



Office of Policy
Research

Credit Loss: Longitudinal Analysis of Students who Transfer from Associate to Bachelor's Programs

Research Brief
Transfer Opportunity Project
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Introduction

This is the third brief summarizing results from the longitudinal analysis of the Transfer Opportunity Project (TOP). TOP, funded by a grant from the Institute for Education Sciences (IES), explores the possible factors contributing to the low percentage of community college students who go on to earn bachelor's degrees. The project uses a combination of quantitative and qualitative research at the City University of New York (CUNY) to identify possible malleable factors related to four possible critical challenges in the transfer student pathway: Application to Transfer, Transfer Melt, Credit Transfer, and Transfer Shock. The longitudinal analysis tracks students who entered a CUNY community college in Fall 2013 and quantifies how many students progressed or did not progress towards earning a bachelor's degree at each of these points.

In the first brief we showed that there is substantial room for improvement at several early points in the pipeline, with more than 35% of the cohort stopped out of college before the third semester. A relatively high percentage (65%) of students who persist into the fourth semester apply for transfer to a bachelor's program, but approximately 9% of students who applied and were admitted to a CUNY bachelor's program did not go on to enroll in a bachelor's program at CUNY or elsewhere.

In the second brief we showed that upon enrollment in the bachelor's program, 60% of transfer students have a decrease in GPA with a mean decrease of 0.72 GPA points and 40% of transfer students have an increase in GPA with a mean increase of 0.45 GPA points. A portion of this change represents regular semester-to-semester fluctuation, but a remaining portion appears to be related to transfer.

In this brief we present findings related to Credit Transfer. The goal of our analysis is to count how many students lose credits during transfer and the number of credits they lose. Counting credits that do not apply toward any degree requirements at the receiving college as lost, we find that up to 47% of CUNY transfer students lose credits during transfer from a community college to a bachelor's program, with an estimated mean of 10 to 13 lost credits per student. These figures are only approximations because our data source, DegreeWorks, does not allow us to attribute any loss of credit directly to transfer. We include details on data source, method, and limitations; the brief's contents may thus be of interest to both researchers and college administrators who work with credit transfer data.

Data

To conduct analyses of credit loss, we use administrative data for Fall 2013 community college first-time-freshmen who transferred to a CUNY bachelor's program at any point by Spring 2021 (N=5,700). Of these transfer students, 1,413 students (25%) took a break in enrollment before starting at the bachelor's program and 288 students (5%) transferred to another CUNY associate program before ultimately enrolling in a bachelor's program.

For our population of transfer students, we merged on data from DegreeWorks, CUNY's degree-auditing and tracking tool through which students and advisors can monitor progress to degree completion against college and major requirements. From DegreeWorks we downloaded a dataset of courses taken by students in our cohort that do not count towards specific degree requirements, allowing us to delve into credit loss in more detail than previous studies that analyzed simply whether credits transferred, but not their applicability to degree requirements.

Credit Loss

When a student transfers from one institution to another, the receiving college typically evaluates the credits that student has previously taken and determines what equivalent courses there are at the receiving college. In the optimal scenario, a credit that counts towards a student's major at the sending college is transferred as an equivalent course that also counts towards the major and degree at the receiving college. A less desirable outcome is when a major-specific credit becomes an elective credit instead of a credit that will count towards the major, in which case the student may have to repeat the original course to fulfill degree requirements, but can at least use the transferred credit to satisfy total-credit graduation requirements (unless the student already has too many credits for this purpose). The least desirable outcome of the transfer credit process is when credits are not transferred at all. In these situations students may have to re-take similar courses in the bachelor's program or take more courses in the bachelor's program than they anticipated, potentially increasing their costs of attending college, the likelihood of their running out of financial aid, and their time to degree completion.

Previous studies have established that students lose many credits in the transfer process and have linked those losses to lower rates of bachelor's completion. Monaghan and Attewell (2014) estimated that students who transferred almost all of their community college credits were 2.5 times more likely to earn a bachelor's degree than students who transferred fewer than half of their credits. Simone (2014) estimated that 39% of students lost all of their credits and 28% of students lost some credits during transfer. Among those who lost credits, the mean number lost was 12.9. A 2017 GAO report found that transfer students lose an average of 13 credits, with significant variation by institution type.

The benefit of studying credit loss using DegreeWorks data is that these data allow us to delve into more detail than previous credit loss studies. That said, the transactional nature of the DegreeWorks database—the fact that it overwrites itself anytime there is a change in a student's record—results in some limitations as to what we can conclude about credit loss at the time of transfer.

Findings

Using the DegreeWorks data, we first counted simply how many lost credits our transfer students currently have on record in the database. We defined lost credits as those that were not counted toward any degree requirements at the receiving college due to either being excess elective or in excess of what the receiving college allows to be transferred in due to residency requirements.¹ We found that of our 5,437 transfer students, 47% (2,531) had at least 0.5 lost credits² and 53% (2,906) did not have any lost credits. The total number of lost credits was 33,320, yielding a mean of 13.2 lost credits per student (among those who lost credits).

The lost credits we identified were *currently* coded as lost in DegreeWorks, where current refers to the time point at which the data were retrieved. They could have gone into this category at various points during a student's college trajectory, including, but not limited to, the time of transfer. A credit could also have been lost at the community college (due to a student accumulating more than the total number of credits required for the degree) or at a later point in the bachelor's program, for example, if a student switched major. Due to the lack of history or archived data in DegreeWorks, these types of lost credits were all included in our initial estimate.³

To estimate what share of observed lost credits were lost during transfer, we used a separate, specialized dataset from the DegreeWorks database. This dataset was created as part of the Articulation of Credit Transfer (ACT) project, a program improvement project at CUNY whose purpose is to facilitate credit transfer. While limited to courses from two sending community

¹ These correspond to CUNY's DegreeWorks categories of "overflow" and "over-the-limit," respectively.

² DegreeWorks reports credits in intervals of 0.5, hence we count any students with at least 0.5 lost credits as having lost credits. Among the 2,906 students who did not lose credits are 81 students who lost only courses with zero credits (as opposed to not losing any courses' credits).

³ For a summary of using DegreeWorks data to count transfer student credits, see this Inside Higher Ed blog post: <https://www.insidehighered.com/blogs/beyond-transfer/what-really-happens-transfer-students%E2%80%99-credits>.

colleges and one receiving bachelor’s degree college, as well as to transfers from Fall 2019 onwards, the major advantage of this dataset is that it includes a history of how courses counted towards a student’s degree at different time points, including prior to transfer and just after transfer (in addition to “current” at the time of data pull).

The presence of this history allowed us to count credits that were not yet in the “lost” categories at the community college, but appeared in one of those categories just after transfer. These were the credits, we could reasonably assume, that were lost during the transfer credit evaluation process. After counting these credits, we compared the resulting count of lost credits to the number of credits appearing as lost at the time at which the data were retrieved and calculated the proportion of current lost credits that were lost due to transfer.

As shown in Table 1, 79% of all credits currently coded as lost in the validation dataset were lost during transfer. Applying this percentage to the 33,320 credits coded as lost in the TOP dataset yields an estimated 26,322 credits lost during transfer. Using our count of 2,531 students who lost credits, this adjusted total would correspond to an adjusted mean of 10.4 lost credits per student; however, we cannot simply re-use this count of students because it too is bound to decrease when we consider only credits lost during transfer. In other words, some of the students who have a small number of current lost credits will not have any credits that were lost during transfer and the adjusted student count is therefore likely smaller than 2,531. Given this, the adjusted mean of lost credits per students must lie somewhere between 10.4 and 13.2.

Table 1. Lost credits in validation and analysis datasets

	A: Total credits currently coded as lost	B: Total credits lost during transfer	C: Proportion of credits currently coded as lost that were lost during transfer	D: Estimated number of credits lost during transfer (=A*0.79)
Validation dataset	2,538	1,994	0.79	N/A
Analysis dataset – all students	33,320	N/A	N/A	26,322

Note: Credit values are rounded to the nearest full credit.

Our adjustment based on the validation is only an approximation, given that the proportion of observed current lost credits that were lost during transfer is specific to the sending-receiving college combination in the validation dataset and differs for transferred credits at CUNY as a whole.

A share of the credits that were lost during transfer revert back to counting towards a student’s degree at a later point at the bachelor’s college (for example, if the student switches major), as we learned from working with the validation dataset. In the validation dataset, this was the case for 40% of the 1,994 credits that were lost during transfer. Applying this to our analysis dataset, where 40% of the estimated 26,322 credits lost during transfer is 10,528, this leaves 15,794 credits that continue to be lost credits at the bachelor’s college.

Summary and conclusions

Credit loss is a potential hurdle that transfer students face during transfer. At most 47% of CUNY transfer students lose credits during transfer from a community college to a bachelor's program, with an estimated mean of 10 to 13 lost credits per student – almost equivalent to one semester of full-time college work.

Ensuring that students lose fewer credits during transfer would decrease the likelihood that students have to re-take similar courses in the bachelor's program that they already took in community college, potentially decreasing their cost of attending college, as well as their time to degree completion. Promising strategies to reduce credit loss at transfer include articulation agreements and dual admission programs such as the Justice Academy at John Jay College. Whichever the program, it is key that the transferred credits do not simply exist at the new college, but that they count toward degree requirements.

In addition to changes in the number of courses that transfer, transfer students would benefit from a more timely credit evaluation process. In an in-depth qualitative study of two-to-four-year transfer students at CUNY, Ciocca Eller (2017) points out that full credit evaluations are often not available until late in the summer, months after course registration has begun. As a result, transfer students have more difficulty getting into desired courses than continuing students.

References

Ciocca Eller, Christina. 2017. Increasing Success for Two-to-Four-Year Transfer Students Within The City University of New York. GraduateNYC College Readiness & Success.

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