



State Grants and Community College Student Postsecondary Outcomes

1 Introduction

The Iowa College Student Aid Commission administers two grant programs available to community college students enrolled in vocational and technical programs. Eligible programs of study include those in nursing, information technology, manufacturing, industrial technology, biotechnology, construction and transportation or logistics. In this analysis we explore the effect these programs have on recipients' postsecondary enrollment and completion trends.

The Iowa Vocational-Technical Tuition Grant (Voc-Tech Grant) was established in 1973. Since 2003, appropriations have ranged between \$2.25 million and \$2.78 million. In 2017 2,674 scholarships were awarded with a maximum of \$1,200 and average award of \$868. It is awarded to students with expected family contributions (EFC) between \$201 and \$5,300.

The Iowa Skilled Workforce Shortage Tuition Grant (Kibbie Grant) was first made available in 2012. It has been appropriated \$5 million each year for the last 5 years. In 2017 4,415 scholarships were awarded with a maximum award of \$2,505 and average award of \$1,128. It is awarded to students with EFCs less than \$6,000.

2 Data and Sample Selection

2.1 Data

Iowa College Aid is the state agency that receives all data on students who file the Free Application for Federal Student Aid (FAFSA). This data provides demographic and financial information for each student. Iowa College Aid administers state scholarship and grants and therefore collects data on the amounts awarded to students each year. Iowa College Aid also collects National Student Clearinghouse (NSC) data on all Iowans who file the FAFSA. NSC data provides postsecondary enrollment information, including colleges attended, dates of enrollment and types of credentials received by a student.

2.2 Target Sample Selection

The Kibbie Grant was first made available in the 2012-13 academic year and awarded to 4,365 students. The same academic year 2,801 students received the Voc-Tech Grant. Students may have received both the Kibbie and Voc-Tech Grants. To determine postsecondary student outcomes for community college students who received state aid in the form of the Kibbie or Voc-Tech Grants we selected the cohort of students who received one or both of these grants during their first year of college. Both the Kibbie and Voc-Tech Grants were designed to address workforce shortages and

encourage non-traditional students to complete postsecondary education. Therefore, we include students who may have returned to college after a break in their postsecondary education. We identified students who had not been enrolled at any college during the two years prior to 2012-13 and included those students in our target sample.

A total of 824 students met the criteria necessary to be included in our target sample of grant recipients. Table 1 shows the percentages of those students who received either the Kibbie or Voc-Tech grants, including those who received both grants.

Table 1: Percentages of students who recieved one or both grants

	Grant Recipients (N=824)
Kibbie Grant Only	41%
Voc-Tech Grant Only	35%
Recieved Both	24%

2.3 Comparison Sample Selection

We identified students to use for a comparison sample using the same criteria as the grant recipients, with the additional condition that the students did not receive any state scholarships or grants. Students were selected from the population of those who started their postsecondary career at a community college and enrolled for the first time in the 2012-13 academic year. Students who returned to higher education in 2012-13 after a two year gap in enrollment were also included in the potential comparison sample.

2.4 Demographics

After identifying the grant recipient and non-recipient samples discussed above, we compared demographics between the two populations (Table 2). Students in each population had an average age of 24 to 25 years old, verifying that community colleges, in general, serve an older (non-traditional) population of students.

Table 2: Demographics of grant recipients compared to comparison students

	Grant Recipients (N=824)	Non-Recipients (N=9,427)
Female	65%	49%
First Generation	42%	36%
Independent Status	44%	45%
Average Age	25.2	24.2
Average EFC	\$1,811	\$6,486
Enrolled Full-Time	73%	56%

The grant recipient and comparison samples differed most significantly by gender, family income and enrollment status. Students who received state financial aid were more likely to be female, at 65% of the recipient population versus 49% of the non-recipient population. The grant recipient population had a larger percentage of females due to the program of study restriction, with 23% of Kibbie Grant awards going to students in registered nursing programs that tend to

draw more females than males. Grant recipients had an average EFC that was over 3 times lower than the comparison sample. This is expected due to the EFC limits for eligibility for the Kibbie and Voc-Tech Grants. Finally, grant recipients were more likely to be enrolled full-time than non-recipients.

3 Analysis

Due to statistically significant differences in demographics of the grant recipients and non-recipients, we used propensity score matching (PSM) to control for biases. PSM predicts the likelihood that a certain student would receive the Kibbie or Voc-Tech grants based on demographic information. It then matches students from the recipient sample to a student in the non-recipient sample with a similar likelihood to form the comparison cohort. The comparison cohort was selected to statistically represent the grant recipient sample on demographics (gender, age, dependency status and first generation status) as well as a family financial indicator, the EFC. We also controlled for part-time versus full-time enrollment status. Table 3 shows the baseline demographics for the grant recipient cohort and comparison cohort after the matching procedure.

Table 3: Baseline characteristics of grant recipients and propensity score matched comparison sample

	Grant Recipients (N=824)	Comparison Cohort (N=824)
Female (%)	539 (65%)	565 (69%)
First Generation (%)	348 (42%)	303 (37%)
Independent Status (%)	364 (44%)	349 (42%)
Average Age (std. dev.)	25.2 (9.5)	25.4 (10.0)
Average EFC (std. dev.)	\$1,811 (\$1,698)	\$2300 (\$3,132)
Enrolled Full-Time (%)	605 (73%)	640 (78%)

4 Results

After selecting the comparison cohort we determined postsecondary enrollment patterns for students in both the grant recipient and comparison samples (Table 4).

Table 4: Enrollment patterns of treatment and comparison cohorts

	Grant Recipients (N=824)	Comparison Sample (N=824)
Earned credential (%)	396 (48%)	210 (25%)
Still enrolled, no credential (%)	13 (2%)	16 (2%)
No credential, not enrolled (%)	415 (50%)	598 (73%)
Total (%)	824 (100%)	824 (100%)
Average time to first credential (std. dev.)	1.7 yrs (0.9)	2.3 yrs (1.1)

Grant recipients were more likely to have earned a credential by the end of spring 2017, within 5 years of their first postsecondary enrollment. Credentials include 2-year or 4-year degrees as well as certificates or less than 2-year completions. Only 2% of both the recipient and comparison

groups had never received a credential yet were still enrolled in the spring 2017 semester. Half of all grant recipients ceased their postsecondary careers without receiving a credential compared to almost 3 out of 4 (73%) students who did not receive the Kibbie or Voc-Tech grants. Finally, grant recipients earned their first credential subsequent to the 2012-13 academic year in approximately 1.7 years, compared to 2.3 years for the comparison sample.