

Gatekeeper Course Report for Kapi‘olani Community College

This study examined the effects that gatekeeper courses had on student performance. More specifically, did gatekeeper courses have effects on student retention and progress towards a degree?

Methodology

Gatekeeper courses were defined by Achieving the Dream protocols (i.e., college-level English and math courses.) These included ENG 100, MATH 100, MATH 103, and MATH 115 for Kapi‘olani Community College (KapCC).

The reporting cohorts consisted of first-time students who were enrolled and home-based at KapCC in the fall and who placed into college-level English and/or math courses. Cohorts were developed for four academic years (2007 – 2008 through 2010 – 2011.) Each cohort was divided into two groups—those who enrolled into any gatekeeper English and/or math course in the initial fall term (gatekeeper group) and those who did not (control group.)

There were three student performance measures. The first measure was the number of students in the cohort who completed between 12 and 23 credits at KapCC by the end of the academic year with at least a 2.0 GPA. The second measure was the number of students in the cohort who completed at least 24 credits at KapCC by the end of the academic year with at least a 2.0 GPA. The third measure was the number of students in the cohort who reenrolled at KapCC in the next fall term.

Comparisons were made between the two groups on each of the student performance measures for each of the academic years and for all academic years combined. Additionally, the gatekeeper groups were disaggregated into English gatekeeper groups and a math gatekeeper groups, and these gatekeeper groups were compared to comparable control groups.

Results

Tables 1 and 2 show the results for the numbers of students who completed 12 to 23 credits (Table 1) and who completed 24 or more credits (Table 2) for any gatekeeper course versus the control group. Significant differences are indicated by the shaded cells. A significantly higher percentage of students who enrolled in at least one gatekeeper course in their initial fall term completed 12 to 23 credits by the end of their initial academic year as compared to the control group when all four years were combined (Table 1.) The results for individual academic years were mixed. The 2008-2009 academic year in Table 2 shows that a significantly higher percentage of students in the control group completed 24 or more credits as compared to the students who enrolled in at least one gatekeeper course, and the 2010-2011 academic year in Table 1 shows that a significantly higher percentage of students who enrolled in at least one gatekeeper course completed 12 to 23 credits as compared to the control group students.

	Overall	2007	2008	2009	2010
Gatekeeper Group	28.9% (514 / 1780)	26.8% (95 / 354)	28.8% (114 / 396)	27.1% (138 / 509)	32.1% (167 / 521)
Control Group	25.2% (316 / 1252)	25.0% (56 / 224)	25.0% (71 / 284)	25.3% (98 / 387)	25.5% (91 / 357)
	$\chi^2 = 4.89,$ p < 0.05*	$\chi^2 = 0.24,$ p = 0.62	$\chi^2 = 1.20,$ p = 0.27	$\chi^2 = 0.36,$ p = 0.55	$\chi^2 = 4.40,$ p < 0.05*

Shaded cells indicate significant differences. One * after the p value indicates significance at the 0.05 level, and two * indicates significance at the 0.01 level.

	Overall	2007	2008	2009	2010
Gatekeeper Group	23.7% (422 / 1780)	24.3% (86 / 354)	19.4% (77 / 396)	23.6% (120 / 509)	26.7% (139 / 521)
Control Group	26.2% (328 / 1252)	27.2% (61 / 224)	30.6% (87 / 284)	22.0% (85 / 387)	26.6% (95 / 357)
	$\chi^2 = 2.45,$ p = 0.12	$\chi^2 = 0.63,$ p = 0.43	$\chi^2 = 11.32,$ p < 0.01**	$\chi^2 = 0.32,$ p = 0.57	$\chi^2 = 0.00,$ p = 0.97

Shaded cells indicate significant differences. One * after the p value indicates significance at the 0.05 level, and two * indicates significance at the 0.01 level.

Tables 3 and 4 show the results for the numbers of students who completed 12 to 23 credits (Table 3) and who completed 24 or more credits (Table 4) for the ENG 100 gatekeeper course versus the control group. Significant differences are indicated by the shaded cells. A significantly higher percentage of students who enrolled in ENG 100 in their initial fall term completed at least 24 credits by the end of their initial academic year as compared to the control group when all four years were combined (Table 4.) Additionally this pattern also is shown in the data for academic years 2009-2010 and 2010-2011. No significant differences were detected for 12 to 23 credits.

	Overall	2007	2008	2009	2010
Gatekeeper Group	28.7% (458 / 1597)	26.9% (84 / 312)	27.6% (96 / 348)	26.8% (125 / 466)	32.5% (153 / 471)
Control Group	27.0% (139 / 515)	22.2% (18 / 81)	27.5% (28 / 102)	28.6% (48 / 168)	27.4% (45 / 164)
	$\chi^2 = 0.55,$ p = 0.46	$\chi^2 = 0.74,$ p = 0.39	$\chi^2 = 0.00,$ p = 0.97	$\chi^2 = 0.19,$ p = 0.66	$\chi^2 = 1.44,$ p = 0.23

Shaded cells indicate significant differences. One * after the p value indicates significance at the 0.05 level, and two * indicates significance at the 0.01 level.

	Overall	2007	2008	2009	2010
Gatekeeper Group	22.7% (363 / 1597)	22.8% (71 / 312)	18.1% (63 / 348)	22.5% (105 / 466)	26.3% (124 / 471)
Control Group	14.4% (74 / 515)	22.2% (18 / 81)	18.6% (19 / 102)	11.3% (19 / 168)	11.0% (18 / 164)
	$\chi^2 = 16.59$, p < 0.01**	$\chi^2 = 0.01$, p = 0.92	$\chi^2 = 0.02$, p = 0.90	$\chi^2 = 9.89$, p < 0.01**	$\chi^2 = 16.51$, p < 0.01**

Shaded cells indicate significant differences. One * after the p value indicates significance at the 0.05 level, and two * indicates significance at the 0.01 level.

Tables 5 and 6 show the results for the numbers of students who completed 12 to 23 credits (Table 5) and who completed 24 or more credits (Table 6) for the math gatekeeper courses versus the control group. Significant differences are indicated by the shaded cells. A significantly higher percentage of students who enrolled in math gatekeeper courses in their initial fall term completed 12 to 23 credits by the end of their initial academic year as compared to the control group when all four years were combined (Table 5.) Additionally this pattern also is shown in the data for academic year 2008-2009. No significant differences were detected for 24 or more credits.

	Overall	2007	2008	2009	2010
Gatekeeper Group	30.9% (113 / 366)	22.8% (18 / 79)	35.6% (31 / 87)	32.9% (28 / 85)	31.3% (36 / 115)
Control Group	24.0% (177 / 737)	26.6% (38 / 143)	23.6% (43 / 182)	22.8% (50 / 219)	23.8% (46 / 193)
	$\chi^2 = 5.94$, p < 0.05*	$\chi^2 = 0.39$, p = 0.53	$\chi^2 = 4.26$, p < 0.05*	$\chi^2 = 3.28$, p = 0.07	$\chi^2 = 2.06$, p = 0.15

Shaded cells indicate significant differences. One * after the p value indicates significance at the 0.05 level, and two * indicates significance at the 0.01 level.

	Overall	2007	2008	2009	2010
Gatekeeper Group	34.4% (126 / 366)	34.2% (27 / 79)	29.9% (26 / 87)	36.5% (31 / 85)	36.5% (42 / 115)
Control Group	34.5% (254 / 737)	30.1% (43 / 143)	37.4% (68 / 182)	30.1% (66 / 219)	39.9% (77 / 193)
	$\chi^2 = 0.00$, p = 1.00	$\chi^2 = 0.40$, p = 0.53	$\chi^2 = 1.45$, p = 0.23	$\chi^2 = 1.13$, p = 0.29	$\chi^2 = 0.35$, p = 0.56

Shaded cells indicate significant differences. One * after the p value indicates significance at the 0.05 level, and two * indicates significance at the 0.01 level.

Table 7 shows fall-to-fall reenrollment rates for the any gatekeeper student versus the control group. There were no significant differences for any academic year or for all years combined.

Table 7. Fall to Fall Reenrollment for English and/or Math Gatekeeper Courses					
	Overall	2007	2008	2009	2010
Gatekeeper Group	60.1% (1069 / 1780)	65.8% (233 / 354)	58.6% (232 / 396)	59.3% (302 / 509)	58.0% (302 / 521)
Control Group	60.0% (751 / 1252)	63.8% (143 / 224)	65.5% (186 / 284)	55.3% (214 / 387)	58.3% (208 / 357)
	$\chi^2 = 0.00,$ p = 0.96	$\chi^2 = 0.24,$ p = 0.63	$\chi^2 = 3.33,$ p = 0.07	$\chi^2 = 1.47,$ p = 0.23	$\chi^2 = 0.01,$ p = 0.93

Shaded cells indicate significant differences. One * after the p value indicates significance at the 0.05 level, and two * indicates significance at the 0.01 level.

Table 8 shows fall-to-fall reenrollment rates for the ENG 100 gatekeeper group versus the control group. Significant differences are indicated by the shaded cells. A significantly higher percentage of students who enrolled in the ENG 100 gatekeeper course in their initial fall term reenrolled from their initial fall term to the subsequent fall term as compared to the control group when all four years were combined. Additionally this pattern also is shown in the data for three of the four individual academic years (2008-2009 through 2010-2011.)

Table 8. Fall to Fall Reenrollment for ENG 100 Gatekeeper Course Only					
	Overall	2007	2008	2009	2010
Gatekeeper Group	60.5% (966 / 1597)	65.1% (203 / 312)	57.5% (200 / 348)	58.8% (274 / 466)	61.4% (289 / 471)
Control Group	45.6% (235 / 515)	56.8% (46 / 81)	43.1% (44 / 102)	44.0% (74 / 168)	43.3% (71 / 164)
	$\chi^2 = 35.05,$ p < 0.01**	$\chi^2 = 1.90,$ p = 0.17	$\chi^2 = 6.53,$ p < 0.05*	$\chi^2 = 10.85,$ p < 0.01**	$\chi^2 = 16.17,$ p < 0.01**

Shaded cells indicate significant differences. One * after the p value indicates significance at the 0.05 level, and two * indicates significance at the 0.01 level.

Table 9 shows fall-to-fall reenrollment rates for the math gatekeeper group versus the control group. There were no significant differences for any academic year or for all years combined.

	Overall	2007	2008	2009	2010
Gatekeeper Group	68.6% (251 / 366)	69.6% (55 / 79)	70.1% (61 / 87)	67.1% (57 / 85)	67.8% (78 / 115)
Control Group	70.0% (516 / 737)	67.8% (97 / 143)	78.0% (142 / 182)	63.9% (140 / 219)	71.0% (137 / 193)
	$\chi^2 = 0.24,$ p = 0.63	$\chi^2 = 0.08,$ p = 0.78	$\chi^2 = 1.99,$ p = 0.16	$\chi^2 = 0.26,$ p = 0.61	$\chi^2 = 0.34,$ p = 0.56

Shaded cells indicate significant differences. One * after the p value indicates significance at the 0.05 level, and two * indicates significance at the 0.01 level.

Conclusions

Generally, students who enrolled in gatekeeper courses exhibited better academic progress and reenrollment than non-gatekeeper course students if there were any significant differences. However, the significant differences were not consistent across all of the student performance measures over the four academic years.

The first student performance measure was the number of students in the cohort who completed between 12 and 23 credits at KapCC by the end of the academic year with at least a 2.0 GPA. The ENG 100 gatekeeper comparisons showed no significant differences, but the math gatekeeper course takers showed better progress overall (all four years combined) and for one academic year. The overall (4-yr) performance enhancement for gatekeeper students continued when English and math were combined.

The second measure was the number of students in the cohort who completed at least 24 credits at KapCC by the end of the academic year with at least a 2.0 GPA. These results were inconsistent. The progress for all gatekeeper students combined was significantly worse in one academic year (2008-2009) as compared to the control group, although math gatekeeper students exhibited no significant differences, and English gatekeeper students showed significantly better academic progress overall and for two of the academic years.

The third measure was the number of students in the cohort who reenrolled at KapCC in the next fall term. The English gatekeeper students showed significantly higher reenrollment overall and for three of the four academic years as compared to the control group. There were no significant differences either for math gatekeeper students or for both English and math gatekeeper students combined.

In summary, enrollment in gatekeeper courses had a positive, but inconsistent effect on academic progress and reenrollment.