SPRING 2023 CORE COMPETENCY ASSESSMENT

OVERVIEW

At MiraCosta College, the concept of Core Competencies refers to overarching learning outcomes students are expected to acquire while completing coursework required for a degree, certificate, or transfer. Each semester the college conducts a classroom assessment of student skill acquisition from the faculty perspective, allowing faculty to examine whether students are achieving course learning outcomes tied to specific areas of *competence*. In the Spring 2023 semester, faculty assessed **Goal Setting & Project Planning**, the process of identifying something that needs to be accomplished, for the first time. **Written Communication** was assessed for the third time. This report divides the analysis of each competence into separate sections and contains charts and tables that disaggregate core competency assessments by important student characteristics.

EVALUATION METHODOLOGY

Prior to the semester's start, faculty review and confirm an initial coding process that has mapped a particular core competency to one or more of their course learning outcomes. During the semester, faculty volunteers evaluate students' level of competency in a specific area, using specified criteria, and locally developed rubric. This competency measurement is subsequently merged with student records and analyzed by the Office of Research, Planning, and Institutional Effectiveness (RPIE).

GOAL SETTING & PROJECT PLANNING

Table 1: Goal Setting & Project Planning Summary

Number of Course Sections	13
Students Rated (Duplicated)	94
Average Rating	2.63

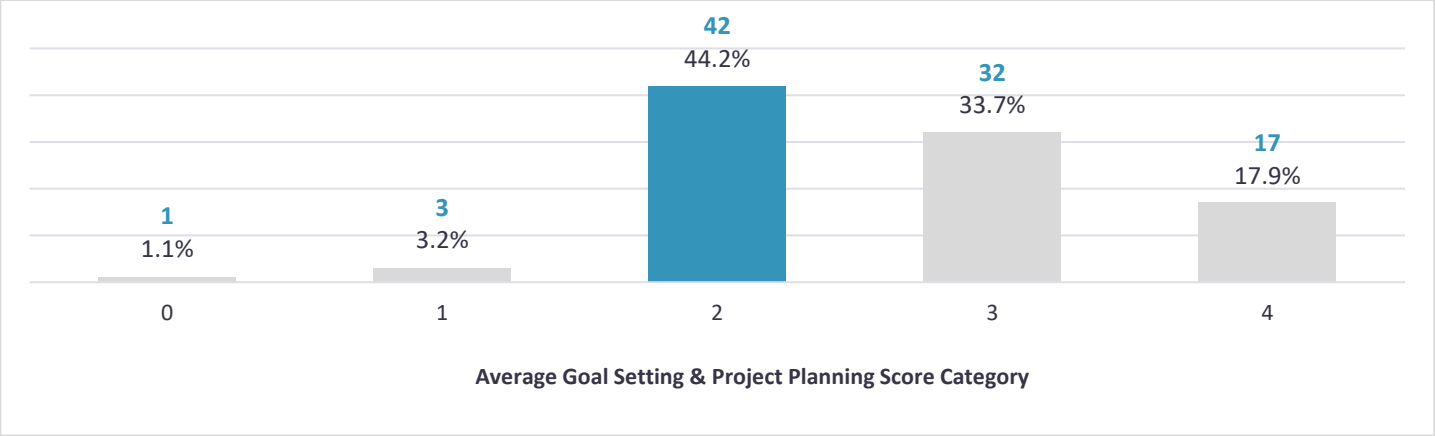
Faculty assessed **Goal Setting & Project Planning** from 0 to 4 on the following dimensions:

- **Designing the goal**: Creating a realistic, timebound, measurable goal and including thoughtful discussion on why the goal was selected
- **Comprehensive plan development**: A complete, detailed, and well-organized plan that describes current conditions and how the goal will be achieved
- **Plan implementation**: Putting plan into action with documentation of progress and identifying issues
- **Project completion & reflection**: Completing the project and reflecting on the process adequately or insightfully

- Students who received a course grade of "W" or "EW" were excluded from the analysis.

- A total of 94 duplicated (94 unduplicated[1]) students were included in the evaluation process of this competency in Spring 2023
- Assessment took place in 13 course sections among 3 associate faculty and 4 full-time faculty
- Students were rated from 0-4 on each Goal Setting & Project Planning dimension according to the developed rubric, with 0 signifying the lowest level of competence
- Most students received an average rating of "2"
- Over seventy-five percent of assessed students received an average rating of "2" or "3"

Figure 1: Number of Students by Goal Setting & Project Planning Average Score Category

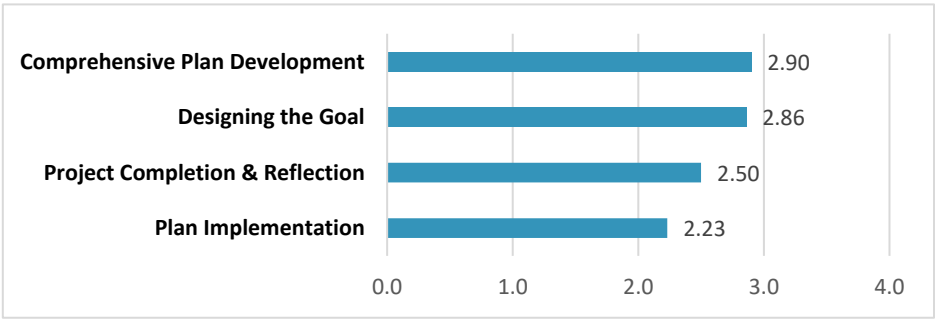


Please note: Sample size is shown in blue above the percent.

GOAL SETTING & PROJECT PLANNING BY DIMENSION

- Average scores on Goal Setting & Project Planning dimensions ranged from 2.23 to 2.90
- **Comprehensive plan development** generated the highest average scores, while **plan implementation** generated the lowest average scores.

Figure 2: Average Score of each Goal Setting & Project Planning Rubric Component



GOAL SETTING & PROJECT PLANNING SCORE BY COURSE GRADE

- Rubric scores were compared to students' grades in the course where assessment occurred to examine a potential relationship between variables

[1] 'Duplicated students' refers to the number of overall assessments given and may include a uniquely identifiable student more than once. 'Unduplicated students' refers to the number of uniquely identifiable students included in the assessment.

- The table suggests that lower Goal Setting & Project Planning scores may be related to failing grades
- Goal Setting & Project Planning scores were higher on average among students who **passed their course** (A, B, C, P grades), but did not increase linearly with increases in grade success
- Extremely small grade samples impede the ability to statistically evaluate the strength of a potential relationship between these variables.

Table 2: Average Goal Setting & Project Planning score by Grade Received in Course

Grade Received	n	Average Score
A	55	3.15
B	23	2.68
C/P	10	2.80
D	-	-
F/NP	6	1.83

- The distribution of grades across Goal Setting & Project Planning Score categories is additionally suggestive of a relationship between course grade and Goal Setting & Project Planning scores
- Over sixty percent of students who earned the grade of "**A**," also earned an average score of "**3**" or "**4**"
- Fifty percent of students who earned a grade of "**F**" received a Goal Setting & Project Planning score of "**2**", however this sample is extremely small and subject to a high degree of variability
- More observations in lower grade categories are necessary to draw firm conclusions about a potential relationship between course grades and Goal Setting & Project Planning scores

Table 3: Average Goal Setting & Project Planning score category by Grade- Heat Map

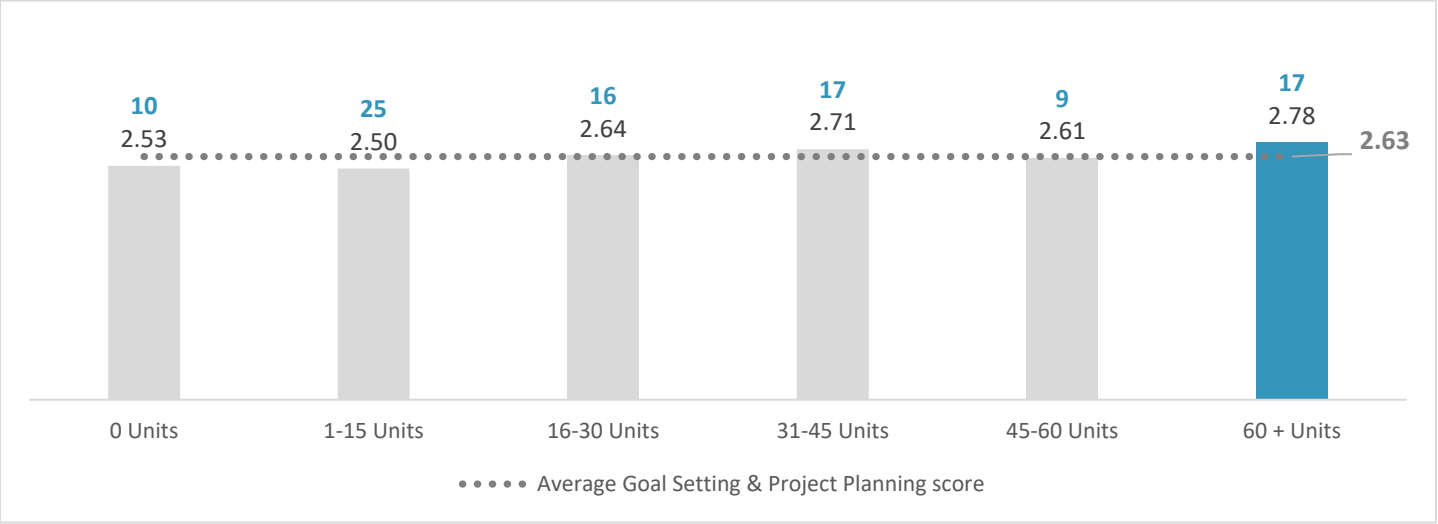
	Average Goal Setting & Project Planning Score Category				
Grade Received	**0**	**1**	**2**	**3**	**4**
A	0.0%	0.0%	38.2%	34.5%	27.3%
B	0.0%	4.3%	56.5%	39.1%	0.0%
C/P	0.0%	10.0%	40.0%	30.0%	20.0%
D	0.0%	0.0%	0.0%	0.0%	0.0%
F/NP	16.7%	16.7%	50.0%	16.7%	0.0%

GOAL SETTING & PROJECT PLANNING DEMOGRAPHIC TABLES & GRAPHS

UNITS ATTAINED AT MIRACOSTA COLLEGE

- Goal Setting & Project Planning scores were highest among students who attained **over 60 units** at MiraCosta College prior to Spring 2023
- Goal Setting & Project Planning scores were lowest on average among students with less than **15 accumulated units** at MiraCosta College
- Average Goal Setting & Project Planning scores declined almost linearly in lower unit categories
- Small, disaggregated samples across unit categories make it difficult to know whether these patterns accurately represent the student population overall
- However, this observed trend may speak to the incremental development of this competency across a student's educational journey
- Inferences will become stronger over time as more data supports or fails to support these initial observations

Figure 3: Average Goal Setting & Project Planning score by Units Completed Prior to Spring 2023



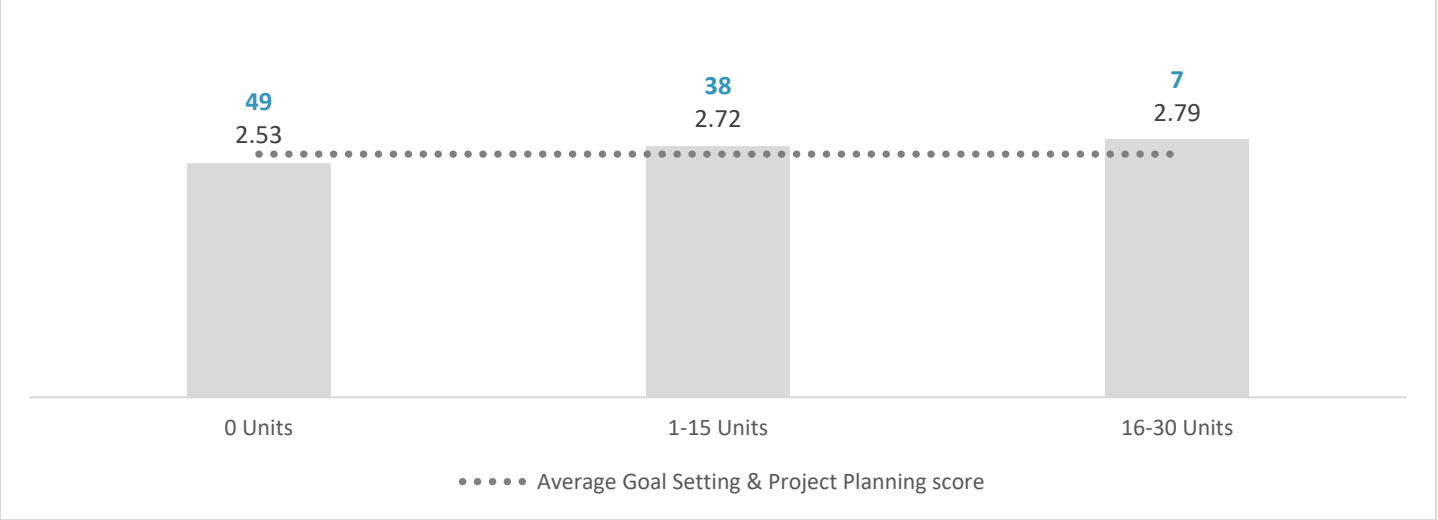
Please note: Sample size is shown in blue above average score.

PLAN A UNITS ATTAINED

- Goal Setting & Project Planning scores were highest among students who attained **16-30 Plan A, Area A units** at MiraCosta College prior to Spring 2023
- Goal Setting & Project Planning scores were lowest on average among students with less than **no Plan A, Area A units** at from the college

- Small, disaggregated samples, particularly for higher Plan A, Area A unit attainment, make it difficult to know whether these patterns accurately represent the student population overall
- However, this observed trend may speak to the incremental development of this competency across student's general education attainment
- As more data is collected, better inferences can be drawn regarding Goal Setting skill and its relation to Plan A unit completion among MiraCosta College students

Figure 4: Average Goal Setting & Project Planning score by Plan A, Area A Units Completed Prior to Spring 2023

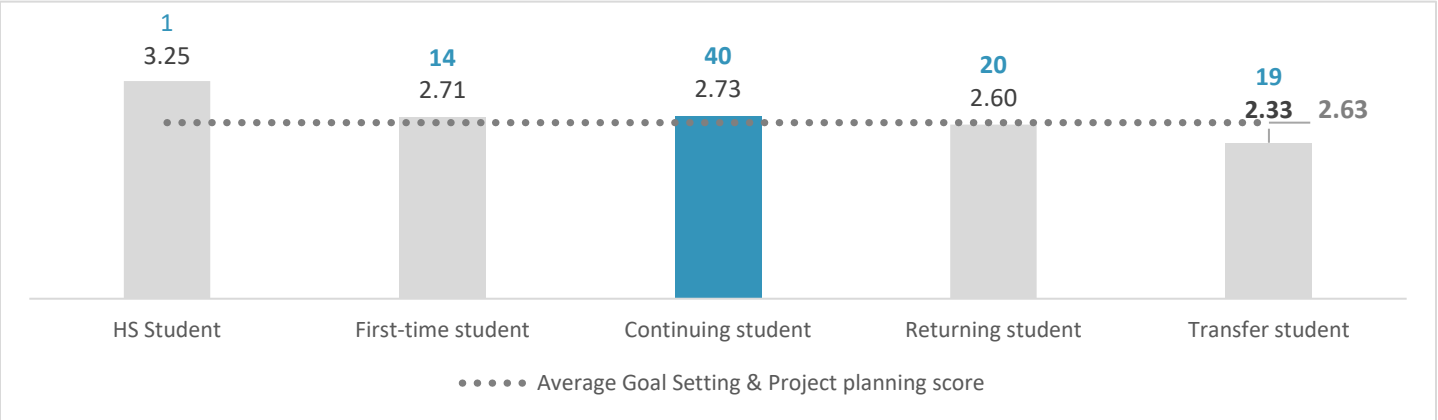


Please note: Sample size is shown in blue above average score.

ADMISSION STATUS

- Average Goal Setting & Project Planning scores were highest among **Continuing students**
- **Transfer students** tended to generate the *lowest* Goal Setting & Project Planning scores
- Small samples of most student admit types make it difficult to draw substantive conclusions about the potential relationship between admission status and Goal Setting & Project Planning

Figure 5: Average Goal Setting & Project Planning Score Category by Admission Status



Please note: Sample size is shown in blue above average score.

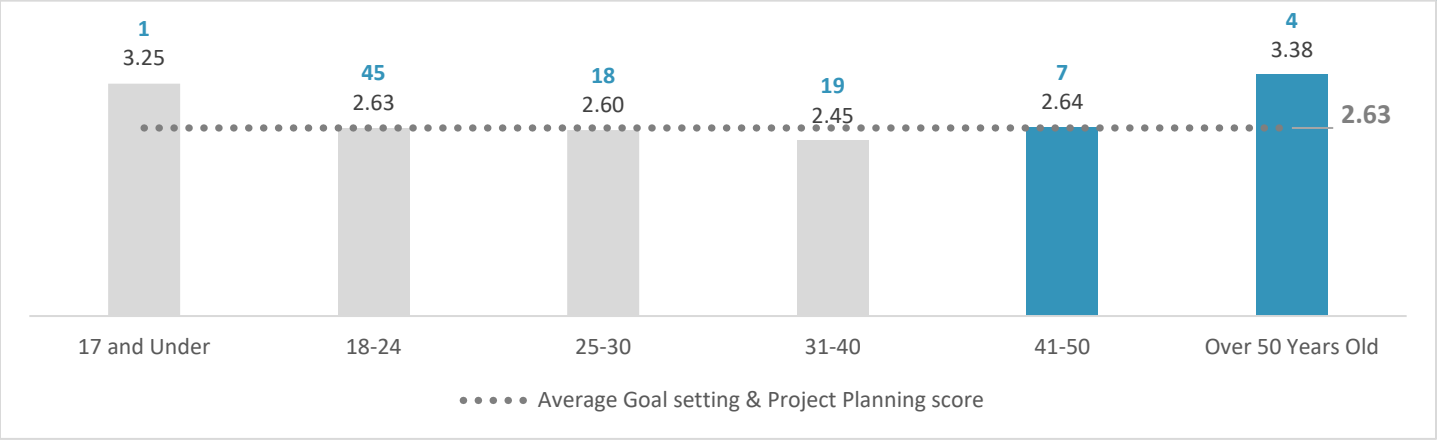
Student Types Defined:

- High School student |student enrolled in high school while attending MiraCosta College
- First-time student | student enrolled at MiraCosta College for the first time after high school
- Continuing student | student enrolled in the current term who was also enrolled in the prior primary term (Spring or Fall)
- Returning student | student enrolled at MiraCosta College after an absence of one or more primary terms (Spring or Fall)
- Transfer student | student who is new to MiraCosta *but* has attended another college/university previously.

AGE

- Students **ages 41+** generated the highest average Goal Setting & Project Planning scores
- Goal Setting & Project Planning scores were *lowest* among students **ages 31-40**
- It is important to note that students **ages 18-24** were the only well-represented age group in the sample of Goal Setting & Project Planning, and they performed equivalent to the average because they comprise the largest proportion of the sample
- Small samples of older students who were *not* 18-24 years old make it difficult to draw firm conclusions about the extent to which Goal Setting & Project Planning observed scores accurately represent these students from older groups

Figure 6: Goal Setting & Project Planning Score by Age

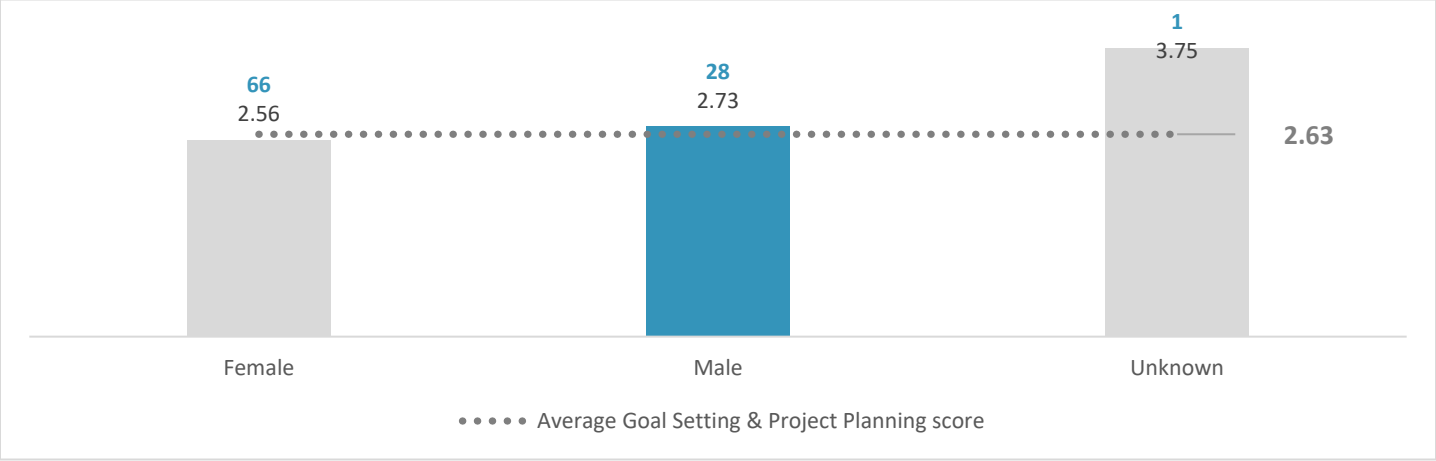


Please note: Sample size is shown in blue above average score.

GENDER

- **Male** students generated slightly higher Goal Setting & Project Planning scores on average, compared to female students
- However, the comparison may not be equitable as the sample of female students was twice as large as the sample of males and samples may differ in variability

Figure 7: Average Goal Setting & Project Planning Score by Gender



Please note: Sample size is shown in blue above average score.

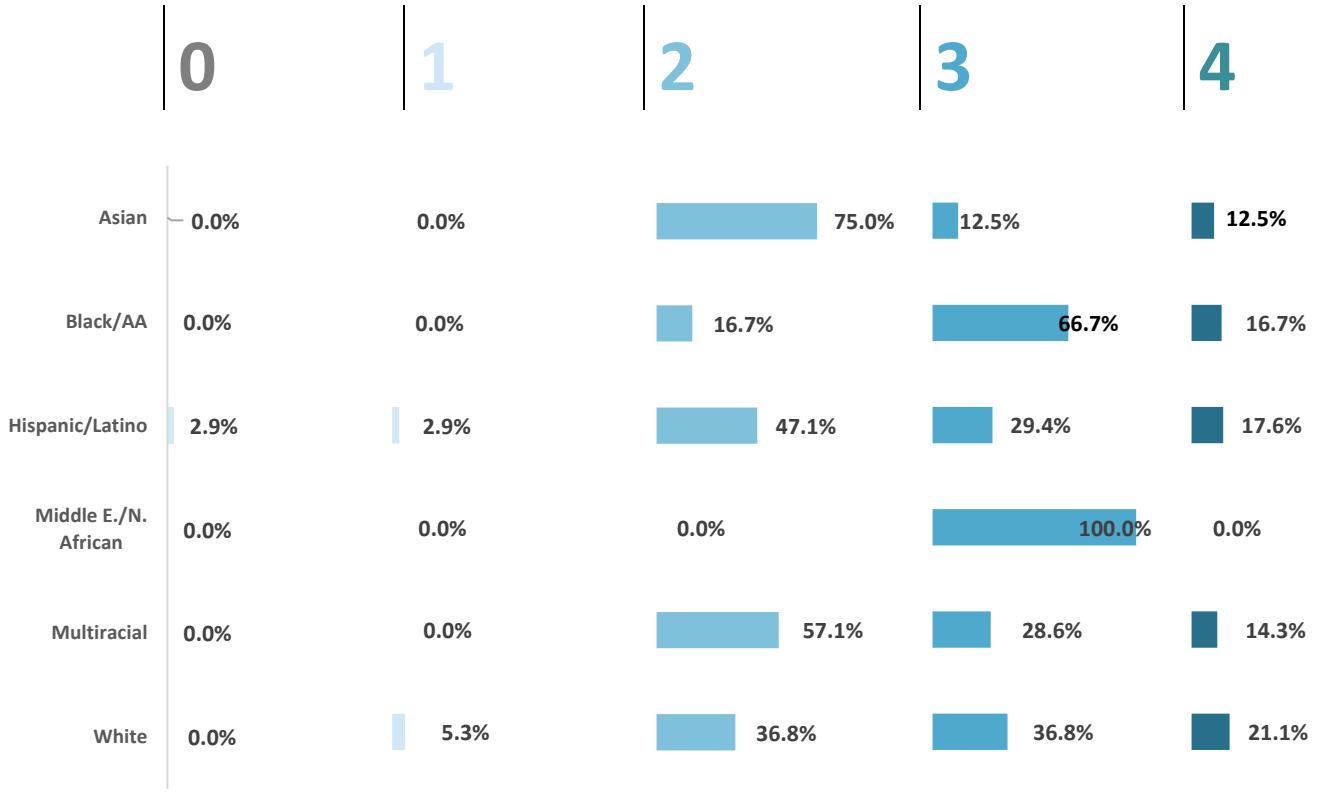
ETHNICITY

- **White** students generated slightly higher Goal Setting & Project Planning scores on average than **Hispanic/Latino** students, who tended to generate slightly lower scores
- Small samples of students from most other ethnic designations make it difficult to draw substantive conclusions about the potential relationship between ethnicity and Goal Setting & Project Planning
- As the college collects more competency data on Goal Setting & Project Planning from students, more substantive determinations about a relationship between ethnicity and Goal Setting & Project Planning can be established

Table 4: Average Goal Setting & Project Planning score by Ethnicity

	n	Average Score
Asian	8	2.41
Black/African American	6	2.75
Hispanic/Latino	34	2.52
Middle Eastern/North African	1	2.50
Multiracial	7	2.71
White	38	2.73

Figure 8: Proportion of average Goal Setting & Project Planning score category by Ethnicity



The sample of **Goal Setting & Project Planning** core competency assessments was small, resulting in a reduced ability to make broad-based inferences about the student body across demographic variables of interest. The strength of the inferences will increase as the college collects more data for this competency in future terms.

By comparison, the sample for **Written Communication** was larger in Spring 2023, making the analysis of this competency more robust and reliable. The statistics generated by this sample more closely approximate the overall population of MiraCosta College students, improving the generalizability of the analysis. Larger samples also increase the reliability and generalizability of subgroup analysis across demographic partitions of interest.

WRITTEN COMMUNICATION

Table 5: Written Communication Summary	
Number of Course Sections	20
Students Rated (Duplicated)	224
Average Rating	2.83

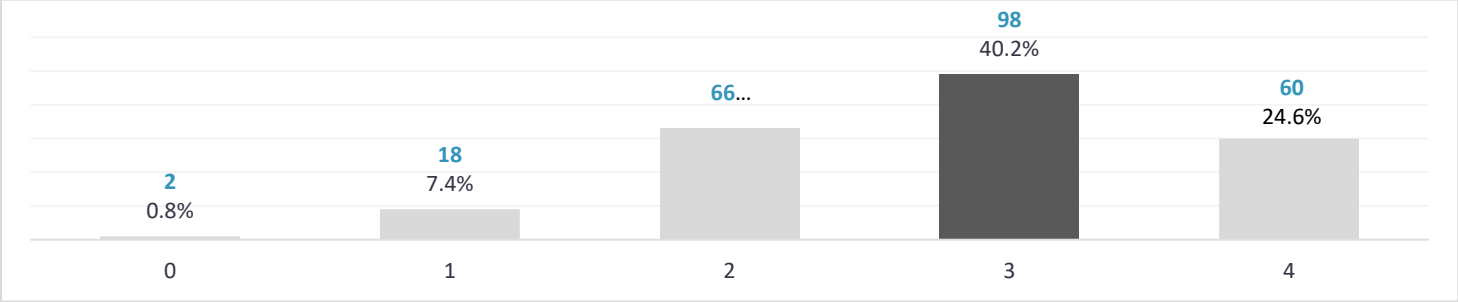
Faculty assessed students' **Written Communication** from 0 to 4 along the following dimensions:

- **Context/Purpose for Writing**: Considerations of audience, purpose and circumstances surrounding writing task

- **Content Development**: Using appropriate, relevant content to explore ideas through work
- **Genre/Disciplinary Conventions**: Following formal and informal rules inherent to the writing project
- **Sources & Evidence**: Use of credible, relevant sources to support ideas
- **Control of Syntax/Mechanics**: Use of straightforward language to convey meaning with clarity

- 20 sections participated in the assessment of this core competency among 8 associate faculty and 5 full-time faculty
- Students receiving a grade of "W" or "EW" or who dropped the course prior to census were excluded from the analysis.
- Students were rated according to a locally developed rubric, from 0-4 on each dimension, with 0 signifying the lowest level of competence
- A total of 224 duplicated[2] (221 unduplicated) students were included in the evaluation process
- 20 students with no student ID were included in the evaluation, but they are excluded from demographic and grade summaries
- The most commonly awarded score was "3"

Figure 9: Number of Students by Average Written Communication rating

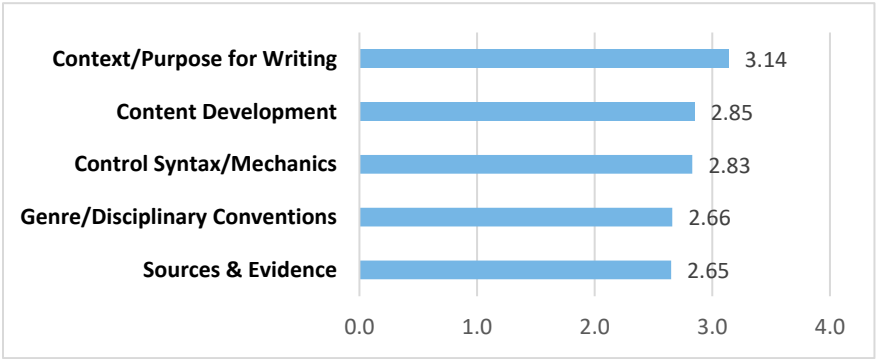


Please note: Sample size is shown in blue above the percent.

WRITTEN COMMUNICATION DIMENSIONS

Figure 10: Average Score of each Written Communication Dimension

- Average scores on Written Communication dimensions ranged from 2.65 to 3.14
- Students generated the highest scores on **Context/Purpose for Writing** and generated the lowest scores on **Sources/Evidence**.



[2] 'Duplicated students' refers to the number of overall assessments given and may include a uniquely identifiable student more than once. It is unknown if Growth for Skills scores provided without Student IDs are duplicated in any manner. 'Unduplicated students' refers to the number of uniquely identifiable students included in the assessment. In this figure each student counts only once.

WRITTEN COMMUNICATION SCORE BY COURSE GRADE

Table 6: Average Written Communication Score by Grade Received

Grade Received	Number of Students	Average Score
A	139	3.14
B	47	2.64
C/P	22	2.46
D	9	2.38
F/NP	7	2.14
N/A*	20	1.95

* Please note: One faculty member did not provide student ID numbers to preserve student anonymity. These individuals could not be associated with student records (n= 20).

- Rubric scores were compared with earned course grade to examine a potential relationship between the variables
- The table suggests that as course grades increased, so too did average Written Communication competency ratings
- It is unknown to what extent this finding is representative of the student population at large, or generalizable, as several grade categories have a minimal number of observations and the potential to produce spurious findings.

Table 7: Average Written Communication score by Grade- Heat Map

	Average Written Communication Score Category				
Grade Received	0	1	2	3	4
A	0.0%	3.6%	18.7%	41.7%	36.0%
B	2.1%	6.4%	31.9%	44.7%	14.9%
C/P	0.0%	9.1%	40.9%	40.9%	9.1%
D	0.0%	22.2%	33.3%	44.4%	0.0%
F/NP	14.3%	0.0%	57.1%	14.3%	14.3%

N/A*	0.0%	30.0%	45.0%	25.0%	0.0%

* Please note: One faculty member did not provide student ID numbers to preserve student anonymity. These individuals could not be associated with student records (n= 20).

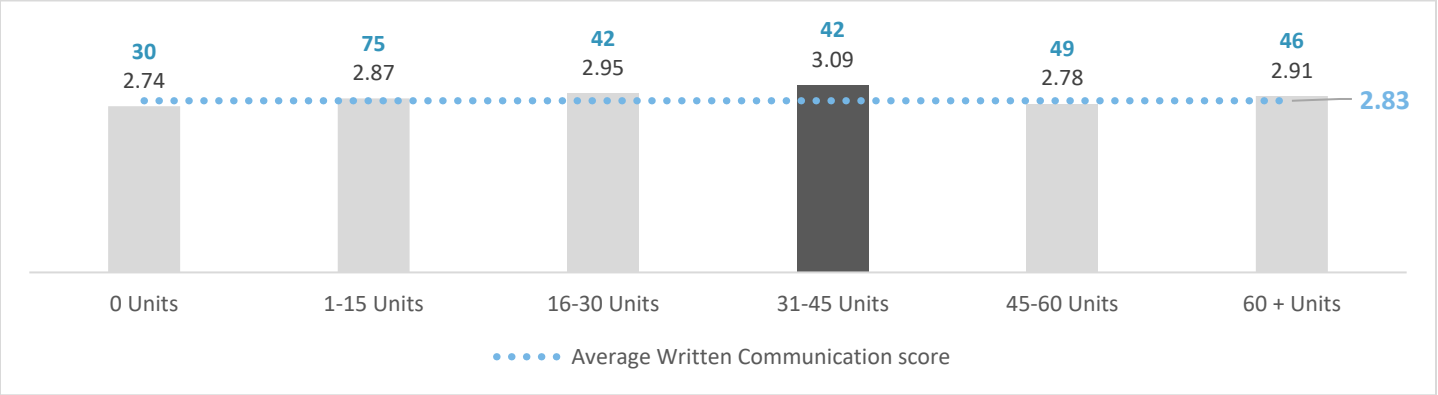
- In examining the distributions of grades across average Written Communication score categories in the heat map below, there appears to be a somewhat linear pattern between Written Communication scores and earned course grade
- Of the students who earned the grade of "**A**," over 75% earn an average score of "**3**" or "**4**"
- Nearly 60% of those earning a grade of "**F**" received a score of "**2**" while 50% of those earning a grade of "**D**" scored a "**1**" or "**2**" on average
- Small numbers of observations in lower grade categories undermine our ability to evaluate the strength of this relationship with inferential statistics

WRITTEN COMMUNICATION DEMOGRAPHIC TABLES & GRAPHS

UNITS ATTAINED AT MIRACOSTA COLLEGE

- The *highest* Written Communication scores were generated by students with **31-45 completed MiraCosta College units** prior to Spring 2023
- The *lowest* Written Communication scores were found among students with **0 completed prior units** at the college
- Small, disaggregated samples across unit categories make it difficult to know whether these patterns accurately represent the student population overall
- Higher writing skills scores among students with more units may point to the development of this competency across a student's educational journey, but improvement was not positively linear across unit categories

Figure 11: Average Written Communication score by Units Completed

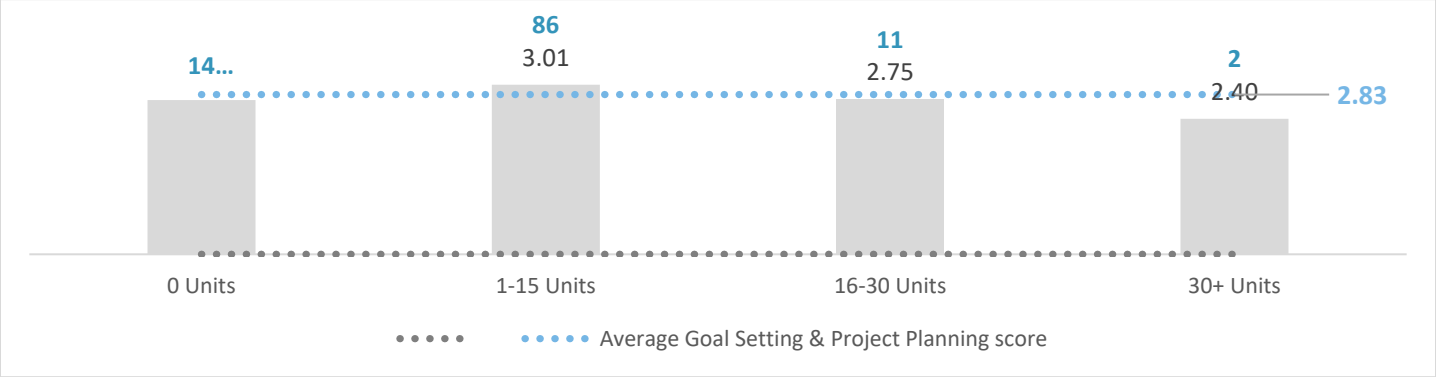


* Please note: One faculty member did not provide student ID numbers to preserve student anonymity. These individuals could not be associated with student records (n= 20). Sample size is shown in blue above the percent.

PLAN A UNITS ATTAINED

- Written communication scores were highest on average among students who attained **1-15 Plan A, Area A units** at MiraCosta College prior to Spring 2023
- Goal Setting & Project Planning scores were lowest on average among students with more than **16 accumulated Plan A, Area A units** at MiraCosta College
- Average Goal Setting & Project Planning scores declined almost linearly in lower unit categories
- Small, disaggregated samples for higher unit categories make it difficult to know whether these patterns accurately represent the student population as such findings may be due to chance
- Inferences will become stronger over time as more data supports or fails to support these initial observations

Figure 12: Average Written Communication score by Plan A, Area A Units Completed Prior to Spring 2023

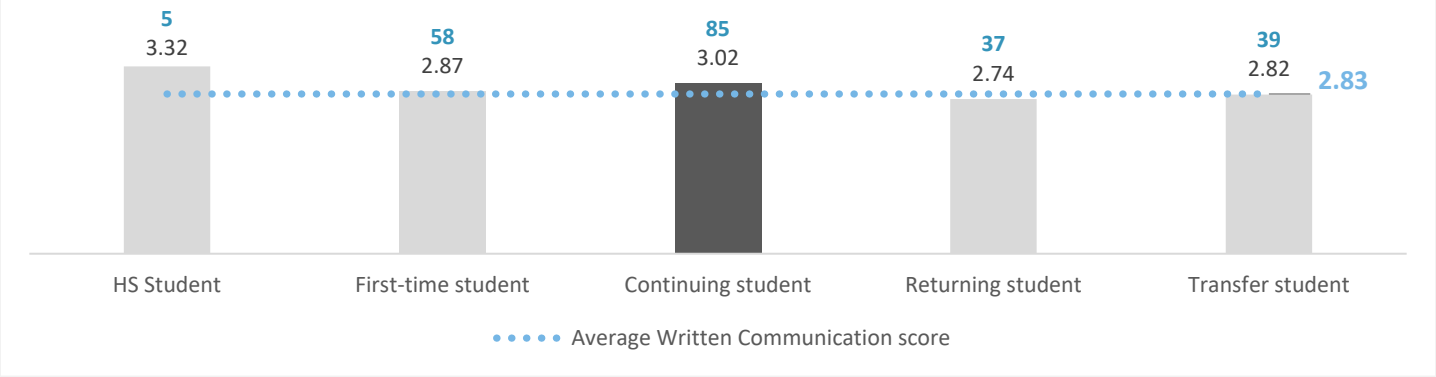


Please note: Sample size is shown in blue above average score.

ADMISSION STATUS

- **Continuing** students exhibited the *highest* Written Communication scores
- Written Communication scores were *lowest* on average among **Returning** students

Figure 13: Average Written Communication score by Admission Status



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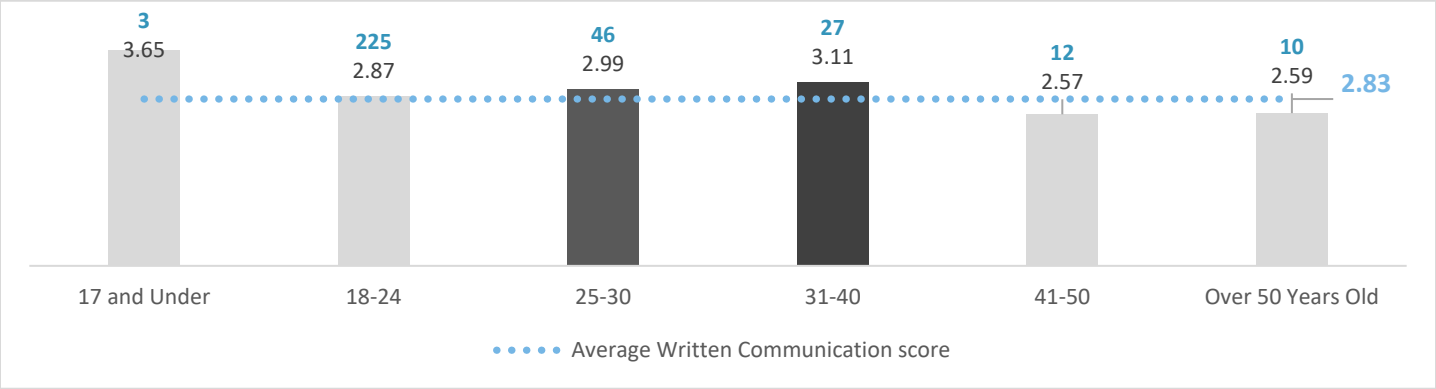
Student Types Defined:

- High School student |student enrolled in high school while attending MiraCosta College
- First-time student | student enrolled at MiraCosta College for the first time after high school
- Continuing student | student enrolled in the current term who were also enrolled in the prior primary term (Spring or Fall)
- Returning student | student enrolled at MiraCosta College after an absence of one or more primary terms (Spring or Fall)
- Transfer student |student who are new to MiraCosta *but* have attended another college/university

AGE

- The highest Written Communication scores were observed among students **ages 25-40**
- However, minimal sampling of non-traditional age college students makes it difficult to establish the existence of a relationship between Written Communication scores and age

Figure 14: Average Written Communication score by Age Group

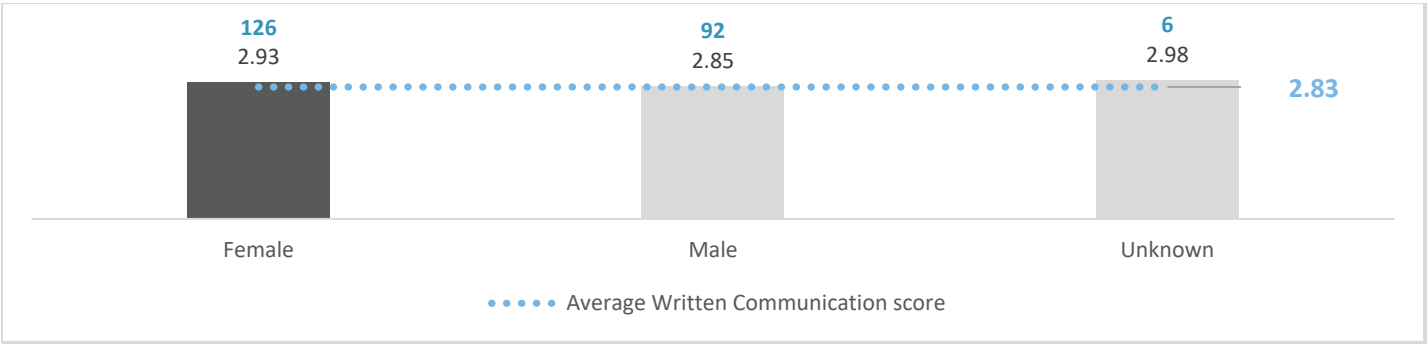


* Please note: One faculty member did not provide student ID numbers to preserve student anonymity. These individuals could not be associated with student records (n= 20). Sample size is shown in blue above the average score.

GENDER

- Written Communication scores were nearly equivalent between **male** and **female** students, showing little evidence of gender differences

Figure 15: Average Written Communication score by Gender



* Please note: One faculty member did not provide student ID numbers to preserve student anonymity. These individuals could not be associated with student records (n= 20). Sample size is shown in blue above the average score.

ETHNICITY

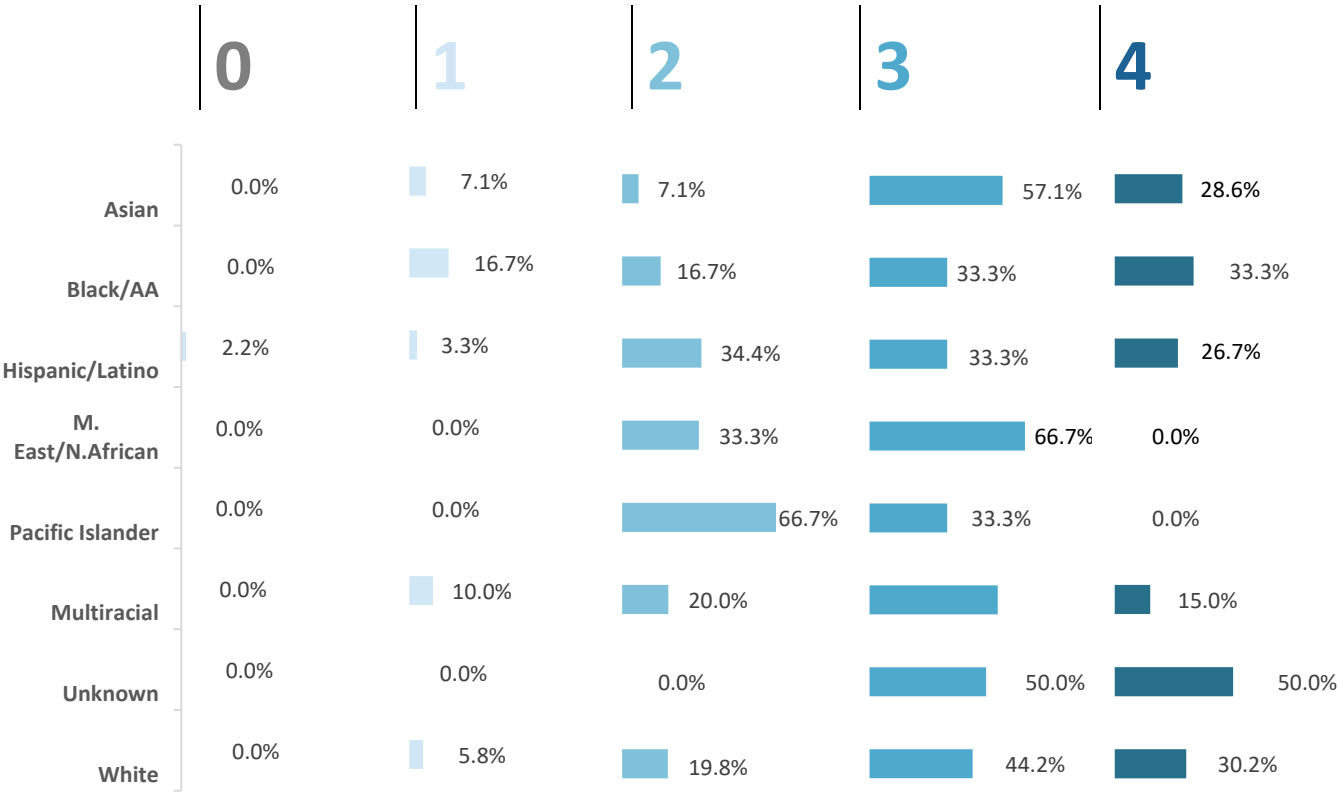
- Among more robustly represented ethnic groups, **White** students tended to generate slightly higher Written Communication scores than **Hispanic/Latino** students
- Small sample sizes for most ethnic categories make it difficult to discern meaningful trends for the remaining ethnic groups

Table 8: Average Written Communication score by Ethnicity

	n	Average Score
Asian	14	3.14
Black/African American	6	2.87
Hispanic/Latino	90	2.83
Middle Eastern/N. African	3	2.67
Pacific Islander	3	2.47
Multiracial	20	2.74
Unknown	2	3.60
White	86	2.99
N/A	20	1.95

* Please note: One faculty member did not provide student ID numbers to preserve student anonymity. These individuals could not be associated with student records (n= 20).

Figure 16: Average Written Communication score category by Ethnicity



* Please note: One faculty member did not provide student ID numbers to preserve student anonymity. These individuals could not be associated with student records (n= 20).

SUMMARY

In Spring 2023, students sampled for core competency evaluation generated **Goal Setting & Project Planning** scores (Mode score = 2) that tended to be at the expected skill level of community college students. Students assessed for **Written Communication** (Mode score = 3) exhibited writing skills that were above the level of expectation, relative to the minimum criterion score of 2. VALUE rubrics utilized in core competency assessments contain scores ranging from 0 to 4, with 0 being the lowest skill level and 4 being the highest skill level. Given that these rubrics were originally created and normed at 4-year institutions on university student populations, the OAC set the level of expected performance of students at MiraCosta College at 2 to approximate the expected skill level of community college students.

There appears to be a relatively linear relationship between course grade and **Written Communication** scores to the extent that students with greater levels of course success (A relative to B; B relative to C) also tended to generate higher Written Communication scores. In other words, average Written Communication competency scores increased incrementally (on average) with gains in academic success. Students evaluated for **Goal Setting & Project Planning** did not exhibit a linear relationship of this nature, where average Goal Setting & Project Planning scores correspondingly increased with gains in academic success. However, there was an appreciable difference between students who failed (received a grade of F) and those who did not (A, B, C or P). Average **Goal Setting & Project Planning** competency scores for all passing grades were distinctly higher for students with passing course grades (A = 3.15, B = 2.68, C/P = 2.80) than for those who failed their course (F = 1.83) in this sample. However, a limited number of observations for **Goal Setting & Project Planning**, particularly in D/F grade categories, render it difficult to speculate about the accuracy of these conclusions. As the college gathers more data on Goal Setting & Project Planning our understanding of the potential relationship between academic achievement and Goal Setting & Project Planning will become more refined.

In both competency assessments this spring, **White** students outperformed **Hispanic/Latino** students, scoring slightly higher on the Written Communication skills assessment (2.99 vs 2.83; M_{Diff} = 0.17) and slightly higher on the Goal Setting & Project Planning assessment (2.73 vs 2.52; M_{Diff} = 0.21), on average. In the **Goal Setting & Project Planning** assessment, other ethnic groups contained too few individuals to make adequate comparisons to larger, normally distributed groups, rendering the collection of more data necessary before establishing trends in data disaggregated by ethnicity.

Continuing students generated the highest scores for Goal Setting & Project Planning in addition to Written Communication while **Transfer** and **Returning** students generated the lowest scores for both competencies. In corresponding fashion, students with greater unit attainment tended to obtain higher Goal Setting & Project Planning scores. However, for **Written Communication** scores were highest among students with **31-45 completed units**, and not simply those with more units. This data may speak to a relationship between educational progression and the development of Goal Setting & Project Planning skills, but more data is needed to strengthen the legitimacy of these observations.

Students **aged 41+** students generated the highest **Goal Setting & Project Planning** scores while **25–40-year-old** students generated the highest **Written Communication** scores. The 41+ students examined for **Goal Setting & Project Planning** were mostly **female** but did not differ systematically based on any other observed demographic characteristics. Over half the students aged 25-40 assessed for Written Communication were mostly **Latinx** while roughly 30% were

White. This observation is interesting considering that overall Latinx students performed worse than white students in terms of Written Communication. This may be suggestive of an interaction between variables where perhaps only segments of the Latinx population (i.e., younger Latinx students under 25) obtained lower Written Communication scores than White students.

Finally, there were slight gender differences in the data with male students outperforming female students in the **Goal Setting & Project Planning** core competency assessment (2.73 vs 2.56; $M_{Diff} = 0.17$). While female students slightly outperformed male students in the **Written Communication** core competency assessment (2.93 vs 2.85; $M_{Diff} = 0.08$). The minimal sample for Goal Setting & Project Planning may have contributed to the observed difference between male and female students and it is possible that as the college collects more data for this competency this difference will diminish. The sample of females for this competency was twice as large as the sample for males. In addition, there were four times as many returning students and three times as many Transfer students included the female sample—relative to the male sample. As additional sampling is conducted, and these differences become more normalized and evenly distributed between groups -the existence of a relationship between gender and Goal Setting & Project Planning skills will become clearer.