

Relative Impact of Interventions to Improve Achievement and Retention in Postsecondary Occupational Programs

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Abstract

This study seeks to identify which interventions are most effective in improving retention and academic outcomes for students in postsecondary occupational¹ programs, and how student characteristics mediate and moderate these effects, with the goal of determining what works best for which types of students. Four community colleges are participating in the study. This report presents information on the study purpose, site characteristics, data sources, retention-related interventions found at two or more sites, data analysis methods, and early findings. Descriptions of examples of specific interventions are included and will provide a basis for determining the comparability of similar programs across sites at a subsequent point in the study. This report describes project activities and findings during the period of August 2009 to July 2010. A second cohort of students, those matriculating at the sites in Fall 2010, has been added to the study and will be discussed in future reports as data become available.

¹ This study uses the term “occupational” to refer to programs and students for which colleges use terms such as career and technical, vocational-technical, and professional and technical. Typically, these are programs that culminate in a less-than-four-year credential that is intended to lead to employment. Colleges vary in how they classify some programs; for example, a business major may be considered occupational at one college but not at another.

Relative Impact of Interventions to Improve Achievement and Retention in Postsecondary Occupational Programs

The Relative Impact study is a longitudinal correlational study using institutional data collection of behavioral, verifiable measures at four U.S. public two-year colleges that have occupational programs and that incorporate clearly defined interventions aimed at improving student retention and completion. For the purposes of this study, the term *interventions* includes programs, services, supports, and other initiatives that can be analyzed at the student level. Two cohorts of students are included in the study: those who entered college in Fall 2009 and Fall 2010, respectively. Community colleges² have been implementing a number of interventions in their efforts to improve retention but lack solid information as to which are most closely associated with student retention and program completion for students in occupational programs, and which students are best served by which interventions. The study examines the association between interventions currently used by community colleges and student retention and program completion rates. Many of these interventions are part of student support services or are integrated within colleges' academic curricula, and an aim of this study is to identify the elements of those interventions that are related to students' continued enrollment (retention) and college success (primarily program completion, but also the intermediate outcomes of course completion and passing grades). This project seeks to provide the field with rigorous, scientifically based data and conclusions on the relation of college-provided interventions to student retention and program completion in community colleges. The primary audiences for this study are community college administrators, instructors, and retention specialists; CTE researchers and funders; and state policymakers.

In recent years, states and individual community colleges have begun to systematically collect more data than they did in the past, often because of state-level mandates for increased accountability in postsecondary education. Taking advantage of this trend by using each institution's existing data as the primary basis for analysis, this study examines which interventions and combinations of interventions are most strongly associated with retention and completion for students at community colleges, and how student background variables and other characteristics mediate and moderate those associations. The study tracks the entire entering classes of first-time postsecondary students enrolling in Fall 2009 and Fall 2010 at four participating sites through Spring 2012. Analyses of data obtained over the course of the study employ logistic regression and hierarchical linear models to (a) determine which interventions are associated with retention and completion of occupational degrees and programs, and the extent of student retention (continued enrollment); and (b) examine the interaction of these interventions with each other and with key student variables. In addition, the study surveys and interviews students from each cohort to support assessment of the effect of mediating and moderating variables not measured by institutions (e.g. life events, goal commitment) on student retention and program completion.

Purpose and Objectives

The purpose of this study is to measure the association between existing retention interventions

² Although not all public two-year colleges are identified as community colleges, the terms are used interchangeably in this report.

and combinations of interventions, on the one hand, and student retention and program completion, on the other, with the goals of (a) understanding which interventions are likely to be effective for which kinds of students and (b) helping community colleges select and implement effective interventions to improve student outcomes in occupational programs. An additional purpose is to obtain information to guide subsequent design of a suite of interventions that can be combined and implemented to maximize effectiveness.

In this study, the term *interventions* encompasses programs, services, supports, and other initiatives that can be analyzed at the student level using data such as referral, registration, and participation. Few of the interventions examined in this study are specific to occupational programs, as community colleges typically use many of the same approaches to improve retention and outcomes for all students. However, the primary focus of this study is to understand methods that improve retention and program completion for occupational students in particular. Comparing the effect of various interventions and combinations of interventions on occupational versus non-occupational students is an important aspect of this study.

Research Questions

The primary and secondary research questions address aspects of the basic question, “What works for whom?”

Primary research question. What interventions and combinations of interventions are most strongly associated with retention and completion for students in postsecondary occupational programs, and how do student background and other characteristics mediate and moderate those associations?

Secondary research questions. (1) What are the characteristics and prior educational and other experiences of students who choose to access each retention intervention? (2) Which student characteristics tend to influence the frequency and duration of use of the interventions overall? and (3) How do retention interventions and combinations of retention interventions support retention in and completion of postsecondary occupational programs, from the students’ points of view?

Rationale and Literature Review

Occupational programs at two-year public colleges play a critical role in reducing poverty among individuals and families (Hollenbeck & Huang, 2003; Kane & Rouse, 1995; Prince & Jenkins, 2005). The educational attainment tables of the U.S. Census (2009) report that individuals who completed an associate degree earned an average of \$8,460 per year more than those with only a high school diploma. Men who complete an associate degree earn an average of 18% more annually and women earn 23% more than those with only a high school diploma (Grubb, 2002). However, completion rates for students at community colleges, including occupational students, are abysmally low. Despite the apparent benefits to students of community college occupational programs, Bailey, Alfonso, Scott, and Leinbach (2004) found that more than two-thirds of students in occupational majors at sub-baccalaureate institutions left after having completed a year or less of coursework over a five-year period. Among those postsecondary occupational

students who enroll with the goal of earning a degree or certificate, fewer than half actually complete a credential of any kind (Silverberg, Warner, Fong, & Goodwin, 2004).

Prince and Jenkins (2005) examined outcomes of low-skilled adults in community colleges using student record information from the Washington State Community and Technical College System. The sample included adult first-time college students in pre-collegiate basic education programs and college-level courses. The purpose of this study was to identify the barriers that cause adult students to drop out or fail to advance to the next educational level. There was no comparison group. The authors found that students who took at least one year's worth of college credit courses and earned a credential had earnings advantages over students who earned some college credits but not a certificate or degree. This advantage held for English as a Second Language (ESL) students, Adult Basic Education (ABE) students, and students who entered college with a General Educational Development (GED) credential or high school diploma. The authors also found that receiving financial aid and participating in developmental (remedial) education increased the odds of student success, and recommended that states increase support to these populations to help them achieve the level of education and training associated with those earnings advantages. More recent research by Hughes and Scott-Clayton (2011) has called into question the degree to which students are helped by developmental coursework.

To be sure, not all entering community college students—occupational or otherwise—intend to complete a degree or credential. Some students attend community college to maintain professional licensure or certification, to gain supplementary job skills, or for personal enrichment. However, many students enter community colleges with a degree or credential goal in mind, and many of these never attain that goal. Sadly, students who invest their time and money in taking courses without earning a credential receive little to no economic return (Grubb, 2002). As the personal and societal consequences of non-completion have become clearer, colleges have sharpened their focus on retention (Upcraft, Gardner, & Barefoot, 2005).

Barriers to program completion are many and include inadequate pre-college academic skills, financial pressures, family responsibilities, transportation problems, health concerns, disabilities, and myriad other difficulties (Astin & Oseguera, 2003; Bray, Braxton, & Sullivan, 1999; Cabrera, Nora, & Castaneda, 1992; Cofer & Somers, 1999; Pascarella & Terenzini, 1991; St. John, Kirschstein, & Noell, 1991; Schlossberg, Lynch, & Chickering, 1989). Although some students leave college for employment in their field of study, low GPA (Metzner & Bean, 1987) and uncertainty about career choice (Pascarella & Terenzini, 1991) are among the most powerful predictors of early college departure. Any or all of these barriers can stand in the way of engagement (integration), achievement, and successful transition into and through postsecondary education to employment (Pascarella & Terenzini, 1991, 2005).

Bailey et al. (2004) concluded that:

Associate occupational students achieve their stated goals less often than their academic counterparts. Moreover, their record is particularly problematic compared with baccalaureate students. Part of this difference can be explained by differences in student characteristics and expectations, but the gap still remains after controlling for many of those factors. (p. 70)

The literature on student retention includes a number of theoretical constructs intended to explain or predict college departure, including social integration, goal commitment, and academic engagement. A host of models based on these constructs attempt to encapsulate the most important factors influencing students' decisions to leave college. Tinto's (1993) theory of student departure is the most widely cited (Guiffrida, 2006) and has reached "near paradigmatic status" (Braxton, Milem, & Sullivan, 2000, p. 107) in the field of higher education. Despite the theory's broad appeal, empirical research reveals only modest support for its propositions (Braxton, Sullivan, & Johnson, 1997) and a need to consider additional factors that may influence student retention and program completion, particularly at the community college level. These may include, for example, student intent at the time of college entry, the amount or type of developmental coursework required, and students' knowledge of and connections to their intended career.

Students in community college programs have a wide range of backgrounds (American Association of Community Colleges, 2010). For example, less than half (43%) of community college students are under the age of 21, often considered "traditional" college age. Nationally, 35% of community college students are from racial or ethnic minority groups; this figure is higher at urban community colleges. Nearly 60% of community college students attend college less than full-time. Nearly 80% of community college students work either full- or part-time, with 50% working full-time. Many community college students (39%) are the first in their families to attend college, and many have additional responsibilities such as caring for children or elders (e.g., 17% report being single parents). Thirty-seven percent of postsecondary students took ESL classes in 2004-2005 (O'Donnell, 2006, Table 9). The ranks of students with disabilities attending college are growing; national survey data show that the percentage of young adults with disabilities participating in postsecondary education after leaving high school more than doubled between 1987 and 2003, from 15% to 32% (Newman, 2005). The proportion of full-time students receiving Pell grants is higher at public two-year colleges than at public four-year colleges (32.2% vs. 26.1%; Wei, Horn, & Carroll, 2002).

To meet the needs of these students, community colleges employ numerous means to improve retention and completion, including common interventions such as bridge programs (often the summer before college, though some begin earlier), first-year programs, cohorts, tutoring, and mentoring programs, alone or in combination with other programs (Bush & Bush, 2005; Lerner & Brand, 2006; Manning & Everett, 2008; Scrivener, Sommo, & Collado, 2009). Rigorous studies of the effectiveness of these interventions have been few and far between. A systematic review of transition programs, including retention programs at community colleges, was conducted under the auspices of the National Research Center for Career and Technical Education (NRCCTE; Valentine et al., 2009; Valentine et al., 2011). In a literature search of over 8,000 citations, Valentine et al. identified only 19 studies with sufficiently well-defined comparison groups to allow for meta-analysis (Valentine et al., 2009; Valentine et al., 2011). Likewise, in a review of studies concerning the impact of non-academic student support on student outcomes, Karp (2011) identified and reviewed 26 studies, noting that "studies in this area, with a small number of important exceptions, contained a number of methodological challenges, including poorly constructed (or absent) comparison groups, small sample sizes, low levels of statistical control, and a focus on short-term outcomes" (p. 4). Given the small number

of rigorous studies of student retention in community colleges in general, as well as students' tendencies to enter community college as "undecided" or to take several courses before settling on a major, this study examines student retention among all students, rather than limiting the scope to retention of only those students who declare occupational majors upon entering college.

Theory and research suggest that different interventions may be more or less effective for individuals from different demographic groups and with different characteristics (e.g., enrolled in two-year occupational vs. transfer programs). Despite increased knowledge about correlates of retention and non-completion, less is understood about how variables interact or how to counter influences that cause students to leave college prematurely. Few institutions have been able to translate what is known about student retention into action leading to substantial gains in student persistence and academic achievement (Tinto, 2006). Further, although little information is available concerning how students choose to participate in interventions, community college students' widely varying characteristics and experiences may influence their use of and experience with institutional support services. For example, Keith (2007) found relationships between students' prior educational experiences, institutional barriers (class availability, class times, etc.), situational barriers (marital status, employment status, age, etc.), and their use of support services. Specifically, Keith found that nontraditional students with characteristics more similar to those of their traditional-age peers (i.e., those who were younger, were unemployed, and had experienced stress from increased tuition) used more academic services than other nontraditional students at the same institution. Likewise, a random-assignment study of the Beacon Mentoring program at South Texas College (MDRC, 2010) found that the intervention:

benefited two subgroups at particular risk of failure: (1) part-time students were less likely to withdraw from and more likely to pass the math class, earned more credits, and, at least in the developmental math classes, scored higher on the final exam, and (2) developmental students were less likely to withdraw from math class than students in the control group, and they earned more credits in their non-math developmental courses.

Bailey and Cho (2010) found that of students enrolled in developmental courses, female, White, Latino, and full-time students were more likely to pass on to higher levels of developmental education than were males and Blacks. They also found that students entering college shortly after high school progressed further in developmental reading than did older students and that students in vocational areas were less likely than other students to pass on to a higher level of developmental math.

Relationship of the Project to Previous NRCCTE Research

This study addresses several research strands identified as priorities by the U.S. Department of Education (USDE), Office of Vocational and Adult Education (OVAE) for the National Research Center for Career and Technical Education (NRCCTE). This study builds upon several previous studies completed under the auspices of the NRCCTE. Bragg et al. (2007) conducted descriptive research on programs that help low-skilled adults enroll in and complete postsecondary occupational and credential programs. They examined career pathway programs that provided seamless transitions and stop-out points for adults seeking credentials that provide access to jobs paying family-sustaining wages. They found that these programs often had a gap

in transition at the developmental education level; the pathway programs provided integrated introductory content for low-skilled adults, but did not always adequately prepare students for college-level coursework. This gap meant that continuing students had to expend more time and resources on preparatory coursework (i.e., developmental education), further delaying their entry into occupation-specific programs. The study also found that learning communities and other cohort groups are promising ways of building community and confidence in adult learners, fostering self-sustaining social and academic supports for staying in college. The report further concluded that additional research on specific intervention elements used at community colleges is necessary to establish their efficacy. This study also builds upon the Valentine et al. systematic literature review (Valentine et al., 2009; Valentine et al., 2011) that identified several transition and retention interventions that merit additional study.

Methods

Figure 1 is a conceptual model of the present study, including variables affecting student retention and related outcomes. This model provides a framework for an input-process-output model of student experience and outcomes.

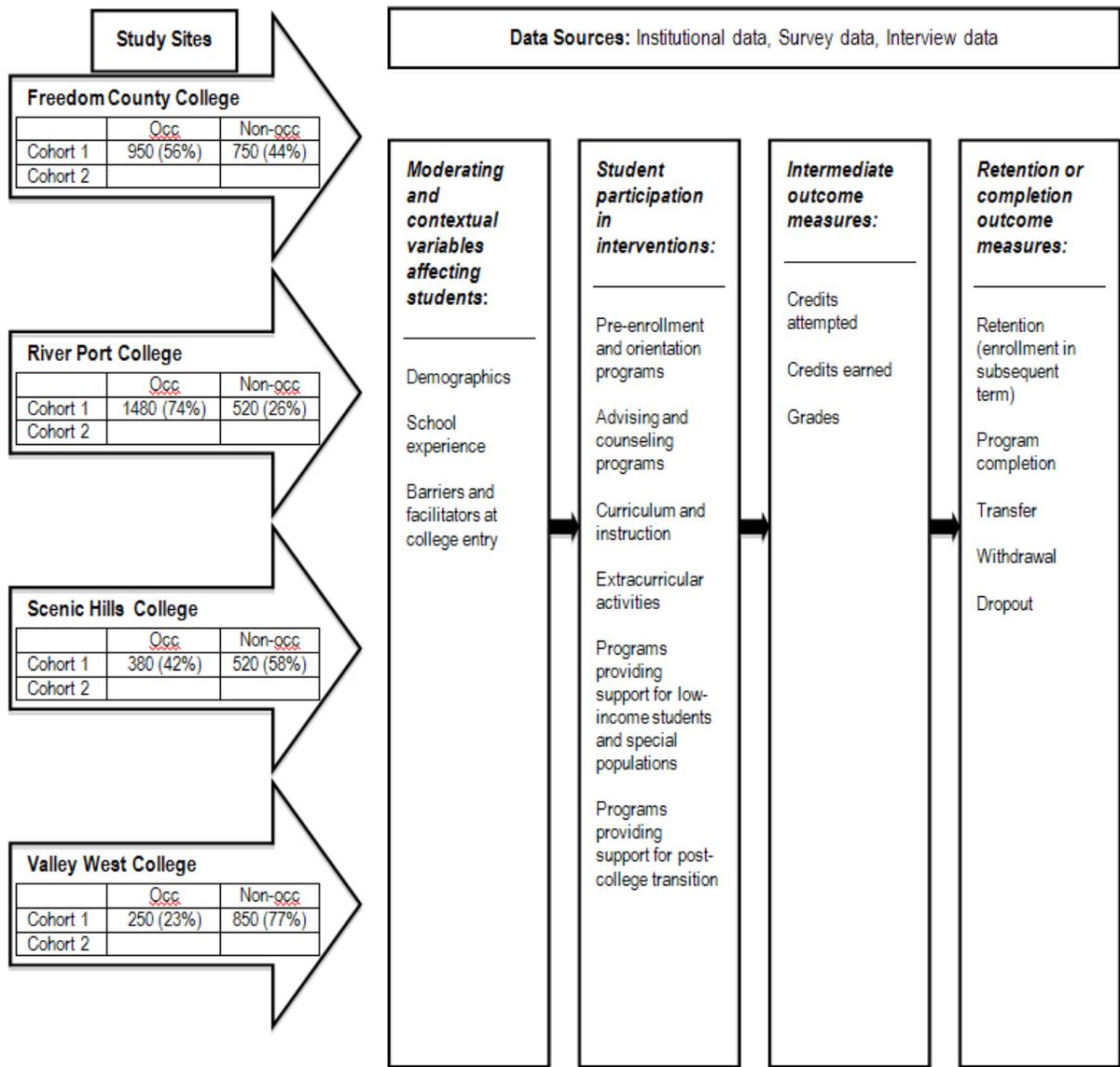


Figure 1. Conceptual model of Relative Impact study. *Note.* Cohort 1 is comprised of all students who entered one of the colleges for the first time in Fall 2009; Cohort 2 is comprised of all students who entered one of the colleges for the first time in Fall 2010. Occupational (Occ) status of students was determined by each college based on factors such as degree program and declared intent. Site student population figures have been rounded to protect sites' identities. Site names are pseudonyms.

Site Selection and Characteristics

Site selection for this study was guided by a process of focal sampling (Anastas, 1999), in which participating community college sites or subjects were selected “not to approximate representativeness but because they are atypical in some way that specially equips them to be

useful as study informants” (p. 288). For this study, the sites sought were atypical in that it was necessary to find institutions with detailed data collection in place, in addition to having interventions of interest and a strong commitment on the part of administrators to participating in the study.

To identify such sites, the project staff turned to members of an OVAE-nominated expert panel of state-level officials and representatives from workforce development organizations. This panel was originally convened in 2006 for a previous NRCCTE study on career pathway programs (Bragg et al., 2007). In addition to the panel members, another facet of the site selection process included contacting experts from states, colleges, and organizations known for their high-quality work in the field. In some states, the state official who was contacted disseminated study information to all community colleges in the state. In others, experts nominated specific colleges they viewed as well regarded community colleges with strong occupational programs and retention interventions, and which they thought might have the kind of data sought. In addition, project researchers identified state systems with strong data collection practices and requested nominations from administrators in those states. All four selected sites met all of the following criteria:

- The college is fully accredited.
- At least four interventions expected to affect retention (based on the literature) are available to students.
- The college has an existing student record database that allows for de-identification of data and that includes frequency data or other measures of intensity concerning student participation in interventions.
- College institutional research personnel are willing and able to provide the data to the researchers.
- College administrators and staff are highly committed to participation in the study.

In addition, three of four sites met the following criterion:

- The college’s entering student body for Fall 2009 is at least 10% minority.

The four sites enrolled a total of 5,674 incoming students in Fall 2009, and a similar number in 2010, all of which are being followed using institutional data. After initial site identification, project staff members visited each site during Summer 2009 to ensure that the site would be able to meet the study’s data provision requirements (access, quality, and transferability), and to ensure that the interventions claimed by each site are in place and being accessed by students.

Geography and demographics. Site demographic profiles as of Fall 2009 (the first term of enrollment for Cohort 1) are provided in Table 1 below. Site names are pseudonyms.

Table 1
Characteristics of College Sites and Their Communities

	Freedom County College*	River Port College	Scenic Hills College	Valley West College
Campus setting**	Suburb: large; City: small	City: large	City: small	Rural: fringe
County unemployment***	10.1%	8.2%	9.5%	13.6%
<i>Enrollment</i>				
Student population†	1,700	2,000	900	1,100
Part-time students	32.8%	44.7%	34.2%	41.8%
Full-time students	67.2%	55.3%	65.8%	58.2%
In any developmental course	30.6%	36.3%	39.6%	66.6%
CTE/Occupational	55.8%	73.5%	42.4%	23.1%
<i>Student Demographics</i>				
Men	46.3%	45.4%	53.7%	44.8%
Women	52.6%	54.4%	46.3%	55.2%
Unreported	1.2%	0.3%	--	5.4%
White	80.5%	41.9%	75.9%	75.6%
Black	11.9%	39.2%	2.4%	1.3%
Latino	1.7%	3.4%	3.0%	11.0%
Asian	1.6%	11.5%	4.7%	1.7%
American Indian or Alaskan Native	0.4%	1.0%	1.2%	1.9%
Pacific Islander	0.3%	0.2%	0.2%	0.5%
Multiracial	--	--	5.0%	2.6
Other	--	--	3.7%	--
Unreported	3.5%	2.8%	3.9%	5.5%
Age: Mean	22.69	27.56	25.41	24.85

Notes. * = Freedom County data combines statistics from two administratively separate campuses. ** = Except for “campus setting” and “county unemployment,” all data in this table are from institutional data provided by each school. *** = Unemployment rates are as of July 2009. For Valley West College, which equally serves more than one county, unemployment rates for those counties are averaged. † = Site student population figures have been rounded to protect their identities.

Educational philosophies. Interviews with administrators during the Summer 2009 site visits revealed both commonalities and differences in how they view their college, its mission, and the best ways to achieve that mission. Across all four sites, there is a commitment to being an open-access institution that serves the needs of the community, but state budget issues in the current economic environment present challenges of varying degrees at each school. In support of the mission of providing postsecondary access, administrators at each college feel it is their responsibility to provide programs and services that (a) ease the transition of new students into college and (b) support students to succeed in their chosen courses of study. At each site, there is a point person, department, or program specifically focused on retention, but there is also a clear commitment to engaging all faculty and staff in improving overall student retention and completion.

Administrators at all four sites agree that, although completion of a credential is a positive student outcome that is easily measured, student goals are diverse and other outcomes can also be indicators of student success, such as transfer to another college, completing specific courses needed for professional advancement or maintenance of professional licensure, or achieving a personal enrichment goal.

Retention is not generally considered a goal for students attending college classes while in still high school (i.e., dual enrollment students) or those attending classes to support their personal interests or avocations. All sites explicitly recognize that in some cases, leaving college for a time (“stopping out”) or transferring to another institution before earning a credential should be supported and even encouraged.

Although administrators at the four sites agree on the basic mission of community colleges and acknowledge the varied manifestations of student success in community colleges, they disagree on several points of community college philosophy and approach. A few examples of such differences follow.

The appropriate role of the college in serving subgroups of students. Differences among the colleges are most evident in culturally based programming. Both Scenic Hills and Valley West have significant programs aimed at supporting Latino students. Scenic Hills’ multicultural programming fosters connections with the community and offers leadership opportunities to motivate students and support academic achievement. At Valley West, multicultural programming focuses on establishing social connections among students, reinforcing cultural identity, and ensuring that students feel they belong at the college and can succeed. Freedom County has some culturally based student groups, but has smaller numbers of minority students than the other three sites and views the student groups primarily as a venue for social integration. River Port also has some culturally based student groups, but considers their campus so diverse that they are “beyond celebrating diversity” and are simply focused on helping all students succeed. The research sites also have programs and services designed to meet the needs of other groups of students, such as veterans, students with disabilities, older students, and female students (examples of such programs are described within subgroups in *Interventions*, below).

The extent to which students are seen as needing high levels of guidance and structure in registration, programs, and course requirements. Freedom County requires all new students to meet with academic advisors prior to registration. In addition, all students on academic probation must also meet with their advisor. College administrators stated that this is critically important and they put considerable effort into ensuring that it happens. On the other hand, River Port has a totally online system of application and registration (as well as an online orientation option) for most students, having determined several years ago that the process of setting up appointments with advisors was a major bottleneck and a barrier both to student progress and to institutional growth because so many River Port students are older and/or employed and have difficulty finding time for such activities. Therefore, many of River Port’s entering students do not have early contact with advisors. Students participating in some special programs at River Port do have in-person orientation and pre-registration counseling, but they represent an exception to the usual process. This college places a high level of responsibility on students to ensure their own

success. Scenic Hills has, over a number of years, continuously increased the degree of structure provided for students. This site makes greater use of learning communities than do the other three sites, and also teaches a common set of study skills strategies across departments and courses. However, although students are encouraged to seek academic advising before registering, it is not required. College administrators would prefer that all students meet with advisors, but they acknowledge that requiring this would be a burden for some students, especially those with full-time jobs. Valley West requires all students to receive academic advising before registering for classes; for many entering students this requirement can be met by attending a group orientation.

Approaches to CTE or occupational education. Of the four sites, Freedom County has the largest number of students who intend to transfer to a four-year institution; although certain programs emphasize employment after two years in the program (e.g., nursing, computer and information technology, engineering technology, business, early childhood education, law enforcement), employment receives less pervasive emphasis at this site. At River Port, however, where many students are low-income or immigrants or both, the college's philosophy is that it would be a disservice to students to offer majors in fields that do not directly lead to a job. Scenic Hills has a particularly strong relationship with regional employers and frequently adjusts its programs to fit the local job market. Valley West uses a cohort model in several occupational fields and has a good working relationship with the local Workforce Center, which refers people to the college and has programs for out-of-school youth and young adults.

Views of growth. Freedom County welcomes growth, and River Port is strongly growth-oriented as an institution. In contrast, both Scenic Hills and Valley West are full to capacity and are challenged to find ways to serve the growing population of students showing up at their doors during the current economic downturn. These views affect policy at the sites. For example, River Port decided not to require academic advising prior to registration in part because it slowed the process for students to sign up for classes. At Scenic Hills, expansion of distance learning has allowed the college to serve more students without adding classrooms.

Data Sources

Data sources include institutional data, student surveys, student and staff interviews, and publicly available sources such as course catalogs and websites. Institutional and survey data are being used to follow two incoming cohorts of community college students (all entering students in Fall 2009 and Fall 2010, including former dual enrollment students who exited high school and subsequently enrolled in college) at four sites over a three-year period (Fall 2009 through Spring 2012). Thus at the end of Spring 2012, there will be three years of institutional and survey data on the 2009 cohort (Cohort 1) and two years of institutional data, plus a single survey, on the 2010 cohort (Cohort 2), as well as interview data from a small sample of students from both cohorts.

Institutional data. Project researchers are collecting institutional data from all sites on many variables of interest for the two cohorts (those entering in Fall 2009 and Fall 2010, respectively) and are receiving available data on demographic variables (e.g., age, sex, ethnicity; White, Altshuld, & Lee, 2008), enrollment status (e.g., delayed enrollment, interrupted enrollment, full-

time, part-time; Bailey, Calcagno, Jenkins, Kienzl, & Leinbach, 2005; Goble, Rosenbaum, & Stephan, 2008), placement test scores, financial aid, registration with disability services, credits attempted, credits earned, grades, and participation in interventions the sites consider important in improving student retention and for which the sites have data. Although much of this information has been provided to the researchers, some data remain to be obtained for the 2009-2010 academic year (i.e., for Cohort 1's first year of participation in the study), especially concerning participation in programs that do not appear on a college transcript. Data are most complete for those items already in each college's main database, such as demographic data, courses taken, grades, and receipt of financial aid. Participation in ESL courses, developmental courses, learning communities, and TRIO Student Support Services is also recorded in these databases. Data on participation in some other programs and services, such as student organizations and personal counseling, is more difficult to obtain in a form linked to individual student identifiers and may ultimately be incomplete or unusable in some instances. If there is no record of a student's participation in an intervention, it will be assumed that the student did not participate. The institutional data has missing data to the extent that some program participation data is simply not collected, or students did not fill out some optional fields on their application.

Involvement in or use of retention interventions is being quantified in ways that reflect availability of data at each site and for each variable. For some interventions, data are binary (e.g., either a student is or is not registered with Disability Services). Participation in other interventions, at some colleges, can be quantified using measures of intensity. These measures consist of frequency of participation or hours of contact. For example, for tutoring or advising, intensity is measured by number of visits. For learning communities or cohorts, intensity is being measured by the number of credits taken with the group.

Institutional data are also being used to obtain information on outcomes, such as retention (as measured by enrollment in subsequent semester) and program completion (as measured by the awarding of a credential), as well as on intermediate outcomes including credits attempted, credits earned, and course grades. Outcomes for students who exited a college before completing a credential but returned in a later term during the course of this study (i.e., stopped out) are also being tracked.

Student survey data and methodology. In addition to the use of institutional data to track all students entering in Fall 2009 and Fall 2010, the study uses student surveys to contextualize and supplement the institutional data. Specifically, surveys are being used to provide a more detailed account of student backgrounds, barriers to learning, and experiences with the interventions offered by each institution (Upcraft et al., 2005). Survey questions also cover variables that have been identified as affecting retention but which are likely to be known only by the students themselves, such as family support for the student's decision to attend college (White et al., 2008), participation in co-curricular activities (Nealy, 2009), informal contact with faculty (Gerdes & Malinckrodt, 1994), personal commitment to obtaining a credential (Lotkowski, Robbins, & Noeth, 2004), sense of belonging in the institution (Karp, Hughes, & O'Gara, 2008; White et al., 2008), satisfaction with course availability (Gerdes & Malinckrodt, 1994), and academic self-confidence (Lotkowski et al., 2004).

Samples of Cohort 1 students at all four colleges are being surveyed twice a year. A stratified random sample of 200 students was identified, with 55 additional students added to replace non-respondents at each site. Within samples, there was oversampling of students who have declared an occupational major, with the samples consisting of at least two-thirds occupational students.

The initial survey, sent in February and March 2010, asked about these students' experiences during the Fall 2009 term (quarter or semester) using a core of items from existing ACT surveys for two-year college students, with some edits and additions. Students who responded to the first survey were sent another survey in May 2010 and are being followed with semi-annual surveys through Spring 2012. The type of survey they receive at each juncture depends on whether they are still enrolled or have not re-enrolled at the college that term. In the subsequent two years, abbreviated versions of the Student Experience Survey and the Withdrawing/Nonreturning Student Survey will be used, and students who have completed their programs will be surveyed to understand their post-college experiences. (The initial versions of the Student Experience Survey and the Withdrawing/Nonreturning Student Survey are provided in Appendices B and C.) Students who returned a survey provided permission to link their survey responses to their institutional data, including courses taken and grades, so that these two data sources can be used to supplement and contextualize each other.

These surveys were administered electronically. Students were initially sent an e-mail with a link to the survey and a cover note from a college administrator at each site. This email was followed by reminder emails and phone calls to non-respondents. Respondents received a \$20 gift card for completing each survey.

Given the nature of survey research, there will inevitably be missing data. A variety of imputation techniques for handling missing survey data have been cited in the literature (Dorofeev & Grant, 2006), and project researchers will utilize the techniques that seem most appropriate given the nature of the missing data and its potential statistical effects. Survey non-respondents will constitute missing data for purposes of the survey.

Some of the study sites already administer the College Academic Self-Efficacy Scales (CASES), the Learning and Study Strategies Inventory (LASSI), and/or the Community College Student Report (CCSR, the instrument administered by CCSSE) to a sample of students; results of administrations of these instruments, where available, will be used to inform the researchers' understanding of the characteristics of each site. Although each has a different focus, all three measure institutional characteristics that may affect retention and completion, and as such would add value to the study.

Interview data. Interviews of administrators and staff provide context for the institutional and survey data collected for this study. Interviews with students are also planned. Most interviews with college staff are being conducted with individuals rather than groups, and have involved two researchers, with one serving as note-taker. If the interviewee was willing, audio recordings were made in order to improve the quality of the interview notes.

Staff interviews. Interviews of college administrators and staff members were conducted in 2009 and 2010; additional interviews are planned for subsequent site visits. These interviews provided

information about college philosophies, data systems, and the specifics of each college's retention programs. Those selected to be interviewed had knowledge specific to the needs of this study and were identified to the researchers by the primary contact at each site.

Student interviews. Interviews of students are planned for 2011. These interviews will provide information about how students decided to attend college, how they chose a major, how they learned about the retention services and programs available to them, and what their experience of the programs has been.

Data Analysis

Analysis of the effects of retention programs using institutional data will employ hierarchical linear modeling (HLM). HLM is appropriate when the variables are nested within individual cohorts of students (e.g., classrooms) and even schools (Raudenbush & Bryk, 2002). The present study will analyze models using institution-level (e.g., college graduation rate, enrollment) and student-level variables (e.g., high school GPA, employment status). HLM will be used to analyze the effects of the interventions on student outcomes (e.g., retention, program completion) resulting from institution-level and student-level variables. Analysis will compare students with and without information on each variable to determine whether subsets of students are comparable.

In the HLM analysis, students will be nested within institutions. The factor analyzed is the treatment (the particular intervention(s) in which the students participate). Moderating and contextual variables affecting student retention and completion will be used as covariates to reduce the probability of Type II error. Additionally, measures of effect size and effect consistency will be calculated. Because self-selection plays a role in who participates in interventions, the analysis will use Heckman's two-stage procedure (Heckman, 1979; Puhani, 2002) to adjust for selection factors. These analyses will be applied to each set of data collected.

To answer the secondary research questions, the study will use multiple logistic regression analysis on the institutional student characteristic data to determine the likelihood of students choosing to access each available intervention based upon these characteristics. The analysis will also examine the characteristics of students who are known to have been referred to interventions by college staff. Sources for student characteristics include both institutional and survey data.

Descriptions of Interventions

The interventions under consideration in this study are those identified by the four sites³ as intended to have an impact on retention and completion. Based on the college success literature, project researchers sought sites with data concerning student participation in interventions such as mentoring, tutoring, learning communities, cohorts, and intrusive advising for students experiencing academic difficulties. It was also expected that colleges would also have orientation and study skills programs, services for special populations, and activities aimed at improving academic and social integration of students. However, during the initial visits to the sites,

³ Names of specific programs at sites have been changed to shield the identities of the sites.

administrators identified an even larger set of interventions they believed to affect retention. The interventions described below were identified at two or more sites.

Pre-enrollment and Orientation Programs

Pre-enrollment and orientation programs include credit for prior learning and experience, dual enrollment of high school students, orientation, and prep/bridge programs.

Credit for prior learning and experience. Community college students bring myriad experiences with them to campus, some of which may qualify for educational credit. Most colleges have a process by which college staff can assess a student's prior learning experiences and determine if academic credit can be granted for them or if a required set of courses can be altered because of them. Successful reviews may result in academic credit, course substitutions or waivers, or advanced standing in an academic program. Typically, students petition for credit for prior life experience by providing evidence of (a) coursework at previous institutions or (b) relevant training or employment experiences in industry or the military. Students may also need to demonstrate mastery of the course content to be eligible for credit.

One site's approach: At Scenic Hills College, one of the associate's degree programs allows up to half of the required 90 credits to be earned through Advanced Placement exams and seminars, College Level Examination Program (CLEP) testing, independent studies, or non-traditional credit. Non-traditional credit includes prior experience in military schools or military work or relevant employment in industry, as demonstrated by credit by examination or evaluation. This academic program is not intended to be a transfer degree to a four-year institution. Designed specifically for active duty military members and their adult family members, this flexible program permits more non-traditional credits than other associate's degree programs.

Dual enrollment of high school students. "Dual enrollment/dual credit programs enable secondary students to take college classes while enrolled in high school" (Morris, 2010, p. 2). High school dual-enrollment students may be dually enrolled at a local postsecondary institution, such as a community college, or may be taking college classes being taught at their high school. These students receive both college credit and credit toward their high school diploma for the college courses they take in either location. Dual enrollment allows students to get an early start on college and transition to college more easily after graduating from high school. College tuition for dual enrollment students is often paid by the school district or the state, although students typically have to buy their own textbooks. One concern about dual enrollment is that high school students may not be adequately academically prepared to be successful in college courses.

One site's approach: Scenic Hills College is a partner in a dual enrollment program in which college-ready high school juniors and seniors can earn both high school and college credit simultaneously by taking courses at Scenic Hills. Students who participate in dual enrollment reduce the time and expense required by their college program, and the program assists with the transition to college by providing early college experience. Students do not pay tuition but must purchase their own books. Although some students take a single dual enrollment course, others

take a full college course load. Courses are available both on the college campus and online, which allows students who do not have access to transportation to participate.

Orientation. Hollins (2009) defines *orientation* as “any effort by an institution to help students make a successful transition from their previous environment into the collegiate experience. The goals for such programs may include academic preparation, personal adjustment, and increasing awareness of students and parents during the transition process” (p. 15).

One site’s approach: River Port College requires new students to participate in orientation, either on-campus (in person) or online. In both venues, the orientation program includes registering for courses online, obtaining financial aid, making tuition payments, registration and payment deadlines, and the college’s other policies and procedures. Those participating in online orientation must take a quiz to show that they have understood the material. Students deemed to be at risk of non-completion are also informed about the College Preparation Program during orientation (see *Curriculum & Instruction - Developmental Education* for more information about the College Preparation Program at River Port College).

Prep or bridge programs. Prep or Bridge programs are summer programs for first-time entering students. These programs typically cover orientation to college, the skills needed to be successful in college, and availability of student support services. Prep or Bridge programs may also include academic instruction such as accelerated reading, writing, and/or math, to minimize the number of developmental courses students need to take upon matriculation. Santa Rita and Bacote (1996) note that summer bridge programs for high-risk students are becoming a common approach as part of efforts to recruit, retain, and graduate such students.

One site’s approach: Valley West College offers a summer bridge program that consists of a week-long one-credit course for area Latino students who are entering college directly from high school. The bridge program takes the form of a class that covers familiarization with the campus, career interests, college success skills, and cultural issues that may be encountered in college. Students also meet with academic counselors, with whom they discuss potential majors and register for Fall courses. About 25 students are served each year in this program.

Advising and Counseling Programs

Advising and counseling programs include academic advising, early alert and mid-term intervention systems, personal counseling, probation or suspension, and retention advising and counseling.

Academic advising. Dr. Joan Marques (2006), an academic advisor at Woodbury University in California, developed the following definition of academic advising:

Academic advising is a process of guiding, motivating, and assisting a student in making the right academic choices, considering his or her unique, contemporary life circumstances and needs, in order to enhance the student’s academic success and gratification, while at the same time adhering to the institution’s mission; endorsing

retention and a sense of mutual satisfaction; and supporting an elevation in the general standards of the learning experience in higher education.

This definition describes how advising—the process of helping students choose courses, academic programs, etc.—takes place within a personal and institutional context.

One site's approach: At Freedom County College, advising tasks include seeing newly admitted students, providing intrusive advising to students identified as being at risk for non-completion (including those on academic probation), and aiding students with course schedule planning, as well as a number of other functions. After new students have taken the college's placement exam, they are scheduled to meet with advising staff. The first appointment serves as an orientation for students, intended to acclimatize them to all the services and opportunities that the campus offers. At this time students also register for a group orientation session, set their campus password, learn about their student ID, and discuss other topics, such as parking, tuition and financial aid, health insurance, and textbooks.

Advising at Freedom County has its own syllabus, the goal of which is to help students develop the skills and knowledge needed to register, monitor their academic progress and grades, and print out degree progress reports on their own. The approach to advising also aligns with the teaching style of the campus, in that all content courses on campus have four criteria built into them: critical thinking, understanding contexts, engaging with other learners, and reflecting and acting. The advising department has integrated these criteria into their learning outcomes.

Advising staff use electronic tools including Blackboard, an in-house wiki, Sage (an early warning system), AdvisorTrac, and podcasts. Advisors use Blackboard to communicate with students, upload documents, and post announcements. The in-house wiki documents common problems, questions, and solutions encountered by students and advisors. AdvisorTrac is an online program that is used to schedule appointments, remind students of upcoming appointments, and record advising notes. Advising staff use podcasts to inform students about how to perform self-service functions such as printing out degree progress reports.

Advising staff work closely with faculty to develop the course schedule, ensuring that co-required courses are not offered at the same time and that sufficient sections of prerequisite courses are offered. Intrusive advising of students considered to be at risk often occurs during the first week of class, as advisors feel it best to reach students early in the term. Staff members review selected student schedules and make phone calls to students whom they view as more likely to encounter difficulties, including students carrying a heavy credit load, students taking a particularly challenging combination of classes, students whose classes don't match their declared major, students taking courses for which they are lacking the prerequisites, and students who have repeatedly taken and failed to complete a similar type of course (e.g., a foreign language). The students whose schedules are reviewed include all students on academic probation; minority and ESL students; student athletes; any student taking a math or pre-nursing science classes; and any student taking other selected science, business, or computer technology classes.

The advising staff also helps students who decide to start attending an affiliated four-year campus. Other responsibilities of this department include planning the annual graduation ceremony, presenting academic awards (by mail or at an awards dinner), and recently, helping to develop an honors program.

Early alert and mid-term intervention systems. Community colleges have various ways to monitor student academic progress during academic terms. Some types of students (e.g., members of cohort-based programs, TRIO participants) may receive mid-term interventions as part of their academic or student support program. An example of such a mid-term intervention is requiring students to have their professors record their progress at mid-term, including the grades they will probably earn in the courses.

A similar system, but typically used for the entire student body, is an electronic early alert system. Many community colleges utilize such systems to help identify students “at risk of continued success and progress at the community college” (Geltner, 2001). Faculty can file reports based on student attendance, course performance, or other concerns. However, use of early alert systems is typically voluntary for faculty, and not all faculty members file reports in the system. Typically, in response to reports being filed, student support staff attempt to contact the student and help them troubleshoot the barriers to their success.

One site’s approach: River Port Faculty members are encouraged to file a report in the online Student Alert System (SAS) if a student demonstrates behavior that puts him or her at risk of failing a course, and/or if he or she experiences behavioral, academic, or personal concerns that require outside assistance. Faculty teaching developmental courses are also asked to file a report on any students in their courses who are earning a grade of D or F midway through the semester to SAS. Faculty may submit reports at any time during the semester.

Faculty are encouraged to attempt to contact the student themselves prior to submitting a SAS report; SAS reports are used by many faculty when third-party intervention is desired. In SAS, a faculty member can record details about the student, such as the last date he or she attended class, the student’s current grade, the problem that is occurring, recommendations for the student, and comments specific to the student. Faculty can view completed SAS Reports and in-progress SAS Reports for their students in the same online interface, and can see whether a Retention Specialist has been able to reach the student.

River Port’s Retention Specialists check SAS daily. Contact with a student is initiated within a day or two of the report’s submission. Students for whom this is their first SAS report are initially contacted by e-mail, and then, if there is no response from the student in several days, via phone. Students who have been reported in SAS multiple times, students who are on academic probation, and first-semester students are considered at higher risk and are typically both e-mailed and called initially in response to an SAS report, if the college has such contact information available.

Use of the SAS system by faculty is voluntary. About one-third of the faculty use the SAS system in any given semester, with these faculty members filing an average of 17 SAS reports

each. Some faculty use SAS mostly as a documentation tool to log their attempts to connect with certain at-risk students.

Personal counseling. Personal counseling refers to mental health counseling with the aim of helping students resolve personal problems that are interfering with their academic success. It is more emotional or affective and intensive than academic advising. Unfortunately, community colleges often have only a few personal counselors on staff at most; therefore, their availability to help students can be quite limited.

Many community colleges have a resource-and-referral staff member whose job it is to help students get connected to the community resources they need so they can succeed at the college. Student needs addressed can include housing, child care, transportation, and temporary financial assistance.

One site's approach: The counseling department at Valley West College provides both academic advising and personal counseling. It also coordinates and teaches classes in two departments: human development and career guidance. Use of services and participation in these classes is voluntary except for students who are on academic probation or academic suspension. These students must comply with prescribed interventions to stay in school and retain their financial aid.

Students are encouraged to take one of two available college success classes from the human development department. These courses are tuition-free but credit bearing. They cover topics such as scholarship application writing and career and life planning. Field-specific career guidance courses are also offered, such as a course for students who are considering nursing and other health careers. These classes reduce the need for counselors to work one-on-one with students on these topics.

Students having relationship, mental health, or general financial problems may receive short-term personal counseling free of charge from the college's counseling staff. They may be referred outside the college if their concerns are more serious or long-term in nature.

Probation or suspension. Community colleges' open access mission is limited by classroom and program space. One tool for preserving space for new students is placing students on academic probation or suspension if they do not meet certain academic thresholds—typically, maintaining a specified GPA such as a 2.0. Students on probation can appeal to be reinstated but may be required to petition an academic standards committee. The committee may stipulate certain conditions for the student to remain enrolled, such as taking one or more college success courses, retaking failed courses, accessing one or more student support services, and maintaining regular contact with an advisor. Students who are suspended may be ineligible to enroll in any college in the state higher education system if they are suspended from one college in the state higher education system.

One site's approach: At Freedom County College, the Probation Learning Contract, managed by the advising department, is a retention program for students who are placed on academic probation. A hold is placed on the student's record until good academic standing is attained.

While subject to the hold, a student must see advising in order to receive permission to register for classes and can register for no more than 14 credits. While on probation, each student receives a phone call from a staff member during the first week of the term, asking about any difficulties with coursework. Advisors also connect students on probation to tutoring resources at the college and strongly suggest that they take advantage of the services available at the campus Learning Resource Center. Students who have complied with the contract and used the suggested resources but are subsequently suspended or dismissed are looked on more favorably if they appeal suspension or dismissal, and they are more likely to be reinstated.

Retention advising and counseling. Some community colleges have staff whose job (in whole or part) is to follow up or track down students at risk of dropout and help them stay in or come back to school. These so-called retention specialists often practice “intrusive advising,” contacting students who have not asked for help, as part of an early alert system as described above. Retention specialists’ efforts may be guided by entries into an early alert system, or by personal contact from faculty members, or they may identify students for intervention themselves, based on institutional records. Retention specialists typically try to reach students by phone or email and may refer them to other campus offices or community agencies for help or support. However, retention specialists’ efforts are often hampered by outdated student contact information.

One site’s approach: River Port College employs three Retention Specialists, two for the general student population and one assigned to students in the college’s “It’s Your Future” program, a site-specific college access and success program for students entering the college directly from high school. These positions are in addition to one counselor who is available to help students with personal issues.

Retention Specialists act as informational resources and provide academic interventions for students experiencing academic difficulties. Their duties include responding to SAS reports, monitoring students identified in the SAS system for adequate academic progress, and providing intrusive advising to students on academic probation. They also offer pre-registration informational sessions for entering developmental education students and students who have not yet chosen an academic program or path, and serve as academic advisors for developmental students. Retention Specialists also meet one-on-one with pre-major students who are on academic probation. (This role is performed by faculty for students who have declared a major.)

The end of traditional advising at River Port College in recent years means that there are now fewer restrictions on the kinds of courses for which students may register. As a result, some students register for courses that are not a good fit. This often results in significant work for the Retention Specialists toward the end of each term, when these students discover that they are struggling because of taking wrong classes or too many classes. These students may find themselves flagged in the college’s early alert system (SAS) or on academic probation.

Curriculum and Instruction Programs

Curriculum and instruction programs include Adult Basic Education (ABE) on-site, cohorts, college success skills courses, developmental education, English as a Second Language (ESL), learning communities, online and hybrid courses, and tutoring.

Adult Basic Education (ABE; on-site). In the community college context, students who score below developmental level on college assessments (at our sites, either Accuplacer or COMPASS) are referred to ABE. The college may offer ABE on site or may refer students to a community organization or agency which provides ABE (e.g., the local school district). ABE provides basic academic instruction in reading, writing, and math to prepare adult learners for the labor market, vocational training, or other college work.

One site's approach: At Freedom County College, students can take Adult Basic Education (ABE) courses on campus, alone or in combination with developmental or credit-bearing courses. The college sees three types of ABE students. A very small number of students (just one or two per year) come to the college with very low skills (as measured by a placement test) and a non-standard high school diploma. Because the college believes that these students will never be admitted, it refers them to the community-based ABE program. A second type of student has a hybrid schedule, taking one or more ABE courses (college-readiness reading, writing, or math) as well as credit-bearing classes that do not require high levels of literacy, such as College Study Skills, Introduction to Computers, Kinesiology, Basketball, or, less often, Introduction to Communications. In theory, these students, once admitted, can sign up for anything, but these students are usually advised to take courses in which they can be successful. Allowing ABE students to take a hybrid schedule is seen as helping students succeed in ABE and feel more connected to the college. A third type of ABE student is one who is enrolled in developmental courses, but is struggling and has been advised to switch to one or more ABE classes to improve their skills before re-enrolling in developmental courses. Because ABE is available at the college, such students are able to experience campus life and to mix ABE courses with both developmental and credit-bearing courses.

Cohorts. In this context, a cohort refers to a group of students who enter a highly structured academic program (e.g., nursing) at the same time and proceed through it together. Cohorts are thought to improve retention by fostering social support for learning.

One site's approach: At Valley West College, the last two years of a three-year AAS nursing program are conducted using a cohort model. During their first year of college, students complete prerequisites such as Biology and Anatomy and Physiology. Then students apply for the AAS program, and 36 are admitted each year on a competitive basis. The number is limited because of a lack of sufficient clinical opportunities in the community for student internships, and the college decided to use a competitive process to help ensure that the cohort remains at or near capacity throughout the duration of the program. Students in the cohort are very supportive of each other, and the instructors get to know them well and can advise them when they encounter difficulties. When a student is doing poorly, the instructors provide academic counseling and may refer him or her to other resources at the college. Students in the cohort are

encouraged to form study groups, carpool to class, and participate in program-sponsored social events.

Some other programs at Valley West are not required to be taken as part of a cohort, but because some classes are offered only once a year, most students go through in a de facto cohort. Evening programs are not considered good candidates for a cohort model, because the students in them tend to take varying numbers of credits and may stop out between courses.

College success skills courses. College success skills courses, also known as student life skills courses or student orientation courses, are designed to improve students' odds of academic success. They provide basic information on study skills (e.g., note-taking, time management) and the requirements of college (e.g., how to interpret a syllabus, how to access student support services) and can be voluntary or required.

One site's approach: At River Port College, four courses are offered to help students succeed in college. Three carry one credit: a first-year course on college success strategies, a course on study skills, and a course on information literacy. A two-credit course is also offered, combining college success strategies with identifying and using career resources (see Programs Providing Support for Post-College Transition: Career Exploration and Counseling for other career-related courses at River Port College). All of the college success courses are offered as eight-week (half-semester) classes, with the exception of an online version which is 16 weeks in duration.

Developmental education. Community college matriculants almost always have to take a placement test to determine whether credit-bearing college-level coursework in math, reading, and writing is appropriate for them, or whether they must first take developmental (i.e., remedial) coursework in one or more of these subjects. Nearly two-thirds of incoming students test into at least one developmental course. Developmental courses usually take the form of semester-long courses, although some colleges are experimenting with intensive developmental courses of shorter duration or computer modules that allow students who have tested into developmental coursework to refresh particular skills (e.g., fractions) in lieu of paying tuition for an entire developmental course.

Developmental students typically have worse outcomes than students who test into college-level coursework. Fewer than 25% of developmental students complete a degree or certificate within eight years of enrollment, compared to almost 40% of students who test into college-level coursework (Bailey & Cho, 2010).

One site's approach: At River Port College, during orientation, students who have taken the placement examination and tested at the pre-college level are told they will need to enroll in all or part of the College Preparation Program course sequence. This sequence includes Developmental Reading, Reading I & II, Writing I & II, Math I & II, Introductory Algebra, and Intermediate Algebra. The college recommends Adult Basic Education (ABE) for students with the lowest writing scores on placement tests. ABE is available at off-campus sites in the community.

English as a Second Language (ESL). English as a Second Language (ESL; also known as English for Speakers of Other Languages [ESOL] or English as a Foreign Language [EFL]) courses are specially targeted to students whose first language is not English. At many community colleges, achieving a specified level of ESL proficiency is required before students can begin taking credit-bearing classes.

One site's approach: At River Port College, an urban college, ESL is an especially important program. College administrators noted that many students who had done well and passed out of ESL were nonetheless doing poorly in credit-bearing classes. They determined that although many students were acquiring English language skills needed for daily living, they were not learning the skills needed to succeed in postsecondary-level academic classes, such as how to write papers. Administrators brought the ESL teachers together and shared statistics showing how former ESL students had performed in subsequent courses at the college. As a result, the ESL instructors decided to change their curriculum.

In addition, the college developed a special center for students in developmental and ESL classes, where these students could have easier access to multiple services designed to help them succeed. This center opened in Fall 2010. As data become available for this second cohort, it will be possible to compare students who used the new center to those who entered in 2009.

Learning communities. In the community college context, learning communities typically take the form of the same group of students taking two or more courses together, with varying degrees of curricular integration between the courses. Bailey and Alfonso noted that many community colleges have implemented learning communities in recent years "to develop a more coherent intellectual environment and forge stronger links with the diverse and fragmented community college student body" (2005, p. 17).

One site's approach: At Scenic Hills College, participation in learning communities is required for all non-occupational students who are working toward Associate's degrees. The typical student participates in two or three learning communities over the course of a two-year program. Because occupational students have a high number of required courses and are often in a cohort-like learning environment within their programs, they are not generally required to register for any learning communities.

Learning communities at Scenic Hills are intended to promote interdisciplinary experiences among students and faculty. There are three main types of learning communities at Scenic Hills. Some learning communities focus on the intersection of two subject areas, and are co-taught by two faculty members who both attend all classes and who share grading. These learning communities have the highest degree of cross-subject integration.

Other learning communities involve two separate but coordinated courses in which two instructors teach the same group of students but at different times and places. In these learning communities, common assignments across the two courses help students understand the connection between the subject matter areas.

A third type of learning community is a first-year class that covers content in a student's major

and is co-taught by a member of the college's counseling staff; these learning communities are viewed as a type of student success course. In these learning communities, the academic and counseling instructors meet regularly to review student progress and discuss strategies for helping students who are having difficulties.

Online and hybrid courses. Because so many community college students are working adults, many community colleges try various approaches to increasing the convenience of courses, including offering online courses and degrees, hybrid courses with both classroom and online components, evening and weekend courses, and courses offered at workplaces.

One site's approach: Scenic Hills College serves people from a three-county geographic area, and includes among its students a number of individuals from a nearby military base. The college offers online and hybrid courses and several online degree programs. Students in online courses complete assignments and learning outcome assessments comparable to those provided in traditional classroom settings.

Scenic Hills has made its math courses flexible and accessible through a hybrid system centered on MyMathLab, a commercially available math instruction system. They combine this with a monitoring system to keep students on track as well as provide centers on campus where students can work together and get help from tutors. Students use the online instruction and homework portions of MyMathLab; however, they are required to come to campus for assessments, and they must meet certain deadlines, such as taking the first test within three weeks of the beginning of the term. Students need not complete a course within a given term; as long as they are progressing, they can receive an incomplete grade for the course and finish it the next term without re-registering. Students receiving an incomplete must sign a contract and provide their phone numbers and email addresses. A staff member contacts students via texting to help them stay on schedule and complete these courses.

Tutoring. In the community college setting, tutoring is often provided through subject-specific support centers or offices, such as a math lab or writing center, as well as through general tutoring centers that provide basic tutoring on multiple subjects. Tutoring can be on an individual or small-group basis.

One site's approach: Tutoring is one of the services provided at Freedom County College's learning resource center, a welcoming environment which provides several types of student support services. The center also offers assessment and advising, and oversees ESL instruction.

Three types of tutoring are offered. Peer tutoring is available to all students and is provided by student employees who are selected and trained for this role. Professional staff also tutor in the areas of math, reading, and English, and an ESL specialist teaches ESL classes and provides one-on-one tutoring and advising. The third area is on-line tutoring using a group format.

Extracurricular Activities

Extracurricular activities programs include athletics and recreational sports and student activities and organizations.

Athletics and recreational sports. Some community colleges have athletic teams, either for intramural or extramural sports. Student athletes may be recruited to the community college and often have to maintain a certain GPA in order to remain on the team. Community colleges give various reasons for having athletic teams, including giving students a “true college experience” and attracting more diverse students to the college (Bush et al., 2009, p. 5).

One site’s approach: At Freedom County College, the mission of the athletics program is to encourage learning in and outside the classroom, and on and off the playing field. The college offers several men’s and women’s sports. Teams play in a statewide conference with similar colleges. To participate in intercollegiate athletics, students must take at least 7 credit hours per semester, of which 4 must be grade-bearing. Students who have earned fewer than 30 credit hours must maintain a cumulative GPA of 1.70; subsequently, a cumulative GPA of 2.00 is required. A summer bridge program is provided for athletes, a special section of the first-year college success and leadership course is offered for them exclusively, and a part-time academic advisor is designated for them as well. Recreational and intramural sports are also available, though whether specific teams are formed depends upon whether there are sufficient signups each year. The college views its athletic programs as important to creating balance in students’ lives, as well as enhancing student connections to each other and to the college.

Student activities and organizations. Many community colleges have student clubs or organizations, including groups for students who share a common interest (e.g., chess), career-focused clubs (e.g., nursing club), academic honor societies, and clubs for specific types of students (e.g., lesbian, gay, bisexual, and transgendered [LGBT] students, students of particular races or ethnicities), among others. A college’s student organization office can provide logistical, monetary, and/or mentoring support to student organizations. Most community college students do not participate in student activities and organizations; however, research has shown that those who do report greater personal and social development (Chang, 2002, Abstract).

One site’s approach: The Student Activities Office at Freedom County College manages a wide range of programs, including orientation, which is led by students. In addition, this office provides leadership development workshops for those involved in student organizations. These help student leaders understand the principles of recruitment, publicity, and collaboration. Student organizations plan over 70 college events each year, such as holiday parties, bingo nights, ski trips, and a casino night. Service opportunities are available through the Student Activities Office and have included weekly service gatherings, a Spring Break alternative local service project, and group trips to provide service or attend service-related conferences. The Student Activities Office also conducts an ongoing sexual health and condom use campaign, in which students who attend informational sessions can purchase condoms at discounted prices.

Programs Providing Support for Low-Income Students and Special Populations

Programs providing support for low-income students and special populations include disability services, TRIO programs, financial aid, multicultural programs, veterans’ services, and women’s programs. Programs providing support for post-college transition include career exploration and counseling and transfer services.

Disability services. The Americans with Disabilities Act of 1990 (ADA) requires that colleges and universities provide equal educational opportunity to students with disabilities (Kalivoda & Totty, 2008). To that end, college disability services offices provide individualized support services to students with physical, mental, or sensory disabilities. Students who have a documented disability, who register with disability services offices, and who request accommodations related to their role as a student are provided help in determining what accommodations they need and arranging for those. Types of accommodations include, but are not limited to: assistive technology (e.g., listening devices, software, screen magnifiers), sign language interpreters, textbooks and other written materials in alternative formats (e.g., in Braille, on CD, as e-text), adaptive equipment, note-takers, recorders and scribes, readers, test proctoring and accommodations (e.g., extra time, quiet room, tests on CD), assistance with course selection and program advising, advocacy and self-advocacy training and support, and support and counseling.

Faculty may discuss concerns and observations with students, and may invite students with disabilities to identify themselves, but colleges do not provide faculty with lists of students who have disabilities. Unlike in the K-12 system, in college it is the student's responsibility to disclose that they have a disability if they wish to access accommodations. If a student self-discloses that he or she has a disability, a faculty member may then refer the student to Disability Services, where students will be advised about available accommodations and how to communicate with faculty about their disabilities.

One site's approach: At Valley West College, Disability Services works with faculty to provide accommodations as specified by the Americans with Disabilities Act (ADA) and the Rehabilitation Act. Their mission is to provide equal access to education to students with physical, learning, and mental health issues that otherwise impede their learning. All course syllabi, the college catalog, and other print and online publications alert students to the availability of these services. Sometimes students are referred to Disability Services by external professionals or staff from other schools, but usually it is the prerogative of the student to self-identify and seek these services. Therefore, Valley West Disability Services staff members are active during college recruitment and orientation to inform students of these services.

In 2008, with an FTE of about 4,000, the Disability Services office at Valley West served approximately 770 students. However, many students do not seek their services, including students with learning disabilities (LD), Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder (ADD/ADHD), and bipolar disorder. (It is not uncommon for college students with disabilities not to register with their campus Disability Services office, for a variety of reasons.) Like other colleges across the country, the Disability Services office at Valley West has noted more students with diagnoses of mental illness registering with their office in recent years.

Valley West takes a resourceful approach to textbooks that need to be scanned to generate accessible text. After they are scanned, the bookstore re-binds the textbooks and sells them used. The Disability Services office at Valley West is proud that there have never been any substantiated claims of non-compliance with the ADA at Valley West.

Federal TRIO programs. The eight federal TRIO programs identify and provide services for college students and prospective students (from middle schools, high schools, and the community) from disadvantaged backgrounds, including low-income individuals, first-generation college students, and individuals with disabilities. TRIO programs aim to help such individuals “progress through the academic pipeline from middle school to postbaccalaureate programs” (U.S. Department of Education, 2011a). In order to be served by a TRIO program, a student must be eligible to receive services and be accepted into a funded project that serves the institution or school that student is attending or the area in which the student lives.

TRIO Student Support Services (SSS), one of the eight federally-funded TRIO programs, is offered at many community colleges, including two sites in this study. All SSS projects are required to provide academic tutoring, advice and assistance in postsecondary course selection, information assistance in obtaining financial aid, education or counseling services to improve student financial and economic literacy, and assistance with enrollment in four-year or graduate-level institutions. SSS projects may also provide additional services as specified in federal legislation, such as individualized counseling, instruction concerning career options, and mentoring (U.S. Department of Education, 2011b).

One site’s approach: Valley West College hosts three TRIO programs. In addition to SSS, the site has an Educational Talent Search (ETS) program providing outreach to middle and high school students and an Educational Opportunity Center (EOC) providing outreach to adults in the community. Students served by the SSS program at Valley West receive all required services; in addition, they participate in tours of nearby four-year college campuses so that they can explore transfer options. SSS students are also able to enroll in Valley West’s college success courses tuition-free. Valley West’s website notes that SSS aims to help students raise their GPAs, improve their test scores, and overcome academic difficulties, as well as create a plan for successfully transferring to a four-year college or university. At Valley West, ETS targets first-generation and low-income students at three local middle schools and four local high schools. ETS identifies qualified youth with the potential to succeed in college and encourages them to complete secondary school and enroll in postsecondary education. Finally, the EOC at Valley West serves adults and high school seniors in the two counties from which most of Valley West’s students come. It provides support to qualified seniors and adults who wish to enter or continue their postsecondary education, including assistance with college planning and research, financial aid assistance, and college application and test fee waivers. In addition to the standard TRIO criteria (first-generation college student or low-income), veterans are also eligible to receive EOC services.

Financial aid. Availability of financial aid is an especially important factor in student enrollment and retention at the community-college level, especially among low-income and minority students (Kennamer, Katsinas, & Schumaker, 2010-2011). Community-college financial aid offices help students navigate the process to acquire federal, state, local, and/or private funding for their education. Several types of financial aid are available: loans, grants, work-study programs, tuition waivers, and scholarships. Students can apply for subsidized or unsubsidized federal loans, and their parents can pursue Federal Direct PLUS Loans (Parental Loans to

Undergraduate Students). If a student wants to take out a loan, they must receive a loan counseling session per federal law.

Examples of federal, need-based grant programs to promote college access include Pell grants and Federal Supplemental Educational Opportunity grants (FSEOGs). Low-income students who have not already earned a bachelor's degree may be eligible for a Pell grant. FSEOGs offer eligible students tuition and fees and financial support for books and supplies if they pursue high-demand careers and meet the income guidelines and application requirements. State and federal programs offer part-time employment, including internships and college work-study positions, to students with financial need.

Finally, the financial aid office serves as a resource for information about (and as the administrator for some) state-supported tuition waivers and local, state, and federal financial aid. Once granted financial aid, students must maintain satisfactory academic progress in aid-eligible majors in order to remain eligible for most types of financial assistance. This progress is measured by GPA and credit accrual rates. Financial aid offices assess financial aid eligibility every year, monitoring program progress. Students are allowed 150% of the program time length in which to finish. If it looks like a student will not complete on this time frame, they do not award. A student can then appeal for an extension, enrolling only in required classes. There are warning points along the way at which messages are sent to the student.

The financial aid office can use professional judgment in the event of circumstances such as a layoff, foreclosure, or illness. If a student can document the situation, the staff can try to increase the amount of financial aid awarded.

One site's approach: At Freedom County College, the financial aid program works hand-in-glove with admissions to ensure that students interested in attending the college have ready access to financial aid information from the start. Although the federal application for financial aid, or FAFSA, is available online, the financial aid office at Freedom County does not want computer literacy to be a barrier to filing for financial aid and provides hard copy instructions and paper application forms to those who request them. The financial aid office also handles scholarship applications and helps students awarded work-study find jobs on campus.

On the college's website is an invitation to send any query about the college to "Questions for Quincy." This is one means by which prospective students receive financial aid information, and may be particularly helpful for those with special financial circumstances. "Questions for Quincy" has been an unexpectedly popular feature of the website.

Freedom County has several sources of funds for both loans and grants, including for special student populations. State funding is available for students attending college after leaving the foster care system. Veterans are helped with the financial aid application process, and a special exception is made concerning non-payment of tuition if veterans' funds have not been processed and disbursed in a timely manner. A special fund at the college offers scholarships for veterans and for students of color who have financial need and are also considered to be at risk of non-completion.

This college has a close relationship with a four-year institution with competitive admissions and the institutions operate with many common policies. Freedom County works within this system but it sometimes creates problems for financial aid, because students at Freedom County, who can be admitted closer to the beginning of the academic year, may not receive their loans or grants quickly enough to avoid getting into difficulty as a result of non-payment of tuition.

Multicultural programs. Many community colleges have staff or an office responsible for supporting ethnic or racial minority students. The services provided by this staff and office can include academic advising, personal counseling, mid-term tracking of student progress, social events, and formal or informal mentoring programs (including student-to-student, student-to-alumni, or student-to-community professional).

One site's approach: At Scenic Hills College, a staff member is assigned to work with multicultural students and to manage two extensive multicultural programs, the All Together Service Club and the Diversity Ambassadors program. This staff person is charged with recruiting and retaining students of color, including minorities, immigrants, and ESL students. He or she serves as an academic advisor for some scholarship students, and is a liaison to the ESL, Office Technology, and Early Childhood Education departments.

All Together replaced several small and marginally viable minority student clubs. It coordinates service projects, engages in service activities, organizes fundraising, and awards scholarships to active members. All Together has a new student chair each term—someone who has taken the college's two-credit leadership course. The group meets weekly; each meeting includes a presentation on a postsecondary education topic as well as service-related agenda items. Active club members are awarded \$600 scholarships, with 10 to 20 top students receiving funds. An annual dance the group organizes raises funds for student scholarships. The group has also raised money for Big Brothers Big Sisters and for Haiti relief. All Together members include students with disabilities.

Diversity Ambassadors are involved in outreach to the community; this activity has increased the proportion of students of color at the college in recent years. Many high school students of color think they cannot afford college, so student ambassadors go to local high schools to tell students about the college experience and to encourage them to plan for college. As part of this outreach, the multicultural program staff person sets up a process by which community members can nominate students for \$1,000 scholarships to Scenic Hills. Awardees are feted at an evening assembly attended by parents and younger siblings, which helps future outreach. The funds are held at the college in the fall of the last year of high school until the awardees enroll for classes. These scholarships are intended to encourage students to complete high school and register for college. Recipients are profiled in the local newspaper.

Veterans' services. At community colleges, military veterans are eligible for a variety of different entitlement programs based on length and type of service. Veterans' services usually take the form of an office, a staff person, or a program which seeks to help veterans become acclimated to campus life and succeed academically. Those coordinating these services these services work to understand veterans' unique needs and provide both services and referrals.

One site's approach: Valley West College employs two full-time veterans' advisors who connect with the Veterans Administration at both the national and state level to help veterans access their educational benefits. Veterans' benefits may include paying tuition and fees, helping with the cost of books, and helping to cover fees. Veterans' advisors interact with students before they enter college to inform them about available assistance, and after they are enrolled to make sure that they receive needed services and that their benefit payments are timely. These staff members do a lot of listening, explaining, and advocating by email, on the phone, and in person.

Veterans at the college range in age and length of military service. Most are relatively young, as veterans' educational benefits expire 10 years after leaving active duty. Some 60% to 70% of those who have experienced combat have some level of disability, including post-traumatic stress disorder. If they are 40% to 100% disabled, Veterans' Rehabilitation benefits are available to them.

Veterans' advisors work with other college staff and faculty to help them understand how to talk to veterans, how to anticipate what they might be thinking and feeling, and how they may perceive environmental stimuli such as loud noises and crowds. The goal is to support a smooth transition to college. Veterans' counselors often attend conferences and become involved with veterans' clubs in the community. Veterans must check in with the counselors when they make enrollment changes.

Women's programs. Women comprise 58% of students in community colleges (AACC, 2010). Some community colleges often offer support services directed to female students, such as career exploration, transitional counseling, and support groups.

One site's approach: Scenic Hills College offers dedicated support programs to promote the intellectual, educational, and personal development of women enrolled in the college. Designed to assist female students with various college transitions, women's programs provide opportunities for reflection, skill development, and peer support, increasing students' confidence and ability to successfully complete college-level work. These programs include career workshops and classes for students who have become primary supporters of their families due to circumstances such as changes in marital status or a spouse's disability. Job search and job readiness courses prepare students to successfully transition to employment, and a leadership program helps students develop and recognize their skills. Workshops and featured speakers connect students with community resources, such as volunteer opportunities and domestic violence services. Other services available through the Scenic Hills College's women's programs include funding for childcare assistance, emergency financial assistance for eligible students, and information about financial planning. An advisory committee comprised of campus and community members supports these programs.

Programs Providing Support for Post-College Transition

Programs providing support for post-college transition include career exploration and counseling and transfer services.

Career exploration and counseling. Career exploration and planning services typically include vocational assessments to determine students' interests and skills. These services also often include help with creating résumés, mock job interviews, finding job shadowing opportunities, and looking for employment.

One site's approach: At River Port College, two one-credit career planning courses are offered: a basic career planning course for students just out of high school, and a second course on choosing a career path. A two-credit course is offered that combines college success strategies with skills for identifying and using career resources. (The college success strategies portion of the course is also offered separately as a one-credit course.)

Transfer services. Transfer services help students transfer to (or from) another community college or a four-year college. Transfer services staff help students learn about their transfer options, plan their course-taking for ease of transfer, and fill out the proper forms for transfer. The transfer function serves as a retention tool because students often have transferring to a four-year university as a goal, so helping students understand the requirements and keeping them on track aids retention at the current institution.

One site's approach: River Port College employs four transfer advisors, who carry out a number of functions. First, transfer advisors advise pre-majors, such as those planning to major in nursing after completing the prerequisites, and are also the academic advisors of record for students seeking some associate's degrees (in some majors, faculty provide advising; in others, faculty and transfer advisors share advising duties). Transfer advisors also help students with detailed planning for transfer to a four-year institution, based on their goals. For students transferring in or out, transfer advisors review transcripts to assess student progress and note which credits are likely to transfer in or out. For those transferring in, transfer advisors may waive placement tests as appropriate, and can override prerequisites for incoming students whose official transcript from a previous college has not yet arrived. They also work with faculty and administrators on statewide articulation agreements, and host transfer fairs and visits by staff of regional four-year colleges. Finally, transfer advisors work with the college's retention advisors to evaluate appeals for reinstatement by students on academic suspension.

Early Findings

Initial analyses have been conducted using data available as of the end of the project year (July 2010). These are described briefly below.

Institutional Data

Institutional data sources include records of student enrollment, course-taking, and demographics. In addition, records of intervention participation are also considered institutional data.

First-year retention data. For Cohort 1, enrollment data have been received from all four sites for all terms in the 2009-2010 academic year. Two sites are on the quarter system and two are on the semester system, so Winter 2010 term data are available for two sites only.

This study defines retention as enrollment in any term subsequent to Fall 2009, as of “count day” (two weeks after the start of the term). Students whose specific programs of study began during Summer 2009 are considered to have started in Fall 2009; otherwise, all Cohort 1 students first enrolled at their college in Fall 2009. If a student is not enrolled for one term, but returns in a subsequent term (as occurred in 2009-2010 with some students on the quarter system who did not enroll in Winter 2010 but returned in Spring 2010), that student is considered to be a “stop-out” student who has been retained. Stop-out is a retrospective categorization based on subsequent enrollment.

Figure 2 shows percentage of students retained in each academic term, using Fall 2009 as the benchmark. The highest retention from Fall to Spring is at Freedom County; the lowest is at Scenic Hills. Although the overall retention rate varies from site to site, the difference in the proportion of occupational and non-occupational students retained at each site from Fall 2009 to Spring 2010 is relatively small (see Figure 3).

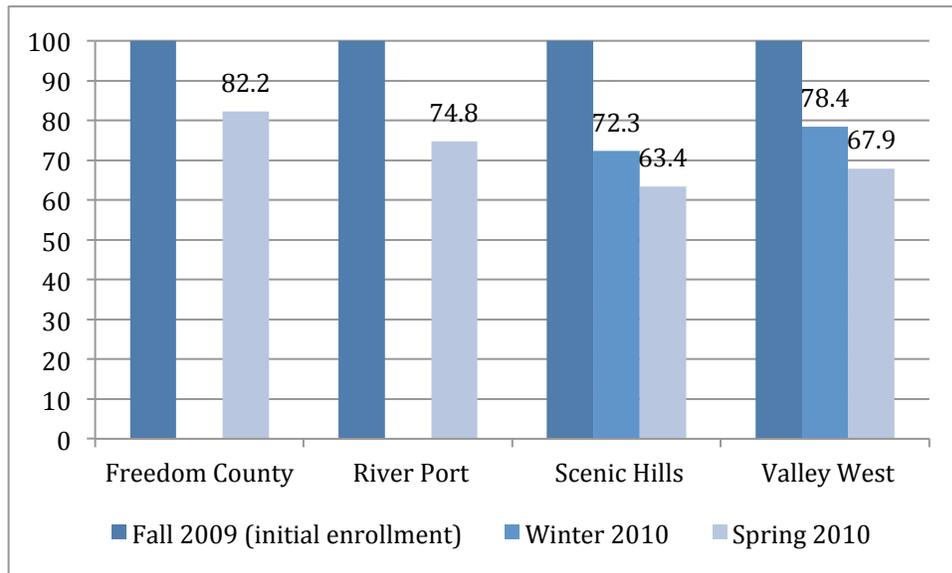


Figure 2. Percent of Cohort 1 students enrolled/retained at the beginning of each term.

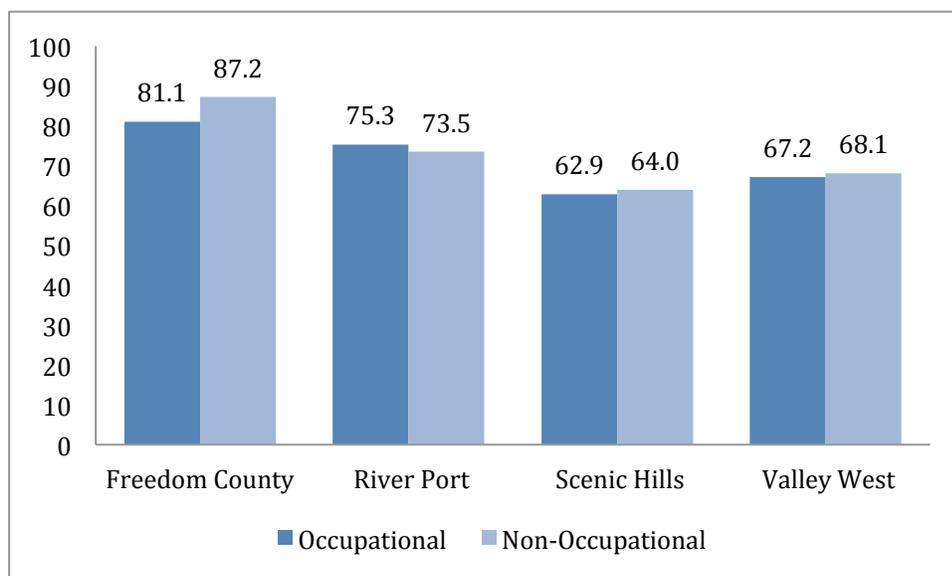


Figure 3. Percent of occupational and non-occupational students retained from Fall 2009 to Spring 2010.

Survey Data

Survey data are collected twice yearly from Cohort 1 survey participants. Only those who responded to the initial survey are included in subsequent surveys.

First-year survey highlights. After all surveys and reminders were sent, a total of 236 students completed the survey (ranging from 47-72 per site); these represented an overall response rate of 23.3%, ranging from 18.4% at Freedom County to 28.2% at Valley West. Students responding to the first survey were sent another survey in Spring 2010 and are being followed with semi-annual surveys through Spring 2012. Table 2 summarizes key survey findings for the Fall 2009 and Spring 2010 surveys. The survey results show that, as might be expected, occupational students are less likely to have entered college immediately after high school and are more likely to seek a certificate or a two-year degree than non-occupational students. Students responding to the survey who were classified as occupational were more likely to have experienced a major life event in the past year, particularly financial setbacks. Most students participating in the survey were employed, regardless of their occupational or non-occupational status.

Table 2

Selected Responses by Percentage to Fall 2009 and Spring 2010 Survey of a Sample of Students

	<i>Non-occupational</i>		<i>Occupational</i>	
	<i>FA09**</i> <i>(n = 72)</i>	<i>SP10</i> <i>(n = 37)</i>	<i>FA09</i> <i>(n = 164)</i>	<i>SP10</i> <i>(n = 86)</i>
Gender	<i>n = 69***</i>	<i>n = 36</i>	<i>n = 161</i>	<i>n = 83</i>
Male	33.3	30.6	44.1	41.0
Female	66.7	69.4	55.9	59.0
Employment status				
Not worked	50.0	29.7	47.6	47.7

	<i>Non-occupational</i>		<i>Occupational</i>	
	FA09** (n = 72)	SP10 (n = 37)	FA09 (n = 164)	SP10 (n = 86)
Worked	50.0	70.3	52.4	52.3
<i>Hours worked</i>	<i>n = 36</i>	<i>n = 26</i>	<i>n = 85</i>	<i>n = 45</i>
1-10 hours per week	8.3	23.1	10.5	6.7
11-20 hours per week	38.9	38.5	18.8	26.7
21-30 hours per week	19.4	19.2	25.9	26.7
31-40 hours per week	22.1	11.5	30.6	26.7
Over 40 hours per week	11.1	7.7	14.1	13.3
<i>For students who worked, similarity between job and field of study</i>	<i>n = 36</i>	<i>n = 26</i>	<i>n = 85</i>	<i>n = 45</i>
Not related	72.2	65.4	57.6	40.0
Somewhat related	19.4	26.9	18.8	26.7
Very related	8.3	7.7	23.5	33.3
Number of CTE courses taken in high school				
None	48.6	-	51.2	-
1	19.4	-	19.5	-
2	16.7	-	11.6	-
3 or more	15.3	-	17.7	-
Highest level of education completed		<i>n = 36</i>	<i>n = 163</i>	
High school diploma	66.7	75.0	40.5	43.0
GED	1.4	2.8	19.6	12.8
Some college at a different college than the one I attend now	19.4	16.7	19.0	25.6
Vocational or technical certificate	5.6	5.6	10.4	5.8
Associate's or other 2-year degree	4.2	0.0	3.1	2.3
Bachelor's or other 4-year degree	1.4	0.0	4.3	5.8
Master's, doctoral, or professional degree	0.0	0.0	1.2	2.3
None of the above	1.4	0.0	1.8	2.3
Entering situation before enrolling at this college			<i>n = 162</i>	
Came to this college directly from high school	40.3	-	24.1	-
Came to this college after working for a period of time	33.3	-	36.4	-
Transferred from another 2-year college	8.3	-	5.6	-
Transferred from a 4-year college	2.8	-	4.3	-
Came to this college after completing military service	0.0	-	3.7	-
Other	15.3	-	25.9	-
Degree goal*				

	<i>Non-occupational</i>		<i>Occupational</i>	
	FA09** (n = 72)	SP10 (n = 37)	FA09 (n = 164)	SP10 (n = 86)
To prepare for a GED or high school diploma	0.0	-	2.4	-
To obtain a license or certification	11.1	-	39.0	-
To maintain a license or certification	2.8	-	5.5	-
To complete a vocational or technical program	5.6	-	19.5	-
To complete an associate's or other 2-year degree	50.0	-	56.7	-
To transfer to a 4-year college	73.6	-	30.5	-
No degree program or credential goal	2.8	-	3.0	-
Other degree program or credential goal	2.8	-	5.5	-
Major life experiences in the past year *				
Marriage	8.3	-	3.0	-
Loss of job	34.7	-	36.0	-
Birth or adoption of a child	4.2	-	4.3	-
Death of family member or close friend	22.2	-	23.8	-
Divorce or separation	4.2	-	6.7	-
Financial setbacks	38.9	-	47.6	-
Assumed primary responsibility for person with illness or other disabling condition	0.0	-	3.0	-
Major illness or other disabling condition	9.7	-	5.5	-
Legal problems	5.6	-	5.5	-
Retirement	0.0	-	1.8	-
Other	4.2	-	6.1	-
None of the above	36.1	-	20.7	-
Educational plans for the next term				
Attend this college full-time	68.1	73.0	70.7	73.3
Attend this college part-time	16.7	16.2	18.3	16.3
Attend another college	4.2	10.8	1.8	5.8
Will not attend school	5.6	0.0	4.9	3.5
Undecided	5.6	0.0	4.3	1.2
Work plans for the next academic term				
Work full-time	22.2	16.2	28.4	27.9
Work part-time	45.8	67.6	34.0	37.2
No plans to work	20.8	10.8	19.1	15.1
Don't know	11.1	5.4	18.5	19.8
Quality of education at this college				
Very inadequate	0.0	2.7	1.2	0.0

	<i>Non-occupational</i>		<i>Occupational</i>	
	FA09** (<i>n = 72</i>)	SP10 (<i>n = 37</i>)	FA09 (<i>n = 164</i>)	SP10 (<i>n = 86</i>)
Below average	2.8	2.7	3.0	2.3
Average	27.8	24.3	14.0	18.6
Good	41.7	48.6	49.4	54.7
Excellent	27.8	21.6	32.3	24.4
General satisfaction with this college		<i>n = 36</i>		
Very dissatisfied	0.0	2.8	1.2	0.0
Dissatisfied	4.2	0.0	2.4	3.5
Neutral	18.1	25.0	17.1	18.6
Satisfied	50.0	41.7	44.5	55.8
Very satisfied	27.8	30.6	34.8	22.1
If you could decide again, would you choose to attend this college?				
Definitely no	4.2	2.7	1.2	2.3
Probably no	13.9	8.1	11.0	16.3
Probably yes	44.4	43.2	38.4	44.2
Definitely yes	37.5	45.9	49.4	37.2

Notes. * Indicates questions for which respondents could choose more than one response. ** FA09 = Fall 2009 survey. SP10 = Spring 2010 survey. *** If the number of responses to a particular item is not equal to the sample cell count, the number of respondents appears above the respective column in italics.

Discussion

Many future changes in community college occupational programs will be driven by the programs of study (POS) model that links students from high school to college to high-skill, high-wage careers. The intent of Perkins IV is for this to be a seamless and successful process for students, with each level of education building on the previous one. Completion of postsecondary programs is a key goal of POS. By analyzing how college retention interventions affect student outcomes, this study will inform community college administrators and policymakers about which interventions are successful and for whom. The results of this study are also expected to provide postsecondary institutions with data supporting the development and implementation of other effective policies and programs to improve student persistence. In turn, colleges will have greater success in preparing graduates who will be able to meet the challenges of a rapidly changing global economy.

Retention interventions, although sharing goals and strategies across sites, were found to be implemented in ways that are locally determined and often quite inventive. The process of interviewing staff about these programs has helped project researchers understand the degree to which two programs of the same name or type might differ across sites. This information continues to be helpful as the data are examined for patterns within and across sites. In addition to the programs described in this report, there are a number of programs unique to a single site. Though these unique programs are not described in this report, they will be included in upcoming data analyses and will be described in detail in a future report.

Retention from Fall 2009 to Spring 2010 varied widely at the four sites, from 82.2% at Freedom County to 63.4% at Scenic Hills. As additional data are analyzed, reasons for these differing rates may be identified. For example, a possible explanation for the high 2009-2010 retention at Freedom County College is its financial aid policy, under which student awards are made for the academic year rather than for a single term. If this policy is the primary cause of Freedom County's higher within-academic-year retention rates, it is likely that retention into the second academic year would fall significantly compared to retention within the 2009-2010 year. Retention rates of occupational and non-occupational students at each site are similar overall through the 2009-2010 academic year within each site.

Future Study Activities

Although the survey results from Fall 2009 offer some insights into the student population at the four colleges, the response rate of 23.3% is inadequate to allow generalization to other students in Cohort 1. For the 2010-2011 academic year, the study has added a second cohort of students, those entering in Fall 2010. Although falling outside the timeframe of this report, it is worth noting that a convenience sample of students in Cohort 2 has been surveyed via paper surveys distributed in classes with a high concentration of Cohort 2 students. The proportion of Cohort 2 surveyed varied by site, but of the surveys given to students, over 90% were completed and returned. These surveys are being coded and the responses linked to student records, as with Cohort 1. The classroom-based survey methodology as implemented with Cohort 2 makes it impossible to re-survey the same group of students at another time. Therefore, the focus of the Cohort 2 survey is to gather information on students that will help project researchers understand student characteristics, and will therefore help determine what works for whom concerning retention and completion.

The central study activity for 2010-2012 will be acquisition of remaining data for Cohorts 1 and 2 and analysis of these data to meet the goals of the study. In addition, a third round of site visits will take place in 2011. These visits will focus on ensuring that the appropriate institutional data are being collected. Project researchers will communicate with college administrators, data managers, and staff to ensure data are as complete as possible. Structured interviews of college staff will be used to obtain missing details in descriptions of interventions and ascertain any changes to college programs or policies since the previous year. Project staff will also interview administrators to determine how retention interventions are selected and evaluated at each site, and will interview a small number of students (six to eight at each site) to answer the last of the secondary research questions, "How do retention interventions and combinations of retention interventions support the community college retention and completion of students in postsecondary occupational programs, from the students' points of view?" Interviewed students will also complete a short questionnaire concerning their background and prior experiences, and their level of exposure to retention interventions at their college.

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Appendix A

About ACT Surveys

ACT developed the Evaluation/Survey Service (ESS) to design surveys focused on the experiences of students (and former students) in educational settings. ACT/ESS surveys are rigorously developed through consultation with content experts (college personnel and students), pilot testing, analyses of pilot data, and multiple revisions. The reliability of ESS instruments is assessed using generalizability and stability indices. Reliability estimates are based on the survey item and on the institution. The object of measurement is the item in cases where the rank ordering, use of, or satisfaction with services is of interest. In research that compares how students at one institution perceive campus offerings to how students at another school view those at their college, the object of measurement is the institution.

Student surveys used in the Relative Impact study use items (either unchanged or modified) from three ESS instruments that were developed to understand the plans, goals, and impressions of individual students in postsecondary environments, along with additional items developed by the research team based on the literature. Items in the ESS instruments are classified as background (e.g., education and employment) or measurement items that assess student perceptions about their experiences at the college (e.g., campus programs, policies, services, environment). Two of the three were designed specifically for use in two-year colleges: the Faces of the Future Survey and the Student Opinion Survey. The third, the Withdrawing/Nonreturning Student Survey, was designed for postsecondary students who have attended two- and four-year institutions.

A collaboration between the American Association of Community Colleges and ACT, the Faces of the Future Survey (ACT, 2009a) assesses a variety of information from community college credit and noncredit students. Items include the reasons students enroll, their educational intentions and expected outcomes, and their perceptions of what institutional experiences contributed to their growth. Developed by community college leaders and ACT, the first survey was disseminated in 1999. National comparison data from 2003-2005 included 97 colleges and 54,000 student records (AACC, 2006), and a comparison of the data across seven years indicates the instrument is “quite stable across all of the administrations” (AACC, 2009).

The Student Opinion Survey (ACT, 2009b) assesses enrolled student satisfaction with programs, services, and other aspects of their college experience. This survey is available in paper and web-based versions, and there are two-year and four-year forms. Considering the item as the object of measurement, the reliability estimates for the Student Opinion Survey (Two-Year College Form) range from .88 to .96 for a sample of 50 students per institution. With the institution as the object of measurement, the reliability estimates for the same number of students range from .68 to .79.

Available in a long or short form, the Withdrawing/Nonreturning Student Survey (ACT, 2009c) offers an in-depth examination of students’ reasons for leaving college before completing a degree or certificate program. The Withdrawing/Nonreturning Student Survey (Long Form) gathers information about a student’s major, occupational choice, and their perceptions of college services and characteristics. Reliability estimates for this instrument range from .86 to .93 (item) and .74 to .85 (institution) for a sample of 50 students per institution (Sun, 2000).

Items from these surveys were modified to fit the goals of the project and supplemented by additional items, then put in a format suitable for an electronic survey. ACT allows the use of its items in this way for a reasonable fee. Copies of the Fall 2009 and Spring 2010 surveys the Relative Impact project team developed based upon these ACT surveys are provided in Appendices 2 and 3.

Appendix B

Student Experience Survey, Fall 2009, as Administered Electronically to a Sample of Cohort 1 Students

Instructions

Please read the consent information below. If you decide to participate, you will need to select "Yes" at the bottom of the page. Clicking "Next", located at the bottom left, will move you to the next page.

Consent Information

You are invited to be in a research study of student success at selected public two-year colleges. You were selected as a possible participant because you are enrolled in a two-year college that has chosen to participate in the study. We ask that you read this consent information and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Dr. Christine D. Bremer, Principal Investigator, and David R. Johnson at the Institute on Community Integration, in the College of Education and Human Development at the University of Minnesota.

Background Information

The purpose of this study is to determine what programs at two-year colleges are best at helping students to succeed and to complete their academic programs. The study will also look at whether some programs are more effective than others for students with different backgrounds and experiences.

Procedures

Study participants will receive two surveys in the first year and one or two surveys in the second and third years of the study. Each survey will take about 15-20 minutes to complete. If you agree to be in this study, please finish reading this consent form, select "Yes" at the bottom of the page and click "Next" in the lower left-hand corner of the page.

Risks and Benefits of Being in the Study

The study has no anticipated risks.

A possible benefit of participating is that you will have the opportunity to have your voice heard regarding your experiences with the programs and services offered by your college. Additionally, by completing the survey, you will help your college's administrators determine which programs and services are most helpful for students at your college. Study results will be made available online, and students at many other colleges may be helped.

Following completion of the survey, we will email or send you a gift card good at your choice of Target, Subway or iTunes. If you choose iTunes, the gift card will be emailed to you using the same email address that was used to send you this survey, unless you provide an alternate email address below. If you choose Subway or Target, the gift card will be mailed using the mailing address provided by your college, unless you provide an alternate mailing address below.

Confidentiality

The records of this study will be kept private. Institutional data from your college (which will include de-identified information about your age, classes taken, classes completed, course grades, and similar information) will be provided by your college according to rules and regulations as outlined in the Family Educational Rights and Privacy Act (FERPA). Data will be acquired from your college's administration in files that do not include any names, student identification numbers or other personally identifiable information. Upon receipt by the researchers, the data will be stored on secure, password protected computer hard drives, to which only the researchers of this study will have access. No one at your college will ever see your individual responses to this survey. Your research identification number will make it possible for the researchers to connect your survey responses to your institutional data. This will allow the researchers to understand what factors help students like you succeed in college. If you leave college, we will continue to send you surveys once or twice a year until the Spring of 2012. Each time you send back a survey, you will receive a \$20 retail gift card to thank you for your participation. Once data is fully collected (2012) all identifying information will be destroyed. In any sort of report we might publish, we will not include any information that will make it possible to identify any participant.

Voluntary Nature of the Study

Participation in this study is voluntary. If you decide to participate, you may withdraw from the study at any time. Your decision whether or not to participate or to withdraw from participation at any time will not affect your current or future relations with either your college or the University of Minnesota.

Please also note that answering yes to the first (consent) survey question is voluntary. By agreeing to participate in this study you give your consent for your survey response(s) to be linked to the institutional data that your college has provided the researcher(s).

Contacts and Questions

The researchers conducting this study are: Christine D. Bremer and David R. Johnson. Feel free to ask either of them any questions you have. If you have questions, you are encouraged to contact them at the University of Minnesota. You may contact Chris Bremer at 6 Pattee Hall, 150 Pillsbury Drive, Minneapolis, MN 55455, 612-625-7595, breme006@umn.edu, or David Johnson at 102 Pattee Hall, 150 Pillsbury Drive, Minneapolis MN 55455, 612-624-1062, johns006@umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455: (612) 625-1650.

Please complete the information below if you have a NEW (since the beginning of the fall term) mailing address or email address. This information will NOT be connected to your survey responses and will be stored separately. This information will allow us to send your gift card and future surveys to your correct address.

Email	Name	Address	Phone
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I agree to participate in the study described in the Consent Information. If I complete this survey I understand that I will be contacted between now and Spring of 2012 to fill out another 3 to 5 surveys. I understand that I will receive an additional gift card for each survey I complete. I agree to allow my de-identified survey responses to be linked to my de-identified educational records at this college (for example, information about my age, courses taken, courses completed, grades, etc.) for research purposes only.

Yes No

This survey was supported under the National Research Center for Career and Technical Education, PR/Award (No. VO51A070003) as administered by the Office of Vocational and Adult Education, U.S. Department of Education. However, the contents do not necessarily represent the positions or policies of the Office of Vocational and Adult Education or the U.S. Department of Education and you should not assume endorsement by the Federal Government. Selected survey items are ©2009, ACT, Inc., and used with ACT permission.

I. General Background

A. What year were you born?
1930...1992

B. What is your gender?
Female
Male

C. Is English your first or primary language?
Yes
No

D. What was your living situation during the fall term (semester or quarter)?
I lived alone
I lived with one or more individuals

[Branch: If they choose "I lived with one or more individuals"]

D2. Of the one or more individuals you lived with, mark all of the following that you lived with.
Spouse or partner
Parent(s) or guardian(s)
Friend(s) or roommate(s)
Brother(s) and/or sister(s)
Child(ren) age birth to 5
Child(ren) age 6-17
Other relative(s)

E. During the fall term, about how far from this college did you live, in miles?
Less than 1 mile
1 – 5 miles
6 – 10 miles
11 – 20 miles
21 – 40 miles
Over 40 miles

F. During the fall term, who was a source of household income? Mark all that apply.
Self
Spouse or partner
Parent(s) or guardian(s)
Other

G. Were you employed during the fall term?

I worked during the fall term
I did not work during the fall term

[Branch: If they choose “I worked during the fall term”]

G2. During the fall term, about how many hours per week did you work?

1-10 hours per week
11-20 hours per week
21-30 hours per week
31-40 hours per week
Over 40 hours per week

G3. During the fall term, did you work on-campus or off-campus?

On-campus
Off-campus
Both on-campus and off-campus

G4. During the fall term, how closely related was your job to your field of study?

Very related
Somewhat related
Not related

H. During the fall term, did you participate in an internship as a required part of your coursework or program?

Yes
No

I. In your courses during the fall term, how often did your instructors bring in guest speakers who work in jobs that are related to the course?

Twice a month or more
About once a month
Less than once a month
Never

J. Indicate if you have experienced any of the following during the PAST YEAR. (Mark all that apply.)

Marriage
Change or loss of job
Birth or adoption of child
Death of family member or close friend
Divorce or separation
Financial setbacks
Assumed primary responsibility for person with illness or other disabling condition
Major illness or other disabling condition
Legal problems
Retirement
None of the above
Other, please specify:

K. As a child or youth, were you ever placed in foster care?

Yes

No

- L. What is the highest level of education completed by your parent(s) or guardian(s)? Mark one in EACH column if you have two parents/guardians.

Mother or
Guardian 1

Father or
Guardian 2

Less than high school diploma
High school diploma or GED
Some college, no certificate or degree
Vocational or technical certificate
Associate or other 2-year degree
Bachelor's or other 4-year degree
Master's, doctoral, or professional degree
Don't know

II. Educational Background

- A. In high school, how many vocational or career & technical education (CTE) classes did you take? (for example: agriculture, business, nursing, information technology, marketing, auto tech/repair)

None
1
2
3 or more

- B. In high school, were you primarily an

A student
A/B student
B student
B/C student
C student
C/D student
D student
Don't know
Does not apply

- C. What is the highest level of education you have completed?

High school diploma
GED
Some college at a different college(s) than the one I attend now
Vocational or technical certificate
Associate or other 2-year degree
Bachelor's or other 4-year degree
Master's, doctoral, or professional degree
None of the above

- D. Which of the following was true for you at the time you first entered this college?

Entered directly from high school
Entered after working for a period of time (excluding summer work)
Transferred from another 2-year college
Transferred from a 4-year college
Entered after completing military service
Other, please specify:

E. In what OTHER educational institutions were you enrolled during the fall term? Mark all that apply.

- None
- High school
- Another community college
- Another vocational or technical school
- 4-year college or university
- Other, please specify:

F. How important was each of the following for you when you decided to enroll in your course(s) or program at this college?

[1 = Not important, 2 = Somewhat important, 3 = Moderately important, 4 = Very important]

1. Satisfy requirements for my chosen future occupation
2. Advance in my current job
3. Keep up with requirements of my current job
4. Increase my earning power
5. Take courses for personal enrichment or self-improvement
6. Family member wanted me to continue my education
7. High school teacher's and/or counselor's encouragement
8. My employer encouraged me
9. Improve my English language skills
10. Obtain financial aid
11. Make a career change
12. Re-enter the workforce
13. Learn new skills while job hunting
14. Other, please specify:

G. What were your degree/credential goals for taking classes at this college? Mark all that apply.

- To prepare for a GED or high school diploma
- To *obtain* a license or certification
- To *maintain* a license or certification
- To complete a vocational or technical program
- To complete an associate or other 2-year degree
- To transfer to a 4-year college
- No degree program or credential goal
- Other degree program or credential goal; please specify

[Branch: G2 is a follow-up to G. Each option selected in G will be presented under G2.]

G2. How important is it to you to achieve the goal(s) you identified in the previous question?

[1 = Not important, 2 = Somewhat important, 3 = Moderately important, 4 = Very important]

H. How important was each of the following factors in your decision to attend this college?

[1 = Not important, 2 = Somewhat important, 3 = Moderately important, 4 = Very important]

1. A particular program of study
2. Distance of college from where I live
3. Distance of college from where I work
4. Cost of attending the college
5. Availability of financial aid or scholarship
6. Opportunity for part-time work on campus
7. Entrance requirements

8. Other, please specify:

I. What one response best describes your educational plans for the spring term (semester or quarter)?

- Attend this college full-time
- Attend this college part-time
- Attend another college
- Will not attend school
- Undecided

J. What one response best describes your employment plans for the spring term (semester or quarter)?

- Work full-time
- Work part-time
- No plans to work
- Don't know

III Current College Experience

A. As a student during the fall term, how much of a problem was each of the following for you? Please mark "Does not apply" if the statement does not apply to you.

[1 = Not a problem, 2 = Minor problem, 3 = Moderate problem, 4 = Major problem, Does not apply]

1. Finding or paying for child care
2. Transportation problems (cost, parking, access to public transportation, etc.)
3. Medical expenses
4. Cost and/or availability of books and related materials
5. Access to computer or internet
6. Personal financial problems
7. Physical or sensory impairment
8. Learning disabilities
9. Health-related problems
10. Family responsibilities
11. Job-related responsibilities
12. Other, please specify:

B. Indicate the degree to which each of the following was a source of funds to pay for the classes you took in the fall term.

[1 = Not a source of funds, 2 = Minor source of funds, 3 = Moderate source of funds, 4 = Major source of funds]

- a. My own income or savings
- b. Spouse or partner's income or savings
- c. Parent(s)' or guardian(s)' income or savings
- d. Employer contributions
- e. Work study
- f. Student financial aid (including grants, scholarships, and direct student loans)
- g. Other loans (bank, etc.)
- h. Public funding (for example: JTPA, welfare, unemployment)
- i. Other, please specify:

C. How concerned are you about being able to pay for your classes at this college?

1. Not at all concerned

2. Somewhat concerned
3. Very concerned

D. For each service or program listed below, indicate your level of satisfaction with it during the fall term. If you did not use the service or program or if your college does not offer the service or program, please mark "Does not apply".

[1 = Very dissatisfied, 2 = Dissatisfied, 3 = Satisfied, 4 = Very satisfied, Does not apply]

1. Academic advising and/or course planning services
2. College retention or transfer services
3. Personal counseling services (for personal concerns and problems)
4. Vocational guidance and/or career planning services
5. Job placement services
6. Financial aid services
7. Recreational and intramural programs and services
8. Library and learning resource center facilities and services
9. Student health services
10. College-sponsored tutorial services
11. Student employment services
12. College-sponsored social activities
13. Cultural programs and activities
14. College orientation program
15. Student organizations
16. Computer labs
17. Veterans services
18. Day care services
19. Developmental or remedial classes
20. Learning communities
21. Disability services

E. Thinking about the fall term, to what extent do you agree with each of the following statements about your academic experiences at this college?

[1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly agree]

- a. I am satisfied with the preparation I am receiving for my future occupation.
- b. I am satisfied with the course content in my major field.
- c. The courses I want to take are available at times I can take them.
- d. I am satisfied with my academic experience at this college.
- e. My interest in ideas and intellectual matters has increased since coming to this college.

F. Thinking about the fall term, to what extent do you agree with each of the following statements about your experiences with other students at this college?

[1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly agree]

- a. Since coming to this college, I have developed positive relationships with other students.
- b. Most of my friends at this college are serious about school.
- c. It has been difficult for me to meet and make friends with other students.
- d. The student friendships I have developed at this college have been personally satisfying.
- e. Few of the students I know would be willing to listen to me and help me if I had a personal problem.
- f. Most students here have values and attitudes which are different from my own.
- g. I learned the name of at least one other student in each of my classes.
- h. I am satisfied with the racial harmony at this campus.

Appendix C

Withdrawing/Non-Returning Survey, Spring 2010, as Administered Electronically to a Sample of Cohort 1 Students

I. Background

- A. What year were you born?
1930...1992
- B. What is your gender?
Female
Male
- C. What were your goals for taking classes at the college you most recently attended? Mark all that apply.
- To prepare for a GED or high school diploma
 - To *obtain* a license or certification
 - To *maintain* a license or certification
 - To complete a vocational or technical program
 - To complete an Associate or other 2-year degree
 - To transfer to a 4-year college
 - No degree program or credential goal
 - Other degree program or credential goal; please specify

[Branch: C2 is a follow-up to C. Each option selected in C will be presented under C2.]

- C2. How important is it to you now to achieve the goal(s) you identified in the previous question?
[1 = Not important anymore, 2 = Still somewhat important, 3 = Still moderately important, 4 = Still very important]
- D. How important was each of the following for you when you decided to enroll in your course(s) or program?
[1 = Not important, 2 = Somewhat important, 3 = Moderately important, 4 = Very important]
- 15. Satisfy requirements for my chosen future occupation
 - 16. Advance in my current job
 - 17. Keep up with requirements of my current job
 - 18. Increase my earning power
 - 19. Take courses for personal enrichment or self-improvement
 - 20. Family member wanted me to continue my education
 - 21. High school teacher's and/or counselor's encouragement
 - 22. My employer encouraged me
 - 23. Improve my English language skills
 - 24. Obtain financial aid
 - 25. Make a career change
 - 26. Re-enter the workforce
 - 27. Learn new skills while job hunting
 - 28. Other, please specify:

E. What one response best describes your plans for this coming year?

- Work full time or part time
- Enroll in college (other than your most recent college)
- Obtain a job and enroll in college
- Care for a home and/or family
- Undecided
- Other, please specify:

F. Do you plan to re-enroll at this college?

- Yes
- Undecided
- No

[Branch: If “Yes” is chosen in F]

F2. If known, when do you plan to re-enroll at this college?

- In less than a year
- In 1-2 years
- In 3-5 years
- In more than 5 years
- Not sure

II. Reasons for Leaving this College

Listed below are a number of reasons why a student might leave college. Please indicate the importance of each reason in your decision to leave this college.

[1 = Not important, 2 = Somewhat important, 3 = Moderately important, 4 = Very important]

1. Learned all that I wanted to learn at this time
2. Decided to attend a different college
3. Health-related problem (family or personal)
4. Wanted a break from my college studies
5. Wanted to move to (or was transferred to) a new location
6. Marital situation changed my educational plans
7. Difficulty in obtaining transportation to this college
8. Uncertain about the value of a college education
9. Commuting distance to this college was too great
10. Child care was not available or was too costly
11. Family responsibilities were too great
12. Did not like the size of this college
13. Experienced emotional problems
14. Felt racial or ethnic tension
15. Felt alone or isolated
16. Influenced by parents or relatives
17. Had conflicts with my roommate(s)
18. Wanted to live nearer to my parents or loved ones
19. Wanted to travel
20. Dissatisfied with my grades
21. Was suspended or placed on academic probation
22. Courses were too difficult
23. Courses were not challenging
24. Inadequate study habits
25. Too many required courses
26. Disappointed with the quality of instruction at this college
27. Desired major was not offered by this college

28. Desired major was offered, but course content was unsatisfactory
29. Desired major was not a good fit for me
30. Academic advising was inadequate
31. Experienced class scheduling problems
32. Dissatisfied with the academic reputation of this college
33. Could not find housing I liked
34. Unhappy with college rules and regulations
35. Impersonal attitudes of college faculty or staff
36. Dissatisfied with the social life at this college
37. Inadequate facilities for students with physical disabilities
38. Did not budget my money correctly
39. Encountered unexpected expenses
40. Applied for financial aid, but did not receive it
41. Financial aid received was inadequate
42. Tuition and fees were more than I could afford
43. Could not find part-time work at this college
44. Could not obtain summer employment
45. Cost of living was too high in this community
46. Wanted to get work experience
47. Accepted a full-time job
48. Conflict between demands of job and college
49. My chosen occupation did not require more college
50. Other, please specify:

III. College Services

For each service or program listed below, indicate your level of satisfaction with it during the last term you were enrolled at your college. If you did not use the service or program or if your college did not offer the service or program, please mark "Does not apply".

[1 = Very dissatisfied, 2 = Dissatisfied, 3 = Satisfied, 4 = Very satisfied, Does not apply]

1. Academic advising and/or course planning services
2. College retention or transfer services
3. Personal counseling services (for personal concerns and problems)
4. Vocational guidance and/or career planning services
5. Job placement services
6. Financial aid services
7. Recreational and intramural programs and services
8. Library and learning resource center facilities and services
9. Student health services
10. College-sponsored tutorial services
11. Student employment services
12. College-sponsored social activities
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19. Developmental or remedial classes
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21. Disability services



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