

THROUGH THE GATE℠
theRPgroup

Determing Students' Transfer Odds on Your Campus

Through the Gate Methodology | Tool 2

Project Overview

The RP Group's Through the Gate transfer study aims to identify strategies for increasing transfer among "high-leverage" learners—students who complete all or most of their transfer requirements but who do not make it to university. The study includes:

Phase 1: Mapping the Transfer Landscape (2016 – 2018)

Quantitative research to understand the transfer landscape, determining: (1) how many students in California arrived at or near the transfer gate, but did not go through, and (2) who they are and where they reside

Phase 2: Getting Better Directions (2019)

Qualitative research with students who are ready or nearly prepared to transfer to understand what factors impact their journey and how policy and practice might change to propel them through the transfer gate

The RP Group is conducting this research with support from the College Futures Foundation.

www.rpgroup.org/through-the-gate

Introduction

Using a statistical model developed by the Through the Gate transfer study can help your college explore the transfer odds for different groups of "high-leverage" students whose course-taking indicates they are close to a transfer goal (see sidebar, *Project Overview*).

This model allows your college to **move beyond descriptive student characteristics towards an analysis of the relationships between student and college factors, and the likelihood students achieve transfer or stop short of transferring**. This modeling can generate key insights to support institutional redesign work such as local Guided Pathways development, equity planning, and other efforts to address California Community Colleges' *Vision for Success* goals. It can help you **determine which student groups are more likely to be stuck** near or at the transfer gate—informing immediate action and longer-term structural change designed to increase their transfer success.



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User Guide

This tool is specifically designed to guide institutional researchers in adapting the model locally, including:

- Description of Through the Gate study population and data sources for conducting this modeling
- Instructions for building, running, and interpreting the model
- Discussion questions your college can use to make meaning of these findings and additional research to consider

This tool **builds on data collection and analysis outlined in *Identifying High-Leverage Transfer Students on Your Campus: Through the Gate Methodology Tool 1***.[1] We recommend conducting this research first in order to carry out the modeling outlined below. This tool also draws on the modeling fully described in *Transfer Odds: Technical Report Examining Factors Impacting whether Students Achieve Transfer or Get Stuck Near or At the Gate*.[2]

While this tool outlines a specific statistical model used by the Through the Gate research team, **consider adapting the approach to your local context**.

Identifying the Study Population and Data Sources

For the purposes of the Through the Gate study, the RP Group used student records found in the California Community Colleges Chancellor's Office Management Information System (COMIS), which also included data from the National Student Clearinghouse to identify which students had transferred to a baccalaureate-granting institution from a community college.

At the same time, while the study relied on COMIS in order to make statewide comparisons, your college's local data offer additional data elements (e.g., students participating in special programs) worth exploring. We recommend that you tap into the data sources that will provide you with the most up-to-date and comprehensive student records.

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[1] View *Identifying High Leverage Transfer Students on Your Campus: Through the Gate Methodology Tool 1* at https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/Through-the-Gate-Transfer-Study-Population-Methodology-Tool.pdf.

[2] View *Transfer Odds: Technical Report Examining Factors Impacting whether Students Achieve Transfer or Get Stuck Near or At the Gate* at https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/Through-the-Gate-Transfer-Odds-Technical-Report.pdf.

The Through the Gate statistical model described below focuses on the study population, which contains three categories of students who have made significant progress along the "transfer continuum" (or points along the transfer path):[3]

- **Transfer achievers:** Students who made it through the gate by transferring to any university, with or without a degree.
- **Students at the gate:** Transfer-ready students who completed 60± transferable units (including transfer-level English and math) and/or an AD-T, but had not yet transferred.
- **Students near the gate:** Transfer-prepared students who completed 60± transferable units, but who were missing transfer-level English and/or math and had not yet transferred.

Find detailed information on the Through the Gate transfer continuum and study population and guidance on replicating this sample in *Identifying High-Leverage Transfer Students on Your Campus: Through the Gate Methodology Instructions*.[4]

Building, Running, and Interpreting the Model

Research Question and Variables

The problem that the Through the Gate research seeks to address is why some students do not transfer from a community college to a university even though they have completed all or most of their transfer requirements. The question guiding this statistical analysis is thus:

> *What factors are associated with an increase or decrease in the likelihood that students near and at the gate will transfer?*

The outcome used in this study is consequently a categorical variable with one of three possible categories: (1) Near the Gate, (2) At the Gate, and (3) Transferred. The value of the outcome variable for each student corresponds with each student's placement along the transfer continuum.

To adopt the model used by the Through the Gate research team, choose predictor variables to examine your students' likelihood of achieving transfer depending on factors deemed significant at your college; examples include:

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[3] Find a description of the Through the Gate "transfer continuum" at http://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/Through-the-Gate-Phase-I-Research-Brief.pdf.
[4] View *Identifying High-Leverage Transfer Students on Your Campus: Through the Gate Methodology Instructions* at https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/Through-the-Gate-Transfer-Study-Population-Methodology-Tool.pdf.

- Demographic variables and background characteristics like gender, race/ethnicity, age, first-generation status, given that they often impact students' educational experiences
- Variables indicating levels of academic achievement (e.g., GPA, completion of math and/or English gatekeeper courses, number of transferable units, degree completion) and intent (e.g., academic major, education goal)
- Variables associated with participation in special programs (e.g., EOPS, DSPS, Umoja, Puente, student-athletes) in which students may receive academic and nonacademic services and supports

Statistical Model

Consider using a multinomial logistic regression, which offers an appropriate method for investing factors associated with the likelihood students remain near or at the gate rather than achieve transfer. This model allows for a categorical outcome with more than two independent, unordered categories. In this scenario, transfer serves as the base outcome and near the gate and at the gate as the alternative outcome categories.

Binary logistic regression is another possible model, as long as the outcome variable contains only two categories. For example, you may want to collapse the high-leverage student population and transfer achievers into one binary outcome variable and simply examine the factors related to the likelihood students belong in one of two groups (Transfer Achiever or Not a Transfer Achiever).

Model Estimation

Since the statistical software packages used across research offices vary, specific guidance on commands for running a multinomial logistic regression is not provided in this tool. However, researchers might want to look at mlogit if using Stata or R, nomreg if using SPSS, or proc catmod if using SAS.

Model Interpretation

Multinomial logistic regression is a straightfoward extension of logistic models and can be thought of as simultaneously fitting binary logits for all comparisons of alternative outcome categories with the base outcome category. Nevertheless, interpretation may be challenging because of the many possible comparisons. Interpretation may be based on predicted probabilities and/or odds ratios—sometimes called relative-risk ratios.

Odds ratios can be used to explore how variables effect change in one outcome category compared with another outcome category. An odds ratio of 1.00 indicates no increase or decrease in the odds of the outcome occurring.However, an odds ratio over 1.00 indicates an increase in likelihood, and an odds ratio less than 1.00 indicates a decrease in likelihood.

Discussion Questions

Findings from the multinomial logistic regression deployed for the *Through the Gate* transfer study explored how various factors may impact students' transfer odds, while at the same time, pointing to specific student groups in potential need for additional support in moving through the transfer gate. Consider using the following questions to spur dialogue around your results:

- Which student groups are more or less likely to be near or at the transfer gate on your campus?
- How do your college's findings align with and/or differ from the statewide results found in *Transfer Odds: Technical Report Examining Factors Impacting whether Students Achieve Transfer or Get Stuck Near or At the Gate*[5]
- What might be holding back [insert student group(s)], even though they have taken such important steps toward achieving their bachelor's degree?
- What college factors and programs are more or less likely to help students through the transfer gate?
- What more do we need to learn about these student groups?

Next Steps

This research sets your college up to explore ***why* students might be getting stuck near or at the transfer gate on your campus.** As a next step, consider gathering the perspectives of students themselves, perhaps focusing on the students whose characteristics indicate they are less likely to transfer based on your modeling.

Interviews and focus groups with students may cover topics such as policies and practices in both the CCC and university systems that may be impeding the progress of high-leverage learners, as well as the social, cultural, financial, academic, and personal obstacles students might face. In talking directly with students who are near or at the transfer gate, you may be able to gather critical insights that can help refine existing strategies to increase transfer and inform new efforts to improve the success of transfer-bound students.

[5] View *Transfer Odds: Technical Report Examining Factors Impacting whether Students Achieve Transfer or Get Stuck Near or At the Gate* at https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/Through-the-Gate-Transfer-Odds-Technical-Report.pdf.

For More Information…

Visit www.rpgroup.org/through-the-gate

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