

# An Evaluation of Supplemental Instruction and Individual Learning Strategy Sessions on Student Grades and Retention

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## INTRODUCTION

Since the COVID-19 pandemic, we have seen an increasing number of students experiencing academic struggles in our Doctor of Pharmacy program. MUSC's Center for Academic Excellence hires pharmacy students to serve as supplemental instructor leaders (SILs) and offers one-on-one appointments with CAE faculty members to discuss time management, learning styles, study skills and test-taking strategies to enhance academic performance.

Supplemental instruction (SI) is provided for courses that regularly receive more than five requests from enrolled students. SILs are trained in the principles of small-group facilitation and topics related to the neurobiology and social aspects of learning.

We evaluated the utilization of student-led SI and CAE faculty-led learning sessions and their impact on academic performance and student retention.

## METHODS

The CAE provided supplemental instruction (SI) and CAE learning coach utilization data for the 2021-22 and 2022-23 academic years.

Course grades and GPA data was pulled from the college's assessment database.

The number of hours students participated in SI and course grades were evaluated. We also compared individual learning strategy sessions students attended with a CAE learning coach to overall student GPA. Student suspension and dismissal data related to SI and CAE faculty utilization was also evaluated.

Descriptive statistics were used to report SI and CAE faculty utilization and retention data. Correlations between hours of SI and course grades were analyzed using Mann-Whitney U test via SPSS.

This project is determined to be quality improvement and is therefore not subject to IRB review or approval.

## ACKNOWLEDGEMENTS:

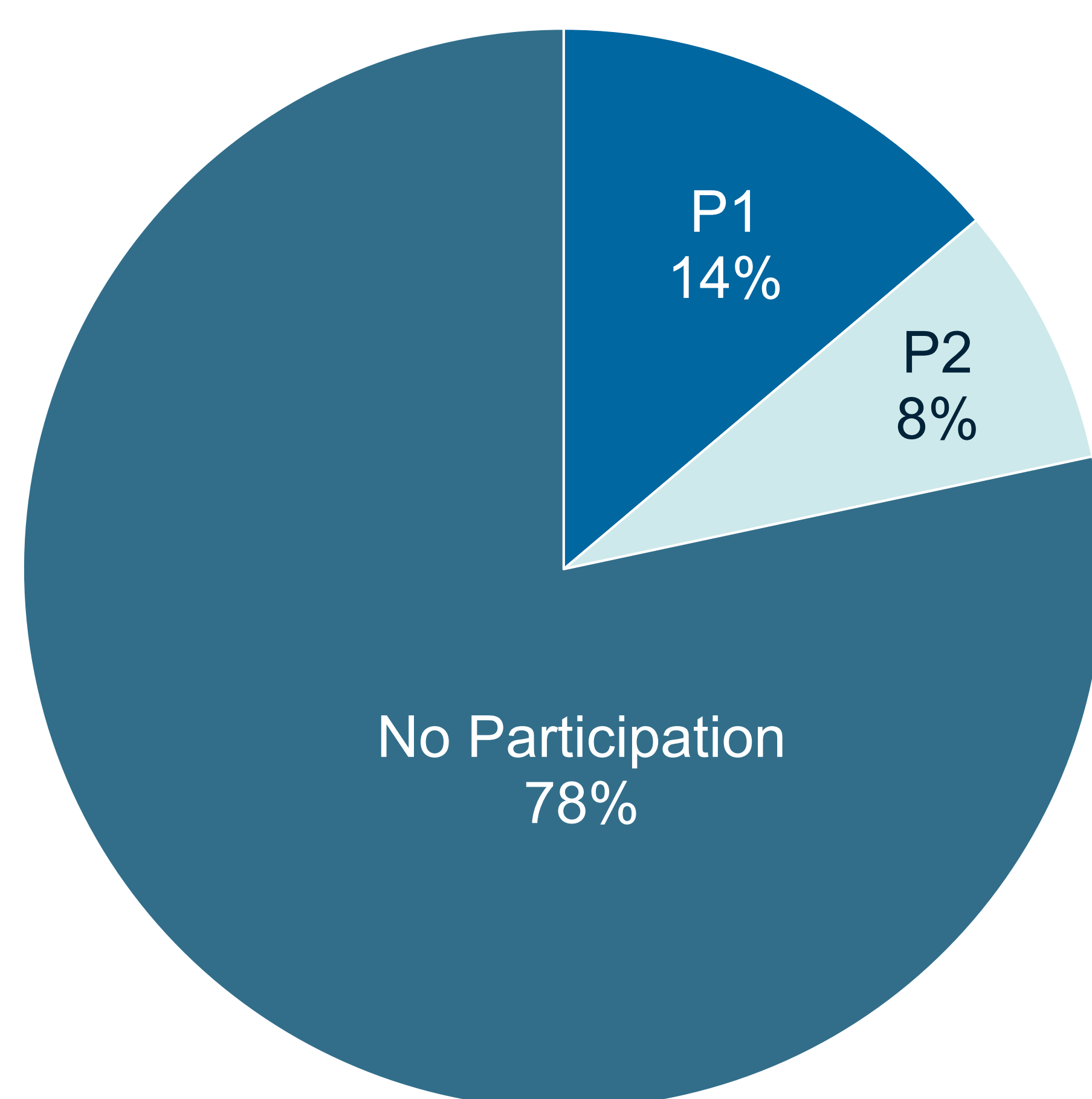
MUSC, Center for Academic Excellence, Christine H. Huggins, Casey O'Neill, PhD, Tara Edwards, and Thomas G. Smith, PhD

## RESULTS

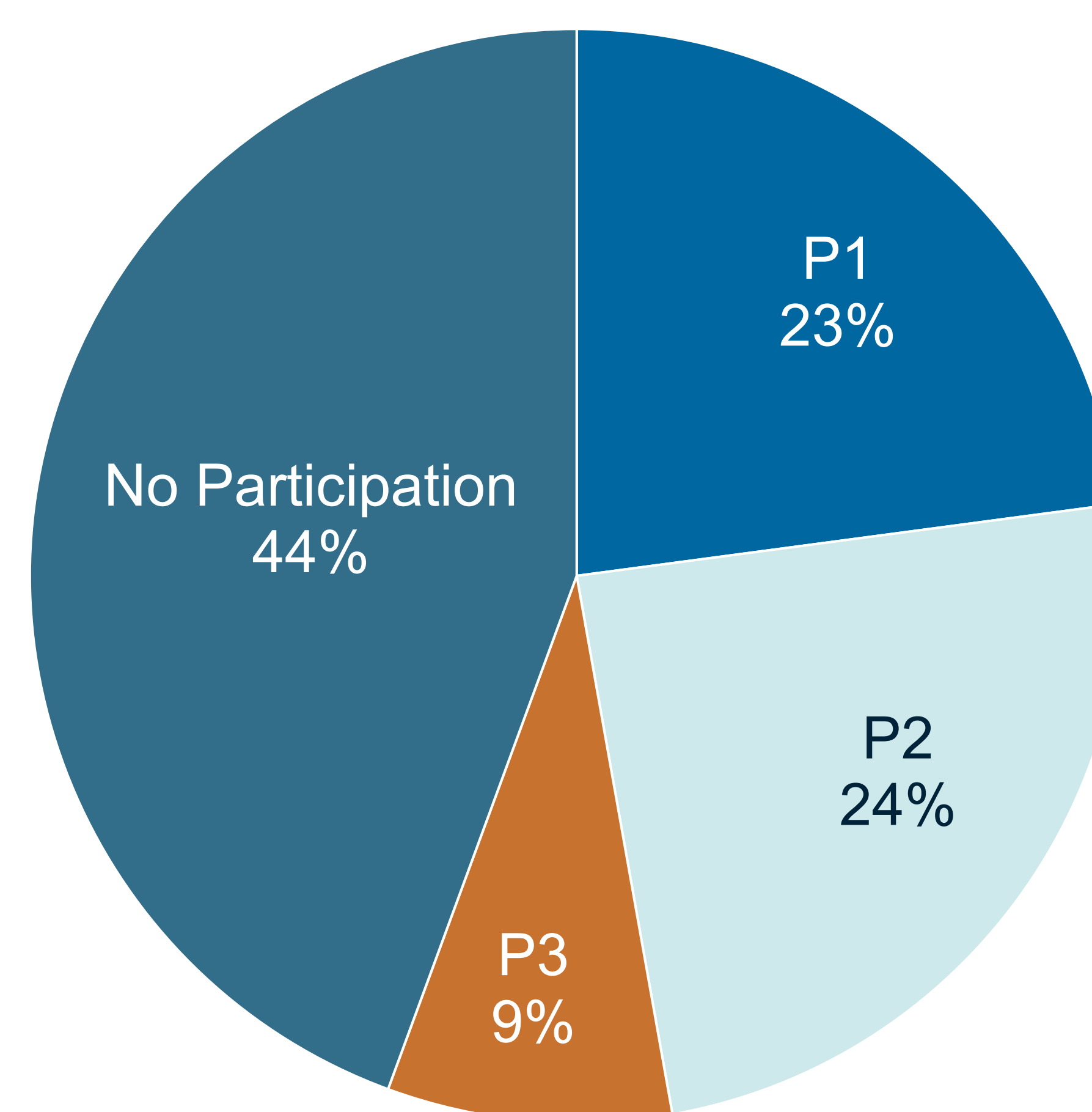
Students attending greater than 30 hours of SI demonstrated a weak, but positive correlation with course grade ( $p=0.015$ ,  $n=443$ ).

Participation data for anything less than 30 hours did not show a meaningful correlation with course grade.

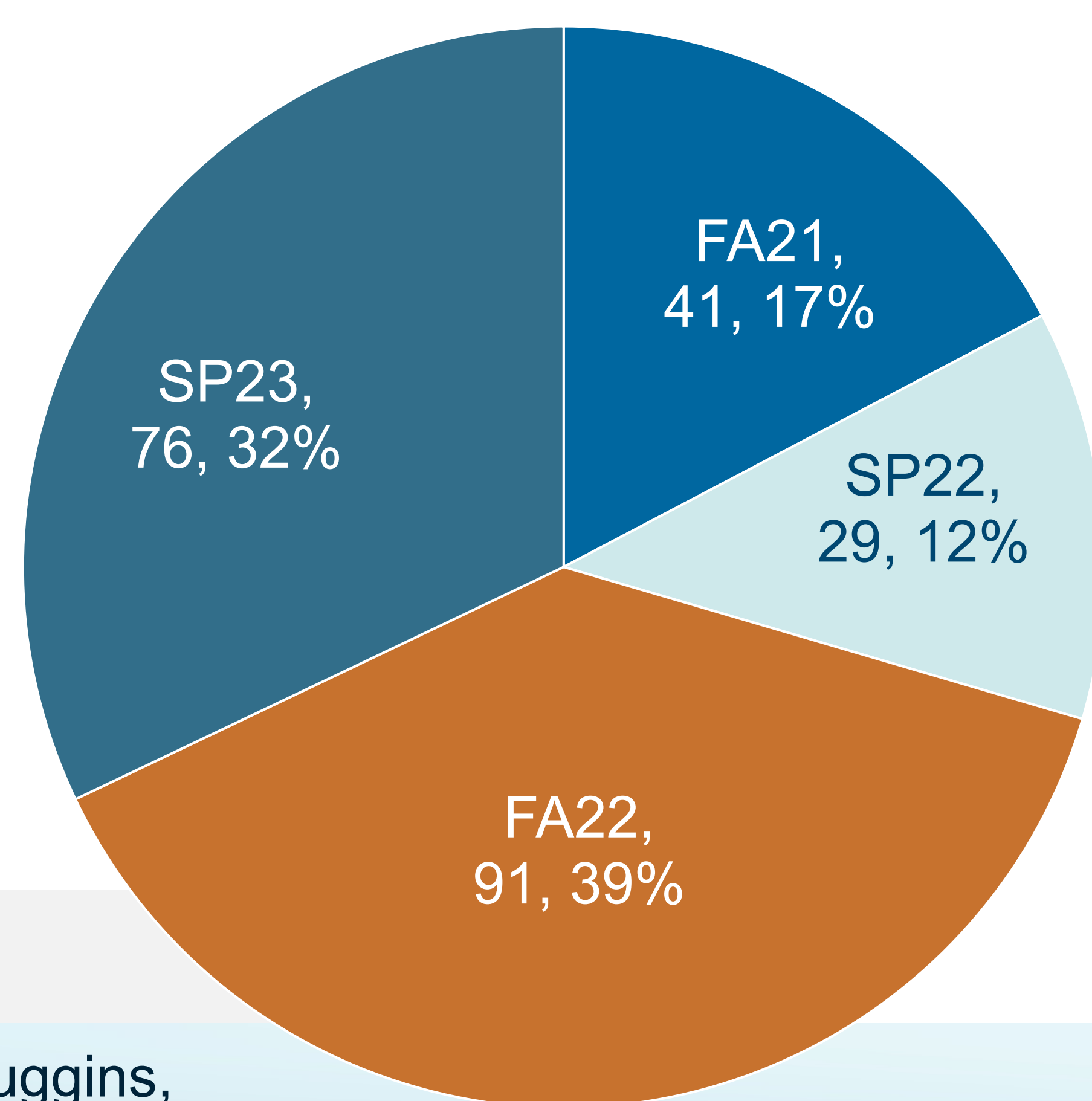
**Figure 1.** Percentage of Students Attending SI during Academic Year 2021-22. P1 (30), P2 (17), & P3 (0), No Participation (170), N=217



**Figure 2.** Percentage of Students Attending SI during Academic Year 2022-23. P1 (49), P2 (52), & P3 (18), No Participation (95), N=214



**Figure 3.** Number of Students Using SI per Semester



**Figure 4.** Total Number of Students Attending SI to Enhance Academic Performance Dismissed or Suspended

Total number of students attending SI to enhance academic performance	Total number dismissed or suspended	Total number dismissed	Total number suspended
N=132	N=29 (22%)	N=14 (11%)	N=15 (11%)
		Attended SI	Attended SI
		10 (71%)	9 (60%)

Totals are for combined academic years 2021-22 and 2022-23. Data does not include petition or appeal outcomes.

## RESULTS

48 students attended individual learning sessions with CAE faculty. The mean number of mins spent in sessions was 73.75 (40-190) and the overall average GPA of this student cohort was 2.77 (1.22-4.00)

## DISCUSSION

Students do not fully utilize services available to support their academic success, especially one-on-one CAE faculty coaching sessions.

Students not in good academic standing are required to meet with a CAE faculty member to develop an academic enhancement plan.

Academic support utilization increased in 2022-23, likely due to the unusually high number of course deficiencies in the 2021-22 academic year.

## CONCLUSIONS

Participation > 30 hours of SI may have a positive impact on course grades.

Further data is needed to determine if enhanced utilization of academic support services, especially one-on-one sessions with skilled learning coaches, may improve student retention.

**Figure 5.** Total Number of Students Attending One-on-One CAE Sessions to Enhance Academic Performance Dismissed or Suspended

Total number of students attending one-on-one CAE sessions to enhance academic performance	Total number dismissed or suspended	Total number dismissed	Total number suspended
N=48	N=29 (60%)	N=14 (29%)	N=15 (31%)
		Attended CAE Session	Attended CAE Session
		7 (50%)	5 (33%)

Totals are for combined academic years 2021-22 and 2022-23. Data does not include petition or appeal outcomes.