

Key Learning Community Return on Investment Analysis

A previous collaborative study between IR and the Key Community program utilized a propensity score retention analysis to causally infer the impact of the Key Community on freshman retention. Results from this study indicate that Key participation increases retention for Key students by 8.29 percentage points. The current analysis applies this percentage point increase in order to estimate the total net tuition received from these students who, without the Key program, would not have been retained.

The table below presents the program costs and net tuition received in years two through five from the subset of Key students who are retained because of the Key program. In summary, the additional net tuition revenue gained by each Key cohort is greater than the cohort cost of Key programming. Overall, each Key student brings, on average, an additional \$590 of net tuition revenue (above Key program costs) due to Key’s positive impact on retention. Since the program costs are constant while students’ share of base tuition increases annually, the return on investment from the Key program increases with each academic year. Detailed tables that provide student counts, gross tuition revenue, paid institutional aid, and net tuition revenue by year are included as an appendix.

Summary of Program Costs and Net Tuition Received in Years 2 through 5

Cohort Year	Key Cohort Size	Program Cost (Investment) ¹	Net Tuition Received ^{2,3,4}	Return on Investment ⁵	Average Return on Investment per Key Student ⁶
2005-06	190	\$152,000	\$252,466	\$100,466	\$529
2006-07	221	\$176,800	\$296,151	\$119,351	\$540
2007-08	294	\$235,200	\$405,846	\$170,646	\$580
2008-09	299	\$239,200	\$440,953	\$201,753	\$675

¹Key estimates that it costs \$800 per student per academic year to run the program. The program cost is equal to \$800 multiplied by the cohort size.

²The net tuition received is based on the net tuition revenue received from the Key students (additional returners) who, without the Key program, would not have been retained in years two through five.

³Net tuition received is based on gross tuition revenue which is equal to the students' share of base tuition for a specific year multiplied by the count additional returners. This does not include differential tuition and is a conservative estimate of gross tuition revenue. Differences in base tuition by residency are accounted for by applying the observed residency distributions of Key students by cohort to the count of additional students retained to the second year.

⁴Net tuition received is equal to gross tuition revenue minus institutional aid summed over each cohort’s second to fifth year of enrollment.

⁵This is the difference between the net tuition received in years two through five and the program cost by cohort.

⁶ Average return on investment per Key student is equal to the cohort’s return on investment divided by the cohort size.

Institutional Research

Appendix.

Second Year				
Cohort Year	Additional Retained to Year 2 ¹	Estimated Gross Tuition Revenue	Estimated Institutional Aid ²	Net Tuition Received ³
2005-06	16	\$101,567	\$29,416	\$72,151
2006-07	18	\$126,480	\$32,815	\$93,665
2007-08	24	\$184,756	\$37,797	\$146,959
2008-09	24	\$195,338	\$60,310	\$135,028
Third Year				
Cohort Year	Additional Retained to Year 3 ⁴	Estimated Gross Tuition Revenue	Estimated Institutional Aid	Net Tuition Received ²
2005-06	13	\$92,840	\$26,120	\$66,720
2006-07	14	\$109,084	\$28,262	\$80,822
2007-08	16	\$93,074	\$25,555	\$67,519
2008-09	18	\$159,048	\$47,079	\$111,969
Fourth Year				
Cohort Year	Additional Retained to Year 4	Estimated Gross Tuition Revenue	Estimated Institutional Aid	Net Tuition Received ²
2005-06	12	\$100,236	\$20,767	\$79,469
2006-07	13	\$110,452	\$22,850	\$87,602
2007-08	17	\$137,682	\$24,083	\$113,599
2008-09	18	\$176,329	\$41,314	\$135,015
Fifth Year				
Cohort Year	Additional Retained to Year 5	Estimated Gross Tuition Revenue	Estimated Institutional Aid	Net Tuition Received ²
2005-06	5	\$40,032	\$5,905	\$34,127
2006-07	5	\$42,390	\$8,329	\$34,061
2007-08	9	\$88,164	\$10,396	\$77,768
2008-09	8	\$70,791	\$11,850	\$58,941

¹Additional students retained to the second year is equal to the cohort size multiplied by the treatment effect of Key on retention (8.29%).

²Net tuition received per year is equal to the cohort's gross tuition revenue minus the institutional aid paid to those students. The net tuition received by cohort in the summary table (on page 1) is equal to each cohort's yearly net tuition received. For instance, the 2005-06 cohort's total net tuition received is equal to the sum of this cohort's net tuition received by year ($\$252,466 = \$72,151 + \$66,720 + \$79,469 + \$34,127$).

³Estimated institutional aid is calculated by applying the percent of a Key cohort that received institutional aid to the count of students additionally retained. This percentage is then used to estimate how much of the total institutional aid spent on a Key cohort in an out year supported the count of additional returners.

⁴Additional students retained in years three through five is based on the observed Key cohort's retention rate applied to the second year count of additional returners. Differences in retention rates by residency are accounted for.