programs as a possible cluster (a total of 29 colleges, see Table 5). Surveying in this manner increased the likelihood of getting a representative sample by making it possible for each student at the randomly-selected colleges to be surveyed, and by insuring a good survey return rate by having the surveys completed in class. Cluster sampling also reduced the cost of the study by reducing postage expenses, increasing the economy of data collection (Kalton, 1983), and also by reducing the number of colleges that must give approval for access to their students. However, more elements had to be included than with a simple random sample because there is a loss of precision introduced with cluster sampling (Kalton, 1983). A total of 16 colleges were randomly chosen from the 29 eligible to participate (see Table 5), with the intention of getting permission from at least 12 of the colleges (the minimum predetermined by the formula below). Thirteen colleges participated. The target number of surveys to be collected at each college was 60 (again suggested by the initial work using the formula below), but the average return was actually just over 45, for a total sample of 589 surveys. The survey sample of 589 students represents about 8.5% of the total population, assuming that the total population is 6904, but Dillman, et.al indicate that it is the size of the sample, not the proportion being sampled, that affects precision (p.55). Once the data was collected, the appropriateness of this size of sample was checked using the following formula:

Var(p) =[p*q / # of clusters) (fpc(b)] + [p*q/individuals per cluster) (fpc(w)]

where:

- p = mean expected binary answer (yes/no); the most conservative possibility is that 50% say yes and 50% say no, so .50 is used when p is not known (Kalton, 1983).
- q = p-1
- N= population size = 6,904
- n = sample size = 598
- SE= standard error= square root of Var(p)
- B= margin of sampling error = +/- 5% (the standard for educational research)
- CI= z-score associated with a Confidence Interval of 95% = 2
- The Finite Population Correction (fpc) is used when the researcher doesn't replace each element sampled before drawing the next. The fpc is (N-n)/N when the true variance is not known.

  So, for the between-cluster variance, the finite population corrector becomes:

  fpc(b) = (N-n)/N = (29-13)/29 = .55

  And for the within-cluster variance it is:

  fpc(w) = (N-n)/n = 6904 - (45x13)/6904

  = 6319/6904 = .915

So now, the computation becomes:

Var(p) =[p*q/clusters) (fpc(b)] + [p*q/indiv per cluster) (fpc(w)]

Var(p) = (.50x.50/13) (.55) + (.50x.50/45) (.915)

Var(p) = .0192(.55) + .0056(.915)

Var(p) = .0156 and

SE = .125, so

Margin of error B = +/- (2x.125) = +/-.25 and the 95% confidence interval (worst case scenario) is .50 +/- .24, or between 26% and 74%. So in the worst case scenario, (a binary question with a 50/50 response rate) the true mean would lie somewhere between 26% and 74% - the minimum amount of precision needed to believe the sample is describing more than it leaves to chance. These formulas take into account the fact that there is variance in responses both between clusters and within clusters.

Is the sample representative?

After the sample was collected, another test could be employed to determine if the sample was indeed representative. Field (2003) says "a small standard error [relative to the mean] indicates that most sample means are similar to the population mean, and so our sample is likely to be an accurate reflection of the population (p.17)." Standard errors were calculated for all the non-categorical variables, and the standard errors (SEs) ranged from .033 to .065 compared to means (M) ranging from .82 to 4.3 (see Appendix F) with the largest SE at about 5% of the mean. Smaller standard errors indicate a narrower confidence interval in which the true mean is expected to lie. The acceptable level for an SE is dependent upon how accurate the researcher feels they must be (Dillman, et al., 2008).

Stage Two College Selection and Survey Distribution

The 16 colleges that were invited to participate in the survey stage were chosen by first rolling a die, and then counting down the list in Table 5 by the number rolled, and continuing back to the top of the list when the bottom had been reached, until 16 colleges were chosen. The first 12 colleges were contacted to request participation. Two chose not to participate, and one never responded. The other four colleges that had been chosen for potential participation were

then contacted. Individual IRB applications were submitted to the colleges that had IRB processes in place; permission of the appropriate administrator was obtained at the other colleges. Thirteen colleges around the state received packets of surveys in October and November 2011, which included 70 surveys on colored paper (a different color for each college); an instruction sheet for the staff or administrator who would disseminate the surveys; 3 faculty information sheets for the faculty who were proctoring the surveys in class (see Appendix H); a pre-stamped return envelope; and 4 bags of individually wrapped candy.

The college administrator over basic skills at each college was asked to determined the appropriate classes, using ABE level 5/6 classes; GED prep classes; or bridge (to college or I-BEST) classes as possible candidates. Then that administrator would ask the faculty in the identified classes if they would participate, either by conversation or by forwarding an email describing the study. In classes where the survey was given, the candy could be given to the students as a thank you for participating, if the faculty deemed this appropriate, or could just be kept by the staff and faculty for themselves. Faculty were asked to give candy to everyone in the class (not just those who took the survey) if they offered it at all. The purpose of the colored paper for the surveys was to make sure that the data could be kept separate for each college, and also to help insure anonymity. Once the survey was returned, the college name became the survey color ('blue college' for example). This made data organization easier but still allowed for individual college differences to be looked at.

Analysis of the Survey Data

Once collected, the survey data was input into an Excel spreadsheet, and aggregated into a report that could be used for this paper. The survey instrument collected data on 50 individual variables. Frequencies and, where appropriate, means and standard errors were calculated.

Individual reports for each of the colleges were created which included the aggregate responses from that college's students and for the whole group. The data was then exported into SPSS version 17 (Statistical Package for the Social Sciences), for more sophisticated analyses.

The first task in SPSS was to check the survey response data on individual items to determine if they had normal distributions using histograms. Normal distributions are needed to perform many of the most common statistical tests with reliability (Field, 2003). The histograms showed that most of the variables did not have normal distributions – some were skewed positively, some negatively; some were leptokurtic and some platykurtic. The data could not be transformed in a way that would have still allowed comparisons between the individual items. For example, to mitigate the problem of a positively-skewed item, a log transformation could be done. However, this would exacerbate the problem with any negatively-skewed item distributions (Field, 2003).

Two tests of normality (Komogorov-Smirnov and Shapiro-Wilk) were run on the items that were to be used for comparisons, to see if the amount of skewness and/or kurtosis was problematic; both with the data as a whole (see Table 8) and by college. Both sets of tests showed that the data is significantly different from a normal distribution. Splitting the data by college did not correct the problems. This meant that parametric tests (such as t-tests) could not be performed on this data as they would not provide reliable results. Therefore, analysis was performed using non-parametric tests. Non-parametric tests do not require the assumption of normally distributed data or homogeneity of variance (Field, 2003). The data had been checked for outliers in Excel; the few that were found were checked to make sure that they matched the actual answers of the students. Since they did, the outliers were not removed or altered. The fact that the survey response data was not normally distributed meant that using confidence

intervals to check for significant differences between the means of individual items by college did not yield any useful information, and so has not been reported here.

Table 8
Tests of Normality (run in SPSS version17)

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Ultimate goal for being at college	.266	342	.000	.869	342	.000
How soon will you take first college class?	.185	342	.000	.865	342	.000
What do you know about choosing a career?	.218	342	.000	.876	342	.000
What do you know about choosing your degree/certificate?	.272	342	.000	.870	342	.000
What do you know about applying to the college?	.221	342	.000	.890	342	.000
What do you know about filling out the FAFSA?	.246	342	.000	.871	342	.000
What do you know about applying for scholarships/grants?	.287	342	.000	.835	342	.000
What do you know about registering for classes?	.215	342	.000	.896	342	.000
Cost difficulty	.247	342	.000	.806	342	.000
Transportation difficulty	.326	342	.000	.823	342	.000
Childcare difficulty	.325	342	.000	.751	342	.000
Difficulty of class schedules (days/times)	.296	342	.000	.832	342	.000
Computer access difficulty	.326	342	.000	.823	342	.000
Time it takes to do homework	.281	342	.000	.828	342	.000
How difficult the class material is	.239	342	.000	.861	342	.000
English language difficulty	.265	342	.000	.857	342	.000
Amount of time needed to work for money	.267	342	.000	.857	342	.000
Finding funds for bills and rent	.219	342	.000	.846	342	.000
Understanding what classes to take	.274	342	.000	.851	342	.000

a. Lilliefors Significance Correction

Besides looking at the descriptive statistics on the replies in the survey, correlational tables were created using Spearman's Correlation Coefficient. Spearman's *r* was chosen because

it is useful with non-parametric data, and because the data set was large. Responses to the questions were significantly interrelated, although it did not appear that multicollinearity was a problem (no two variables were correlated at .8 or above) nor was singularity (variables that correlate perfectly). Next, approximating factors (Table 9) were created using exploratory factor analysis from questions four and ten to determine which of the following the surveyed students perceive as being most difficult for them: (1) their perceived 'fit' as a college student, (2) life circumstances and support outside of the college, or (3) their perceptions of their ability navigate college systems. To do this, the factors were created and then the means were compared using a Kruskal-Wallace test. The factor analysis started with running a Kaiser Meyer Olkin (KMO) measure of sampling adequacy and the Bartlett's Test of Sphericity to check that the data set was appropriate for factor analysis (Field, 2003). The KMO score of .808 indicates the data can be divided into distinct factors; and the Bartlett's test was significant (.000; $p<.05$) and therefore the selected variables were appropriate. A principal component analysis extraction was used, with a varimax rotation and Kaiser normalization. Chronbach's alpha tests were run to check the reliability of the factors identified with the results listed in Table 9.

Table 9
Exploratory Factor Analysis Results

Factor	Component variables	Chronbach's alpha	Variance explained *
1. College knowledge	What do you know about applying to the college? What do you know about choosing your degree or certificate? What do you know about applying for scholarships or grants? What do you know about filling out the FAFSA? What do you know about registering for classes? What do you know about choosing a career?	.900	28.15%
2. Life/money challenges	Finding funds for bills and rent Cost difficulty Childcare difficulty Amount of time needed to work for money Transportation difficulty Computer access difficulty	.763	16.47%
3. Fit/ Self-confidence	Time it takes to do homework English language difficulty How difficult the class material is Difficulty of class schedules (days/times) Understanding what classes to take	.733	13.94%

*rotated sums of squares loadings – varimax rotation

New variables were created representing each of the factors by adding each variable score and dividing by the number of variables to get an average score. The scale of "college knowledge" was transformed to create something comparable to the scale used in the other two factors so that comparisons could be made between the factors. The three new variables were looked at for normalcy, and again these were non-normal distributions (see Table 10). A

limitation with these factors is the low numbers of valid records that were included in the factors – if a record was missing one response on any question in the factor, the entire record was left out of the factor.

Table 10
Descriptive Statistics on New Factors

Statistics				
		Factor 1:college knowledge - transformed scale	Factor 2: life and money challenges	Factor 3 fit or self confidence
N	Valid	360	168	318
	Missing	229	421	271
Mean		1.7116	1.8909	1.5673
Std. Error of Mean		.04387	.04042	.02538
Std. Deviation		.83240	.52388	.45261
Variance		.693	.274	.205
Skewness		.089	.148	.901
Std. Error of Skewness		.129	.187	.137
Kurtosis		-1.019	-.633	.527
Std. Error of Kurtosis		.256	.373	.273

Chi-squared tests were used to determine if subpopulations of the whole group answered significantly differently on the IBEST question (question 6). The null hypothesis for this question is that students do not know about I-BEST programs; just looking at the frequencies gives a good indication of what is happening there. Does it make a difference if you are an ESL student? Is there a difference in the answers to this question for females as compared to males? The chi-squared tests indicated there was not a significant difference ($p<.05$) between the answers from these different subgroups. Even if students said they had heard about I-BEST

programs, but then couldn't pick out any true statements about I-BEST programs on question 7, then they probably don't know enough to make a choice to go in to one.

In addition, some questions were compared to see if there are significant differences between the answers from individual colleges – particularly, question six and the newly created factors. This was done by running a Kruskal-Wallis test with colleges as the grouping. The results of these tests are reported in Chapter 6.

Integration of the Qualitative and Quantitative Results

The quantitative data is reported in Chapter 5, with the comments gathered from the qualitative interviews used to both inform the survey instrument and help explain the results about the factors most significant to ABE student transitions to college-level courses, and the ways they would prefer the programs be offered.

From this data, the elements of a model program can be described. The qualitative information, being the richest source of data but from a smaller group, was considered equally important to the quantitative data. The qualitative and quantitative results together provided a clearer picture of how to design and offer transitional programs for low-skilled, returning adult students to maximize their success and retention in college-level programs. Both data sets were used to explore this important transition for students, and to inform the future development of programs for Washington CTCs.

Chapter 4

Stage 1: The Focus Groups

The three colleges chosen for focus groups included a community college located in the largest urban center in Washington; a technical college located in an urban area; and a community college located in a rural county. Some select facts about the colleges are listed in Table 11.

Table 11
Select Information about the focus group colleges

College	Total # of Students in 2010	Largest minority group	ABE target for 2008-09
Technical Institute	5600	Asian	1491
Urban Community College	6600	Asian/Pacific Islanders	1888
Rural Community College	12000	Hispanic	914

Note: Data from the College websites

Each college designated a particular ABE faculty member to assist in recruiting students. The focus groups were held at the end of April and beginning of May, 2010. The complete Focus Group Guide is attached in Appendix D, which outlines the exact protocol that was followed for each group, and which was also outlined in the methods chapter. Questions were asked in the order listed, and all focus groups were run by the lead researcher. Follow-up questions differed between groups and were dependent upon the actual dialogue of the group.

Focus group students

A total of seventeen students participated in the three groups. One group had eight students, the second had six, and the last had three. The groups were ethnically and age diverse, and included a variety of backgrounds (see Table 7). While an initial premise of this study was

that recruiting just ABE students would separate ABE from ESL students, it became apparent in the focus groups that this was an impractical idea because many upper-level ABE students are former ESL students who are continuing toward college. The focus groups included nine students who indicated they were former ESL students. Some of the former ESL attended college in their home county prior to coming to the U.S., and several had earned degrees. Only three of the participants said they had completed a high school diploma in the US, although several had completed the equivalent in their home country. Six of the focus group participants are currently working, although three more volunteered that they have been, and still are, looking for work.

Table 12
Demographic Data from the Focus Groups

Data Point	Number	Percent
Age Range	18 to 47	
Average age	26.18	
Female	11	65%
Male	6	35%
W/dependants	5	29%
Working	6	
Average hours of work/week:	25.5	
Less than HS diploma	5	29%
HS Diploma	3	18%
College certificate	4	23%
Bach. degree or higher (all foreign)	3	18%
Unreported	2	12%
Ethnicity		
White	4	23%
Hispanic	4	23%
Asian	2	12%
Mexican	1	6%
Indian	1	6%
U.S.	1	6%
Other	1	6%
Blank	3	18%

Each focus group answered the questions slightly differently and each had a different "feel". One group included mostly former ESL students; the smallest group had students who were each very individual and different in their needs; the third group was mostly young adults, several of whom were unemployed. Overall, the students were very participatory and not at all reticent to answer any of the questions. In fact, on several occasions we tabled some subjects for after the formal focus group so that the topics could be explored more fully without compromising the study protocol. For example, several students spoke of frustration with the entire American higher education system and didn't understand how it all fit together. We had a discussion afterwards about how/where these particular students might proceed with finding the information they needed.

As both a researcher and a practitioner, I came into the focus groups with an expectation of some baseline knowledge that the students already had, which helped to determine the questions for the study. For example, I expected that the students knew what the FAFSA (Free Application for Federal Student Aid) was, and when it needed to be filled out – especially since these students are at that transitional point. I expected that all would say they had heard of I-BEST, knowing the amount of outreach colleges have provided to this captive audience. I was wrong in both assumptions. I also expected that most of the students would say that going to school was hard. This turned out to be incorrect as well. Six said it was hard, five said it was both easy and hard, and six said it was easy – a perfect tie. To my delight, the students surprised me in many ways, which validated the wisdom of talking directly to them.

The focus groups at each of the colleges differed quite a bit. One group had three students, one six, and one eight. Since only one woman participated in the smallest focus group, the results of the focus groups are not being reported by college. This protects the anonymity of

all students. In addition, all of their names have been changed from the names they used in the focus group interviews.

Biases and Limitations

In qualitative research, "…it is important that the researcher identify his or her interest in the subject and examine it to make sure that the interest is not infused with anger, bias, or prejudice. The interviewer must come to the transcript prepared to let the interview breathe and speak for itself. " (Seidman, 2006). Who I am and what I believe has made a mark on this research – in everything from the design of the study, to the questions that I asked, to how I have interpreted the data. Therefore, it is important that I be clear to the readers about my beliefs. As a researcher, and as a person, I have a constructivist world view – that is, I believe that we construct our 'truths' about the world and that no particular one truth exists. This makes the idea of asking the students directly, rather than just looking at overall data, important. I believe that education is the key to success and that everyone deserves to have access, and that most people can succeed at the college level, given an opportunity, support, and good teaching. This means I am biased toward thinking that failures of particular groups of students are not because the students can't learn but because our systems aren't giving them what they need to succeed. I also believe that students must have the desire to learn to be successful. Finally, I believe that if students come to community colleges with a goal to complete a certificate or degree, that in itself constitutes a desire to learn. Helping them develop the skills to be successful college students is a step I believe we can and should take, and that is why I have designed this study the way that I have.

These beliefs and biases framed the questions that I asked the students and how I interpreted their answers. My worldview suggests that if students from this population aren't entering I-BEST programs or succeeding in transitioning to college-level classes that this is an issue with program design and outreach rather than proof that these students can't succeed in academic programs.

Two Student Stories

One goal of qualitative research is to provide rich, thick descriptions that provide an in-depth look at a particular topic (Merriam, 2009). To this end, two student stories are included so that the reader has a better understanding of some of the focus group participants.

Sue is a 21-year-old Washington resident who works as a nanny. She works full time and uses the public transit system to get between work, school, and home. She loves coming to the college for her ABE classes, and truly enjoys school. She intends to become a teacher. She had a role model in a family member who took care of her own children while going to school to become a paralegal. Sue shared, "Now, in just a couple years, she is working at a good job."

Right now, Sue's biggest challenge is working out her transportation issues. The public transportation system in her area is complex and it can take hours to get where she needs to go. When she completes her GED and moves to college classes, she expects funding to be her biggest issue. She and her focus group wondered, "Why can't someone just help us find all the possible sources of funding, and help us by telling us what to do to get the money? Why is it 'go here, and then go there, and then go to that next office?". Overall, Sue expects that she will need to work full time while going to school, and therefore wants to see a full program offered at night.

Marie is citizen of India who has come to the US to work and live. She has an MBA in her own country, and must earn a degree or certificate here to work here. She wondered, 'Should I pay to get my transcripts evaluated?" She shared a story of a friend who was a dentist in her home country of India. The friend paid $2,000 to a private company to have her transcripts evaluated, only to be told that none of her credits would transfer – not even the math. This created a question in Marie's mind about the value of getting this done. It also was very disheartening for someone who attended 5 years of higher education in their own country. Marie had been thinking of doing an I-BEST in accounting, but was counseled away from it by her instructor because of her previous education in India. She cannot yet pass the placement test at her college that would allow her to take college-level accounting courses on her own. She was attending a bridge class to try to get her English writing skills high enough to move into college-level accounting classes.

Responses to the questions

This section provides more detail about the responses to the questions asked in the focus groups. The entire focus group guide is included in Appendix D. The questions are listed as they were asked to the students.

1. **Do you find attending school now (at this time in your life) easy or hard?** This first question was about what the students were currently experiencing while attending their ABE classes. As the financial burden is only $25 per quarter for the ABE students, and the academic expectations in ABE are not overly challenging (students can go at their own pace), the expectation was that students would answer this in reference to the personal challenges, which they did. The students were equally split on whether going to

school at this time was easy or hard for them. In general, students who were unemployed said that it was easy for them at this time. Two focus group students, Kevin and Mark, put it this way: "It's easy because I have absolutely nothing else to do during the day. There's just nothing else going on in my life right now, no job or anything like that." Students with full-time jobs or with children found attending school difficult. Almost a third of the students said it was both easy and hard – for the reasons listed above and also because of disabilities, chronic illness, and lack of transportation (all difficulties). One might surmise from this that some of the students were only in school because they had nothing else going on – however, when asked if the students had a college-level goal, almost all indicated they not only wanted to go to college but also had a specific career goal in mind that would require college-level coursework.

2. **Do you want to continue into college-level courses?** Most students said yes to this question. The most popular industry choice among the focus group students was computer science, with three students choosing goals within this field. The rest of the students were interested in teaching or being a para-educator; becoming a CSI investigator, ultrasound technician, nurse, commercial diver; attending beauty school; or getting a Business Administration degree. Only two students were unsure if they wanted to continue on to college – one had young children at home, and the other was just returning to school after a fairly lengthy absence and just hadn't started thinking that far ahead yet.

3. **Have you heard of I-BEST? What do you know about I-BEST programs? Are you planning to use an I-BEST pathway? If not, why not? If so, which one?** When asked if they knew about I-BEST programs, seven students indicated they did – but when

asked what they knew about it, only two of the students actually explained what an I-BEST program was correctly. Said Marie, a former ESL student, "I have a question about that. So I wanted to study Business Administration. What I heard is something about that [I-BEST]. I don't know if that program applies to me or can help me to finish what I'd like to. I don't understand if I can take this?" This response is particularly of interest, because the students at all three colleges had listened to a presentation about each school's I-BEST options within the previous few months, according to their teachers. A few students mentioned that they thought someone had given them information about I-BEST, but most did not appear to remember the presentation. CTCs in general do a significant amount of outreach for I-BEST through classroom visits and presentations, since the students are a 'captive audience' on their campuses. Most have fliers and I-BEST information sheets, some also have I-BEST webpages and videos.

Some of the other focus group students had heard the name but had either no idea how it worked or explained it incorrectly. As an example, one student explained it this way: "I heard about it from a friend, well, my co-worker. She's just 17 years old. She is in that program doing half…not half time, but it's almost full-time school, high school and at the same time,[earning] college credits. She went to the college and to the high school, too. So I think it is only for high school people." This student was likely talking about Running Start, not an I-BEST program.

None of the students in the focus groups had any plan to use an I-BEST pathway. Once the focus group questions about I-BEST had been answered by the students, the recorder was shut off and students asked questions about I-BEST. One student, Erika, expressed some frustration about the amount they knew about I-BEST. "…a lot of

people don't know [about I-BEST], because I have had at least several people in our class who want to work in health care and they don't know about this program. I think, for them, it's a good way." For the few who had heard of I-BEST programs and had enough information to make a decision, their reasons for not using the programs were because of the areas of study that their college's I-BEST programs covered. Selena, a former ESL student who was attending a regular Nursing Assistant class, indicated she would enter an I-BEST Practical Nursing program if her school offered one. By far the biggest reason these students gave for not choosing an I-BEST program was that they just did not know what I-BEST is. Given this strong theme in all three focus groups, this seemed likely to be validated by the survey results.

4. **What factors do you think will help you transition into college-level classes? What do you expect will be the most challenging part about moving into college-level classes?**

The students in all three focus groups had fairly long lists of things that they felt would help them transition into college. The responses, grouped together by the factors that were expected to be of interest (based on the research) are shown in Table 13.

The students were inclined to answer the question about what supports or assistance would help them by first thinking of their own personal effectiveness as a college student, and added more information about supports needed outside and inside the college only after follow-up questioning. As the question was answered by each individual, the other students would chime in with more ideas – this question really created the most collaborative discussion of the meetings. Surprisingly, cost was not the first item to come up, although it was frequently mentioned in all three focus group meetings.

Table 13
Important Factors for Transitioning

Grouping (based on the research)	Factor	# of times this came up	Comments	Most Challenging
Perceived ability as a college student	Being prepared for class (homework)	5	"I don't know if I can handle the workload."	Getting homework completed
	Having good study skills	2		
	Access to tutoring	2		
	Being able to do the work/comprehension	1	"We need more information about everything"	
	Listening and writing notes in class	1		
	Having the basic education to be successful	2		
	English (speaking and writing)			
Life circumstances and support outside of the college	Childcare	1		Fitting college in around life
	Time for homework	2		
	Time to study at the college	1		
	Transportation	2		
	Being organized	1		
	Being persistent	1		
Concern about costs	Cost of college	5		Paying for college
	How much does it cost? (clear info)	1		
	Finding a part-time job	1		
Ability to navigate college systems	Good advising	3	Why don't people at career centers and employment centers know to tell students about I-BEST?	Getting enough accurate information
	Mentors	1		
	Good career planning	2		
	Support for disabilities	2		
	Understanding the American higher education system	3		

5. **Answers to questions 10, 11 and 12: If you could design a program to fit your life better, how would that look? When, where, and how would it be offered? What supports would you need?**

Students on all three campuses showed a strong preference for having their college classes offered during the day, mostly starting in the morning between 7am and 9am. In general, the students were not interested in online courses, although after some explanation of what a hybrid is, two students indicated a preference for that. Said one former ESL student; "For us, it's just difficult because, at least I never had an online class at all. In my country, that doesn't exist. So here, just getting involved is a little bit hard, because when you're reading the instructions you get sometimes confused….I am doing an online class now… I understand now, but I know that there were so many people who couldn't understand something completely different than what I did."

The focus groups very strongly preferred on-campus, face-to-face courses. A few students mentioned that they would like to go longer hours in a day and be done more quickly – perhaps even from 8-4 daily. "Just like Job Corps does it" said one student. Many students spent a good amount of time talking about having instructors who were available and transparent about what they expected from the student, as well as caring and supportive. Much of the fear expressed about making the transition was tied to what would happen in the classroom, followed closely by not understanding the systems, deadlines, and requirements of the college. Table 14 shows the responses by student.

Table 14
Designing the 'perfect program' – comments from focus group participants

Student	Program design	When	Where	How	Supports needed
Sue	Night program	6p-10	On campus	Face to face, maybe hybrid	-Tutoring -Make it more affordable -Teachers who are willing to help and explain -One stop to do everything to get into class
Dave	Weekends	Any	On campus	Hybrid	-Add vacation time -Make it more affordable -Put all services in one place
Lisa	Day	Morning 7a-12 or week-ends	On campus		-Work study that pays enough to cover college expenses
Mona		Morning 9a-2			-Childcare center, available during class and for enough time to do homework. -More financial aid -Enough time so the instructor isn't rushed -with outside social activities
Polly		8a-12:30	On Campus	Face to face	-Carpools arranged by the college
Erika	Day or evening	Prefer morning	On campus		-Study time at the college -More homework and higher requirements from teachers (than from the ABE teachers)
Gary	Cohorted; lock-step	Day – 8a-2 or 8a-4	Single classroom		-School bus or shuttle -The students stay in the same classroom all day, teachers change by subject
Marie	Cohorted group with a set schedule	Night and back to back, and every day.	On campus	Face to face	-Online is not good for ESL students, because we don't understand written instructions -Make sure there is enough parking -Make the classes challenging -Practicum set up by the college of 6 months to a year

Table 14 Designing the 'perfect program' (continued)

Student	Program design	When	Where	How	Supports needed
Bill	Day			Hybrid	-Help with getting grants
Jennifer	Full time	Day 9-?	On campus		-Childcare on campus -More homework, less in-class work
Kevin	Just like Job Corps -	Full-time. All day 5 days a week	On campus	Face to face, hands-on	-Teachers who stay after or stop to explain -A way to not have to take notes and try to listen at the same time -more 1 on 1 help (in all forms) Small classes
Mark	College-level classes that are like IEP or Special Ed		On campus		-Para-educators or volunteers in the classroom to help you 1 on 1 -Teachers who notice when you struggle and ask how they can help
Selena		Day or night		Face to face or online	-Extended study time -Decrease the number of students per class - Teachers know the students
Tanya	Inclusive, self motivating	Day (like ABE, but more hours)	On campus	Face to face	-Teacher asks 'What are your goals for the day?" -Teacher is excited about your gains and praises students.
Betty		Flexible hours (options	On campus	Face to face	-Para-educators in the classroom -tutors available
Bob		Full time, day	On campus		-Classes no bigger than 12 students -with a tutor or volunteer -Funding for living expenses -Allow Basic Skills students to audit a college-level class for free as a form of career exploration
Kathy		Night	On campus		-Special attention from the teacher -Teachers who care about whether students have done their work.

Some of the suggestions they made were very interesting. In particular, notice that one student has a novel idea for career exploration for ABE students who are attending on campus. He suggested that these students be able to audit classes in areas they may want to go in to (for example, Biology), while they are still in ABE. This would allow them to learn more about the discipline or subject, and prepare them to actually take the course at some point in the future. Another student suggested that there should be para-educators or volunteers in the classrooms to give more individual attention to students. And one student suggested that students in a program stay in the same room all day, with the faculty coming to them as classes change, instead of the other way around. More than one student mentioned that having a consistent schedule from quarter to quarter is something that they would really like to see.

Observations from the Focus Groups

Although the three focus groups were each quite different, several observations bear more investigation. As expected, the issues that the former ESL students spoke of in the focus groups were, in general, different than those identified by students who were not second language students, particularly around understanding the American higher education system. Those that had a degree from their own country were trying to either continue to build on or leverage it in the American system, which was proving very difficult. One student shared: " I don't understand how it works here. In my country, you don't have college. You only have university. You finish your five years and you are done. Here, you go to college and then you can continue to the university. I don't know what courses I need to take." A question on the survey in phase two asked if the student is a former or current ESL student, which allowed for

the data to be checked for differences between the 'English' ABE students and those ABE who are former ESL.

There are several themes that were pulled from the focus groups that were then compared in the survey data. Specifically, the following four theories can be drawn from the focus group information:

1) Upper-level ABE students do not know enough about basic college preparation functions, such as financial aid processes, to transition when their studies have prepared them to that level.
2) Students understand little about I-BEST programs, what they are, and what their options for I-BEST pathways are at their particular college.
3) Former ESL students struggle not only with the language issues, but also with understanding the American higher education system.
4) The systems and supports that the students identified as being most important for them in transitioning show that the most worrisome areas for Washington student are: the costs of college, concern about their own abilities as college students, and their concerns about getting good advising and planning assistance (in that order).

The focus groups provided rich information that was used to create the survey questions and answer options in Appendix E. The questions on the survey were also informed by the results of an informal survey that an ABE faculty member had compiled two years previously, in which students indicated they knew little about college procedures for advising, registration, and financial aid. The questions were refined after the focus groups to include answer options identified by the focus group participants.

Rather than using existing scales, such as a Likert scale, new ones were created based on the qualitative data, using terms and words that were brought up in the conversations with students in the focus groups. This was done to ensure maximum clarity in what the questions were asking.

Chapter 5

Stage 2: The Survey

Once the draft survey was created using the information gathered from the focus groups, it was given to several community college administrators and ABE faculty for review. Their feedback was taken into account as the survey was revised. Next, a 'think-aloud' protocol (Cresswell, et al, 2007) with an ABE student was performed to check that the questions were being perceived as expected. The instrument was again revised.

The final survey was distributed to 13 community and technical colleges in Washington who agreed to participate in the project, using the plan outlined in the Methodology chapter. Information about the randomly selected colleges is in Table 15. Surveys were returned by mail over a two month period in late 2011 and early 2012. The data was compiled into a Microsoft Excel spreadsheet to be initially screened and aggregated. Outliers were identified and checked.

Table 15
Select Statistics about the Survey Colleges

College	Type (Rural, Urban, or Technical)	FTEs*	IBEST FTEs in 2010-11	% of students in Basic Skills	# of Surveys Returned
Yellow	R	2000	140	11%	51
White	U	4300	29	8%	42
Apple Green	U	6900	83	40%	45
Magenta	U	5800	41	13%	21
Salmon	U	6400	73	10%	98
Goldenrod	T	4400	159	18%	66
Purple	R	6000	11	9%	41
Gray	U	9900	16	7%	55
Tangerine	U	5500	3	20%	56
Cream	U	5200	204	9%	34
Green	T	2400	45	5%	35
Pink	R	2600	20	18%	28
Blue	R	3600	112	17%	15

Note: Source: WSBCTC Field Guide 2011-12
*rounded.

Individual spreadsheets were created for each of the colleges to offer them a look at how their students answered compared to the group. Means, standard errors, and confidence intervals were created for all the variables, however, because the data was non-parametric, these tests did not provide any information of interest. More complete analyses were run once the data was exported into SPSS (Statistical Package for the Social Sciences) version 17.

In this dissertation, each college is renamed with the color their surveys were printed on. The raw score data is spit into six different areas: demographics; student intentions; college knowledge; I-BEST knowledge; expected barriers; and design for the "perfect program".

Demographics

Few demographics were collected on the surveys, in part because of the difficulty of rationalizing that data to Internal Review Boards (IRBs) on each campus. Another reason for gathering little demographic information was the fact that campuses are not likely to be able to create separate programs for different subpopulations of this particular group because of cost constraints. What was collected provided answers to the questions asked in this particular study; future studies in this arena may wish to gather more demographic information. Few students left the demographic information blank; 61% of the respondents were female and 37% were male (see Table 16). The observation from the focus groups that ESL students could not be separated from ABE students by class choice is upheld in the fact that 34% of the responding students report being former ESL students. This data was collected so that the responses from former ESL students could be compared to native student responses to see if there are significant differences. This would be expected given the differences in the two populations (see Table 16).

Table 16
Survey Respondent Demographics

College	Yellow	White	Apple Green	Magenta	Salmon	Goldenrod	Purple	Gray	Tangerine	Cream	Green	Pink	Blue	Total	% of total
Total # of surveys collected	51	42	46	21	98	66	41	55	56	34	35	28	15	589	100%
Type of college (Urban, Rural, Technical)	R	U	U	U	U	T	R	U	U	U	T	R	R		
Demographics															
Gender															
Male	20	10	16	11	41	30	9	10	20	20	10	12	7	216	37%
Female	31	33	28	9	55	36	28	43	36	12	24	15	8	358	61%
Other	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0%
Blanks	0	0	2	1	2	0	3	2	1	1	1	0	0	13	2%
Former ESL															
Yes	4	21	13	3	22	36	27	42	17	3	8	5	2	203	34%
No	47	22	31	17	72	29	10	8	38	29	26	22	13	364	62%
Blank	0	0	2	1	4	1	3	5	2	2	1	1	0	22	4%
Grew up outside the US															
Yes	6	21	13	5	31	38	28	45	21	6	10	4	1	229	39%
No	45	22	31	15	65	28	9	7	35	27	24	24	14	346	59%
Blank	0	0	2	1	2	0	3	3	1	1	1	0	0	14	2%
Attended college in another country															
Yes	3	16	2	1	13	20	18	28	3	3	1	1	1	110	19%
No	48	27	42	19	83	46	19	25	52	30	33	27	14	465	79%
Blank	0	0	2	1	2	0	3	2	2	1	1	0	0	14	2%

Thirty-nine percent of students reported growing up outside of the United States. Nineteen percent of the students responding have attended college in another country. Separating this group for further study could be a topic of a future research with this same data set, but is not explored here because that information is not needed to answer these research questions.

Student Intentions

Students reported on their intentions for attending college, a large majority (83%) said they did have a college degree or certificate goal, although some had yet to define it (see Table 17). Forty-four percent of students indicated they are going into a professional/technical program and 20% indicated they expect to earn a transfer degree. Students at technical colleges were more likely to say they were going for a professional or technical degree or certificate, which makes sense since those colleges do not offer traditional transfer education. Previous

research has indicated that adults tend to choose career training more frequently than traditional students (Kasworm, et.al, 2002), and this is born out in this study as well.

Table 17
Survey Results – Student Intentions

College	Yellow	White	Apple Green	Magenta	Salmon	Goldenrod	Purple	Gray	Tangerine	Cream	Green	Pink	Blue	Total	% of total
Total # of surveys collected	51	42	46	21	98	66	41	55	56	34	35	28	15	589	100%
Type of college (Urban, Rural, Technical)	R	U	U	U	U	T	R	U	U	U	T	R	R		
Ultimate Goal for being at the college:															
Transfer degree	10	12	10	9	25	4	8	12	9	9	6	4	2	120	20%
Professional/technical degree	18	20	13	5	23	32	12	12	19	13	16	7	6	196	33%
Professional/technical certificate	5	9	5	2	12	5	6	6	6	3	3	3	1	66	11%
Going to college, no specific goal yet	9	1	10	5	24	13	3	8	9	7	8	4	1	102	17%
No college goal	7	1	8	0	14	11	11	16	14	2	2	10	4	100	17%
Expects to take first college-level class														0	0%
In the next 6 months	19	17	25	17	56	25	12	15	12	19	16	5	4	242	41%
In the next year	15	10	7	0	18	24	9	14	28	10	10	12	4	161	27%
Has already taken 1 or more	2	2	1	2	6	0	5	2	0	1	2	1	2	26	4%
Doesn't know	12	7	7	1	10	10	12	17	11	4	3	7	2	103	17%
Will work while in college:															
Yes	25	24	25	10	44	31	22	24	30	19	17	13	5	289	49%
No	8	5	4	4	14	12	4	11	5	5	6	4	2	84	14%
Doesn't know	11	7	12	6	27	13	7	14	18	8	6	7	6	142	24%
Blanks	7	7	5	1	13	10	7	6	4	2	6	4	2	74	13%
Expects to attend															
Full time	23	21	26	13	49	36	10	16	26	15	20	13	8	276	47%
Part time	13	11	8	5	23	16	18	19	12	6	11	7	3	152	26%
Doesn't know	14	11	10	2	22	13	12	16	11	12	4	7	4	138	23%
Blanks	1	0	2	1	4	1		4	8	1	0	1	0	23	4%

More than half of the students who answered the question about working while in college indicated they expect to work while going to school. Twenty-four percent were unsure if they would work while in college, perhaps because they are unsure how much aid they can get to support them while in school. The high number of blanks (no option chosen for that question) was likely due to the response in Question 2 - those who did not have a college goal were told to skip this and several other questions (see Appendix E). Still, even though many expect to be working, only 26% of students expect to attend part time. Forty-seven percent think they will

attend full time, and many (23%) aren't sure yet –some of these are the students who have not yet determined their college goal.

College Knowledge

Some of the comments from students in the focus groups indicated that few knew and understood about financial aid and picking classes. One ABE instructor who teaches these students shared the results of a survey that she had done in class with her students in 2007. The survey indicated that many students had little knowledge of how to interact with the college and what was expected of them. This helped inform the creation of the questions for the 'college knowledge' grid in the survey (see Appendix E and Table 18). The scale was created using information from the focus group, in which students indicated that their knowledge range about specific actions related to college went from knowing absolutely nothing about it to having already completed that step. For the aggregate information, the first two columns of 'knows nothing' and 'know I need to do this but don't know how" were combined into one line. The information given by the focus group participants was confirmed in this study – even though most of the students have a college level goal, and most expect to transition to college within the next year, they don't understand how to plan effectively to go to school.

Table 18:
Survey Results: College Knowledge

College	Yellow	White	Apple Green	Magenta	Salmon	Goldenrod	Purple	Gray	Tangerine	Cream	Green	Pink	Blue	Total	% of total
Total # of surveys collected	51	42	46	21	98	66	41	55	56	34	35	28	15	589	100%
Type of college (Urban, Rural, Technical)	R	U	U	U	U	T	R	U	U	U	T	R	R		
College knowledge: what they know about:															
Choosing a career															
Nothing/don't know how	13	15	14	9	36	22	11	32	22	9	10	8	4	205	35%
Can do this and explain it	11	6	4	4	13	13	10	2	7	7	7	8	5	97	16%
Have completed this	17	11	17	6	24	12	8	6	9	15	12	5	3	145	25%
Don't need to do this	1	0	0	0	3	0	3	2	1	0	0	0	1	11	2%
Blanks	9	11	11	2	22	19	8	13	18	3	6	7	2	131	22%
Choosing a degree or certificate															
Nothing/don't know how	18	16	21	12	40	29	15	32	26	12	10	16	7	254	43%
Can do this and explain it	8	6	3	2	16	5	9	3	4	4	6	3	4	73	12%
Have completed this	15	9	8	5	20	10	4	5	8	15	12	1	2	114	19%
Don't need to do this	1	0	2	0	3	0	4	2	1	0	0	1	0	14	2%
Blanks	9	12	12	2	19	22	8	13	18	3	7	7	2	134	23%
Applying to the college															
Nothing/don't know how	19	14	21	6	43	27	19	29	24	9	6	11	3	231	39%
Can do this and explain it	10	8	4	4	21	5	6	3	10	8	9	5	6	99	17%
Have completed this	12	8	7	9	14	8	3	8	2	12	11	3	4	101	17%
Don't need to do this	1	0	2	0	1	2	2	2	1	1	0	1	0	13	2%
Blanks	9	13	12	2	19	24	10	13	20	4	9	8	2	145	25%
Filling out the FAFSA															
Nothing/don't know how	24	14	20	5	46	30	24	31	28	10	7	16	6	261	44%
Can do this and explain it	5	6	2	6	6	6	3	3	5	9	5	1	4	61	10%
Have completed this	12	10	11	8	23	7	2	5	3	11	11	2	1	106	18%
Don't need to do this	2	1	2	0	5	2	4	3	4	1	5	2	0	31	5%
Blanks	8	12	11	2	18	21	7	13	17	3	7	7	2	128	22%
Applying for scholarships or grants															
Nothing/don't know how	29	17	26	15	52	33	24	34	30	21	19	17	8	325	55%
Can do this and explain it	6	8	0	3	17	5	3	3	2	4	3	4	4	62	11%
Have completed this	4	7	2	3	9	6	2	2	4	4	4	0	1	48	8%
Don't need to do this	2	0	3	0	3	2	4	3	3	3	3	1	0	27	5%
Blanks	10	11	15	0	17	20	7	13	18	2	6	6	2	127	22%
Registering for classes															
Nothing/don't know how	23	11	24	12	46	24	15	29	21	12	7	11	1	236	40%
Can do this and explain it	13	13	4	3	19	11	11	3	13	13	11	6	7	127	22%
Have completed this	6	6	3	5	12	11	6	9	3	6	11	3	5	86	15%
Don't need to do this	1	0	2	0	2	1	2	2	1	0	0	0	0	11	2%
Blanks	8	13	13	1	19	19	6	12	19	3	6	8	2	129	22%
Homework expected per day:															
1 hour per day or less	16	17	12	4	20	19	13	18	18	6	9	10	5	167	28%
1 hr for each in class	11	11	14	6	24	18	8	10	12	8	8	7	5	142	24%
2 hrs for each in class	9	12	13	7	43	17	10	14	11	12	7	3	3	161	27%
Doesn't know	15	3	6	3	10	12	7	12	9	8	11	8	2	106	18%
Blanks	0	0	1	1	1	0	2	1	7	0	0	0	0	13	2%

Note that 22% of students didn't complete this part of the survey, again because of the instructions to skip to this grid if they didn't have a college goal. Of those that responded, more than 44% of the respondents indicated they don't know how to choose a career; 56% don't know

how to pick a degree or certificate; 52% don't understand how to apply to the college; 57% haven't completed a FAFSA and don't know how (23% of those that responded said they already have done the FAFSA); 70% don't understand about grants and scholarships, and 51% don't know how to register for a college class. Yet, 68% of the students indicated they expected to take their first college class within a year – 41% within 6 months.

Running a correlations technique (Spearman's *r*) on these questions, the expectation is that responses to these questions would all be positively correlated, and that is what was found. According to Field (2005) "Spearman's correlation coefficient, *r(sub s),* is a non-parametric statistic and so can be used when the data have violated parametric assumptions such as non-normally distributed data" (p.129). Below is an excerpted table from the SPSS for Spearman's Rho, which shows positive correlations between the variables ranging from .409 to .775. The lowest correlation is between knowing how to pick a career and knowing how to register for classes; the highest is between knowing how to fill out a FASFA, and knowing how to apply for scholarships and grants. This data helped in the creation of several factors – "college knowledge" became one of those factors and included all the "What do you know about…." questions from Table 19. There were significant differences between the aggregated responses in this factor – as will be described in the 'factors' section of this chapter.

Table 19
Correlations: College Knowledge

Correlations

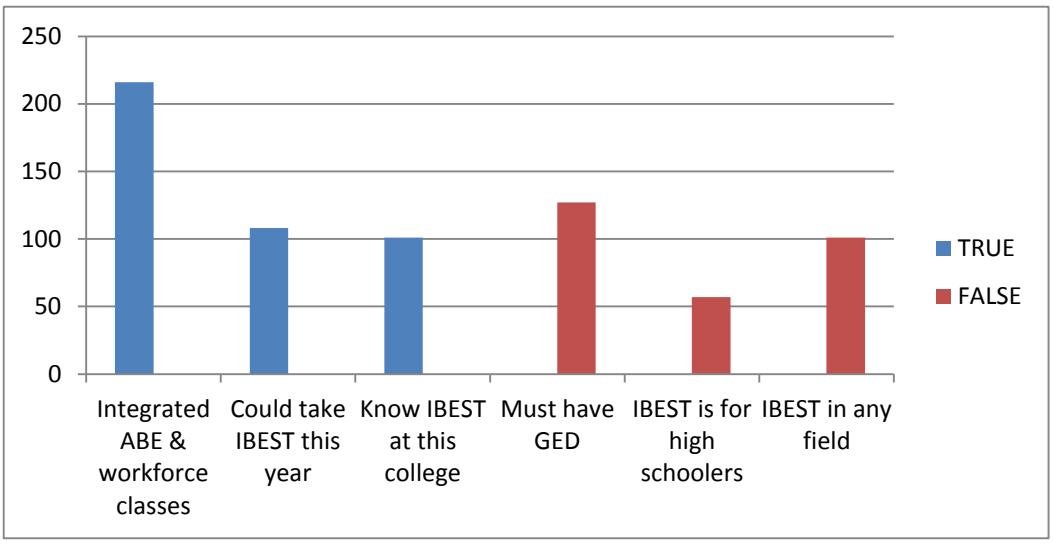
		What do you know about choosing a career?	What do you know about choosing your degree/ certificate?	What do you know about applying to the college?	What do you know about filling out the FAFSA?	What do you know about applying for scholarships/ grants?	What do you know about registering for classes?
Spearman's Rho							
What do you know about choosing a career?	Corr. Coefficient	1.000	.751**	.549**	.486**	.446**	.409**
	Sig. (1-tailed)	.	.000	.000	.000	.000	.000
	N	447	420	409	404	402	419
What do you know about choosing your degree/certificate?	Corr. Coefficient	.751**	1.000	.679**	.575**	.530**	.492**
	Sig. (1-tailed)	.000	.	.000	.000	.000	.000
	N	420	441	409	406	403	421
What do you know about applying to the college?	Corr. Coefficient	.549**	.679**	1.000	.683**	.591**	.678**
	Sig. (1-tailed)	.000	.000	.	.000	.000	.000
	N	409	409	431	398	403	417
What do you know about filling out the FAFSA?	Corr. Coefficient	.486**	.575**	.683**	1.000	.775**	.564**
	Sig. (1-tailed)	.000	.000	.000	.	.000	.000
	N	404	406	398	430	408	414
What do you know about applying for scholarships/grants?	Corr. Coefficient	.446**	.530**	.591**	.775**	1.000	.530**
	Sig. (1-tailed)	.000	.000	.000	.000	.	.000
	N	402	403	403	408	435	416
What do you know about registering for classes?	Corr. Coefficient	.409**	.492**	.678**	.564**	.530**	1.000
	Sig. (1-tailed)	.000	.000	.000	.000	.000	.
	N	419	421	417	414	416	449

**. Correlation is significant at the 0.01 level (1-tailed).

I-BEST Knowledge

CTC practitioners report doing a fair amount of outreach on I-BEST programs to their upper level ABE and ESL classes. They make presentations in classes, have marketing and informational pieces to advertise the programs; and some have web pages and videos with I-BEST success stories. Yet, more than half (60%) of the students that were surveyed either had never heard of I-BEST or weren't sure that they had. Of those that answered the questions about what they felt is true about I-BEST, most were able to find at least one of the three true statements, but many students also marked some of the false statements as true. Out of the 589 respondents, only 1% (8 students) responded by marking the true statements correctly, and not checking any of the false statements. Table 20 shows the aggregated responses. Students had been asked to mark all statements that they thought were true about I-BEST. The most often chosen response was the correct description of the program as being an integrated education model that combines ABE with a workforce program. The second highest response rate was to a false statement, that the students must have a GED before entering I-BEST.

Table 20
Aggregated True/False Choices for I-BEST Question



This finding bears more research, as it could be argued that the way this question was asked in the survey was inelegant and could have been confusing for some students. Also, even though students marked they had never heard of I-BEST programs, some still attempted to answer the question about which statements were true.

Table 21
Survey Results: I-BEST Knowledge

College	Yellow	White	Apple Green	Magenta	Salmon	Goldenrod	Purple	Gray	Tangerine	Cream	Green	Pink	Blue	Total	% of total
Total # of surveys collected	51	42	46	21	98	66	41	55	56	34	35	28	15	589	100%
Type of college (Urban, Rural, Technical)	R	U	U	U	U	T	R	U	U	U	T	R	R		
Has heard of I-BEST programs															
Yes	12	32	16	10	61	21	14	11	8	14	16	7	9	231	39%
No	32	7	26	8	33	35	22	28	36	16	12	19	6	280	48%
Doesn't know	6	4	3	3	4	9	4	14	9	4	6	2	0	68	12%
Blanks	1	0	1	0	0	1	0	2	4	0	1	0	0	10	2%
Understands about I-BEST programs															
Got all correct	2	0	1	0	2	0	1	0	0	1	0	0	1	8	1%
Found at least 1 true statement	26	28	19	14	68	25	21	24	20	19	16	13	7	293	50%
Attempted with none correct	7	11	7	2	12	8	3	5	7	7	4	4	5	82	14%
Incorrect answers	18	39	19	11	53	18	15	17	30	19	12	14	5	270	46%
Blanks	18	3	20	5	18	33	16	26	30	8	15	11	4	207	35%

Chi-squared tests were used to determine if subpopulations (ESL students, males, or females) of the whole group answered significantly different on the IBEST question (question 6). The null hypothesis for this question is that students do not know about I-BEST programs; the null is confirmed with 61% of students surveyed indicating that they either haven't heard about it or don't know if they have. Does it make a difference if you are an ESL student? Is there a pattern of differences in the answers to this question for females than for males? The chi-squared tests indicated there was not a significant difference between the answers from these different subgroups. However, doing a Kruskov-Wallis test (a non-parametric equivalent of t-testing) on the data showed that there is a significant difference in the responses from specific college's students ($H(11)=58.51$, $p<.05$), although it doesn't indicate where the significant

differences lie. With 13 different colleges to test, doing repeated Mann-Whitney tests to determine where the differences are significant would inflate the probability of Type 1 error, and therefore no post-hoc tests were performed.

Table 22
Kruskal-Wallis Test on I-BEST Question, by College

Ranks and Test Statistics			
Ranks	College number	N	Mean Rank
Heard of I-BEST programs?	Yellow	50	219.36
	White	43	341.17
	Apple green	45	254.42
	Magenta	21	271.05
	Salmon	98	320.66
	Goldenrod	65	235.96
	Purple	40	248.08
	Gray	53	189.94
	Cream	34	259.82
	Green	34	264.65
	Pink	28	229.05
	Blue	15	321.60
	Total	526	
Test Statistics			
Chi-Square (Kruskal-Wallace)	58.514		
df	11		
Asymp. Sig.	.000		
Grouping Variable	College		

Kruskal-Wallis tests take non-parametric data and rank each entry in order numerically. Those rankings are then used instead of the raw data to create means for comparison. Looking at the rankings, (Table 22) White College has the highest mean rank, which indicates more of their students said they knew what I-BEST is. Gray College had the lowest mean rank, and looking back at the raw data only 20% of their students indicated they knew what I-BEST was, compared to about 75% at White. These significant differences could be because of different outreach approaches used at each college.

Expected Barriers

Table 23 is reported in the order of what the students expect to be the most difficult for them as they transition (which is different than how the items were presented on the survey). The order was determined by looking at the raw numbers of how many students chose "very difficult" as a response to that question. The literature would indicate that students would be very concerned about money – which they were, both for college and for paying rent and bills outside of college. The cost of college was the most worrisome factor, followed closely by concern about finding money to pay rent and bills while they are in school, and how many hours they would need to work to get the money for living expenses. Computer access at home was the next concern for students in the survey, with 31% of them indicating this would be very or somewhat difficult for them. Understanding what classes to take was the next item the students were worried about, followed by childcare issues, difficulty with the English language, and then how much time they expected to need to do homework. The least worrisome items on the list for this group were finding transportation and making the class schedules work in their lives.

The exploratory factor analysis indicated that two factors could be created from this table; one called 'life/money challenges' and one to approximate their perceived fit as a college student called 'fit/self-confidence'. Table 24 shows the individual variables that were compiled into factors. These are similar to the factors compiled from the qualitative data from the focus groups. The factors will be described further in a later section in this chapter.

Table 23
Survey Results: Expected Barriers

College	Yellow	White	Apple Green	Magenta	Salmon	Goldenrod	Purple	Gray	Tangerine	Cream	Green	Pink	Blue	Total	% of total
Total # of surveys collected	51	42	46	21	98	66	41	55	56	34	35	28	15	589	100%
Type of college (Urban, Rural, Technical)	R	U	U	U	U	T	R	U	U	U	T	R	R		
Expectations of Barriers/Difficulties:															
Cost of College															
Very difficult	24	19	12	7	31	24	16	17	33	19	12	16	3	233	40%
Somewhat difficult	16	10	19	13	38	25	14	16	12	8	10	6	7	194	33%
Not a difficulty	6	3	8	0	13	6	4	11	2	4	8	4	4	73	12%
Not applicable	4	4	4	1	4	5	4	4	5	2	4	1	1	43	7%
Blanks	1	7	3	0	12	6	2	7	5	1	1	1	0	46	8%
Funds for rent/bills															
Very difficult	15	19	15	9	25	23	14	11	25	13	11	9	3	192	33%
Somewhat difficult	20	11	15	6	26	24	9	9	9	11	8	7	4	159	27%
Not a difficulty	7	2	7	2	19	12	8	14	8	5	6	8	6	104	18%
Not applicable	8	5	6	4	17	3	5	10	5	4	7	3	2	79	13%
Blanks	1	6	3	0	11	4	4	11	10	1	3	1	0	55	9%
Amount of time needed for work															
Very difficult	13	10	12	4	13	14	11	10	20	7	8	3	1	126	21%
Somewhat difficult	18	22	15	9	39	26	12	16	14	14	15	12	4	216	37%
Not a difficulty	12	3	11	4	19	18	5	11	8	3	4	9	6	113	19%
Not applicable	7	2	5	4	13	2	7	8	4	7	5	3	1	68	12%
Blanks	1	6	3	0	14	6	5	10	11	3	3	1	0	63	11%
Computer access at home														0	
Very difficult	12	6	5	3	8	8	3	2	20	6	5	5	3	86	15%
Somewhat difficult	6	12	7	4	17	12	2	7	8	8	6	4	1	94	16%
Not a difficulty	26	16	27	12	45	32	19	25	15	16	16	14	8	271	46%
Not applicable	6	4	5	1	13	10	13	9	6	3	5	4	3	82	14%
Blanks	1	5	2	1	15	4	3	12	8	1	3	1	0	56	10%
Understanding what classes to take															
Very difficult	1	5	3	2	5	12	7	10	9	1	4	1	1	61	10%
Somewhat difficult	21	12	17	11	46	28	14	22	24	20	13	11	4	243	41%
Not a difficulty	23	18	20	7	26	15	9	9	13	10	13	15	9	187	32%
Not applicable	4	4	4	1	9	6	6	4	3	2	2	0	1	46	8%
Blanks	2	4	2	0	12	5	4	10	8	1	3	1	0	52	9%
Childcare															
Very difficult	7	8	2	0	7	2	8	5	12	2	1	3	0	57	10%
Somewhat difficult	9	1	7	0	15	4	5	12	9	3	5	6	1	77	13%
Not a difficulty	5	7	13	1	17	16	6	7	10	3	5	7	3	100	17%
Not applicable	26	24	20	18	47	35	16	17	17	22	21	11	11	285	48%
Blanks	4	3	4	2	12	9	5	14	9	4	3	1	0	70	12%
English Language															
Very difficult	1	3	2	0	7	10	8	15	6	2	0	0	0	54	9%
Somewhat difficult	4	13	10	5	12	25	17	22	8	2	7	3	3	131	22%
Not a difficulty	29	15	22	11	43	20	7	5	23	20	16	18	5	234	40%
Not applicable	15	11	9	5	25	6	5	3	12	9	9	6	7	122	21%
Blanks	2	1	3	0	11	5	3	10	8	1	3	1	0	48	8%
Difficulty of the material															
Very difficult	4	3	1	0	3	5	2	14	9	2	0	1	1	45	8%
Somewhat difficult	17	13	14	6	42	24	13	12	18	16	22	11	6	214	36%
Not a difficulty	18	18	23	14	30	25	12	13	16	14	7	13	5	208	35%
Not applicable	8	4	3	1	9	5	6	4	5	1	2	1	3	52	9%
Blanks	4	5	5	0	14	7	7	12	9	1	4	2	0	70	12%
Amount of time needed for homework															
Very difficult	4	3	2	1	4	3	6	7	10	1	0	0	0	41	7%
Somewhat difficult	20	14	13	9	36	29	18	15	15	14	10	10	4	207	35%
Not a difficulty	22	20	25	10	40	24	11	18	22	16	16	16	9	249	42%
Not applicable	5	3	2	1	8	5	3	3	2	1	5	1	2	41	7%
Blanks	0	3	4	0	10	5	2	12	8	2	4	1	0	51	9%
Transportation															
Very difficult	3	6	1	1	5	2	4	6	7	1	3	1	0	40	7%
Somewhat difficult	16	9	11	6	22	11	7	9	9	5	7	5	4	121	21%
Not a difficulty	25	17	21	13	48	36	17	20	26	24	15	17	9	288	49%
Not applicable	7	6	10	1	13	12	7	6	4	3	8	3	2	82	14%
Blanks	0	5	3	0	10	5	5	14	11	1	2	2	0	58	10%
Class schedules															
Very difficult	1	1	2	0	2	1	5	8	4	0	0	0	0	24	4%
Somewhat difficult	13	12	9	9	29	14	12	21	17	10	10	5	5	166	28%
Not a difficulty	21	20	30	9	43	35	12	11	21	19	13	17	8	259	44%
Not applicable	13	5	2	2	11	9	9	7	6	4	8	4	2	82	14%
Blanks	3	5	3	1	13	7	2	8	9	1	4	2	0	58	10%

Table 24
Factor Analysis- Component Variables

Factor	Component variables
1. College knowledge	What do you know about applying to the college? What do you know about choosing your degree or certificate? What do you know about applying for scholarships or grants? What do you know about applying for the FAFSA? What do you know about registering for classes? What do you know about choosing a career?
2. Life/money challenges	Finding funds for bills and rent Cost difficulty Childcare difficulty Amount of time needed to work for money Transportation difficulty Computer access difficulty
3. Fit/ Self-confidence	Time it takes to do homework English language difficulty How difficult the class material is Difficulty of class schedules (days/times) Understanding what classes to take

Notice in Table 23 that 41% of students ranked understanding what classes to take as 'somewhat difficult' – this suggests that required advising might be a positive thing for this group.

Design for the 'perfect program'

Students were instructed to mark as many elements as they wanted in this section – although very few marked more than one in each of the three areas (see Table 25 and Appendix E). More than half of the students were interested in having classes in the morning. Forty-nine percent said classes should be between 8am and noon, and nearly all of the 10% that marked the 'other' box and wrote in their preference requested a morning start. Only 15% were interested in evening classes, and almost as many (11%) were interested in weekend classes. This is somewhat surprising given that this is a non-traditional group of students, and the research indicates that they would be interested in alternative times and modalities to fit their busy

schedules. A limitation here is that little information about what classes were surveyed at each college is known. This strong preference for day classes could be because few evening classes were surveyed.

Online education is not attractive to this group. The reasons for this require further study, and it would be very interesting to know if the lack of interest is attended by a lack of knowledge, or if these students truly knew what online classes are like and were making an informed choice. Hybrid courses were marginally attractive, but the large majority (66%) is really interested in face-to-face classes offered a few hours a day, every day or four days per week.

Interestingly, fewer days per week for classes were not attractive to them, either. Again, the research on adult students indicates that they have extremely busy lives, are more likely to have children, and work more hours (Goldhaber & Peri, 2007; CAEL, 2008) than traditional student populations. An education program that was just two or three days per week might seem like an attractive option for colleges to offer. Only 15% were interested in three days per week, and virtually no one wanted classes two days or one day per week. So the idea proposed in the Methods chapter of this paper that perhaps low I-BEST enrollment is partially a function of the programs not being offered when the students need them is probably incorrect – most I-BEST programs appear to be offered during the day. Finally, specific supports were mentioned to see what the students were interested in building in to their "perfect program". As was heard in the focus groups, students were very interested in having someone help them register and pick their classes; as well as having assistance with learning how to study.

Table 25
Survey Results: Perfect Program

College	Yellow	White	Apple Green	Magenta	Salmon	Goldenrod	Purple	Gray	Tangerine	Cream	Green	Pink	Blue	Total	% of total
Total # of surveys collected	51	42	46	21	98	66	41	55	56	34	35	28	15	589	100%
Type of college (Urban, Rural, Technical)	R	U	U	U	U	T	R	U	U	U	T	R	R		
The students' "perfect program"															
When it would be offered:															
mornings	29	22	27	16	38	37	16	29	33	14	13	15	1	290	49%
afternoons (12-5pm)	10	4	10	3	32	12	9	8	9	15	11	7	8	138	23%
evenings (after 5pm)	4	12	6	0	20	15	7	3	7	3	4	3	2	86	15%
night (after 9pm)	3	4	4	1	3	6	3	6	1	0	0	2	1	34	6%
all day (8am-5pm)	6	4	2	1	9	7	5	5	3	1	7	3	2	55	9%
weekends	5	7	5	2	11	11	7	5	6	2	2	2	1	66	11%
other'	6	5	4	4	8	2	2	5	7	3	5	3	2	56	10%
How it would be offered:														0	0%
Online only	2	2	0	0	2	0	1	1	2	1	2	1	0	14	2%
Partially online	21	5	10	1	21	14	10	11	7	7	6	5	3	121	21%
All day, every day for a short period of time	3	7	2	2	12	12	3	6	4	4	2	2	1	60	10%
Every day, a few hours	14	16	15	11	39	24	10	21	23	14	8	11	6	212	36%
4 days per week	14	8	16	5	25	17	11	12	30	10	17	11	3	179	30%
3 days per week	10	5	6	2	18	12	6	12	4	2	5	5	2	89	15%
2 days per week	3	5	1	0	5	1	6	7	1	1	4	1	1	36	6%
1 day a week	0	1	0	0	2	0	0	1	0	0	0	0	0	4	1%
Help would be offered to:														0	0%
Register and pick classes	25	14	22	9	44	25	14	25	28	17	21	13	5	262	44%
Learn how to study	22	22	16	8	39	41	12	28	17	13	11	12	4	245	42%
Faculty would explain fully what they want	16	8	11	5	23	19	2	11	11	7	9	11	5	138	23%
Faculty would care about them	12	9	9	9	22	18	4	7	8	16	5	6	2	127	22%
Help with organization and accountability	5	5	5	4	7	13	2	6	3	3	3	5	2	63	11%
Other (tutors were the #1 answer	5	5	3	2	9	2	2	1	4	4	8	4	1	50	8%

The selections of items for this section of the survey came directly from the focus group conversations; these were the areas that students seemed most concerned with. They also wanted faculty who cared about them (22%) almost as much as they wanted faculty who explained clearly what they wanted (23%). The 'other' category allowed for a write –in answer, and students were mostly interested in having built-in tutoring for their program.

Factor Analysis

As mentioned earlier, an exploratory factor analysis was done on the non-categorical data to determine if there were viable factors. The factors were explored to see if the suggestions

from the literature would be confirmed – namely, that student concerns would cluster around (1) their perceived 'fit' as a college student, (2) life circumstances and support outside of the college, or (3) their perceptions of their ability to navigate college systems. Indeed, these were the factors that the analysis identified. The next question was, which of these do the students feel is most problematic for them? Looking at the descriptive statistics, it appears that the' life and money challenges' are most problematic based on the higher mean (m=1.89) for the factor, followed by 'fit or self confidence', and finally 'college knowledge'. However, with non-parametric samples, Field (2003) indicates that the median is a more appropriate statistic to use for comparison of non-parametric data (p. 532). Looking at the medians, the same order remains (see Table 26).

Table 26
Means and Medians for Factors

Descriptive Statistics

	N	Minimum	Maximum	Median	Mean	Std. Deviation
Factor1: college knowledge, scale recoded	360	.17	2.83	1.00	1.3032	.60849
Factor2: life or money challenges	168	1.00	3.00	1.83	1.8909	.52388
Factor3: fit or self-confidence	318	1.00	3.00	1.60	1.5673	.45261
Valid N (listwise)	91					

It is of interest to know if there were significant differences between the samples from different colleges. Looking at this could allow for colleges whose students indicate they are less concerned about these items to be studied to determine how they are supporting these students in their efforts to continue their education. A Kruskal-Wallace Test was run to look at the differences.

Table 27
Kruskal-Wallace Rankings for Factors by College

Ranks						
	Factor1: college knowledge		Factor2: life or money challenges		Factor3: fit or self-confidence	
College Name	N	Mean Rank	N	Mean Rank	N	Mean Rank
Yellow	32	169.13	17	85.44	23	111.20
White	26	172.42	10	97.05	24	134.44
Apple green	26	131.02	17	66.24	27	97.46
Magenta	16	206.72	1	91.00	13	103.42
Salmon	65	168.40	31	73.29	52	147.13
Goldenrod	31	144.34	17	59.74	40	161.21
Purple	22	175.50	13	73.15	20	197.60
Gray	36	106.00	13	66.81	29	215.47
Cream	25	219.94	7	80.07	21	140.62
Green	20	200.73	7	78.64	14	125.07
Pink	18	146.67	11	78.73	17	107.82
Blue	12	202.13	3	51.33	8	127.44
Tangerine	13	146.15	21	111.45	30	173.97
Total	360		168		318	

Table 28:
Kruskal Wallis Test Results

Test Statistics[a,b]			
	Factor1: college knowledge, scale recoded	Factor2: life or money challenges	Factor3: fit or self-confidence
Chi-Square	41.887	15.919	51.531
df	12	12	12
Asymp. Sig.	.000	.195	.000

a. Kruskal Wallis Test

b. Grouping Variable: College number

The results of a Kruskal-Wallace test (Tables 27 and 28) show that there are significant differences between the ranks across colleges for factor 1 and factor 3, but not for factor 2 ($p>.05$ at .195). Factor 2 has less records included (168) because of the elimination of records with a blank on a question included in the factor. This could be the reason for the non-significant finding in the differences between colleges. The highest and lowest rank scores are highlighted in yellow. High scores indicate that the students at that college considered the variables in that factor more problematic; lower scores indicate the opposite. The same is true for factor 2, but the differences between colleges are not significant at the $p<.05$ level.

Chapter 6

Discussion and Recommendations

The previous two chapters have reported the findings from this exploratory, mixed methods study of upper-level ABE students in Washington community and technical colleges. One intended outcome of the study was to determine if the focus group data was corroborated by survey data on a larger group. These were the conclusions drawn after the focus groups, which helped in the creation of the survey:

1) Many or most upper-level ABE students do not know enough about basic college preparation functions, such as financial aid processes, to transition when their studies have prepared them to that level.
2) In spite of what CTCs perceive as being substantial efforts, students understand little about I-BEST programs, what they are, and what their options for I-BEST pathways are at their particular college.
3) Former ESL students struggle not only with language issues, but also with understanding the American higher education system.
4) The systems and supports that the students identified as being most important for them in transitioning show that the most worrisome areas for Washington students are: the costs of college, concern about their own abilities as college students, and concerns about getting good advising and planning assistance (by order of importance).

Each of these conclusions was upheld in the data from the survey. The first conclusion, about the amount of knowledge students have, can be determined by looking at the frequencies in the ‘college knowledge’ table. Students showed considerable lack of understanding of the

basic requirements of preparing for college. For example, few had a good understanding of what to do to apply for financial aid –only 10% responded that they could fill out the FAFSA and understood it well enough to explain it to another person. This is particularly alarming when a good portion of these students (41%) indicated they were planning to transition to college in the next six months.

This survey was administered towards the end of fall quarter, and it could be that some colleges plan FAFSA workshops for early spring. However, students who plan to transition to college in the next six months need to have applied for financial aid for the current year, and it appears few of them (18%) actually have done that. Fifty-five percent of students said they don't know how to apply for scholarships or grants. Again, for those transitioning soon, it's difficult to think they would be able to access many resources with such a short timeline until they transition. Another indicator that corroborates this idea is the fact that many students (40%) said they didn't understand how to register for classes, and the students built assistance with this task into their perfect program design. For many people, registering for classes doesn't seem that difficult, but for this population it appears to be problematic.

Conclusion two, above answers the main research question of this study, which was "Why don't more student participate in I-BEST programs?" It appears that students just don't know enough about the programs and how they work to make a decision to go into one. Forty percent of the survey participants said they had heard of I-BEST programs, but only 1% of respondents were able to pick out the true statements about I-BEST. Just a few more than that (20 students) indicated they were planning to use an I-BEST program and wrote in the program they intended to enter. More research into this issue is needed. Some colleges had higher numbers of students indicating they had at least heard of the program; the outreach those

colleges are doing may be worth replicating elsewhere. Still, even for those that are able to get the word out, unfortunately few students indicate they will use an I-BEST program. Very few students understood who the I-BEST programs were trying to serve – many marked that they were for high school graduates or students who had completed their GED only. Colleges may wish to delve into this misinformation more with their own students. Certainly all the colleges in the survey should re-evaluate the type of outreach they are doing for I-BEST. Many of the colleges send someone directly into the classroom to give this information (including all three of the focus group colleges), so it may not be lack of exposure. Perhaps there is something related to timeliness of the information for the students – if it doesn't seem relevant at the time, they don't pay attention to it.

The third conclusion about ESL students can be seen by running a chi-squared test to check relatedness between being an ESL student and the 'college knowledge' factor (factor 1) and 'fit or self-confidence' factor (factor 3). The results can be seen in Table 29.

Table 29
Chi-squared test – ESL with college knowledge

	Is a former English as a Second Language (ESL) student	Factor1: college knowledge, scale recoded
Chi-Square	45.716[a]	580.667[b]
df	1	16
Asymp. Sig.	.000	.000

This indicates that there is a significant relationship between the two variables ($p<.05$).

The rankings (using a Mann-Whitney test, Table 30) show that the mean rank for factor three is 205.45 if the student was a former ESL compared to 126.05 if they were not, indicating that former ESL students expect the items in this factor to be much more problematic for them

than native students (U=5740; p<.05; r=.43). The 'college knowledge' factor (factor 1) showed that ESL students have a slightly higher mean rank (77.15) than native students (74.10) but this is not a significant difference in the Mann-Whitney test (U=2215.50, p>.05, r = -.047).

Table 30
Mann-Whitney Ranks – ESL status and Factors 1 and 3

	Is a former English as a Second Language (ESL) student	N	Mean Rank	Sum of Ranks
Factor3: fit or self-confidence	no	191	126.05	24076.00
	yes	122	205.45	25065.00
	Total	313		
Factor1:collegeknowledge recoded scale	no	105	74.10	7780.50
	yes	44	77.15	3394.50
	Total	149		

Table 31
Mann-Whitney Results* – ESL and Factors 1 and 3

	Factor3: fit or self-confidence	recoded for the scale
Mann-Whitney U	5740.000	2215.500
Wilcoxon W	24076.000	7780.500
Z	-7.657	-.581
Asymp. Sig. (2-tailed)	.000	.561

*Grouping Variable: Is a former English as a Second Language (ESL) student

So these results indicate that ESL students do not have much less understanding of how to do tasks such as registering or applying for aid using the FAFSA than non-ESL students, but ESL students are much more concerned with their ability to understand what they are supposed to do in class and how much time it will take them to complete their homework.

The final conclusion drawn from the focus group data was regarding the items that students expect to be most problematic or difficult for them. The expectation was that costs would be most problematic; followed by concerns about their own abilities as college students and finally that the need for good advising and planning assistance would be key. Costs definitely came out at the top of the concerns list (see Table 20) both in survey question 10 (the difficulty grid) and in the write-in box for question 11 (what one thing will be most difficult?). ABE students pay just $25 per quarter for their ABE classes no matter how many they take. ABE and ESL students both tend to have low household incomes. It is not surprising that concerns for funding college and their lives are of concern. From a policy standpoint, this is the biggest barrier that needs to be dealt with for this population – finding a way to provide adequate funding for these students. Washington has a funding source called the Opportunity Grant which is often given to students in I-BEST pathways. However, each college is only able to fund a few students with this grant. Funding this grant more heavily will have a direct impact on the success of I-BEST programs and I-BEST students.

After the concerns about money, students wrote in on question 11 that they were most concerned about the difficulty of the homework; managing their time; and balancing work, life, and family.

All in all, the focus group data proved consistent with the results of the large scale survey of students in Washington State.

Answering the research questions

The question about why more students don't go into I-BEST programs is answered in the prior section. How about the other questions of interest? To recap, these were the questions posed in Chapter 3:

- How should community colleges design and offer programs for low-skilled adult ABE students to best mitigate the multiple barriers to college success?
- How many students plan to use, I-BEST for transitioning into college programs?
- What reasons do ABE students give for not using I-BEST programs?
- What would a perfect program be that would fit into the students' lives?
- When and how would it be offered?
- Are there ABE students who are not interested in accessing college-level courses/programs? What reasons are given for this? How could these students be served?

Starting with the two other I-BEST-related questions: only 20 students out of 589 (3%) that were surveyed said they were planning to transition to an I-BEST program; even though many were planning to transition to college-level classes in the near future (68% within a year). In the focus group, where the students were asked why they weren't considering an I-BEST pathway the students overwhelmingly answered that they just didn't know what they were. This is clearly the case for the larger population as well, as was seen in the quantitative results chapter. The two focus group participants who had heard of I-BEST only knew of one or two pathways, neither of which was of interest to them.

Designing better programs for returning adults

The 'perfect program' question in the focus groups and the surveys returned surprising results. Contrary to the research that shows adult students want differing schedules from what traditional students want (Kazis, et al, 2007; Garner, 2004; Matus-Grossman & Gooden, 2002) the Washington CTC students were mostly in favor of morning classes offered a few hours per day, four to five days per week – a fairly traditional class schedule. A limitation here is that no

data was collected in the survey to determine whether many students from night classes were included in the surveyed groups; if few were included this could explain why the students surveyed were so heavily in favor of the day classes. Since most of the participating colleges struggled to get the requested number of surveys returned, it is possible that they surveyed every appropriate class and that night students were represented proportionally. Without clear information, there is no way to know for sure.

Some results that were different from what was expected were both the modality of traditional face-to-face classes (almost no one was interested in online classes, and few were interested in hybrids) and the supports that the students wanted (help with registration; built-in tutoring). Certainly cost of college and the difficulty of paying for living expenses was the number one concern, so increasing the access to, availability of, and dollar amounts of financial aid would be the number one thing that anyone (legislators, practitioners, or community-based organizations) can do to better serve this group. But perhaps the perfect program for transitioning ABE students looks like what the colleges are already offering with a few more wrap-around services and classroom supports (which is very similar to what I-BEST offers).

Finally, delving into the answers of students who were not planning on going to college, most expressed the need to earn money immediately as the number one reason why they didn't have a college goal. And several went on to say that they had a college goal but that it would have to wait until they got back on their feet financially. A very few students (three) reported that they had good-paying jobs and didn't need college.

Other interesting correlations

Looking at the data, some other items were significantly correlated; for example these variables:

'Plan to attend' negatively correlated with 'cost difficulty' (rho=-.163 significant at the p< .01 level). So the more difficult students feel the cost is going to be, the more likely they were to say they would be attending part time.

Gender was not significantly related to any of the college knowledge or expected barriers variables. There is a slight negative correlation between gender and whether a student was a former ESL student (-.194 significant at the p< .01 level) or if they grew up outside the US. This reflects the fact that a higher number of the former ESL respondents were female than in the survey as a whole.

Limitations of the Study

The most limiting factor of this study is the fact it included only Washington ABE students. The information acquired in this study may not be at all applicable in any other state. While the survey was well-vetted and provided much information, further study could be done to delve more deeply into some of the issues – in particular, about why students aren't coming to I-BEST programs. While most of the questions seemed clear and students did a good job of filling out the surveys, question seven, which tried to determine how much students knew about I-BEST, yielded such poor results that it brings to mind the possibility that the question was poorly written. The results did, however, match what was found in the focus group participants, and that lends some credence to the results. More could also be done to determine what policy decisions could support I-BEST or other transitional programs beyond funding students.

The surveys were collected in fall, and students may have had more 'college knowledge' had they been proctored later in the school year – several practitioners explained that they do workshops and presentations for their ABE students in the spring. The colleges that participated have the survey instrument to proctor in the future if they found these results interesting.

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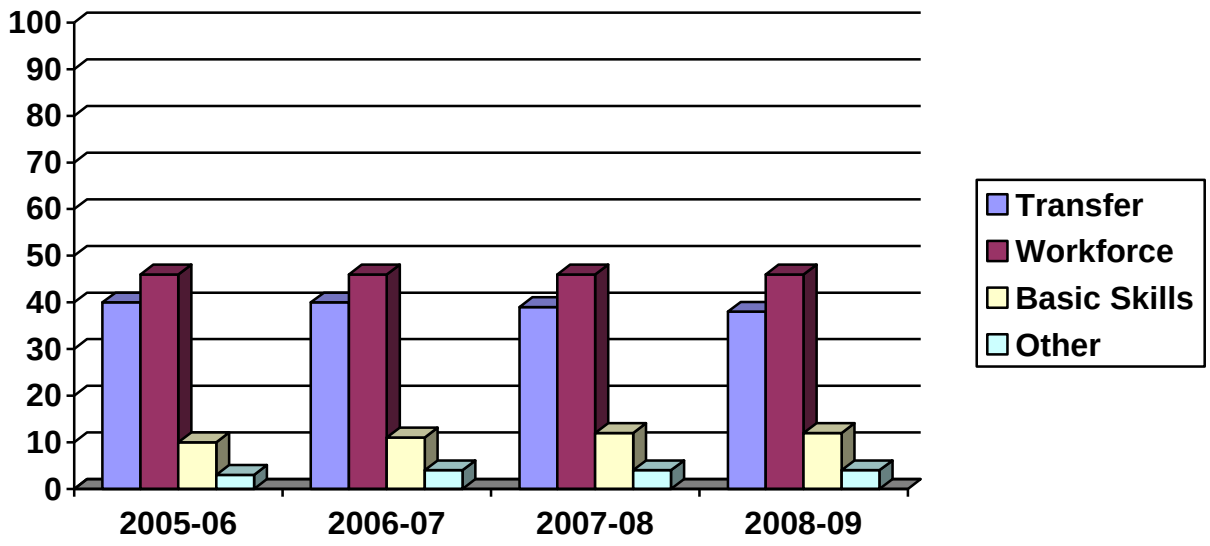
Appendix A: FTEs by Mission, Washington State (WSBCTC, 2009)



ACADEMIC YEAR 2004-05 TO 2008-09

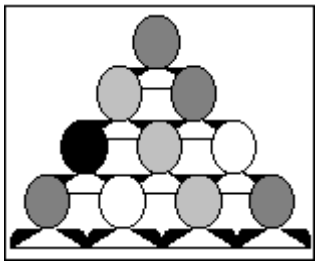
2008-09 FTES increased substantially for students in all three missions. The reason most commonly identified for attending the community and technical colleges was related to the workforce education mission – to prepare for a new job or upgrade existing job skills. FTES generated by students attending for workforce education increased by 6,230 FTES or 11 percent. Workforce students generated 47 percent of all state FTES.
The FTES generated by students enrolled with a transfer purpose accounted for 38 percent of the total FTES as they increased by 2,862 FTES or 6 percent. 11 percent of the total FTE was generated by students who took courses with basic skills as their immediate goal. FTES for these students increased by 1,152 FTES or 12 percent.

FTES BY STUDENT PURPOSE

	State Supported					All Funds	
	2004-05	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2007-08**	**2008-09**
Workforce Education	59,648	60,041	59,935	61,927	68,657	70,346	77,833
% of Change	-6.1%	0.7%	-0.2%	3.3%	10.9%	3.4%	10.6%
% of Total	45.5%	46.0%	45.4%	45.5%	46.6%	41.6%	42.4%
Transfer	52,867	51,678	51,731	53,132	56,094	67,518	72,060
% of Change	-2.7%	-2.2%	0.1%	2.7%	5.6%	3.0%	6.7%
% of Total	40.3%	39.6%	39.2%	39.0%	38.1%	39.9%	39.2%
Basic Skills as Immediate Goal	13,036	14,021	15,358	15,875	17,022	20,541	22,459
% of Change	-6.7%	7.6%	9.5%	3.4%	7.2%	2.8%	9.3%
% of Total	9.9%	10.7%	11.6%	11.7%	11.6%	12.1%	12.2%
Home/Family Life/ Other/Not Reported	5,504	4,896	5,017	5,270	5,536	10,832	11,347
% of Change	-2.9%	-11.0%	2.5%	5.0%	5.1%	4.5%	4.8%
% of Total	4.2%	3.7%	3.8%	3.9%	3.8%	6.4%	6.2%
TOTAL	131,046	130,628	132,033	136,199	147,302	169,237	183,699

Source: SBCTC Data Warehouse, Student Table.

Appendix B: Outcomes of the "Tipping Point" study: Prince & Jenkins, 2005.



Research Report
No. 06-2

Washington State Board for Community and Technical Colleges

Building Pathways to Success for Low-Skill Adult Students: Lessons for Community College Policy and Practice from a Longitudinal Student Tracking Study

(The "Tipping Point" Research)

April 2005

According to the U.S. Census (2000), 42 percent of adults in the United States between the ages of 25 and 64 have no more than a high school education (authors' calculations). Unfortunately, however, most new jobs and the vast majority of jobs that pay wages sufficient to support a family require at least some education beyond high school (Carnevale & Derochers, 2003), and low educational attainment is associated with high rates of unemployment and poverty.

Community colleges are an important entry point to postsecondary education for adults with no previous college education or even a high school diploma. In fall 2002, for example, adults between the ages of 25 and 64 represented 35 percent of fulltime equivalent (FTE) enrollments at two-year public colleges, compared with only 15 percent of FTE undergraduate enrollments at four-year public institutions (authors' calculations, based on U.S. Department of Education, 2001). Moreover, more than two-thirds of the community college students who entered postsecondary education at age 25 or older were low income (authors' calculations based on "Beginning Postsecondary Students Longitudinal Study" [BPS:96/01], 2003).

The potential ofcommunity colleges to serve as a "pathway" for lowskill adults to college and career-path employment, therefore, is evident. Across the nation, several major projects are underway whose goal is to develop policies and practices supportive of this role. Funded by national foundations, these initiatives include the Ford Foundation's Bridges to Opportunity initiative and the National Governor's Association's Pathways to Advancement project, funded by Lumina Foundation for Education.

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http://ccrc.tc.columbia.edu/

Despite this interest, relatively little is known about the unique experiences and the educational and employment outcomes of adults who enter community college with limited education. We do know that their experiences and outcomes differ from those of traditional college-aged students. Compared with community college students who enrolled soon after high school (at ages 18-24), those who start later (at ages 25-64) are more likely to earn a certificate and less likely to earn an associate degree. The late starters are also far less likely to transfer to a four-year institution and earn a bachelor's degree. Indeed, among students who entered a community college for the first time in 1995-96, 60 percent of older first-time students did not earn any credential or transfer to a baccalaureate program after six years, compared with 40 percent of younger, first-time students (authors' calculations, based on BPS:96/01, 2003).

This Brief summarizes findings from a new study that seeks to fill information gaps about older community college students. Researchers used student record information from the Washington State Community and Technical College system to examine the educational experience and attainment as well as the employment and earnings of a sample of adult students, five years after first enrolling. The students in the sample were age 25 or older with, at most, a high school education. The study was conducted by staff at the Washington State Board for Community and Technical Colleges (SBCTC), with assistance from the Community College Research Center, as part of Ford's Bridges to Opportunity initiative. Its goal was to provide educators throughout Washington's community and technical college system with a detailed profile of their low-skill adult students, who make up about one-third of the approximately 300,000 students served by the system annually. The study also sought to identify the critical points where adult students drop out or fail to advance to the next level in order to help SBCTC staff stimulate thinking among educators throughout the system about how to bridge those gaps and thereby facilitate student advancement.

Study Sample

The study's data source was the system that the Washington State Board for Community and Technical Colleges uses to track students in its 34 colleges. The database contains complete transcript information on every student who enrolls in college credit or non-credit courses.

The study sample consisted of two SBCTC cohorts: first-time college students who were adults age 25 or older with a high school education or less and who started in 1996-97 or in 1997-98. Also included in the cohorts were 18- to 24-year-old, first time students who lacked a high school diploma or GED. These younger students were included because by not graduating from high school and enrolling at a community college, they had in effect entered the adult labor market, whether or not they were employed. The sample included students who enrolled in college-credit (including college remedial or "developmental") or adult basic skills programs, which include adult basic education (ABE), English as a second language (ESL), and GED preparation. In Washington State, adult basic skills programs are provided through the community and technical colleges. Together the two cohorts totaled 34,956 students, or about one-third of

all students who entered a community or technical college for the first time in Washington State in the two baseline years.

Females comprised the largest share of the student sample, reflecting a common pattern among students in community colleges. Whites made up more than half of the sample, and Latinos one-quarter. Students between the ages of 25 and 29 comprised the largest group. Over 70 percent had children; nearly one-quarter were single parents. Most of the students were working or seeking work. A little more than one-third were not in the labor force. The majority of the low-skill adults were low income.

The starting education level of the students also varied. Nearly one-third enrolled in an ESL program. Slightly more than one-third did not have a high school diploma and enrolled in adult basic education or GED programs. Approximately one-third of the students already had either a diploma or a GED.

Three-quarters of the high school diploma holders, and nearly 80 percent of GED holders, enrolled in occupational degree programs, reflecting the high interest of adult students in occupational programs. Forty percent of the students with a high school diploma or GED also took at least one developmental course. The majority of both GED and diploma holders who enrolled in academic transfer programs had to take at least one remedial course.

Study Findings

For both cohorts we used the transcript information in the SBCTC student database to track the educational progress of the different subgroups (defined in terms of the students' starting education levels) five years after they entered a community or technical college. We used Unemployment Insurance wage record data from the Washington State Employment Security Department to examine the annual earnings of students five years after they started.

Student Educational Attainment and Earnings after Five Years

Only 13 percent of the students who started in ESL programs went on to earn at least some college credits. Less than one-third (30 percent) of adult basic education (ABE/GED) students made the transition to college-level courses. Only four to six percent of either group ended up getting 45 or more college credits or earning a certificate or degree within five years. (Washington's community and technical colleges are on the quarter system, so 45 credits is equivalent to two full-time semesters of coursework, or 30 credits in semester systems.)

Nearly 30 percent of the students who started with a GED, and 35 percent of those who started with a high school diploma, earned at least 45 credits or a credential in five years. Fourteen percent of the students who started with a GED, and 18 percent of students who started with a high school diploma, earned an advanced certificate or an associate degree in five years.

Not surprisingly, the higher students' educational attainment after five years, the higher the wages they earned on average. Compared with students who earned fewer than ten college credits, those who took at least one year's worth of college-credit courses and earned a credential had an average annual earnings advantage: $7,000 for students who started in ESL; $8,500 for those who started in ABE or GED; and $2,700 and $1,700 for those entering with a GED or high school diploma, respectively.

These findings are consistent with previous research on the economic returns to a subbaccalaureate education. These studies show that earning an occupational certificate (equivalent to two semesters of full-time study) provides individuals with a significant earnings advantage compared with individuals with just some college but no degree, although the magnitude of the advantage varies by student gender and field of study (Bailey, Kienzl, & Marcotte, in press; Grubb, 2002; Kienzl, 2004). These studies have also found that the wage gains associated with postsecondary education of less than a year are negligible.

Advancement beyond English as a Second Language and Adult Basic Education

Only one percent of ESL students who started with less than a high school education earned a GED or high school diploma in five years. In all, 12 percent went beyond ESL and enrolled in college-credit courses. Of these, two-thirds had a high school credential when they started in ESL. A much larger group of ESL students had a high school credential upon enrollment but went no further than ESL. Latino ESL students with a high school diploma were less than half as likely as other students to advance beyond basic skills. Males who earned a GED (particularly Latinos) were less likely than women to go further in their education. Part of this gender difference may result from the fact that, on average, men earn more than women, and thus forgo more wages when they attend school.

Thirty-one percent of the students who started in ABE or GED courses went on to enroll in at least one college-level course. Of this group, 70 percent, or 2,543 students, already had a high school credential. A larger group (3,245) also had a high school credential but went no further than basic skills, including 1,147 students who earned their GED or diploma at the college and left.

A number of factors seem to be associated with a greater likelihood that students who start in ESL or ABE/GED will go on to succeed in college-level courses. A higher percentage of students who succeeded in earning a credential or completing at least 45 credits received financial aid than did students who did not do either. In addition, students who took developmental education after taking ESL or ABE/GED were more likely to earn a credential or at least 45 credits than were those who did not. Students who expected up-front that they would attend college a year or longer were more successful than were students who did not know upon enrollment how long they would attend or those for whom information on their expectations for college was not available.

Although financial aid and developmental education were associated with higher chances of success, many students who went beyond ESL or ABE/GED did not receive these supports. Only about 23 percent of students who transitioned from ESL, and 35

percent of those who transitioned from ABE, received financial aid when they enrolled in collegelevel courses. Only 28 percent of ESL students who transitioned, and 33 percent of transitioning ABE students, enrolled in developmental courses. Moreover, less than one-third of ESL and ABE/GED students expected to attend college for a year or more. About half (54 percent) of ESL students, and 47 percent of ABE/GED students, did not have clear plans or their intent was not ascertained.

Appendix C – Adult Basic Education Program Information

1. SBCTC website – Adult Basic Education Home Page

"More than 1 million adults in Washington State lack the basic education skills they need to succeed in an increasingly complicated world. For these citizens, Adult Basic Education (ABE) opens doors to self-sufficiency, stronger families, and improved citizenship. But adult basic education does more than help individuals. It lays the foundation for our state's success in building a strong workforce, a vital economy, and healthy communities. When one person learns, everyone benefits. We hope you will find on this site information and connections that will help you as an adult learner, provider, or partner and discover opportunities to influence ABE in our state.

Adult Basic Education staff at the State Board for Community and Technical Colleges work with adult learners, service providers and literacy supporters across the state of Washington to ensure that all adults will have access to the adult and family literacy services that can assist them in getting the skills they need to:

Have access to information.
Act independently.
Express their own ideas and feelings.
Keep up with a changing world.
Exercise their full rights and responsibilities as family members, workers and community members. "

2. Excerpt from the Adult Basic Education Handbook (found at : http://www.sbctc.edu/college/_e-abe_abehandbook.aspx)

"**Educational Interviewing**

Support services that are tailored to target populations includes logistical elements, like transportation and childcare, but also the services that prepare students to succeed in education, like orientation, study skills development, barrier removal, and goal-setting. These preparation activities have been seen to have substantial impact on learner retention and achievement. Intentional goal-setting with students has been elevated on the national level to a mandatory requirement, meaning that only those goals that are identified in advance will be counted as successes in year end federal reports.

Research and best practices demonstrate that students persist longer, attend more regularly, focus better on achieving their goals, and achieve better when:

- They understand how their goals and learning plan fit into their real reasons for trying out the basic skills program,
- They know what the expectations and criteria are for "success" and are involved in their own assessment,
- The learning design is adjusted for their individual life circumstances and learning styles, and
- The learning setting is comfortable and familiar."

Appendix D – Focus Group Guide

FOCUS GROUP GUIDE - CHECKLIST
COLLEGE DATE

Set up

- ☐ Choose area of designated room for interview. Arrange chairs to suit.
- ☐ Put fresh batteries in recorder
- ☐ Place recorder on the table
- ☐ Bring out paperwork, pens, coffee card, slips of paper and a container for the coffee card drawing
- ☐ Arrange refreshments

Preliminary Info

- ☐ Turn off phone ringer. Ask students to do the same.
- ☐ Introduce the study (go through the consent form)
- ☐ Explain how the info collected will be used
- ☐ Explain the focus group interview process:
  - Researcher will ask a question
  - Anyone may be first to reply
  - One person speaks at a time
  - Researcher may ask clarifying questions
  - Everyone will have an opportunity to reply to a question before the next will be asked
  - No one is required to answer any particular question.
  - There are just 9 questions, with some follow ups
  - If you don't understand the question, you can ask for clarification.
  - The session will last about 90 minutes.
  - At the end, a name will be drawn for the coffee card
- ☐ Ask for questions about the study, the process, or the use of information.
- ☐ Does everyone still agree to participate?
- ☐ **Have students sign the Consent Form**

Questions

- ☐ **TURN ON THE RECORDER!**

6. What is your name (for the purposes of the study)?

7. Do you find attending school now (at this time in your life) easy or hard (probe on what makes it easy/hard)

8. Do you want to continue into college-level courses? (Probe on why or why not)

9. Have you heard of I-BEST? What do you know about I-BEST programs?
10. Are you planning to use an I-BEST pathway?
    a. If not, why not?
    b. If so, which one, and to what end goal?

11. What factors do you think will help you transition into college-level classes? (Probe on life circumstances; support at the college; personal attributes)

12. What do you expect will be the most challenging part about moving into college-level classes?

13. If you could design a program to fit your life better, how would that look?
14. When, where, and how would it be offered?
15. What supports would you need?

Appendix E – Survey

Dear Survey Participant,

You have been chosen to participate in this survey because you are in an upper level Adult Basic Education class and are ready to transition into college-level classes. You do not have to participate in this survey. If you do complete the survey, your answers will help community colleges determine the most important supports that we can give to you and other ABE students to help successfully make the leap from ABE to college classes . It is okay if you don't know some of the answers. The answers you give will be anonymous; they will only be reported in total with the other survey responses. Please take a few minutes to fill out this important survey and return it to your instructor.

1. What is your ultimate goal for being at the college-what do you want to do here? Mark **one** answer below:
   - ☐ A **transfer degree** that prepares me to transfer to a 4-year college.
   - ☐ A **professional/technical degree** that prepares me for work.
   - ☐ A **certificate** (something shorter than a 90-credit degree).
   - ☐ I plan to go to another college or university after I complete my ABE classes.
   - ☐ I am here to prepare for the **GED** exam, and don't plan to continue in classes after that.
   - ☐ I am here taking ABE classes, but do not plan to take the GED or continue after that.
   - ☐ I do not have a college goal.
   - ☐ I have not decided yet.

2. If you are **not** planning to go to college, why not? (Please complete this question and skip to question 9). If you do plan to take college classes, write nothing here and move on to question 3.

3. **How soon** do you expect to take your first college-level class (Note: any class numbered 100 or higher is a college level class. Examples: Biology 101; Business 120; ENG& 101)
   - ☐ I have already taken _____college-level classes (how many?)
   - ☐ In the next 6 months
   - ☐ In the next year
   - ☐ After I complete my GED (estimated date of completion_____)
   - ☐ I don't know

4. What do you know about the following tasks or steps that are needed for college?

Task / Step	**Nothing**	**Know I need to do this, but don't know how.**	**Can do this and can describe how to do it to others.**	**I have already completed this step or task.**	**Don't think I need to do this.**
Choosing my degree or certificate					
Choosing my career					
Applying to the college					
Filling out the FAFSA (financial aid form)					
Applying for scholarships and grants					
Registering for classes					

5. Do you expect to work at a job while going to college?
   - ☐ Yes
   - ☐ No
   - ☐ I don't know

CONTINUE ON BACK

6. Have you heard of I-BEST programs (Integrated Basic Education and Skills Training)?
   - ☐ Yes
   - ☐ No
   - ☐ I don't know

7. Which of the following do you think are true about I-BEST Programs? Mark **all** that you think are correct.
   - ☐ They are programs that let ABE students work toward a college certificate or degree while still working on their basic skills.
   - ☐ I could begin an I-BEST Program this year.
   - ☐ I-BEST programs are for students who have completed their GEDs.
   - ☐ I can do an I-BEST program in any field I want to go into.
   - ☐ I-BEST is for high school students who want to come to the college while they finish their high school diploma
   - ☐ I know the I-BEST programs that this college offers.
   - ☐ I am planning to go in to an I-BEST program (Name of the program_____)

8. When I take college classes, I plan to attend: (Mark one)
   - ☐ Full time (attend school 5 days a week for at least 3 hours, or 15 hours per week or more).
   - ☐ Part time (anything less than every day or 15 hours per week).
   - ☐ I don't know.

9. Each day that I attend class, I expect to work on homework: (Mark one)
   - ☐ Less than an hour a day.
   - ☐ An hour a day.
   - ☐ About an hour for each hour in class.
   - ☐ About 2 hours for each hour in class.
   - ☐ I don't know.

10. Think about the things that would make it difficult for you to attend college. Read the list below, and mark the box at the right that most closely fits your situation. If some items do not apply to you, mark 'not applicable.'

Things that may make it difficult for me to go to college:	**Not applicable**	**Not a difficulty**	**Somewhat difficult**	**Very Difficult**
The costs (tuition, fees, books, etc)				
Finding transportation – getting to school.				
Finding, keeping, or paying for childcare.				
The class schedules (times or days).				
Computer access at home.				
The amount of time it will take to do the homework.				
The difficulty of the material covered in the classes.				

The difficulty of the English language.				
The amount of time I need to work to earn money.				
Finding funds to pay rent and bills while I go to school.				
Understanding what classes I need to take.				

11. Which **one** item from the list above do you expect to be most difficult for you?_____

12. If you could design a perfect program – one that would get you to your goal in a way that works best for you, what would it look like? (Mark all that apply)
I would attend classes:

- ☐ Between 8am and noon.
- ☐ In the afternoons between 12pm and 5pm.
- ☐ In the evening 5pm to 9pm.
- ☐ After 9pm.
- ☐ All day (8am to 5pm).
- ☐ On weekends.
- ☐ Other (please describe)_____

My classes would be:

- ☐ Online only
- ☐ Partially online (some time in class, some online)
- ☐ All day, every day for a short period of time (a year or less)
- ☐ Every day, a few hours per day
- ☐ 4 days per week
- ☐ 3 days per week
- ☐ 2 days per week
- ☐ 1 day per week

13. Are you a former ESL (English as a Second Language) student? (Remember, your answers are anonymous. This is only to determine if there is a difference in the barriers to education for non-native students).

- ☐ Yes
- ☐ No

14. What is your gender?

- ☐ Male
- ☐ Female
- ☐ Other_____

15. Did you grow up outside the United States?

- ☐ Yes
- ☐ No

16. Did you attend college in another country?

- ☐ Yes
- ☐ No

Thank you for completing this survey. The information you gave us here will help other people in ABE succeed in transitioning to college. Your answers will remain strictly anonymous. Please **hand this survey back to your instructor.** Thank you!

If you have questions about this study, or the survey and how it will be used, call lead researcher Terry Cox at 206-934-7798 or 360-920-9181.

If you have questions about your rights as a participant, call UW Human Subjects Division at 206-543-0098.

Appendix F: Descriptive statistics for non-categorical data

Statistics

		Ultimate goal for being at college	How soon will you take first college class?	What do you know about choosing a career?	What do you know about choosing your degree/ certificate?
N	Valid	584	534	458	455
	Missing	5	55	131	134
	Mean	4.15	2.25	1.79	1.59
	Std. Error of Mean	.065	.060	.051	.053
	Median	5.00	2.00	2.00	1.00
	Mode	5	2	1	1
	Std. Deviation	1.564	1.384	1.092	1.123
	Variance	2.447	1.916	1.193	1.260
	Skewness	-.699	-.352	-.047	.288
	Std. Error of Skewness	.101	.106	.114	.114
	Kurtosis	-.321	-.994	-1.125	-1.015
	Std. Error of Kurtosis	.202	.211	.228	.228
	Range	6	4	4	4

Statistics

		What do you know about applying to the college?	What do you know about filling out the FAFSA?	What do you know about applying for scholarships/ grants?	What do you know about registering for classes?
N	Valid	444	461	462	460
	Missing	145	128	127	129
	Mean	1.57	1.57	1.23	1.55
	Std. Error of Mean	.053	.059	.053	.049
	Median	1.00	1.00	1.00	1.00
	Mode	1	1	1	1
	Std. Deviation	1.123	1.257	1.149	1.058
	Variance	1.261	1.581	1.320	1.120
	Skewness	.203	.356	.896	.212
	Std. Error of Skewness	.116	.114	.114	.114
	Kurtosis	-.993	-1.081	.012	-.793
	Std. Error of Kurtosis	.231	.227	.227	.227
	Range	4	4	4	4

Statistics

		Cost difficulty	Transportation difficulty	Childcare difficulty	Difficulty of class schedules (days/times)
N	Valid	543	531	519	531
	Missing	46	58	70	58
	Mean	2.14	1.22	.82	1.25
	Std. Error of Mean	.040	.035	.046	.033
	Median	2.00	1.00	.00	1.00
	Mode	3	1	0	1
	Std. Deviation	.929	.797	1.052	.766
	Variance	.863	.635	1.106	.587
	Skewness	-.870	.475	.937	.151
	Std. Error of Skewness	.105	.106	.107	.106
	Kurtosis	-.146	-.048	-.514	-.365
	Std. Error of Kurtosis	.209	.212	.214	.212
	Range	3	3	3	3

Statistics

		Computer access difficulty	Time it takes to do homework	How difficult the class material is	English language difficulty
N	Valid	533	538	519	541
	Missing	56	51	70	48
	Mean	1.35	1.46	1.49	1.22
	Std. Error of Mean	.040	.032	.035	.039
	Median	1.00	1.00	1.00	1.00
	Mode	1	1	2	1
	Std. Deviation	.926	.745	.790	.906
	Variance	.858	.554	.625	.822
	Skewness	.487	.134	-.035	.368
	Std. Error of Skewness	.106	.105	.107	.105
	Kurtosis	-.604	-.287	-.433	-.622
	Std. Error of Kurtosis	.211	.210	.214	.210
	Range	3	3	3	3

Statistics

		Amount of time needed to work for money	Finding funds for bills and rent	Understanding what classes to take
N	Valid	526	534	537
	Missing	63	55	52
	Mean	1.75	1.87	1.59
	Std. Error of Mean	.042	.046	.035
	Median	2.00	2.00	2.00
	Mode	2	3	2
	Std. Deviation	.967	1.063	.801
	Variance	.936	1.131	.641
	Skewness	-.392	-.479	-.145
	Std. Error of Skewness	.106	.106	.105
	Kurtosis	-.788	-1.033	-.420
	Std. Error of Kurtosis	.213	.211	.210
	Range	3	3	3

Appendix G: Focus Group Participant Consent Form

UNIVERSITY OF WASHINGTON
CONSENT FORM
[Focus Group Participation – Increasing Transitions study]

Researcher: **Terry Cox, (206) 526-7798.**

Faculty advisor to the researcher: Professor Steven Olswang, (206) 685-7693.

Researchers' statement

We are asking you to be in a research study. The purpose of this consent form is to give you the information you will need to help you decide whether to be in the study or not. Please read the form carefully. You may ask questions about the purpose of the research, what we would ask you to do, the possible risks and benefits, your rights as a volunteer, and anything else about the research or this form that is not clear. When we have answered all your questions, you can decide if you want to be in the study or not. This process is called "informed consent." We will give you a copy of this form for your records.

PURPOSE OF THE STUDY

The purpose of this study is to find out what will help more Adult Basic Education (ABE) students to transition from ABE into college classes and programs. This study will ask Adult Basic Education students about their future plans for college, and about what makes it difficult for them to stay in school, and how they would like to see a program designed.

STUDY PROCEDURES

This portion of the study will be conducted using focus groups. A focus group is simply a small group of people who discuss a particular topic area and share their expertise. The researcher asks questions about the topic and guides the discussion. The focus group participants answer the questions and offer insights. Three focus groups at three separate colleges in Washington will be used. The information gathered at the focus group sessions will inform the development of a short survey to be given to more ABE students across the State.

The focus group session will last between an hour and a half and two hours. Questions such as "Are you planning to go on to college-level classes?" and "What difficulties are you facing with staying in school?" and "Are you planning to enter an I-BEST program?" will be asked of the participants. Any participant may refuse to answer any question or item in the interview.

RISKS, STRESS, OR DISCOMFORT

The questions being asked in the focus group request answers that would not generally be considered risky or require confidential answers. However, it is possible that a participant could be mildly uncomfortable with the personal data that they reveal in

response to the questions. Therefore, the researcher will take care to make sure that the answers are anonymous (so the answers that participants give will not be directly identifiable to them). At the beginning of the focus group session, you will be asked for a first name to use during the interview. The name does not have to be real. When the final report on the focus group data is written, each name will be changed in the report (so if you use the name John in the interview, your words would show up in the report under another name, such as Mike).

The interview will be recorded. The data will be transcribed into a Word document. As soon as the draft dissertation has been approved, the researcher will erase the original recordings (no longer than two years after the original focus group interview).

BENEFITS OF THE STUDY

This study will give community and technical colleges the information they need to understand how to offer programs that are designed for ABE students in Washington State. It will also let administrators and faculty understand how ABE students like you feel about I-BEST programs – whether they plan to use them, what they are most concerned about, and how they (the ABE students) would design the program if they had the option to do it themselves. Depending upon the results of the study, this could result in a change in the way programs are offered that will benefit the subjects of the study and other ABE students that come after them.

OTHER INFORMATION

You may refuse to participate and you are free to withdraw from this study at any time without penalty or loss of benefits to which you are otherwise entitled.

All of the information you provide will be anonymous. If you would like to know more about how the information you provide is used after today, you can call the researcher (who interviewed you today) at 360-920-9181 to answer any questions you may have.

Terry Cox

Printed name of study staff obtaining consent Signature Date

Subject's statement

This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have questions later about the research, I can ask one of the researchers listed above. If I have questions about my rights as a research subject, I can call the Human Subjects Division at (206) 543-0098. I will receive a copy of this consent form.

Printed name of subject Signature of subject Date

Appendix H: Instructions for Survey Proctors

Increasing Transitions to College for ABE students

a UW-approved study

Faculty Information Sheet

Terry Cox, MBA, EdDC, lead researcher
209-934-7798 or 360-920-9181

Thank you for agreeing to proctor this survey in your class. If you need more copies of the survey, please use the same color of paper as the original is on. You should have been given a bag of candy to share with your class (at your discretion). Please make sure that you tell students that they do not have to participate, and the candy should be available to all students (or not available to any if you so choose). Here is more info that you can share with the class. At a minimum, please go over the Frequently Asked Questions. Thank you!

What the study is about:

This will be a mixed-methods study, incorporating both qualitative and quantitative data. This study will look at what ABE students feel about transitioning to college: do they have a college-level goal? How prepared are they to transition? Do they know and understand I-BEST programs? How could we offer those programs (or other transitional programs) to better fit student needs? The first stage of the study was conducting focus groups at three community and technical colleges in the State. The information gathered at the focus group sessions was used to inform the development of a short survey to be given to a cluster sample of students from the same population across the State. The colleges for inclusion in the larger survey were chosen through a randomized process. SCCC was selected in that process.

One purpose of this study is to find out why more students don't go from ABE (Adult Basic Education) programs into college-level programs. Questions concerning the knowledge of the students about I-BEST programs (Integrated Basic Education and Training) are included so that colleges can gauge whether the information and recruiting efforts they are using are effective. Another purpose of the study is to let students tell the community and technical colleges how to design programs at times and in ways that are most convenient to the students.

How the study will be conducted:

This portion of the study will be completed by conducting surveys that are given directly to ABE students in levels 5/6 or GED Prep courses.

How the research will be used:

These survey results will be compiled and interpreted using quantitative methods to look at trends and tendencies in the responses. This will be done for the individual college, and also in conjunction with the same survey data from eleven other colleges around the state. This survey is part of a mixed-methods study that also included focus groups. The results of the study will be reported in a dissertation which will be available to the participating colleges upon completion, as well as to the Washington State Board for Community and Technical Colleges and other interested parties.

Risks, stress, or discomfort:

The questions being asked on the survey would not generally be considered risky or require confidential answers. However, it is possible that a participant could be mildly uncomfortable with the personal data that they reveal in response to the questions. Therefore, the researcher will take care to make sure that the answers are anonymous (so the answers that participants give will not be directly identifiable to them). No names are to be collected on the surveys.

Benefits of the study:

This study will give community and technical colleges the information they need to understand how to offer programs that are designed for ABE students in Washington State. It will also let administrators and faculty understand how ABE students feel about I-BEST programs and whether they plan to use them, as well as what they are most concerned about, and how they (the ABE students) would design the program if they had the option to do it themselves. Depending upon the results of the study, this could result in a change in the way programs are offered that will benefit the subjects of the study and other ABE students that come after them.

Frequently Asked Questions:

Will anyone be able to pick out my answers? No. Your answers will be anonymous.
Who is being asked to participate? ABE level 5/6 and GED prep students over 18.
What if I don't want to answer a question? You can always choose to not answer any question.
How long will this take? About 10-15 minutes
Do I have to participate in this? No. You do not have to participate in this study.
What if I already filled one of these out in another class? Please do not fill out a second survey.
Do I put my name on this survey? No. Please do not include your name, ID, or class on the survey.
THANK YOU!

VITA

Terry Cox was born in North Carolina, but moved with her family to Washington shortly thereafter. She grew up on a farm in rural Washington, and has lived many places within the State. Currently she calls Seattle her home. She earned an Associate of Arts degree at Centralia College, transferred to St. Martin's College (now St Martin's University) and graduated with a Bachelor of Arts degree in Economics. In 2006, she earned a Master of Business Administration degree from Washington State University. In 2012, she finished a Doctor of Education degree at University of Washington. Terry is currently working as a dean at North Seattle Community College.