

## ENGINEERING

### A Fork in the Road: Exploring Undecided Student Success

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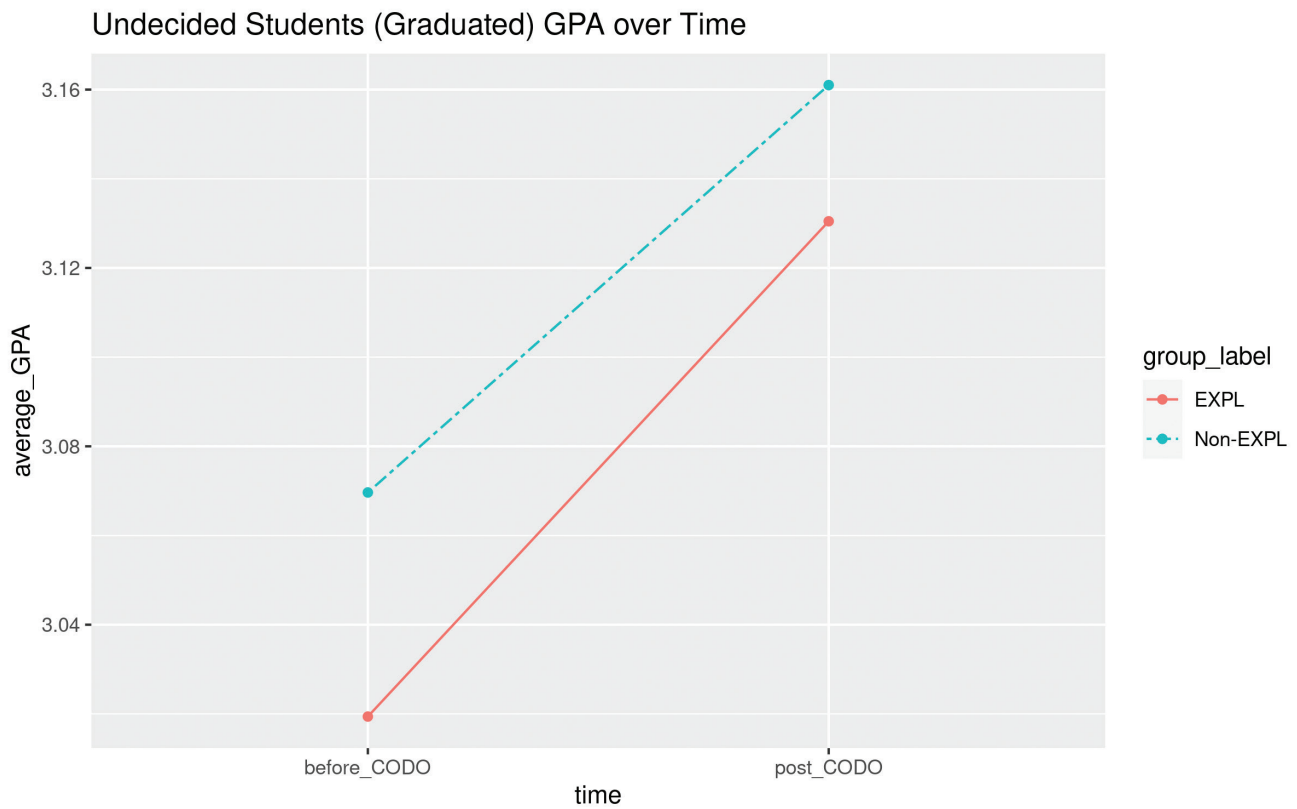
Between 2008 and 2019, 49% of Purdue students switched majors. Lack of career decisiveness has been associated with attrition, according to Titley and Titley (1980) in “Are Only the Undecided Undecided?,” and lower academic achievement, according to Tampke and Durodoye (2013) in “Improving Academic Success for Undecided Students.” Purdue University’s Exploratory Studies program (EXPL) aims to guide undecided students with a higher advisor-to-student ratio and coursework in academic planning. This study measures the program’s impact on students’ GPAs and graduation rates.

The study focused on students enrolled from 2008–2019 who switched majors only once, as they make up 71% of major switches. These students were broken into two groups: those that started college in EXPL and all other students (non-EXPL). The average GPA before the change of degree objective (CODO); GPA after CODO; GPA difference; and 4-, 5-, and 6-year graduation rates were compared

between groups using a t-test and z-test. Since GPA is a significant predictor of graduation, as concluded by Voelkle and Sander (2008) in “University Dropout,” GPA measures were recalculated excluding non-graduates to account for lower EXPL graduation rates.

The non-EXPL group had significantly higher graduation rates and GPAs. This can be explained by differences in their academic background relative to the EXPL group. The key finding is the change in GPA after switching majors, as this indicates how much a student improved. Both groups of graduating students showed GPA increases post-CODO, with a significantly greater increase for EXPL students. Future analysis will control for additional factors of demographics, high school academic performance and engagement in the EXPL program.

*Research advisor David Nelson writes: “While Exploratory Studies provides many benefits to Purdue students, the particular academic paths of learners after they leave Exploratory Studies remain relatively untraced. Joseph addresses the possible improvement in select student academic performance tracks after participation in EDPS 105–Academic and Career Planning.”*



This figure shows the change in average term GPA before and after CODO for graduated EXPL and non-EXPL students. The difference in GPA between the two groups decreased from 0.05/4.00 to 0.03/4.00 after CODO.