

Transfer Velocity Project

Key Findings on Student Transfer in California Community Colleges

Which factors promote student transfer from California Community Colleges (CCC) to baccalaureate-granting institutions? How do community college practices support this transition? Which student behaviors and characteristics particularly facilitate their movement to four-year colleges and universities?

The RP Group investigated these questions through the **Transfer Velocity Project (TVP)—the most comprehensive study of community college transfer implemented to date.**

Because CCCs serve as the primary point of access to post-secondary education understanding and improving the community college transfer function is increasingly a priority for higher education policy-makers, advocates, researchers and practitioners alike, particularly in light of and demographic forecasts of a debilitating shortage of baccalaureate-trained workers in California.

The RP Group conducted the *Transfer Velocity Project* between 2007 and 2009 with funding from and in partnership with the California Community Colleges State Chancellor's Office. The California Partnership for Achieving Student Success (Cal-PASS) provided additional research assistance.

What is the RP Group?

The RP Group is a nonprofit, non-partisan organization providing *research, evaluation and professional development services* to individual practitioners, colleges and statewide initiatives.

The RP Group seeks to build a CCC culture that views *planning, evidence-based decision making and institutional effectiveness as key strategies for student success.*

With projects powered by teams of community college faculty, administrators, institutional researchers and student services professionals, our work benefits from an *insider's perspective* and *direct system access.*

As a result, RP has helped to shape issues such as statewide accountability reporting, local and statewide strategies for under-prepared students and implementation of student learning outcomes.

The following research brief **(1) introduces the project's primary components, (2) highlights key findings on institutional factors and student behaviors and characteristics facilitating transfer and (3) informs possible strategies and approaches** for improving this transition for California Community College students.

What is the Transfer Velocity Project (TVP)?

The TVP involved a large-scale investigation of student transfer in California Community Colleges including both quantitative and qualitative components. An RP Group team composed of institutional researchers, administrators, counselors and articulation staff from community colleges across the state conducted the study. The RP Group collaborated closely with the CCC State Chancellor's Office to define and generate data on the students and colleges considered in this research.

Rather than focusing solely on “transfer rates” which are static in time, the TVP looked at students’ “transfer velocity.” The study considered factors impacting students’ dynamic movement toward a transfer goal—investigating (1) student behaviors and characteristics that influence their speed and path toward transfer, and (2) college-level factors that promote students’ achievement of this transition.

Three major efforts make up the TVP.

1. **Literature Review.** The RP Group launched the TVP with an extensive *review of the research and analysis available on transfer issues and practices spanning over 100 references.* This review focused on identifying strategies and approaches to enhance student success in transitioning from community colleges to four-year institutions. Ultimately, this literature assessment served as a guide for developing the research questions and design pursued through both the project’s quantitative and qualitative components.
2. **Case Studies of Colleges with Higher-than-Expected Transfer Rates.** Using data on transfer cohorts generated in partnership with the State Chancellor’s Office, the RP Group identified CCCs with higher-than-expected transfer rates representing diverse geography, size and enrollment profiles. The TVP then performed two-day site visits, conducting focus groups and interviews with a broad range of stakeholders including administrators, faculty, student services professionals, transfer center directors and students. In this portion of the TVP investigation, the RP Group performed *numerous interviews and focus groups* and ultimately determined *six key transfer-promoting factors present at all colleges* visited. This part of the TVP resulted in a [tool](#) for colleges to assess their approach to promoting transfer and determine opportunities for growth and improvement.
3. **Transfer Predictors Investigation.** The RP Group further developed statistical models of institution-level factors as well as student characteristics and behaviors that predict transfer through an extensive quantitative analysis based on a variety of data sources.

Working with the State Chancellor’s Office, the RP Group developed *“SQL Orange”—a data warehouse that mirrors the CCC’s Management Information System (MIS) and allows for innovative and exploratory research on behalf of institutions and statewide initiatives.*

Key Terms & Definitions

TVP Cohort. Based on the definition used by the State Chancellor’s Office, the TVP tracked cohorts of students who met the following criteria within six-years of starting as first-time freshmen:

- *Completed 12 units*
- *Attempted a transfer-level math or English course*

There is one TVP cohort per academic year.

Transfer Rates. To determine transfer rates, the study identified those TVP cohort students with enrollment records at a four-year institution within a given period of time and then divided that number by all students in the original TVP cohort. Transfer rates were calculated for different time periods ranging up to twelve years. The TVP’s college-level and student-level statistical models predicted colleges’ nine year transfer rate.

Colleges with Higher-than-Expected Transfer Rates. Qualitative teams visited a set of colleges identified by the Chancellor’s office as having six-year transfer rates that were consistently higher than predicted by a model that statistically controlled for the age of student body and the average educational level of the each college’s service area. These colleges were of interest because they seemed to exceed expectations.

The project also utilized course offerings data from the state’s MIS system and archived responses from annual surveys of CCC Transfer Centers performed by the State Chancellor’s Office to determine institutional factors facilitating transfer. To identify student behaviors and characteristics impacting this transition, the study analyzed ***data generated by following the nearly 150,000 students in the 1999-2000 TVP cohort for nine years.***

Reader’s Guide

The following sections focus on factors that appear to support or facilitate student transfer. The first section outlines institutional factors that enhance transfer success as discovered through the study’s qualitative and quantitative investigation. The second section describes specific student behaviors and characteristics that influence transfer as discovered in the quantitative analysis.

Given the scope of the Transfer Velocity Project and the wealth of data available to this study through both the State Chancellor’s Office and individual colleges across the CCC system, the following sections focus only on the clearest and most stimulating findings. Interpretation of the findings is encouraged through the presentation of provocative questions intended to spur further inquiry and action.

The document concludes with a brief discussion of possible areas for further research and a description of the RP Group’s Career and Technical Education Transfer Research Project—a related initiative looking at transfer issues faced by students in career-oriented disciplines such as nursing and engineering.

What key factors facilitate CCC student transfer?

Institutional Factors the Promote Student Transfer Success

Both the qualitative and quantitative components of the TVP surfaced multiple key institutional factors that can support CCC student transfer. The case studies on colleges with higher-than-expected transfer rates distinguished six transfer-promoting factors that send one clear message: **transfer rates are higher at colleges where institution-wide efforts are designed to support all students in pursuing transfer goals.** CCCs that simultaneously implement a culture of transfer across the institution, integrate instructional and student support divisions and partner closely with high schools and universities appear to experience elevated transfer success. Outlined below are the six institutional factors that support transfer identified through the case studies.¹

Robust Transfer Culture. Colleges exhibiting a transfer culture implemented a variety of actions and activities across the institution to support students in pursuing this goal. College administrators, instructors, counselors, student services and support staff and peer mentoring groups all worked to promote transfer rather than just those assigned to provide related services. Students frequently received the message from multiple sources that transfer is a viable option and resources were available to assist in exploring, preparing for and undertaking this transition. Colleges visited by quantitative teams typically promoted transfer culture by making transfer a strong theme in their Student Success courses. For example, Skyline College offers a “Transfer Power” course designed to aid students in researching and selecting a transfer destination that meets their particular needs and interests.

¹ The TVP acknowledges that the colleges studied implement these factors to varying degrees and that readers should not use these findings as a prescription for transfer success; rather these factors can help CCCs assess their own transfer efforts.

Taking a different angle, the TVP quantitative analysis confirmed the relevance of a transfer culture by observing the relationship between the number of transferable course sections available at a CCC and its transfer rates. Perhaps not surprisingly, the percentage of all courses offered that are transferable positively correlates with transfer rate—by providing a relatively large number of transferable courses, colleges exhibited a commitment to supporting students in their transfer preparation.

Student-Focused Environment. Colleges demonstrating a student-focused environment met learners at their current level of academic achievement and personal development and implemented programs, services and approaches designed to move them toward their transfer goal. Most colleges visited by the qualitative teams integrated student services with instruction either through informal interactions or highly-formalized agreements. For instance, DeAnza College maintains division-based retention teams involving both instructional and counseling staff to provide a comprehensive approach to student service delivery.

Intense Commitment to the Institution. Those working at the institutions investigated expressed a high level of pride in and dedication to their college in focus groups and interviews. At these colleges, faculty and staff frequently defined their role in terms of what they do to promote student success rather than simply by their specific job description. In some cases, this pride and dedication translated to low faculty and staff turnover and the attraction and retention of what interviewees described as highly talented and committed employees.

Strategic High School Relationships. Nearly all institutions investigated in the TVP case studies helped students make the transition from high school to college. These relationships spanned a range of activities targeting high school students, families, teachers and counselors. Approaches included direct outreach to secondary students and their families with a particular focus on under-represented groups, provision of matriculation services on-site at the high school, implementation of concurrent enrollment opportunities and regular interaction with high school guidance staff. In one example, Los Angeles Southwest College works through its Talent Search program to outreach to low-income, first-generation students at local high schools and bring participants to campus to use Transfer Center resources.

Colleges Take Action

Colleges put these factors into practice in a variety of ways. Here are a few examples found in the TVP case studies:

Robust Transfer Culture: Skyline College offers a “Transfer Power” course to aid students in researching and selecting a transfer destination that meets their needs and interests. Like many colleges studied, this offering is one of the college’s student success course options.

Student-Focused Environment: DeAnza College maintains division-based retention teams involving both instructional and counseling staff to provide a comprehensive approach to student service delivery.

Strategic High School Partnerships: Los Angeles Southwest College works through its Talent Search program to outreach to low-income, first-generation students at local high schools and bring them to campus to use Transfer Center resources.

Strong Four-Year Relationships: San Diego City College regularly hosts five private colleges at its Transfer Center and notes that relationships with private institutions gained more emphasis when data showed that 40% of its transfer students go to out-of-state and/or private institutions.

Strong Relationships with Four-Year Institutions. Community colleges with higher-than-expected transfer rates regularly engaged students in interactions with baccalaureate-granting institutions. Almost all colleges studied facilitated a regular presence of representatives from four-year institutions on their campus. Most sites conducted tours to nearby universities and hosted transfer days in an effort to familiarize students with a range of transfer options, both private and public. For example, San Diego City College made a data-informed decision to regularly hosts five private colleges at its Transfer Center after discovering that 40% of its transfer students go to out-of-state and/or private four-year institutions.

For more information on the colleges investigated by the TVP, including **individual case studies and a cross-case analysis**, visit:

www.rpgroup.org/css/TVP.html

The TVP quantitative investigation corroborated the pertinence of strong relationships with four-year institutions through an analysis of annual Transfer Center Survey data that consider student usage of Transfer Admission Agreements (TAAs) or Transfer Admission Guarantees (TAGs) with University of California (UC) and California State University (CSU) institutions. As the number of students taking advantage of these agreements increased, so did a college's transfer rate.

Effective Use of Support Services. While all colleges maintain an articulation function, provide some form of transfer guidance, supply financial aid, and offer special programs like EOPS or honors, the colleges investigated through the TVP leveraged these structures and services in unusual and effective ways to support transfer. To highlight a few examples, Irvine Valley College's Articulation Officer serves on the Curriculum Committee and meets regularly with faculty, ensuring they have current transfer agreement information to supply to students. Porterville College dispatches an outreach team to local high schools to provide financial aid advice and assistance. DeAnza College's Transfer Center engages underrepresented students who are well on their way to transfer as peer advisors.

The TVP quantitative research also found that community colleges maintaining an adequately staffed Transfer Center showed increased transfer success. An analysis of data derived from annual Transfer Center Surveys on staffing patterns indicated those colleges with a full-time Transfer Center Director tended to have higher rates of transfer.

Significant Student Swirl. One additional factor surfaced through the TVP quantitative research focused on the phenomenon of "student swirl" or "lateral transfer," where students enrolled in multiple community colleges. The level of college swirl, as indicated by the average number of colleges attended by the student body, was positively associated with transfer. Transfer rates tended to be higher for colleges whose student bodies attended a larger number of community colleges, on average.

Student Behaviors and Characteristics

The TVP identified several transfer predictors for students through its quantitative analysis of nearly 150,000 students assigned to the 1999-2000 TVP cohort. Those who met the cohort criteria represented about a quarter of all first-time freshmen for that academic year. Some of the TVP findings replicated existing research on student transfer predictors, while other TVP discoveries extended this body of knowledge and increased what is known about the transfer function in California. Noteworthy aspects of the student-level model include the use of survival analysis as the primary analytical tool, as well as the sheer number of predictors that were simultaneously considered in the model. As in the previous section, a select number of noteworthy findings are presented below.

Course-Taking Patterns

Math

- Initial math placement was strongly associated with students' transfer success. Those who started in college-level math were almost twice as likely to transfer as those who started in basic skills math courses. About 25% of students in the TVP cohort began in college-level math.

English

- While not as pronounced as math, starting in college-level English also affected students' transfer achievement. This group was 16% more likely to transfer to a four-year institution than those who began in basic skills English. About half of the students in the TVP cohort began in college-level English.

Educational Goals

Declaration of Goal of Transfer

- While other research suggests that students' declaration of a transfer goal is not associated with transfer success, this study's analysis showed that students in the TVP cohort who declared a transfer goal were nearly 25% more likely to make this transition than those who did not. Nearly 75% of the TVP cohort indicated a transfer goal at some point during their CCC enrollment.

Academic Performance

Grade Point Average (GPA)

- Students' academic performance linked closely with transfer achievement; a straight "A" student was nearly 45% more likely to transfer than a student maintaining a "B" average, and nearly 90% more likely to transfer than a student maintaining a "C" average. The average GPA was 2.92.

Course Withdrawals ("W" Grades)

- Students who completed a high proportion of their courses were more likely to transfer. TVP cohort students with fewer "W" grades were over 60% more likely to transfer than those whose transcripts showed 20% or more of enrollments resulting in a course withdrawal.

Degree & Certificate Attainment

Associate Degree Completion

- Attainment of an associate degree was strongly associated with a greater likelihood of transfer. Moreover, this effect varied greatly with the time it took for students to attain the degree. Those students who completed their degree within three years of their first enrollment were about twice as likely to transfer as those who do not receive an associate degree. Even those who reached this benchmark in years four through six were 44% more likely than learners who did

Predictors of Student Transfer Success

Research indicated that these factors, particularly in combination with one another, were associated with higher odds of successful transfer for California community college students.

1. Committed to a goal of transfer
2. Began in college-level math and English
3. Immediately enrolled in math and English
4. Focused on academics with a minimal number of withdrawals
5. Obtained an associate's degree within first three to six years of enrollment

not. Nine percent of the TVP cohort attained an associate degree within three years; another 14% had attained an associate's degree by year six.

Certificate Achievement

- On the other hand, students obtaining a certificate were about 40% *less* likely to transfer than students who did not. Six percent of the transfer cohort attained a certificate.

Enrollment Patterns

Full-time Attendance

- Transfer cohort students who averaged at least 24 units per academic year over their CCC career were about 33% more likely to transfer than those with lighter unit loads. Twenty-two percent of the TVP cohort consistently enrolled full time.

Summer Enrollment

- Students who attended at least one summer session within their first three years of enrollment also improved their transfer odds by nearly 50% relative to those who did not. Nearly 70% of students in the TVP cohort attended summer session within three years of initial enrollment.

Student "Swirl"

- Data indicate that attending more than one community college ("swirling") was associated with a nearly a 25% increase in the likelihood of transfer to baccalaureate-granting institutions. Forty percent of TVP cohort students enrolled at more than one community college.

Demographic Characteristics

Ethnicity

- Asian students had the greatest transfer velocity out of all the ethnic groups in the study. Of those Asian students who transferred within 12 years, nearly all did so by year six; in contrast, of all African American, Latino and Native American students who transferred within 12 years, approximately 25% made this transition *after* year six.
- Pacific Islanders, African Americans, Latinos and Native Americans in the TVP cohort all had lower transfer velocities than Asians. For example, about two-thirds of Asian students while just two-fifths of Latino students made this transition within nine years of initial enrollment. The TVP cohort was 42% White, 24% Latino, 14% Asian, 6% African American, 4% Pacific Islander, 2% Other, 1% Native American, 1% Filipino, and 5% unknown.

Age

- Younger students were more likely to transfer than older students. Students who were 21 years old or younger when they first began at the CCC were over twice as likely to transfer as those who were 32 years old or older when they started college. Approximately 83% of the TVP cohort was 21 years of age or younger upon cohort entry.

Financial Aid & Special Program Participation

- Receipt of a student loan increased students' transfer odds by over 15%. Four percent of the transfer cohort received student loans.

- Initial investigation revealed that the impact of financial aid and special program participation on student transfer success were best examined in combination with each other and with ethnicity. Further analysis will take part in the next phase of TVP research.

Where do we go from here?

The RP Group is communicating the findings of the TVP widely and working with constituencies around the state to put these powerful insights into service by guiding planning and action that will increase the number of students who are able to reach their goals. Through the TVP, the RP Group has generated an array of additional questions about how to best increase the transfer velocity of CCC students and accelerate transfer. The organization aims to leverage its extensive access to student data to investigate additional aspects of transfer velocity. In particular, the RP Group will seek to learn more about how the achievement of an associate's degree impacts this transition for different subgroups, uncover the relationship between financial aid and special program participation and better understand what particular factors might increase the transfer velocity of our growing population of Latino students.

Additionally, the Transfer Velocity Project triggers questions about system-level transformation and inter-segmental change needed to substantially increase the number of baccalaureate degree recipients in the state. Keeping our eyes on the prize, we now ask **what policies and practices might allow for more learners to enter the state's four-year universities and private institutions? What must be done to ensure that all who want to transfer can ultimately complete a baccalaureate degree?**

Finally, the RP Group is also currently implementing the **Career and Technical Education (CTE) Transfer Research Project**, a multi-year study of the factors that facilitate and impede students' transfer in career-oriented disciplines. Funding from the State Chancellor's Office launched Phase I of this investigation, conducted between Fall 2007 and Summer 2009. This first stage of research included a quantitative study of the CCC CTE course infrastructure, student enrollment, transfer rates and destinations. Additionally, the project engaged in a qualitative exploration of factors that students and faculty believe support or compromise CTE transfer.

The project continues into a second stage with additional support from the James Irvine Foundation; Phase II of the project will conclude in Fall 2010. Current research activities focus on the experience of students who successfully transferred in key career-related programs including (1) mapping what kinds of courses they took while enrolled in a community college and (2) identifying why they made these course and enrollment choices prior to this transition.

For further information...

For reports and presentations generated by the Transfer Velocity Project, including the literature review, college case studies and access to an online transfer velocity cohort tool, visit:

www.rpgroup.org/css/TVP.html

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