Lee College Transfer Student Outcomes

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Introduction

The purpose of this report is to examine the outcomes of Lee College transfer students. The methods presented here are based on recommendations from the report: How to Measure Community College Effectiveness in Serving Transfer Students by the Community College Research Center[1]. The analysis will be accomplished in four steps:

1. Defining the students in the Lee College Transfer Cohort;
2. Determining the amount of preparation students in the Transfer Cohort receive at Lee College;
3. Determining the percentage of students in the Transfer Cohort who transfer to a four-year college or university and earn a bachelor's degree; and
4. Analyzing results and comparing Lee College transfer and completion rates to national averages for community colleges.

Step 1: Defining who is in the Lee College Transfer Cohort

The Transfer Cohort is the group of students at Lee College who intend to transfer to a four-year college or university. Not all students in the Transfer Cohort actually transfer, and not all students who transfer will earn a bachelor's degree, but understanding who is in the Transfer Cohort is an essential step for measuring transfer student outcomes.

Research suggests that the decision to transfer and earn a bachelor's degree is often made after a student has started taking college classes, so the information given by the student on their college application regarding transfer is frequently inaccurate. Likewise, the student's declared major is often based on their application and is frequently out of alignment with academic goals that are formed as they gain more experience in college. Thus, we don't use information from the college application or declared majors to determine whether students are members of the Transfer Cohort.

The determination of who is in the Transfer Cohort is based on three criteria:

1. First Time Status: Students must be First Time Ever in College (FTEIC) students in the fall semester. Students who were FTEIC in the summer and also enrolled in the fall are included. Transfer students are excluded, students who participated in dual-credit programs while they were in high school are excluded, students who matriculate in the spring are excluded, and Huntsville students are excluded (because they are only allowed to enroll in workforce programs and they are not allowed to transfer).
2. Enrollment Intensity: Students must enroll as a full-time student in at least one semester in their first twelve months (fall or spring of their first year) or as a half-time student in at least two semesters in their first eighteen months (summer, fall, spring, summer, fall). A full-time student is one who is registered for at least 12 credits as of the census date; this only applies to the long

[1] How to Measure Community College Effectiveness in Serving Transfer Students (December 2017), John Fink and Davis Jenkins, Community College Research Center Teachers College, Columbia University: https://ccrc.tc.columbia.edu/media/k2/attachments/measure-community-college-effectiveness-transfer.pdf

semesters (fall & spring). A half-time student is one who is registered for at least 6 credits as of the census date; this applies to all semesters (fall, spring & summer).

3. Course Selection: Students must enroll in courses that indicate an intention to transfer. A student's course selections indicate an intention to transfer if they include a lot of transfer courses typically found in the core, such as English, math, history and government. A student's course selections indicate that they do not intend to transfer if they include a lot of workforce courses, such as welding, business technology, cosmetology, etc. However, students in workforce programs take transferrable general education courses if they are pursuing an AAS, so we cannot simply compare transfer courses to workforce courses. The logic for determining the intention to transfer based on course selection is done individually for each student as follows:
    a. Create a list of all courses the student has attempted.
    b. Remove developmental courses from the list because they don't help distinguish workforce from transfer students.
    c. If a course is in the General Education requirements for the AAS degree, remove it from the list because it doesn't help distinguish workforce from transfer students. We only remove courses that would count toward the AAS, so, for example, if a student took both ENGL 1301 & ENGL 1302, we would only remove one of them from the list because only one would count toward the AAS.
    d. Calculate the total credits attempted for workforce (WECM) courses and transfer (ACGM) courses on the list. (This excludes developmental courses and courses that count toward the AAS General Education requirements.)
    e. Calculate the percentage of transfer credits attempted. (The numerator is the number of attempted credits of transfer courses. The denominator is the number of attempted credits of both workforce and transfer courses.)
    f. If the percentage of transfer credits is at least 50% or if the student has attempted at least 12 SCH of transfer credits (not including courses that count toward the AAS General Education requirements) then the student's course selection indicates an intention to transfer. For example, a student could complete an AAS and have 42 credits of workforce courses, but if they also have at least 12 SCH of transfer courses beyond what is needed for the AAS General Education requirements, we consider that student to be part of the Transfer Cohort.

The national study of transfer outcomes done by the CCRC[2] used the FTEIC and Enrollment Intensity criteria to establish the Transfer Cohort, but did not use the Course Selection criterion. This study analyses transfer outcomes both with and without the Course Selection criterion. The results without the Course Selection criterion are used for comparison with the national study so that we have an equal comparison. The results with the Course Selection criterion are used to provide a more meaningful measure for driving continuous improvement. The Course Selection criterion is important for Lee College because we have a large population of incarcerated

[2] Shapiro, D., Dundar, A., Huie, F., Wakhungu, P. K., Yuan, X., Nathan, A., & Hwang, Y. (2017). Tracking transfer: Measures of effectiveness in helping community college students to complete bachelor's degrees (Signature Report No. 13). Herndon, VA: National Student Clearinghouse Research Center. https://files.eric.ed.gov/fulltext/ED580214.pdf

students and workforce students, and including them in the Transfer Cohort distorts the transfer rate by including students who are unable or not interested in transferring to a four-year college or university.

In conclusion, we define a student as belonging to the Lee College Transfer Cohort if:

1. They are a first-time-ever-in-college student in the fall, and
2. They are a full-time student in the fall and/or spring of their first year or they are a half-time student for at least two semesters within 18 months of matriculation, and
3. Their course selection indicates an intention to transfer.

Transfer Cohorts are classified by the semester of matriculation, e.g., Fall 2018.

Step 2: Determining the Amount of Preparation at Lee College

The traditional idea that students in the transfer cohort begin their studies at a community college, earn an associate degree or complete the core, then transfer to a four-year institution to complete a bachelor's degree is not supported by the data on student enrollment. Some students start at a four-year school, switch back to a community college to save money or because it feels more like home, and then back to the four-year school. Other students "swirl" between multiple community colleges and four-year schools over many years accumulating credit. Despite the complexity, it is useful to understand how much preparation takes place at Lee College even if the preparation isn't all at one time and isn't all before the student transfers to a four-year college or university. We define three levels of preparation:

1. Less than 30 SCH of earned credit. These students have earned less than 30 SCH of college credit at Lee College. There are no time limits on this calculation, so it could include courses taken intermittently and in-between enrollments at other institutions. If a student has earned a credential at Lee College, they will be identified as "Lee Credential" and not as "Less Than 30 SCH" even if they earned less than 30 credits at Lee College.
2. At least 30 SCH of earned credit. These students have earned at least 30 SCH of college credit at Lee College. There are no time limits on this calculation, so it could include courses taken intermittently and in-between enrollments at other institutions. If a student has earned a credential at Lee College, they will be identified as "Lee Credential" and not as "At least 30 SCH" regardless of how many credits they earned at Lee College.
3. Lee Credential. These students have earned one of these Lee College credentials:
    a. Core Completion Certificate
    b. Technical Certificate (any level)
    c. Associate of Applied Science
    d. Associate of Arts
    e. Associate of Science
    f. Associate of Arts in Teaching

Step 3: The Percentage of Students who Transfer and Earn a Bachelor's Degree

The number of students who transfer and earn a bachelor's degree is based on data from the National Student Clearinghouse:

1. Transfer is defined as having an enrollment record at a four-year college or university within three years of the student's first enrollment at Lee College. Many community colleges now offer baccalaureate degrees and are considered four-year colleges by the National Student Clearinghouse, so transfers to San Jacinto College, Brazosport College, etc. qualify as transfers to a four-year college even if students aren't pursuing a bachelor's degree.
2. Bachelor's degree attainment is defined as receiving a bachelor's degree within six years of the student's first enrollment at Lee College.

The CCRC recommends using a six-year period for tracking both transfer and bachelor's degree attainment. Although six years is probably a good period to include almost all students, it means the students began their studies six years ago, and the experiences of students six years ago is not very helpful when discussing what to do for students in the present. We use a three-year period for tracking transfer because our data show that the vast majority of transfers occur within three years, and it is more relevant to current students. We use the six-year timeframe for degree attainment because most bachelor's degrees are earned four to six years after matriculation, and looking at shorter time frames does not produce useful information. (When we are comparing Lee College to national data, we use a six-year tracking period for both transfer and degree attainment to make a fair comparison.)

Step 4a: Results: The Number of FTEIC Students Who are Transfer Students

Table 1 shows the cohort of all First Time Ever in College Students and the percentage of the cohort that is identified as Transfer, Workforce or Other. (Students in the "Other" category are students who only took developmental courses and students who didn't meet the enrollment intensity criterion.) We make the following observations:

- The FTEIC cohort was around 950 before the pandemic and dropped by 150 during the pandemic.
- About 45% of FTEIC students were in the transfer cohort before the pandemic, and that number increased to about 55% during the pandemic.
- About 60% of FTEIC women are in the transfer cohort, compared to 35% of FTEIC men. This is a significant gender gap. Women are much more likely to be in the Transfer Cohort than men.
- The percentage of White, Black, Hispanic and Other FTEIC students in the transfer cohort is roughly the same. There are a few percentage points of difference, but the major difference is by gender, not race/ethnicity.

Step 4b: Results: Preparation for Transfer

Table 2 has columns showing the size of the Transfer Cohort and the different levels of preparation for students in the Transfer Cohort. The "n" column shows the number of students in the Transfer Cohort. The "<30SCH" column shows the percentage of students who earned less than 30 credits at Lee College. The "30+SCH" column shows the percentage who earned at least 30 credits at Lee College. The "LeeCred" column shows the percentage who earned a Lee College credential. We make the following observations:

- About 450 FTEIC students enroll at Lee College each fall with the apparent intention to transfer to a four-year college or university. This is the Transfer Cohort. (Not all students in the cohort will transfer.)

- The amount of preparation increases over time. The Fall 2016 Transfer Cohort matriculated six years ago. About 40% of them have earned less than 30 SCH at Lee College. About 40% have earned more than 30 SCH but haven't earned a credential. About 20% earned a Lee College credential. There are only small differences by gender and by race/ethnicity.
- Table 3 has transfer outcomes where the Transfer Cohort does not use the Course Selection criterion and uses a six-year time span so it is comparable to the national study conducted by Shapiro et al.[3] About 28% of students in the Lee College Transfer Cohort earned a credential compared to an average of 33.6% for all community colleges. (It makes sense that without the Course Selection criterion the percentage of students with a credential would increase because the Transfer Cohort will include a lot of workforce students whose educational goal is a certificate.)

Step 4c: Results: The Number of Students in the Transfer Cohort who Transfer to a Four-Year College or University and Earn a Bachelor's Degree

Table 2 has columns showing the percentage of students in the Transfer Cohort who transfer and attain a bachelor's degree. The "Xfer_No" column shows the percentage of students who do not transfer within three years (and obviously do not earn a bachelor's degree). The "Xfer_Yes" column shows the percentage of students in the Transfer Cohort who transfer to a four-year college or university within three years of starting at Lee College, but not all of them will earn a bachelor's degree. The "Xfer_Degree" column shows the percentage of students in the Transfer Cohort who earn a bachelor's degree within six years. We make the following observations:

- About 25% of the Transfer Cohort transfers to a four-year college or university within three years. It is quite variable from year to year and ranges from 19% for the Fall 2016 cohort to 32% for the Fall 2018 cohort. There are only small differences by gender and by race/ethnicity.
- About 14% of the Transfer Cohort earn a bachelor's degree within six years based on the Fall, 2016 cohort. About 9% of earn a bachelor's degree within five years based on the Fall, 2017 cohort. Degree attainment for White students is about 17%, compared to only 9% for Black students and 8% for Hispanic students, which is a significant disparity.
- Table 3 shows transfer outcomes where the Transfer Cohort does not use the Course Selection criterion and uses a six-year time span so it is comparable to the national study conducted by Shapiro et al.[4] The Lee College Transfer-Out rate is about 25% compared to an average of 31.5% for all community colleges. The Lee College Bachelor's Completion Rate is about 9% compared to an average of 13.3% for all community colleges. It is interesting that the Lee College transfer rate (Xfer_Yes) is about the same in both Table 2 and Table 3, but the bachelor's degree completion rate drops from 14% to 9%. This suggests that a significant number of workforce students who are not in the Transfer Cohort may be taking classes at nearby community colleges that are classified as four-year institutions but are not pursuing a bachelor's degree, so they "count" as transfers but they are not pursuing a four-year degree.

Conclusions

- Lee College admits a Transfer Cohort of about 450 students each fall semester.

[3] Ibid.
[4] Ibid.

- About 60% of FTEIC women intend to transfer, compared to about 35% of FTEIC men, which is a significant gender gap.
- Lee College has a 25% Transfer-Out Rate based on a three-year time span and using the Course Selection criterion to determine who is in the Transfer Cohort. The Transfer-Out Rate is also about 25% when not using the Course Selection criterion and using a six-year time span, which matches the methods in the national study that found a 31.5% Transfer-Out Rate on average for all community colleges.
- Lee College has a 14% Bachelor's Completion Rate based on a six-year time span when the Transfer Cohort is limited to students who indicate a desire to transfer through their course selection. The Lee College Bachelor's Completion Rate is only 9% when not using the Course Selection criterion, as compared to the national average of 13.3% for all community colleges.
- About 17% of White students in the Transfer Cohort earn a bachelor's degree within six years compared to 9% for Black students and 8% for Hispanic students. This is a significant race/ethnicity gap.
- The Texas Higher Education Almanac[5] calculates the Transfer Cohort for Lee College at about 1,000 students because it counts all first-time students, not just students who meet the Enrollment Intensity and Course Selection criteria. The Almanac calculates the Transfer Rate at about 13% based on a six-year time span, which is much less than the 25% rate in this study. This may be due to the fact that the almanac only looks at transfers to Texas Public Universities. It is not clear if the Almanac counts transfers to community colleges that are classified as four-year institutions by the National Center for Education Statistics.
- The US Department of Education calculates the IPEDS Lee College Transfer-Out Rate[6] at 1%. This is based on first-time-full-time students. It isn't clear how transfers are counted.

Lee College's transfer rate and bachelor's degree completion rate are lower than national averages for community colleges, but not as low as values published in the Texas Higher Education Almanac or on the National Center for Education Statistics website. There is significant room for improvement.

[5] Texas Higher Education Almanac https://www.highered.texas.gov/data-reports/texas-public-higher-education-almanac/

[6] IPEDS website for Lee College https://nces.ed.gov/collegenavigator/?id=226204#retgrad

Table 1: First Time Ever in College (FTEIC) Students					
Cohort	**Population**	**n**	**Transfer Cohort**	**Workforce Cohort**	**Other**
Fall2016	All	1058	44%	33%	23%
Fall2017	All	960	48%	27%	25%
Fall2018	All	979	45%	25%	30%
Fall2019	All	966	45%	25%	30%
Fall2020	All	802	51%	25%	24%
Fall2021	All	832	61%	30%	9%
Fall2016	Male	547	31%	44%	26%
Fall2017	Male	509	38%	37%	26%
Fall2018	Male	469	31%	37%	32%
Fall2019	Male	462	34%	34%	33%
Fall2020	Male	324	39%	40%	21%
Fall2021	Male	368	48%	44%	7%
Fall2016	Female	511	58%	23%	19%
Fall2017	Female	451	60%	17%	24%
Fall2018	Female	510	58%	15%	27%
Fall2019	Female	504	55%	17%	27%
Fall2020	Female	478	60%	15%	25%
Fall2021	Female	464	72%	18%	10%
Fall2016	White	362	44%	34%	22%
Fall2017	White	316	47%	26%	27%
Fall2018	White	307	42%	30%	27%
Fall2019	White	267	40%	32%	28%
Fall2020	White	242	49%	31%	20%
Fall2021	White	229	59%	32%	9%
Fall2016	Black	188	39%	31%	30%
Fall2017	Black	150	43%	31%	25%
Fall2018	Black	158	38%	25%	37%
Fall2019	Black	170	43%	27%	30%
Fall2020	Black	140	50%	24%	26%
Fall2021	Black	143	61%	29%	10%
Fall2016	Hispanic	455	44%	36%	20%
Fall2017	Hispanic	423	50%	27%	23%
Fall2018	Hispanic	449	48%	23%	29%
Fall2019	Hispanic	463	48%	20%	32%
Fall2020	Hispanic	367	51%	24%	25%
Fall2021	Hispanic	411	62%	30%	8%
Fall2016	Other	53	58%	21%	21%
Fall2017	Other	71	51%	25%	24%
Fall2018	Other	65	55%	17%	28%
Fall2019	Other	66	53%	24%	23%
Fall2020	Other	53	70%	11%	19%
Fall2021	Other	49	65%	20%	14%

Table 2: Transfer Student Outcomes								
Cohort	**Group**	**n**	**<30SCH**	**30+SCH**	**LeeCred**	**Xfer_No**	**Xfer_Yes**	**Xfer_Degree**
Fall2016	All	465	41%	41%	18%	68%	19%	14%
Fall2017	All	460	45%	35%	21%	67%	24%	9%
Fall2018	All	441	39%	44%	17%	65%	32%	2%
Fall2019	All	434	50%	44%	7%	73%	27%	0%
Fall2020	All	413	69%	30%	1%	80%	20%	0%
Fall2016	Male	167	41%	44%	15%	66%	20%	14%
Fall2017	Male	191	50%	32%	18%	73%	20%	7%
Fall2018	Male	146	42%	44%	14%	67%	32%	1%
Fall2019	Male	155	51%	43%	6%	74%	26%	1%
Fall2020	Male	127	71%	29%	0%	83%	17%	0%
Fall2016	Female	298	41%	39%	19%	68%	18%	13%
Fall2017	Female	269	41%	36%	23%	62%	28%	10%
Fall2018	Female	295	37%	43%	19%	64%	33%	3%
Fall2019	Female	279	49%	44%	7%	72%	28%	0%
Fall2020	Female	286	68%	31%	1%	79%	21%	0%
Fall2016	White	160	42%	40%	18%	64%	18%	17%
Fall2017	White	148	47%	30%	22%	57%	27%	16%
Fall2018	White	130	42%	41%	17%	62%	34%	4%
Fall2019	White	106	45%	45%	9%	66%	33%	1%
Fall2020	White	119	62%	35%	3%	79%	20%	1%
Fall2016	Black	73	51%	27%	22%	60%	29%	11%
Fall2017	Black	65	57%	23%	20%	66%	28%	6%
Fall2018	Black	60	43%	38%	18%	60%	38%	2%
Fall2019	Black	73	52%	40%	8%	74%	25%	1%
Fall2020	Black	70	73%	27%	0%	77%	23%	0%
Fall2016	Hispanic	201	40%	45%	15%	74%	15%	10%
Fall2017	Hispanic	211	39%	42%	19%	73%	21%	6%
Fall2018	Hispanic	215	37%	46%	18%	71%	28%	1%
Fall2019	Hispanic	220	51%	44%	5%	77%	23%	0%
Fall2020	Hispanic	187	74%	25%	1%	80%	20%	0%
Fall2016	Other	31	26%	48%	26%	58%	23%	19%
Fall2017	Other	36	44%	28%	28%	69%	25%	6%
Fall2018	Other	36	33%	50%	17%	50%	44%	6%
Fall2019	Other	35	49%	43%	9%	63%	37%	0%
Fall2020	Other	37	54%	46%	0%	86%	14%	0%

Table 3: Transfer Student Outcomes for Comparison to State and National Data								
Cohort	**Group**	**n**	**<30SCH**	**30+SCH**	**LeeCred**	**Xfer_No**	**Xfer_Yes**	**Xfer_Degree**
Fall2016	All	819	0.42	0.3	0.28	0.66	0.25	0.09
Fall2017	All	722	0.45	0.29	0.26	0.66	0.28	0.06
Fall2018	All	690	0.43	0.34	0.22	0.68	0.3	0.02
Fall2019	All	676	0.48	0.4	0.12	0.75	0.24	0.01
Fall2020	All	613	0.65	0.31	0.04	0.81	0.19	0.01