This Month's Topic: Corequisite Support and Throughput Outcomes

What is Throughput?

Throughput is the percentage of a student cohort who completed either transfer-level Math or English within either 1-term or 1-year after having begun that sequence at the same point in time (Fall 2022).

- 1-term throughput is if a student successfully completed a transfer-level Math or English course in Fall 2022.
- 1-year throughput is if a student successfully completed a transfer-level Math or English course in Fall 2022, Spring 2023, or Summer 2023.

What is a Corequisite?

A corequisite is a course that is taken at the same time as a transfer-level course where students receive additional instruction and support to help them master the material in that transfer-level course.

- When first entering college, students fill out the placement form which identifies the need for a corequisite support course.
- There are 3 options that can come from this:
  - 1) It is required to take a transfer-level course and a corequisite.
  - 2) It is recommended to take a transfer-level course and a corequisite.
  - 3) It is optional to take a transfer-level course and a corequisite.

Methodology

In this research, a statistical model called the Binomial Effect Size Display (BESD) was used to provide a more understandable way of showing the proportion of achievement versus lack thereof under different conditions. This is a theoretical statistical model, meaning that if 50% of students were in one group (i.e., Math with a corequisite) and the other 50% were in a second group (i.e., Math without a corequisite), the results show what we would expect to see based on the effect size (r). The farther away the percent is from 50, the more of an effect the measure had on the outcome.

Table 1 presents the percentages of students achieving **1-term** throughput in Math, categorized by different measures including whether they took a Math course with or without a corequisite and by GPA. Students with a corequisite had lower 1-term throughput (26.1%) compared to those without (73.9%). Students with a lower GPA had lower throughput (21.1%) compared to those with a higher GPA (78.9%).

Table 1. *Binomial Effect Size Display (BESD)*

Measure	Variable		Total (%)
Corequisite status and 1-Term Throughput in Math (r = -0.49)			
	Did not achieve 1-term throughput	Achieved 1-term throughput	
Math course with a corequisite	73.9%	26.1%	100
Math course without a corequisite	26.1%	73.9%	100
Total (%)	100	100	200
GPA and 1-Term Throughput in Math (r = 0.58)			
	Did not achieve 1-term throughput	Achieved 1-term throughput	
2.50 GPA or lower	78.9%	21.1%	100
2.51 GPA or higher	21.1%	78.9%	100
Total (%)	100	100	200

Table 2 presents the percentages of students achieving **1-year** throughput in Math, categorized by the same measures above including whether they took a Math course with or without a corequisite and by GPA. Students with a corequisite had lower 1-year throughput (28.8%) compared to those without (71.2%). Students with a lower GPA had lower throughput (19.4%) compared to those with a higher GPA (80.6%).

Table 2. *Binomial Effect Size Display (BESD)*

Measure	Variable		Total (%)
Corequisite status and 1-Year Throughput in Math (r = -0.42)			
	Did not achieve 1-term throughput	Achieved 1-term throughput	
Math course with a corequisite	71.2%	28.8%	100
Math course without a corequisite	28.8%	71.2%	100
Total (%)	100	100	200
GPA and 1-Year Throughput in Math (r = 0.61)			
	Did not achieve 1-term throughput	Achieved 1-term throughput	
2.50 GPA or lower	80.6%	19.4%	100
2.51 GPA or higher	19.4%	80.6%	100
Total (%)	100	100	200

Table 3 presents the percentages of students achieving **1-term** throughput in English, categorized by the same measures above including whether they took an English course with or without a corequisite and by GPA. Students with a corequisite actually had a slightly higher 1-term throughput (53.9%) compared to those without (46.1%), although not statistically significant. Students with a lower GPA had lower throughput (16.3%) compared to those with a higher GPA (83.7%).

Table 3. *Binomial Effect Size Display (BESD)*

Measure	Variable		Total (%)
Corequisite status and 1-Term Throughput in English (r = -0.08)			
	Did not achieve 1-term throughput	Achieved 1-term throughput	
English course with a corequisite	46.1%	53.9%	100
English course without a corequisite	53.9%	46.1%	100
Total (%)	100	100	200
GPA and 1-Term Throughput in English (r = 0.67)			
	Did not achieve 1-term throughput	Achieved 1-term throughput	
2.50 GPA or lower	83.7%	16.3%	100
2.51 GPA or higher	16.3%	83.7%	100
Total (%)	100	100	200

Please note that race/ethnicity measures were not included in these tables. This is because when comparing to White students, there were no statistically significant differences in results among Asian, Black/African American, Filipino, Hispanic, Native American, Pacific Islander, Two or More Races, or Unreported race students after controlling for GPA, corequisite status, age, and gender. In other words, race/ethnicity did not predict 1-term or 1-year throughput.

Summary of Findings and Limitations

- Math: A student is more likely to achieve 1-term and 1-year throughput without a corequisite and more likely with a higher GPA.
- English: A student is slightly more likely to achieve 1-term and 1-year throughput with a corequisite (although not statistically significant) and way more likely with a higher GPA.

The primary limitation of this research was the limited time available, which necessitated a focused scope. Future research should explore additional factors such as first-generation status, socioeconomic status, financial aid status, and a deeper analysis of just the students taking corequisites. This would allow for a better understanding of whether corequisites are truly effective.