

# TOWARD COLLEGE SUCCESS FOR WORKING ADULTS

## The Pipeline to Credentials in the Wisconsin Technical College System

### INTRODUCTION

*"... Postsecondary education or training has become the threshold requirement for access to middle-class status and earnings in good times and in bad. It is no longer the preferred pathway to middle-class jobs – it is, increasingly, the only pathway."*

College credentials have become more important in determining earnings, meaning that many Wisconsin workers need to earn college credentials that can connect them to skilled jobs and good careers. A statistical study of low-skill adult students published by the Washington State Board of Community and Technical Colleges (SBCTC)<sup>2</sup> characterized this need in terms of an educational "tipping point." To significantly improve their earnings, students needed to complete a year's worth of college credits and earn a credential. Unfortunately, few of the low-skill adults followed in that study reached the tipping point. The report's authors linked their findings with previous studies that found negligible wage gains associated with postsecondary education of less than a year. Echoes of the tipping point perspective were heard in President Obama's "college for all" call in 2009, when he urged every American to commit to at least one year or more of higher education or career training.<sup>3</sup>

Several workforce realities help to underscore the relevance of that challenge for Wisconsin. More than half (51 percent) of Wisconsin's jobs in 2016 will require more than a high school education but less than a four-year college degree,<sup>4</sup> so getting workers to the tipping point will be key to enhancing Wisconsin's productivity. Also, since the age distribution of Wisconsin's population is skewed away from younger workforce entrants, adults who are of working age today will comprise a large majority of workers Wisconsin employers will rely on in the near future – 78 percent of the working-age population in 2020, and 66 percent in 2025.<sup>5</sup> To a large extent, we are dependent on the workers of today to furnish the skills of tomorrow. **As Figure 1 on the next page shows, in fact, the workers of today that do not possess a postsecondary credential represent the equivalent of almost ten years of high school graduating classes. Providing those workers with adequate skills will be key to Wisconsin's economic success.**<sup>6</sup>

### Acknowledgements

This paper was written by Jayson Chung (Wisconsin Department of Public Instruction, formerly Wisconsin Technical College System), Matías Cociña (COWS), and Laura Dresser (COWS). However, the data construction, analyses, and interpretations have benefited immeasurably from numerous contributors. We wish to acknowledge the efforts of WTCS programmers Doug Sanford (who developed the original data set) and Tim Wetter. Also, Pablo Mitnik (formerly COWS, now at the Stanford Center on Poverty and Inequality) and Jessa Valentine (formerly COWS, now UW-Madison) provided critical analyses and interpretation to earlier versions of this data. Partners from WTCS, including Mark Johnson, Kathy Cullen, and Willa Panzer, reviewed and discussed results and helped develop and refine the arguments found here. Finally, we thank Davis Jenkins and Tim Harmon who weighed in on questions from data definition to results and recommendations.

The authors gratefully acknowledge the support of the Joyce Foundation for this research.

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<sup>1</sup> *Help Wanted: Projections of Jobs and Education Requirements Through 2018*. Carnevale, Smith, and Strohl. 2010.

<sup>2</sup> *Building Pathways to Success for Low-Skill Adult Students: Lessons for Community College Policy and Practice from a Statewide Longitudinal Tracking Study*. David Prince and Davis Jenkins. Community College Research Center. 2005. Available at: [ccrc.tc.columbia.edu/Publication.asp?uid=204](http://ccrc.tc.columbia.edu/Publication.asp?uid=204)

<sup>3</sup> [www.insidehighered.com/news/2009/02/25/obama](http://www.insidehighered.com/news/2009/02/25/obama)

<sup>4</sup> *Wisconsin's Forgotten Middle-Skill Jobs: Meeting the Demands of a 21st-Century Economy*. National Skills Coalition. Available at: [www.nationalskillscoalition.org/assets/reports-/skills2compete\\_forgettenjobs\\_wi\\_2009-10.pdf](http://www.nationalskillscoalition.org/assets/reports-/skills2compete_forgettenjobs_wi_2009-10.pdf), p. 11.

<sup>5</sup> Updated from *Wisconsin's Forgotten Middle-Skill Jobs: Meeting the Demands of a 21st-Century Economy*. National Skills Coalition. Available at: [www.nationalskillscoalition.org/assets/reports-/skills2compete\\_forgettenjobs\\_wi\\_2009-10.pdf](http://www.nationalskillscoalition.org/assets/reports-/skills2compete_forgettenjobs_wi_2009-10.pdf), p. 21, using population projections from Demographic Services Center, Wisconsin Department of Administration.

<sup>6</sup> *Building Bridges in Wisconsin: Connecting Working Adults with College Credentials and Career Advancement*. Valentine, Jessa Lewis, and Pagac, Adrienne. 2010. Available at: [www.cows.org/about/publications\\_detail.asp?id=506](http://www.cows.org/about/publications_detail.asp?id=506)

Figure 1  
**WISCONSIN LOW-INCOME WORKING ADULTS WITHOUT A POSTSECONDARY CREDENTIAL VERSUS  
 HIGH SCHOOL GRADUATING CLASSES**



Source: Wisconsin Department of Public Instruction. Total students expected to complete high school (based on 3-year average, 2006-2008), American Community Survey, 2007.

Recently, manufacturing businesses trying to grow their way back to stable profitability have expressed concern about the difficulty of finding skilled workers, reprising the “skills gap” concerns that were prevalent prior to the deep recession. Even though the skills gap explanations for current high unemployment are often criticized and are still an open debate, the impact of the high unemployment rates of recent years on low-skill workers has left an indelible impression about the risk to workers who lack at least some college education.

Given these circumstances, it is important to have a clear picture of the educational trajectory of low-skill adults in the Wisconsin Technical College System (WTCS). This knowledge can help colleges design programs and services that turn more workers into successful college-goers and bring the tipping point within their reach. This is the purpose of this WTCS pipeline data study. The following analysis, a central component of RISE data efforts (see box, next page), presents statewide results on transition rates, enrollment, and diploma and degree completion for adults accessing a wide variety of basic skills and postsecondary courses and programs at WTCS. Future analyses will provide information disaggregated by technical college district and educational clusters, so that campuses can compare themselves to average state performance.

## The RISE Initiative and Career Pathways

The RISE Initiative (Regional Industry Skills Education) in Wisconsin is a partnership led by the Wisconsin Technical College System (WTCS) and the Wisconsin Department of Workforce Development (DWD) that aims to increase the number of low-skill adults in the state who earn postsecondary credentials linked to high-demand jobs. In doing so, the goal is to help low-income working Wisconsinites secure good careers while providing a much-needed skilled workforce for area employers. Since 2006, RISE has been a participant in the Joyce Foundation's Shifting Gears Initiative ([www.shifting-gears.org](http://www.shifting-gears.org)).

The target population for the RISE Initiative corresponds to the approximately 709,000 Wisconsin adults who could use better skills and higher wages. To help these adults acquire higher skills and qualifications, the RISE Initiative focuses on Career Pathways and Career Pathway Bridges as a way to match one-step-at-a-time, upwardly-mobile educational pathways with actual career building opportunities employers offer. Career Pathway Bridges integrate basic skills and occupational skills instruction within a Career Pathway. This removes the disincentive for low-skill adults to have to sign up for a period of basic skills development before they can begin to work on their primary objective: to learn new occupational skills. The focus is, thus, in the design of relevant, reliable, and realistic college opportunities, that respond to the specific needs of low-skill adults, and to the demands of the local labor market and industry needs.

One of Shifting Gears' objectives is to help states use data to promote policies and program strategies to increase low-skill adults' educational attainment. Central to RISE efforts is the improved use of state data to track and measure performance of state programs serving low-income working adults, and to develop benchmarks regarding adult transitions in order to improve upon this baseline with innovative programming being developed through RISE work. In conducting the WTCS Pipeline Study, we have received invaluable support and guidance from the Shifting Gears initiative. For more information on the RISE Initiative, see [www.risepartnership.org](http://www.risepartnership.org).

## BASIS FOR THE PIPELINE DATA STUDY

RISE has concentrated on building an educational pipeline for turning low-skill, low-wage workers into college credential holders with improved economic prospects and the skills demanded by business and industry. Because Wisconsin's technical colleges provide basic skills (Adult Basic Education and English Language Learning) instruction as well as postsecondary education, a significant number of adults belonging to our RISE "target population"<sup>7</sup> (but still just a small fraction of that population) take some level of course work at technical colleges. However, not much is known about the educational performance and outcomes of these students.

The Pipeline Study was conducted collaboratively by the Center on Wisconsin Strategy (COWS)<sup>8</sup> and the Wisconsin Technical College System (WTCS),<sup>9</sup> with assistance from Shifting Gears. Besides having a special focus on working-age students with limited prior education, the Pipeline Study is the first longitudinal analysis to follow the progress of WTCS basic skills students over a multi-year period.<sup>10</sup> Our Pipeline Study bridges a gap between basic skills data and postsecondary data that reflects the separation that has traditionally existed between basic skills services and postsecondary instruction.

<sup>7</sup> [www.cows.org/pdf/ds-RISETarget.pdf](http://www.cows.org/pdf/ds-RISETarget.pdf)

<sup>8</sup> [www.cows.org](http://www.cows.org)

<sup>9</sup> [www.wtcsystem.edu](http://www.wtcsystem.edu)

<sup>10</sup> Prior to this study, measurement of postsecondary transitions, as performed for the Adult Education and Family Literacy Act's National Reporting System (NRS), stopped after seeing whether or not a basic skills student took a college course or entered a program. A complementary limitation affects WTCS's postsecondary performance measurement systems: while they do follow progress in college study over time, they do not look backward to trace what students were doing (e.g., enrolling in basic skills) before they became part of a postsecondary cohort.

## Data Construction

In conducting our analysis, we relied on data produced by WTCS. The aim of the data analysis was to generate a summary report on the composition of the population of WTCS students, their transitions within the system, the factors that may influence these transitions, and the successful achievement of their academic goals.

In order to be able to draw conclusions at the College and Program Cluster levels, we required more cases than those provided by a single cohort. Thus, we constructed a pooled data set, including people from different cohorts (i.e., students who enrolled for the first time in the system in different years). Currently, the data set is populated by students from seven cohorts, from 2000 to 2006. In order to make the data comparable, we considered a five-year time window for each of these cohorts. The pooled data set contains, then, information about academic achievements within the five-year window from the moment a student enrolled in the system for the first time. Thus, the time windows pooled in the set are: 2000-2004; 2001-2005; 2002-2006; 2003-2007; 2004-2008; 2005-2009; and 2006-2010.

By following this definition, our data set was populated by more than 590,000 cases. Of those, we used only 152,000, which corresponds to students with no prior credits at WTCS who enrolled in the system for the first time between 2000 and 2006, were 25-54 years old at the time of first enrollment, and who had 12 years or less of formal education at entry.

Due to the structure of the WTCS underlying data set, we did not have access to the clients' information on a semester-by-semester basis. Instead, we only have access to summary variables for a given time window. For example, we could not know how many Remedial Education credits a client took in any particular semester, but we were able to know how many such credits she took between 2000 and 2005.

We adapted the methodology used by David Prince and Davis Jenkins<sup>11</sup> in the Washington SBCTC's tipping point study to our technical college system data. A hallmark of that method was to group students by the type of instruction they enrolled in when they entered a community or technical college. This allowed the researchers to compare students' educational progress and attainment by the educational "doorway" through which they entered the institution. We used a similar approach, assigning each student to an English Language Learning (ELL) group, one of three Adult Basic Education (ABE) groups (Beginning level, Intermediate level, or Adult-Secondary-Education level), a Developmental Education group, a Remedial Education group, or a Postsecondary group, depending on the lowest level of coursework the student took during the study period. In this report, for simplicity, the three levels of ABE groups are combined into one group, and the Remedial Education group, which was by far the smallest in size, is pooled together with the Developmental group.<sup>12</sup>

Our study population mirrored as closely as possible the RISE target population. Specifically, the population consisted of seven cohorts (2000-2006) of first-time WTCS students who were between 25 and 54 years of age (beyond traditional college-going age)<sup>13</sup> and who had completed at most 12 years of prior education (i.e., completed high school but had less than a year of or no college experience, or did not complete high school at all) at the time they first enrolled in technical college. Students in each cohort were followed for a five-year period<sup>14</sup> from their first enrollment (e.g., if a student enrolled in a single credit in 1998, and did not take credits again until 2001, she was not counted as part of the 2001 cohort). In performing the analysis, we combined all seven cohorts into one population, thus increasing the number of cases so we could perform the full analysis for smaller units (e.g., colleges and career clusters) without running out of cases.<sup>15</sup>

Given our interest in technical colleges' ability to help more low-skill workers in Wisconsin earn career-related college credentials, our study focused on understanding the degree to which this population of students was able to avail themselves of college-level instruction and reach educational milestones such as entering and graduating from a technical college program.<sup>16</sup>

11 *A Short Guide to "Tipping Point" Analyses of Community College Student Labor Market Outcomes*. Davis Jenkins. Community College Research Center. 2008. Available at: [ccrc.tc.columbia.edu/Publication.asp?uid=600](http://ccrc.tc.columbia.edu/Publication.asp?uid=600)

12 In WTCS, "remedial" and "developmental" refer to two different kinds of pre-college-level instruction and are coded differently in WTCS's data system. However, these definitions and codes have not been applied consistently across all the technical colleges, so for statewide analysis it was safer to combine the two categories.

13 We have also collected and analyzed data for students aged 18-24 years old. Data for this age group is provided in Appendix 1.

14 Most students leave the system before five years. For the population under study, the median time within the system is one year, while the mean time is 1.9 years. More than 75 percent of students in the age and education group stay in the system for two years or less. More than 80 percent stay three years or less, and more than 90 percent of students stay in the system for four years or less.

15 Before pooling the data, we looked at consistency across cohorts. The results for individual cohorts did not differ markedly.

16 Readers who are familiar with the National Reporting System (NRS) may point out that for ABE and ELL students, we ignored the students' personal goals that are a baseline factor for federal accountability indicators. Keeping in mind that all of the students in this study were past the traditional age of college attendance, and none of them had more than high school completion as their highest level of educational attainment, we let the imperative for more adults to earn college credentials shape the framework for this analysis.

## STUDY FINDINGS

### Characteristics of Cohort Groups

The size of our study population, consisting of the seven combined cohorts, was 152,285 students. The largest group, based on starting level of instruction, was the Postsecondary group. This group, which was made up of students who did not take any courses below the college level during the five-year study period, numbered almost 80,000 students, more than half of the study population. The ABE group numbered about 44,400 students (11,600 were in the Beginning level ABE subgroup, 23,400 were in the Intermediate level subgroup, and 9,400 were in the Adult Secondary Education level subgroup.)

In the discussion below about findings, we often use the short labels “ELL students,” “ABE students,” etc., to refer to the study population groups. The label “ELL students” refers to the group of students whose lowest-level course taken during the five-year observation window was an English Language Learner course, and so on.

The students in the ELL group of our study population of 25-54 year-olds tended to be considerably younger than students in the other groups. Sixty-one percent of the ELL students were in the 25-34 age band as opposed to the 35-54 age band. The students in the Postsecondary group tended to be older than the students in the other groups.

A much higher proportion of students – more than 90 percent – in the Developmental/ Remedial and Postsecondary groups had completed high school prior to their initial enrollment at a technical college than those in the ELL and ABE groups. Even so, a notable 43 percent of the students in the ABE group began studies at a technical college having already earned a high school credential. (More than half of all WTCS ABE students at large hold high school diplomas or the equivalent.<sup>17</sup>)

Table 1  
STUDY POPULATION DEMOGRAPHICS

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Post-secondary</i>
Overall number of students	20,923	44,403	7,310	79,649
Percent who are:				
Younger (25-34 years of age)	61.3	48.1	49.1	43.5
Non-White	88.0	39.7	12.4	13.4
Black	2.3	24.8	6.7	8.4
Hispanic	74.3	10.2	3.0	2.5
Asian/Pacific Islander	11.5	1.8	1.1	1.0
Native American	0.0	2.8	1.6	1.5
High School Completers	32.4	42.6	93.1	93.2

17 For example, WTCS's Client Reporting System shows that in 2010-2011, 55.6 percent of all enrollees in Adult Basic Education and English Language Learning courses had completed high school or the equivalent.

Groups differed dramatically in their racial/ethnic composition. The proportion of non-white students in the study population's Postsecondary group is very similar to the representation of non-white individuals in Wisconsin's general population. However, non-white racial-ethnic groups are significantly overrepresented in the study population's ABE group. Twenty-five percent of the ABE students were Black/African-American, and 10 percent were of Hispanic origin. Improving college transitions and outcomes for ABE students could hold particular promise for increasing Black and Hispanic students' participation in technical college programs and improving their chances for educational and economic success. (Transition to program enrollment by Race/Ethnicity is discussed in the box below.)

### Race/Ethnicity Outcome Differentials

Below we show the rates of transition to program enrollment for various racial and ethnic groups. Although there are not great differences in the rates at which Postsecondary students enter programs, there is a difference among ABE students. A much higher proportion of white ABE students enroll in programs than Black, Hispanic, or Native American ABE students. The Asian/Pacific islanders group, though relatively small, tends to perform as well as whites. It is worth noting that the small group of black students who enter the system through the Developmental/Remedial "gate" outperform all other groups in terms of enrollment in a postsecondary program.

#### POSTSECONDARY PROGRAM ENROLLMENT BY RACE AND ETHNICITY

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Post-secondary</i>
Overall number of students	20,923	44,403	7,310	79,649
<b>Number of students who are:</b>				
White	2,160	25,845	6,302	64,715
Black	475	11,032	490	6,653
Hispanic	15,536	4,543	220	1,998
Asian/Pacific Islander	2,396	815	79	796
Native American	7	1,253	116	1,189
<b>Percent enrolled in a postsecondary program</b>				
White	4.4%	23.2%	65.5%	30.8%
Black	8.2	12.9	68.2	26.9
Hispanic	0.8	9.5	62.7	35.2
Asian/Pacific Islander	3.2	20.7	57.0	33.7
Native American	0.0	11.6	62.1	31.1

## College Transition Milestones

Our first set of findings focused on the extent to which groups of students moved on to postsecondary studies during the study period. We looked at what percent of students reached three milestones in each group: attempting at least three college level credits, enrolling in a college program of at least one year in length, and completing a college program of at least one year in length. Looking at these milestones as a sequence gives us an idea of the persistence, or yield, of students along the pathway to college success.

Because of our overriding interest in looking at students' progress toward tipping-point success, in this analysis when we talk about program enrollments and program completions, we are only counting state-approved technical college programs one year in length or more (i.e., one- and two-year technical diplomas and associate degrees) and apprenticeship programs. We purposely set aside data about technical diploma programs of less than one year in length.<sup>18</sup> To remind the reader of this exclusion, we will use the term "qualifying program" to refer to the set of program types we are tracking. However, before leaving less-than-one-year programs behind, we note that ELL and Postsecondary students showed a higher level of interest in these programs than their ABE counterparts (see Table 2). Omitting these short-term programs from our counts made the number of ELL students who enrolled in any program 36 percent smaller than it would have been had we left those programs in; the number of Postsecondary program students was reduced by 26 percent. In contrast, the number of ABE students who enrolled in programs was cut by only 12 percent.

Table 2

### COMPARING ENROLLMENT IN SHORT-TERM PROGRAMS AND QUALIFYING PROGRAMS (SEE FOOTNOTE 18 FOR DEFINITION)

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Number of students enrolling in a postsecondary program at some point **	537	9,359	5,050	32,667
Percent who enrolled in a short-term technical diploma	44.7%	22.2%	20.1%	31.0%
Percent who enrolled in a qualifying program	73.2	99.8	107.3	78.8

**Note:** \*\* Figures in this table count as "program enrolled" all students both in short-term and qualifying programs. In the remaining tables, students are counted as "program enrolled" as long as they have registered in at least one qualifying program during the observation window. You can find tables on enrollment and performance for students who only enrolled in short-term programs in the appendix.

(Percentages may add to more than 100 percent by column due to duplicate counts, since some students enroll in more than one program.)

<sup>18</sup> More specifically, we counted students whose only programs were less-than-one-year technical diploma programs as being enrolled in course work in the system (the denominator in our ratios) but not as entering or completing a program. A set of tables describing this population is provided in Appendix 2. These tables do not include the many local, short-term certificates that colleges offer and are not approved or tracked by WTCS.

Table 3  
ATTAINMENT OF POSTSECONDARY MILESTONES

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem*</i>	<i>Postsecondary</i>
Overall number of students	20,923	44,403	7,310	79,649
Average time (years) that students remained in the system	2.0	2.1	2.6	1.9
<b>Percent who passed pre-college credits</b>				
One or more, less than 3 ELL	31.1			
Six or more ELL	22.5			
One or more, less than 3 ABE	10.0	50.1		
Six or more ABE	3.7	12.4		
One or more, less than 3 Dev/Rem	0.8	6.2	60.1	
Six or more Dev/Rem	0.3	1.4	5.9	
<b>Percent who enrolled in a postsecondary:</b>				
Course (3 or more credits)	4.2	25.7	73.7	70.1
Qualifying program	1.6	18.6	65.1	30.3
and who completed a program	0.6	7.2	29.5	11.4

Note: \* The WTCS course labeling structure includes other categories of courses that deal with the remediation needs of entering students. Recent figures indicate that the WTCS has delivered pre-program math, reading, and/or writing instruction to 13,970 (2009), 17,562 (2010), and 22,158 (2011) students respectively.

## TAKING COLLEGE CREDITS

As shown in Table 3, 70 percent of the Postsecondary students reached the first milestone, attempting at least three college-level credits, which is the size of a typical college course. Since by definition all of the students in the Postsecondary group enrolled in at least one college course, then three out of ten of them only attempted a course of less than three credits, which over a five-year period represents only a fleeting connection with technical college study. Developmental/Remedial students reached this milestone at about the same rate.

A little over 25 percent of the ABE group reached this milestone. Three-quarters of the ABE students did not reach the three-credit threshold during the study period, and almost as many never attempted college credits at all. Obviously, there is plenty of room to improve this transition measure. Even so, this level of transition strikes many adult education observers as being surprisingly high. This transition indicator, and the next two, bear out that the improvement for which technical colleges should strive can be built on capabilities that are already strong.

In contrast to Postsecondary students, almost all Developmental/Remedial students and ABE students who enrolled in any college credits attempted at least three credits (93 percent and 83 percent, respectively). This suggests that students who attempted college work after some pre-college instruction were more firmly committed than a good portion of Postsecondary students who merely dipped a toe in the waters of college study.

For ELL students, the rate of reaching this first milestone, like the other milestones to come, was much lower. Only 4 percent attempted three or more college credits. The WTCS ELL student population is diverse but is predominantly Hispanic and functions at low academic levels. The connection between ELL students and technical college programs is tenuous and warrants further investigation.

The second and third milestones directly concern college programs. A technical college student must first enroll in a specific program in order to be able to earn a credential. Not all students who take college courses enroll in a program – so a student's enrollment in a program is an important milestone. Completing the program and earning the credential that program offers is the obvious next milestone.

### ENROLLING IN AND COMPLETING PROGRAMS

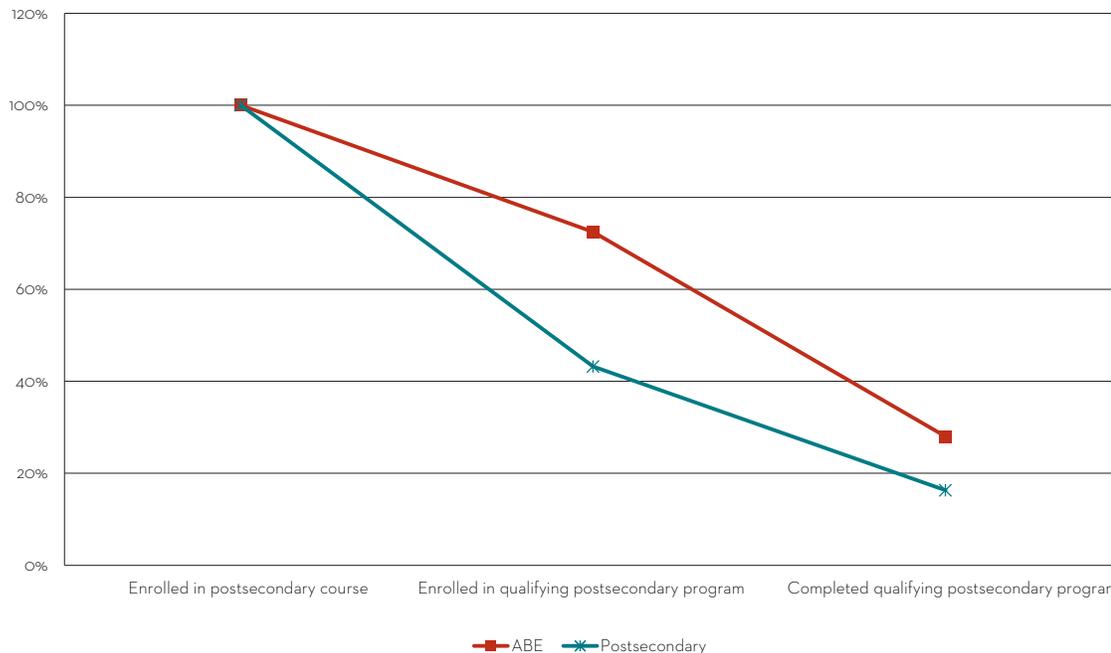
While about 70 percent of all students in the Postsecondary group attempted at least three credits of college work, only about 30 percent of all students in the group enrolled in a qualifying program during the study period. Twelve percent of all Postsecondary students reached the third milestone, completing a qualifying program.<sup>19</sup> Developmental/Remedial students had higher achievement rates regarding the second and third milestones. This is reassuring, since it is safe to assume that students in this group had strong intentions to become program students, an assumption that cannot be made of all Postsecondary students.

Fewer students in the ABE group reached the second and third milestones. Nineteen percent of ABE students became program students during the study period (compared to more than a quarter who reached the first milestone). About 7 percent were successful in completing a technical college program. Still, these data reflect significant movement from technical college basic skills classrooms and learning labs into college programs. They underscore an earlier observation: while there is plenty of room to improve transitions to postsecondary education for ABE students, there is also a history of strong performance in this area to build on.

Besides looking at these major transition milestones, we also examined other measures to determine how individuals in our student groups performed in college-level courses. The next two indicators focus just on those students who took a college-level course during the study period (all of the Postsecondary students, but only portions of the other groups).

Figure 2 compares the performance of ABE versus Postsecondary students. If we take the total number of students that entered the system through the ABE “doorway” and enrolled in at least one postsecondary course as the reference group, we observe that more than 72 percent of them enrolled in a qualifying postsecondary program, and that 28 percent of them successfully completed the program. From the total of Postsecondary students who enrolled in a postsecondary course (three or more credits), only 43 percent of them enrolled in a program, and 16 percent of them graduated.

**Figure 2**  
**FROM TAKING A POSTSECONDARY COURSE TO COMPLETING A PROGRAM:**  
**ADULT BASIC EDUCATION VERSUS POSTSECONDARY STUDENTS**



<sup>19</sup> This measure describes the transition of course enrollees into program completers and thus bears only a limited relationship to the standard program completion measure used in the WTCS's Perkins postsecondary performance report cards. The latter only tracks students who are in a program and have already earned at least 12 college credits. Also, the population for the study at hand is restricted to older students with limited prior education. For these reasons, the Perkins measure returns much higher transition values.

### CREDIT ACCUMULATION AND “GATEKEEPER” COURSES

Of the students who attempted a college course, students in the “pre-college” groups – that is, ELL, ABE, and Developmental/Remedial – were more likely to successfully complete at least three credits than Postsecondary students, as shown in Table 4. ELL students met with slightly better success in college course work than Postsecondary students, but ABE as well as Developmental/Remedial students outperformed Postsecondary students by a wide margin. Moreover, this performance gap widened as the credits-earned threshold increased. ABE and Developmental/Remedial students were roughly three times as likely as Postsecondary students to earn at least 24 credits – a full year’s worth of college study.

English and math courses are commonly regarded as obstacles to technical college success for many students, especially those with lower levels of previous academic achievement. Table 5 depicts a measure related to successful completion of college-level English and math courses from the General Education curriculum. It shows that the proportion of students who took General Education English or math and successfully completed those credits is about the same for all of the groups except one (students who are not pursuing associate degrees often do not need to take such courses). The exception was the ELL group, which produced higher English and math course success rates.<sup>20</sup>

Table 4

#### COLLEGE CREDIT COMPLETION FOR STUDENTS WHO ATTEMPTED COLLEGE COURSE WORK

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Overall number of students	20,923	44,403	7,310	79,649
Number who attempted postsecondary credits	1,088	12,438	5,542	79,649
Percent who completed:				
at least 3	69.4%	80.8%	90.2%	60.0%
at least 6	40.2	68.1	81.9	39.3
at least 12	29.3	57.0	70.9	26.6
at least 24	18.5	42.2	55.1	15.1

Table 5

#### SUCCESSFUL COMPLETION OF COLLEGE ENGLISH AND MATH

<i>A.</i>	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Number who took a college English course (801)	298	7,205	3,896	16,452
as percent of those who reached the college level	27.4%	57.9%	70.3%	20.7%
Number who took a college Math course (804)	205	5,092	2,666	13,351
as percent of those who reached the college level	18.8%	40.9%	48.1%	16.8%
<i>B.</i>	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Number who took a college English course (801)	298	7,205	3,896	16,452
Percent who passed 80 percent or more of attempted college-level English credits	80.5%	70.9%	75.7%	70.0%
Number who took a college Math course (804)	205	5,092	2,666	13,351
Percent who passed 80 percent or more of attempted college-level Math credits	81.0%	63.8%	72.5%	68.2%

<sup>20</sup> This is likely a selection issue. It is worth noting that the number of ELL students at this level is rather small (N=298), and that these students are likely to present either observable or non-observable characteristics (e.g., motivation, resilience) that makes them more likely to perform well. Another possible explanation for the high performance of this group is that a portion of ELL students had a high level of education in their country of origin prior to enrolling at a technical college for English language instruction. However, WTCS Client Reporting data is insufficient to bear that out, because usable information regarding highest level of prior education was not provided for a significant number of students.

ELL students who attempted a college English or math course represented less than 30 percent and 20 percent, respectively, of all ELL students who reached the college level. Still, those English and math participation rates were higher than those of the Postsecondary group – 21 percent of postsecondary students attempted a college-level English course, and 17 percent of them attempted a college math course. In sharp contrast, 58 percent of ABE students who reached the college level took college English and 41 percent took college math. The highest rates of English- and math-taking (70 and 48 percent, respectively) were posted by the Developmental/Remedial students.

These additional data suggest a strong intentionality among the segment of ABE students who transitioned to postsecondary study. Not only did they accumulate more college credits than their Postsecondary counterparts, but more of them also took “tough” courses like English and math, and they performed just as well in those courses.

## Participation and Success in College Programs

Now that we have described the attainment of some important transitional milestones and course-related success of our groups, we will focus closer attention specifically on the students who, at some point during the study period, entered a qualifying program. We will present data related to their accumulation of college credits, their choice of program type, and their success at completing those programs.<sup>21</sup>

### CREDITS EARNED BY PROGRAM STUDENTS

It stands to reason that students who are in qualifying programs would accumulate more credits than those who are not; the former have a given number of credits (at least 26 for a one-year program) to earn to complete their presumptive goal. However, given how important it is for today’s workers to try to attain more than just a few college credits, it is worthwhile to see how stark the difference between enrolled and non-enrolled students is.

Table 6 (next page) compares the levels of college credits earned by students who attempted at least one college course, depending on whether they were or were not enrolled in a qualifying program during the study period. The distinction could not be clearer. Individuals completing fewer than six credits made up a majority of students who were not enrolled in a qualifying program, while such individuals accounted for only a small proportion of students who were enrolled in a qualifying program. In sharp contrast, individuals completing 12 credits (the equivalent of four typical courses or one semester’s worth of credits) or more made up only 11 percent of students who were not enrolled in qualifying programs, compared to 70 percent of students who were.

While the differences among groups in this comparison were not large, we did find that the proportion of students taking college courses that earned a semester’s worth or more of credits was higher for the ABE and Developmental/Remedial groups than for the Postsecondary group.

We also counted significant numbers of students who earned 12 credits or more, yet were not in qualifying programs. For the student population as a whole, and for Postsecondary students in particular, almost 10 percent of students who had attempted college credits were in this category. An even larger proportion of ABE students – more than 20 percent – fit this description. That many technical college students of working age and holding only a high school diploma or less completed a semester’s worth of credits, yet may not have been on a path leading to the tipping point, merits attention.

<sup>21</sup> As a reminder, “qualified programs” refers to one- and two-year technical diplomas, associate degrees, and apprenticeship programs, thus excluding technical diplomas and certificates that run for less than a year.

Table 6

**COMPARING COLLEGE CREDIT ACCUMULATION BETWEEN STUDENTS WHO WERE AND WERE NOT ENROLLED IN A QUALIFYING PROGRAM**

	<i>ELL</i>		<i>ABE</i>		<i>Dev/Rem</i>		<i>Postsecondary</i>	
	Y	N	Y	N	Y	N	Y	N
Enrolled in a Qualifying Program								
Total number of students taking college-level courses (in 1000s)	0.3	20.6	8.3	36.2	4.8	2.6	24.1	55.5
Percent that attempted:								
Less than 3 credits	1.9%	26.5%	1.0%	21.7%	0.9%	12.7%	3.1%	41.6%
At least 3, less than 6 credits	10.6	43.7	2.9	31.8	2.8	29.0	5.5	30.6
At least 6, less than 12 credits	9.9	16.4	8.3	17.2	7.5	21.8	14.0	15.0
At least 12, less than 24 credits	17.1	9.5	16.7	16.4	15.4	25.1	22.8	10.7
24 or more credits	60.6	3.8	71.1	12.9	73.5	11.4	54.7	2.2
Percent that completed:								
Less than 3 credits	8.7%	39.8%	8.5%	38.4%	6.6%	26.0%	11.5%	52.4%
At least 3, less than 6 credits	8.4	38.0	4.9	26.6	4.8	26.7	7.6	26.3
At least 6, less than 12 credits	9.9	11.2	9.7	13.6	9.4	19.5	14.3	12.0
At least 12, less than 24 credits	17.7	8.0	15.6	13.2	14.8	20.6	19.8	8.0
24 or more credits	55.3	3.0	61.2	8.2	64.3	7.3	46.7	1.3

**STUDENTS CHOICE OF PROGRAM TYPE**

Table 7 (next page) allows us to compare the number of students who enrolled in technical college programs by program type, as defined by the type of credential the program delivers. The distribution of program admissions for each student group generally reflected the number of programs of each type offered by technical colleges. Applied associate degrees are by far the most numerous of technical college programs, which means that a large majority of program students are pursuing that credential. Two-year technical diplomas are the occupational programs offered in lowest number, and have the smallest number of students. Though a pattern based on program type was clearly discerned, there was some variation in program choices among student groups. Totals within each group exceed 100 percent because students enroll, on average, in more than one program during the five-year observation window, as shown in the last row of the table.

A much higher proportion of Postsecondary students were enrolled in apprenticeship programs when compared with other groups.<sup>22</sup> The higher proportion of students enrolled in apprenticeship programs was counterbalanced by higher proportional enrollments in one-year technical diplomas for ELL, ABE, and Developmental/Remedial students compared to Postsecondary students. ABE and Developmental students also had higher admission rates to associate degree programs than other student groups. Seventy-nine percent of ABE students who entered programs participated in associate degree programs, compared to 69 percent of Postsecondary students. This suggests that many program-minded students who acknowledge some basic skills deficiencies may use technical colleges' ABE services in addition to or in place of Developmental instruction as part of their preparation for college programs. ABE students' preference for associate degree programs is likely to at least partially account for the higher credit accumulation and English and math course participation rates described in the previous section.

<sup>22</sup> Because of the depth of training and superior earnings potential that apprenticeship provides, this difference deserves attention. Since access to apprenticeship programs is not directly under technical college control (the classroom instruction provided by technical colleges that is reflected in the data here supports on-the-job training that is at the heart of apprenticeship), this issue is outside the main scope of this report's discussion.

**PROGRAM COMPLETION RATES**

Completing programs and earning credentials, of course, is the educational goal. When all types of programs were taken together, completion rates were basically the same for all groups of students, with Developmental/Remedial students outperforming the other three groups by a small margin. Postsecondary students did not outperform students in the pre-college groups. For each of the groups of ELL, ABE, and Postsecondary students, the program completion rate for students who enrolled in a program was between 37 and 39 percent. The success rate for Developmental/Remedial students was several percentage points higher.<sup>23</sup>

For the applied associate degree, the longest (along with two-year technical diplomas) and, due to its General Education requirements, the most academically challenging program type, completion rates across the student groups differed by only a handful of percentage points. Thirty percent of ABE students finished their applied associate degree programs, just behind Postsecondary students at 32 percent. The small group of ELL students who entered applied associate degree programs completed at a rate of 33 percent.

The completion rate for ABE students of one-year technical diploma programs lagged behind that of students in the Postsecondary group by five percentage points, a wider, though still fairly small, gap than for applied associate degree programs.

*Table 7*  
**PROGRAM ENROLLMENT BY QUALIFYING PROGRAM TYPE**

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Number of students enrolling in postsecondary program at some point	344	8,252	4,759	24,119
Percent enrolled in				
Apprenticeship program	7.3%	3.2%	1.3%	15.6%
One-year technical diploma	32.3	29.1	26.9	19.3
Two-year technical diploma	2.6	2.0	1.6	2.4
Applied associate degree	61.9	71.0	80.0	63.7
Liberal Arts associate degree	10.2	7.9	4.2	5.7
Mean number of postsecondary programs (among those who enrolled)	1.4	1.4	1.5	1.2

*Table 8*  
**PROGRAM COMPLETION RATES BY PROGRAM TYPE**

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Percent of students who enrolled in a program of the type indicated below that completed a program of that type				
A program of any type	37.1%	38.6%	45.4%	37.7%
Apprenticeship program	30.8	46.5	53.1	40.9
One-year technical diploma	47.4	44.8	53.5	51.6
Two-year technical diploma	22.2	25.3	33.8	37.9
Applied associate degree	33.3	29.9	32.0	32.0

<sup>23</sup> The values for standard indicators of technical college program completion are much higher, as previously explained in footnote 19. One of the reasons is that the study population was limited to students between the ages of 25 and 54. We provide figures for students aged 18-24 years in the Appendix section.

### PROGRAM STUDENTS' SUCCESS AT PASSING CREDITS

One last finding of interest involves the rate at which program students successfully completed the credits that they attempted. Table 9 shows that the program students who took the highest number of credits during the study period were the most successful at passing their credits. Because the vast majority (93 percent) of enrolled students represented in Table 9 attempted at least six credits, we can focus our attention on the three topmost levels of attempted credits. There we see a clear upward trend of passing rates as students took more credits. Pass rates for students who attempted 12 to 23 credits were at least nine percentage points higher than for students who attempted six to 11 credits for all groups except Postsecondary students, for whom the difference was minimal. Stepping up from taking 12 to 23 credits to taking 24 or more credits produced an increase in pass rates of at least 14 percentage points within the Postsecondary, Developmental, and ABE groups, and a smaller 6 percentage point increase within the ELL group.

This interesting feature of educational persistence and achievement may be attributable to a self-selection process, whereby less capable students, whether in terms of academic skills or other college readiness factors, finished or withdrew from their studies before reaching the higher credit levels. If this is the case, knowing that this phenomenon exists should spur colleges to find ways to help program students overcome barriers that prevent persistence and future success in credit-bearing courses.

Table 9

#### CREDIT-PASS RATES FOR PROGRAM STUDENTS BY NUMBER OF POSTSECONDARY CREDITS TAKEN

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Credit-pass rate, for students who took:				
more than 0 and less than 3 credits	50.0%	66.7%	64.6%	69.1%
at least 3 and less than 6 credits	61.3	58.8	55.4	71.1
at least 6 and less than 12 credits	67.7	50.8	55.4	68.3
at least 12 and less than 24 credits	84.5	61.5	64.4	70.7
at least 24 credits	90.8	83.2	85.2	85.1

## College Differences Suggest Innovation and Improvement is Possible

To this point, we have focused on system-wide data, and in our conclusions (next page) we spend some time thinking about system-wide implications. Here, however, we provide a table that powerfully illustrates the variation among districts within the system using selected measures of adult student progress and success. Indeed, the variation among districts in student success appears to be more significant than variation among demographic groups we have reviewed above. Some findings that emerge at the state level clearly may not reflect the situation at individual colleges. However, they do provide a reference point for further analysis at the district and program or career cluster level.

The table below shows the range of variation in educational outcomes for the population of adult students in the highest performing college in each indicator and group, the lowest performing college, and the median college for that variable and group (this means that the “lowest college” for the percentage of students enrolled in a postsecondary program for ELL can be different from the college ranked in the same position for, e.g., ABE). The variation in educational outcomes is significant in almost all indicators and all groups. For example, the percentage of postsecondary students who completed at least 12 credits is four times as large in the better performing college as compared to the lowest performing college. The fact that these differences are so marked suggests to us that colleges have room for improvement in almost all indicators, and that colleges that perform particularly well in generating positive outcomes for specific educational groups have a lot to offer to the technical college system.

### VARIATION AMONG COLLEGES FOR SELECTED INDICATORS

<b><i>A. Percent of students who enrolled in a postsecondary program</i></b>	<b><i>ELL</i></b>	<b><i>ABE</i></b>	<b><i>Dev/Rem</i></b>	<b><i>Postsecondary</i></b>
System-wide	1.6%	18.6%	65.1%	30.3%
Lowest college (among non-zero values)	0.3	9.9	39.1	13.1
Highest college	10.9	31.0	87.0	47.6
Median college	1.6	18.4	60.5	31.5
<b><i>B. Percent of students who attempted postsecondary course work that completed at least 12 credits</i></b>	<b><i>ELL</i></b>	<b><i>ABE</i></b>	<b><i>Dev/Rem</i></b>	<b><i>Postsecondary</i></b>
System-wide	29.3%	57.0%	70.9%	26.6%
Lowest college (among non-zero values)	4.5	47.3	48.5	9.9
Highest college	66.7	69.4	89.1	39.9
Median college	24.1	55.9	71.1	24.7
<b><i>C. Percent of students who enrolled in a postsecondary program that completed an applied associate degree</i></b>	<b><i>ELL</i></b>	<b><i>ABE</i></b>	<b><i>Dev/Rem</i></b>	<b><i>Postsecondary</i></b>
System-wide	33.3%	29.9%	32.0%	32.0%
Lowest college (among non-zero values)	13.3	18.4	21.2	26.5
Highest college	100.0	40.7	53.1	44.0
Median college	26.6	29.9	36.1	31.4

## CONCLUSIONS AND IMPLICATIONS

This project marks the first time that Wisconsin technical college data has been analyzed with a narrow focus on working-age adult students (ages 25-54). The analysis yields surprising results as well as confirms and expands widely held understandings of the trajectories of adult students in WTCS. Probably the most surprising and significant result is that ABE students make it to degree and technical diploma completion at least as often as other students. Less surprising, perhaps, but significant nonetheless, is the apparent importance of program enrollment on students' accumulation of credits. Fundamentally, this analysis reinforces the importance of adult students in the technical college system and the need for greater investment of attention and resources in Career Pathways designed to support their advancement and success.

### ABE as a Feeder for Degree Programs

The study indicates that colleges' ABE services are a significant feeder mechanism for their occupational programs. While the rate at which ABE students transition to postsecondary studies could and should be improved, adults already use ABE in greater numbers than they use Developmental and Remedial instruction as a way to prepare for college success. ABE students who become program students tend to move more frequently into applied associate degree programs, compared to program students who don't have an ABE background. Critically, ABE students are at least as successful at completing their programs as other students. These ABE students tend to accumulate more college credits than their Postsecondary counterparts, probably due to their preference for associate degree programs.

This result tends to come as a surprise. We emphasize it because it should help colleges consider new ways to focus on ABE as a feeder into their occupational programs. Consistent outreach from key occupations to ABE programs, exposure of ABE students to campus opportunities (especially when ABE is delivered away from campus), and other innovations may help build stronger connections between ABE and occupational programs throughout the system. Colleges should consider what they can do to help more basic skills students make this transition.

It is worth remembering that the analysis also shows that many students who took only postsecondary courses had very limited engagement with their colleges. Three out of ten of them took fewer than three credits worth of college courses, and seven out of ten did not enter programs with durations of a year or more, nor did they enter apprenticeship programs. This finding might signal that these students are struggling academically, and that pre-college preparation would have helped them. They may have enrolled in a course to just "try things out" without any firm commitment to enter a program. Or, they may have been interested in a course or two of special interest. However, in many ways, these students are similar to ABE students. Colleges might do well to explore how they can encourage more of these students to firm up their college goals and enter programs, or engage in the basic education they may need for success.

The high numbers of students from both the Postsecondary and ABE groups who earned 12 or more college credits but never entered a qualifying program might be another target group for intervention. Colleges should seek to identify what outcomes such students achieved, and provide them with the direction and support they need to get them into programs that lead them toward the tipping point.

### Success Breeds Success, and the Importance of Program Enrollment

A second important result of this analysis is the sense that there is no single event in a student's trajectory that guarantees success. While there is no easy target, it is clear that success breeds success. The rates at which students in qualifying programs passed the college credits they took showed that students who enrolled in between six and 23 credits did significantly worse than students who took at least a full year's worth of credits, 24 or more. This corroborates the opinion of many on-campus observers that success in the early stretch of a student's academic career is critical to her educational momentum.

By definition, enrolling in a program is necessary for earning a technical college credential. However, looking deeper at program enrollment and credit accumulation shows unmistakably that low-skill adult students do not build momentum in their college experience unless they are in a program. We might think of program enrollment as a basic requisite for student

engagement, and this deepens our appreciation of program enrollment as an important milestone for college success. We are impressed by the stronger success across the pipeline of enrolled students.

Both of these insights (that success breeds success, and that program enrollment matters) may seem obvious and may simply owe to selection – enrolling in a program means you are more focused on your success, and finishing more credits gets you closer to completion. It is important, however, to think precisely about how students' college experiences change on the basis of these two factors. Passing courses early in their studies builds confidence and enables students to develop self-images as potential college graduates. Enrolling in programs may integrate students into a community of peers, faculty, and advisors that helps them stay on course through completion.

Our data can only suggest directions for colleges to explore. In particular, colleges might do well to begin thinking about systems and practices that can help connect more adult learners, especially ABE students, to programs more quickly. Colleges may find it fruitful to examine what supports could be put in place to help more students succeed in tough courses that typically challenge students early in the program curricula and persevere through the early stages of their programs, which are critical to their ultimate academic success.

## Putting These Results to Use

This system-wide pipeline analysis provides some new perspectives on low-skill, working-age adults attending technical colleges. As with other studies using highly aggregated data, it is a starting point for more detailed questions and further investigation. We offer this data to help inspire discussion, investigation, and innovation at the district level. Improving student success for adults – for those who need basic skills – will come from interaction and knowledge of college instructors and staff. Answers will take the form of improved instructional and student-support strategies to help more low-skill adults set higher goals that include earning a credential and making solid connections to college programs. A vigorous, purposeful partnership between basic skills and occupational divisions and departments at the colleges will be a key to successfully responding to the challenge.

## Continued Innovation and Investment in Bridges and Pathways

Wisconsin's RISE work on Career Pathways is a prime example of how technical colleges, along with workforce development partners, are responding to the challenges made clear by these data. Career Pathway Bridges, which integrate Adult Basic Education or English Language Learning and occupational instruction inside the embedded credentials of Career Pathways, exemplify the new partnership between basic skills and college programs that can dramatically improve the rates of college attainment for adult learners. Career Pathways strengthen the connection between education and work, while providing a sequential approach to skill building that is realistic for workers. Career Pathway Bridges, in particular, have the effect of “lowering the ante” for embarking on college study for adults who have not considered themselves to be “college material,” without lowering the standards for college credentials.

Along with Career Pathways, technical colleges already have a rich catalog of strategies and techniques for intensifying student engagement and actively supporting students' efforts to complete programs. This study may help colleges identify groups of adult students who have not been on programs' “radar” in terms of targeted recruitment and retention efforts. By using effective and already familiar methods for promoting student success with a new target audience and expanding Career Pathway programming, colleges may produce a new generation of successful college-goers from within their walls.

## APPENDIX 1

This appendix includes figures for students who were 18-24 at the time of first enrollment at a technical college and had less than 12 years of formal education at that time.

### DEMOGRAPHICS

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Overall number of students	10,880	81,128	15,106	126,303
Non-White	90.7%	31.9%	11.9%	9.9%
Black	2.4	17.8	4.5	4.5
Hispanic	80.1	8.0	4.1	2.7
Asian/Pacific Islander	8.1	3.6	2.4	1.7
Native American	0.1	2.5	0.9	0.9
High School Completers	32.6	29.3	82.7	78.0

### ATTAINMENT OF POSTSECONDARY MILESTONES

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Overall number of students	10,880	81,128	15,106	126,303
Average time (years) that students remained in the system	2.0	2.4	2.9	2.2
Percent who passed pre-college credits				
One or more, less than 3 ELL	31.1%			
Six or more ELL	22.3			
One or more, less than 3 ABE	11.1	40.5%		
Six or more ABE	4.8	20.2		
One or more, less than 3 Dev/Rem	1.8	6.5	60.3%	
Six or more Dev/Rem	0.6	0.8	4.9	
Percent who enrolled in a postsecondary:				
Course (3 or more credits)	7.4%	32.8%	87.2%	93.4%
Qualifying program	4.6	23.3	78.0	58.8

**POSTSECONDARY PROGRAM ENROLLMENT BY RACE AND ETHNICITY**

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Overall number of students	10,880	81,128	15,106	126,303
<b>Number of students who are:</b>				
White	829	53,536	13,116	106,840
Black	256	14,417	682	5,679
Hispanic	8,715	6,511	620	3,372
Asian/Pacific Islander	884	2,890	355	2,204
Native American	10	2,053	137	1,189
<b>Percent enrolled in a postsecondary program</b>				
White	11.0%	26.1%	78.6%	61.1%
Black	18.0	15.3	80.2	43.2
Hispanic	2.6	18.0	76.0	53.8
Asian/Pacific Islander	12.8	35.3	73.8	60.1
Native American	10.0	10.9	61.3	53.2

**COLLEGE CREDIT COMPLETION FOR STUDENTS WHO ATTEMPTED COLLEGE COURSE WORK IN A QUALIFYING PROGRAM**

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Overall number of students	10,880	81,128	15,106	126,303
Number who attempted postsecondary credits	893	27,837	13,318	126,303
<b>Percent who completed:</b>				
at least 3	80.6%	80.3%	91.0%	81.4%
at least 6	62.5	67.3	83.2	62.1
at least 12	50.7	55.0	72.7	49.0
at least 24	40.6	39.1	56.7	35.0

## SUCCESSFUL COMPLETION OF COLLEGE ENGLISH AND MATH

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Number who took a college English course (801)	484	18,385	10,745	67,187
Percent who passed 80 percent of attempted college-level credits	77.1%	58.3%	66.6%	63.7%
Number who took a college Math course (804)	422	13,654	7,426	52,467
as percent of those who reached the college level	80.8%	54.0%	67.0%	64.1%

## COMPARING ENROLLMENT IN SHORT-TERM PROGRAMS AND QUALIFYING PROGRAMS

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Number of students enrolling in a postsecondary program at some point**	588	21,247	12,361	86,326
Percent who enrolled in a short-term technical diploma	22.4%	21.9%	21.2%	20.8%
Percent who enrolled in a qualifying program	92.7	102.0	109.1	95.0

Note: \*\* Figures in this table count as "enrolled" all students both in short-term and qualifying programs. In the remaining tables, students are counted as "enrolled" as long as they have registered in at least one qualifying program during the observation window. You can find tables for student enrollment and performance in short-term programs in the appendix.

(Percentages add to more than 100 percent by column due to duplicate counts, since some students enroll in more than one program.)

## DISTRIBUTION OF QUALIFYING PROGRAM ENROLLMENTS BY PROGRAM TYPE (LONG-RUN PROGRAMS)

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Number of students enrolling in postsecondary program at some point	501	18,887	11,780	74,311
Percent enrolled in				
Apprenticeship program	2.8%	2.9%	1.2%	6.1%
One-year technical diploma	17.8	23.3	23.5	19.5
Two-year technical diploma	1.0	2.8	2.6	5.0
Applied associate degree	74.1	70.1	81.5	66.2
Liberal Arts associate degree	13.2	15.7	5.8	13.5

## QUALIFYING PROGRAM COMPLETION RATES BY PROGRAM TYPE

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Percent of students who enrolled in a program of the type indicated below that completed a program of that type				
A program of any type	46.3%	31.1%	41.3%	38.2%
Apprenticeship program	60.0	41.4	38.0	48.4
One-year technical diploma	40.6	39.7	47.6	52.1
Two-year technical diploma	20.0	28.1	41.3	50.0
Applied associate degree	47.0	22.4	27.4	29.6

## APPENDIX 2

This appendix includes figures for students aged 25-54 years at time of first enrollment who enrolled only in a short-term program.

### DEMOGRAPHICS

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Overall number of students	193	1,105	291	8,548
Percent who are				
Younger (25-34 years)	59.1	43.9	48.5	45.6
Non-White	82.9%	29.1%	11.0%	17.3%
Black	11.9	15.7	6.9	12.0
Hispanic	53.4	8.9	3.4	2.5
Asian/Pacific Islander	17.6	2.5	0.3	1.0
Native American	0.0	2.0	0.3	1.9
High School Completers	60.1	65.3	95.2	89.6

### ATTAINMENT OF POSTSECONDARY MILESTONES

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Overall number of students	193	1,105	291	8,548
Average time (years) that students remained in the system	3.4	2.9	2.5	1.8

#### Percent who passed pre-college credits

One or more, less than 3 ELL	26.4%			
Six or more ELL	39.4			
One or more, less than 3 ABE	20.2	46.7%		
Six or more ABE	22.8	17.0%		
One or more, less than 3 Dev/Rem	8.8	11.3	62.9%	
Six or more Dev/Rem	2.1	3.1	2.7	

## SUCCESSFUL COMPLETION OF COLLEGE ENGLISH AND MATH

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Number who took a college English course (801)	17	216	82	921
Percent who passed 80 percent of attempted college-level credits	82.4%	67.1%	81.7%	72.1%
Number who took a college Math course (804)	6	83	26	640
as percent of those who reached the college level	50.0%	51.8%	80.8%	57.7%

## QUALIFYING PROGRAM COMPLETION RATE

	<i>ELL</i>	<i>ABE</i>	<i>Dev/Rem</i>	<i>Postsecondary</i>
Number of enrolled students	193	1,105	291	8,548
Percent who completed short-term vocational program during five-year window	68.9%	70.3%	77.0%	68.0%