SPRING 2021 CORE COMPETENCIES ASSESSMENT

OVERVIEW

Core Competencies at MiraCosta College refer to the over-arching learning outcomes students are expected to acquire as the result of completing coursework required for a degree, certificate, or transfer pattern. Each semester the college conducts a classroom assessment of student skill acquisition from the faculty perspective. In the Spring 2021 semester, faculty assessed **Inquiry, Analysis, & Independent Thinking** as well as **Intercultural Competence & Respect for Diverse Perspectives** for the first time. This report divides the analysis of each competence into the following two sections.

EVALUATION METHODOLOGY

Prior to the start of the semester, faculty are asked to review and confirm an initial coding process that has mapped a particular core competency to their course. At the end of the semester, faculty volunteers then evaluate students using criteria and a rubric developed locally to assess that competency. This information is then merged and analyzed by the Office of Research, Planning and Institutional Effectiveness (RPIE).

The sample sizes for this assessment are somewhat small, particularly for **Intercultural Competence & Respect for Diverse Perspectives**, resulting in a reduced ability to make broad-based inferences about the student body as a whole. The strength of the inferences will increase over time as more data is collected in future semesters.

INQUIRY, ANALYSIS & INDEPENDENT THOUGHT

- The assessment for **Inquiry, Analysis,** & **Independent Thought** was partitioned into the following sections:
  - Topic selection
  - Existing knowledge, research or views
  - Design process
  - Analysis
  - Conclusions
  - Limitations & Implications

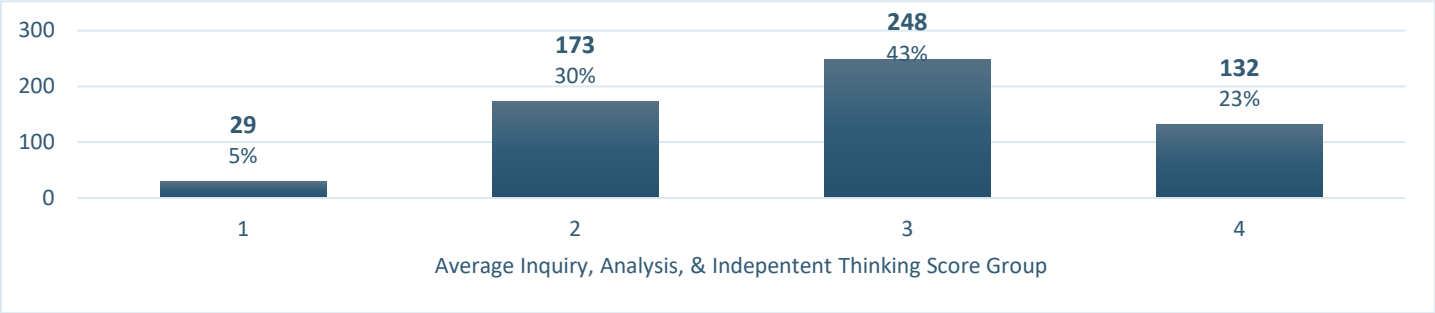
Table 1: Inquiry, Analysis & Independent Thought Summary

Number of Course Sections	31
Students Rated (Duplicated)	582
Average Rating	2.76

- Students receiving a grade of "W" or "EW" who dropped the course prior to census were excluded from the analysis.
- A total of 582 duplicated (567 unduplicated) students were included in the evaluation process of this competency in Spring 2021[1]
- Assessment took place in 31 course sections among 27 faculty/instructors
- Students were rated from 0-4 on each dimension according to the developed rubric, with 0 signifying the lowest level of competence
- Approximately 2 in 3 students assessed received an average rating of "3" or "4"

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

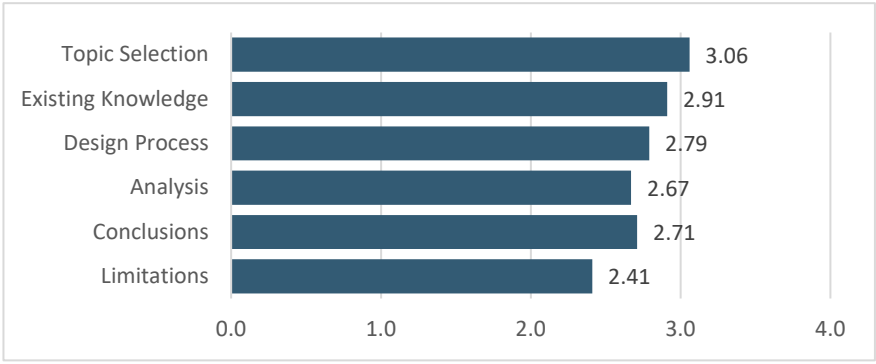
Figure 1: Number of Students by Average Inquiry, Analysis, & Independent Thinking Rating Average Category



INQUIRY, ANALYSIS, & INDEPENDENT THINKING BY COMPONENT

- Average scores on Inquiry, Analysis, and Independent Thinking components ranged from 2.41 to 3.06
- **Topic selection** and **Existing Knowledge** generated the highest average scores, while the **Analysis** and **Limitations** dimensions generated the lowest average scores.

Figure 2: Average Score by Inquiry, Analysis, Independent Thinking Rubric Component



INQUIRY, ANALYSIS, & INDEPENDENT THINKING SCORE BY GRADE RECEIVED

- Rubric scores were compared with the grade students received in the course to determine if there was a relationship between the two variables
- Statistical analysis confirmed that Inquiry, Analysis, and Independent Thinking scores were positively related to student course grades, $r(553) = .36$, $p < .001$)
- This suggests that as course grades increased (*from F to A*) so too did Inquiry, Analysis, & Independent Thinking scores

Table 2: Average Inquiry Rating by Grade Received

Grade Received	Number of Students	Average Overall Score
A	281	3.07
B	167	2.59
C/P	73	2.30
D	17	1.80
F	12	2.67
EW	3	2.89
N/A*	29	2.36

**Please note*: One faculty member did not provide student ID numbers to preserve student anonymity. These students could not be tied back to student records (*n*= 27). Two additional students in different sections did not receive course grades for the semester.

- It is unknown to what extent this finding can be generalized, as many grade categories have a minimal number of observations and the potential to produce spurious findings.[2]

- The heat map below also suggests a relationship between the grade received and Inquiry, Analysis and Independent Thinking scores.
- Of the students who earned the grade of "A", over 80% earn an average score of "3" or "4"
- Over 80% of those earning a grade of "D" received a score of "1" or "2"

Table 3: Inquiry, Analysis & Independent Thinking Heat Map

	Inquiry, Analysis & Independent Thinking Average Score Category			
Grade Received	**1**	**2**	**3**	**4**
A	0.4%	18.9%	44.1%	36.7%
B	7.2%	35.9%	44.9%	12.0%
C/P	11.0%	46.6%	35.6%	6.8%
D	29.4%	52.9%	11.8%	5.9%
F	16.7%	8.3%	58.3%	16.7%
EW	0.0%	66.7%	0.0%	33.3%
N/A*	3.4%	48.3%	48.3%	0.0%

**Please note*: One faculty member did not provide student ID numbers to preserve student anonymity. These students could not be tied back to student records (*n*= 27).

INQUIRY, ANALYSIS, & INDEPENDENT THINKING DEMOGRAPHIC TABLES & GRAPHS

UNITS ATTAINED

- Average Inquiry, Analysis & Independent Thinking scores were similar across unit attainment groups

Table 4: Average Inquiry, Analysis & Independent Thinking Score by Number of Units Completed Prior to Spring 2021

	n	Average Score
0 Units	28	2.76
1-15 Units	133	2.72
16-30 Units	110	2.96
31-45 Units	99	2.78

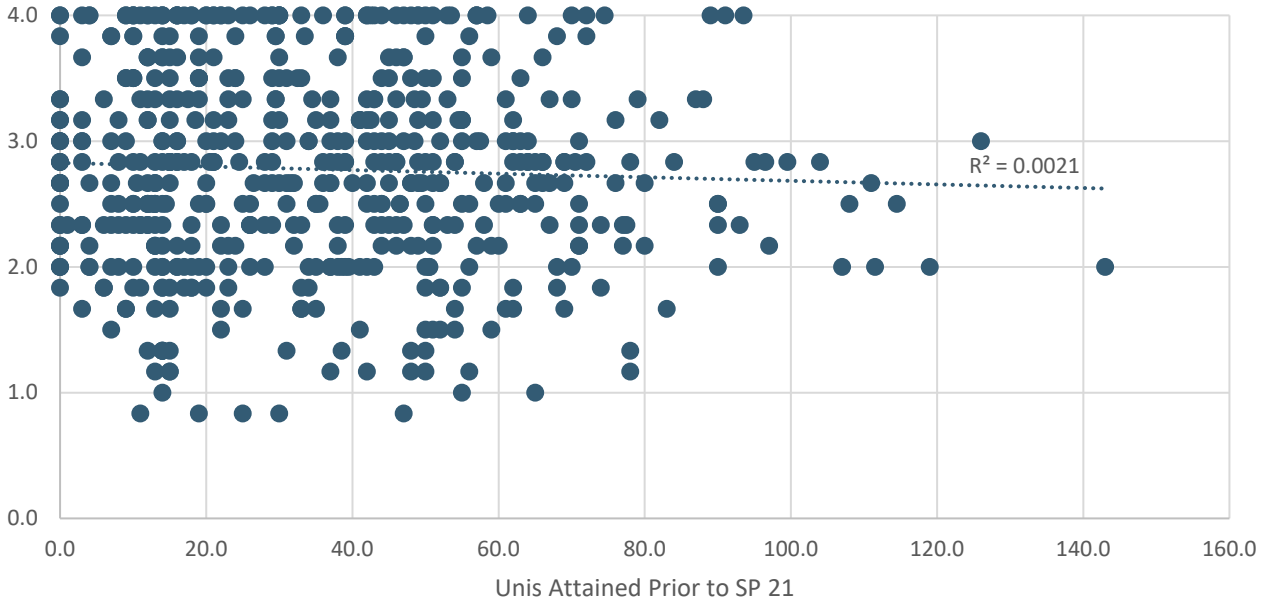
[2] Only credit grades A, B, C/P, D, & F were used in this analysis

46-60 Units	95	2.73
More than 60 Units	90	2.69
N/A*	27	2.31

**Please note*: One faculty member did not provide student ID numbers to preserve student anonymity. These students could not be tied back to student records (*n*= 27).

- A Pearson correlation confirms that units attained is not significantly related to Inquiry, Analysis & Independent Thinking scores, r (555) = -.05, p = .14.

Figure 3: Average Inquiry, Analysis & Independent Thinking Score by Units Completed Prior to Spring 2021



ADMISSION STATUS

- Average Inquiry, Analysis & Independent thinking scores were roughly equivalent across Admission Status groups, save High School students who score lower on average than other types of students.
- The small sample of High School students make it unclear if these students scored lower at random, and whether this trend would generalize to High School students as a whole.

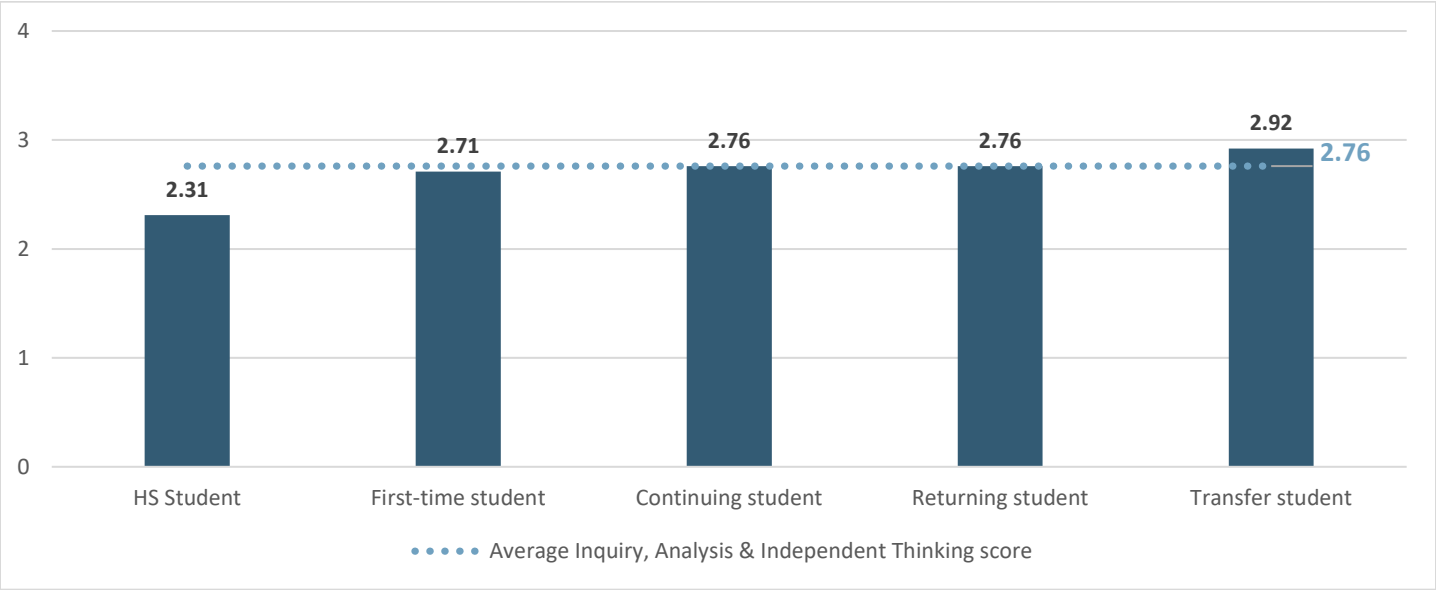
Table 5: Average Inquiry, Analysis & Independent Thinking Score by Admission Status

	n	Average Score
High School Student	7	2.31
First Time Student	86	2.71
Continuing Student	303	2.76
Returning Student	89	2.76
Transfer Student	70	2.92
N/A*	27	2.31

**Please note*: One faculty member did not provide student ID numbers to preserve student anonymity. These students could not be tied back to student records (*n*= 27).

- Statistical analysis confirmed there were no significant differences in average Inquiry, Analysis & Independent Thinking scores between Admission Status groups, F (4,550) = 1.38, p = .24

Figure 4: Average Inquiry, Analysis & Independent Thinking Score Category by Admission Status



**Please note*: One faculty member did not provide student ID numbers to preserve student anonymity. These students could not be tied back to student records (*n*= 27).

AGE

- Average Inquiry, Analysis & Independent Thinking scores were relatively similar across age groups, but look to increase slightly with age and finally trend downward in students over 50
- The small samples of students age 41+ makes it difficult to know if these students score higher or lower randomly and whether this trend would generalize to the population of older students as a whole.

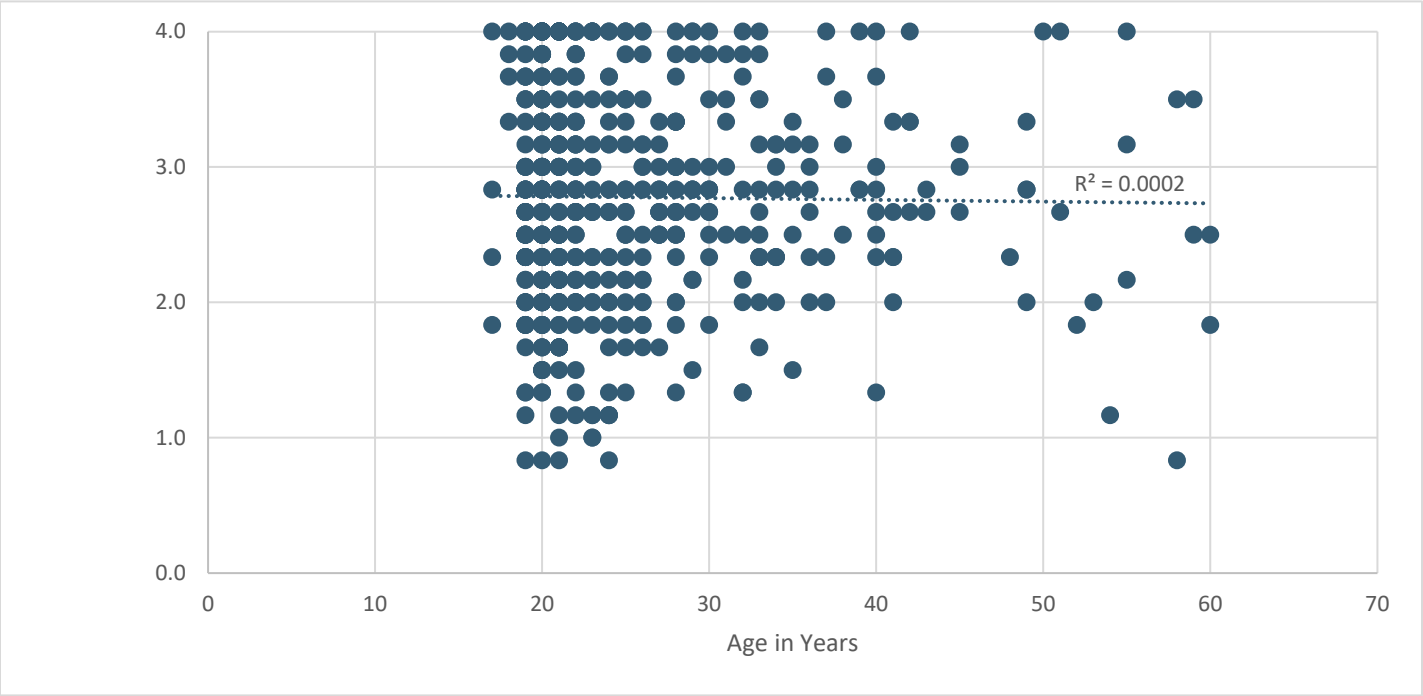
Table 6: Average Inquiry, Analysis & Independent Thinking Score by Age Category

	n	Average Score
17 and Under	4	2.75
18-24	346	2.76
25-30	107	2.80
31-40	64	2.82
41-50	20	2.88
Over 50 Years Old	14	2.55
N/A	27	2.31

**Please note*: One faculty member did not provide student ID numbers to preserve student anonymity. These students could not be tied back to student records (*n*= 27).

- Statistical analysis revealed that age was not significantly related to Inquiry, Analysis & Independent Thinking scores, r (555) = -.01, p = .76.

Figure 5: Inquiry, Analysis & Independent Thinking Score by Age



GENDER

- Average Inquiry, Analysis & Independent Thinking scores were similar between Male and Female students

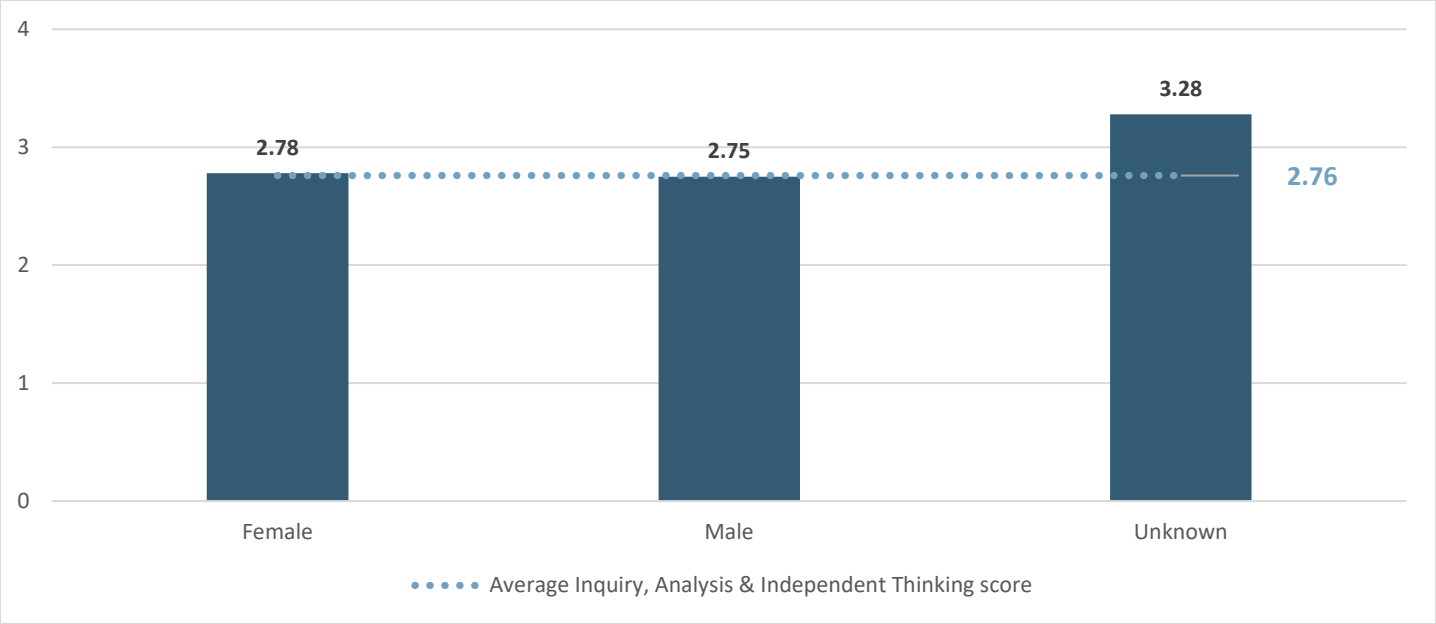
Table 7: Average Inquiry, Analysis & Independent Thinking Score by Gender

	n	Average Score
Female	362	2.78
Male	187	2.75
Unknown	6	3.28
N/A*	27	2.31

**Please note*: One faculty member did not provide student ID numbers to preserve student anonymity. These students could not be tied back to student records (*n*= 27).

- Statistical analysis supported the lack of a significant difference between male and female students' Inquiry, Analysis, and Independent Thinking scores, t(547) = .46, p = .64.

Figure 6: Average Inquiry, Analysis & Independent Thinking Score by Gender



**Please note*: One faculty member did not provide student ID numbers to preserve student anonymity. These students could not be tied back to student records (*n*= 27).

ETHNICITY

- Among more well represented ethnic groups in this sample (*n* > 30), White students generated the *highest* Inquiry, Analysis & Independent thinking scores on average, while multiracial students generated the lowest scores.

Table 8: Average Inquiry, Analysis & Independent Thinking Score by Ethnicity

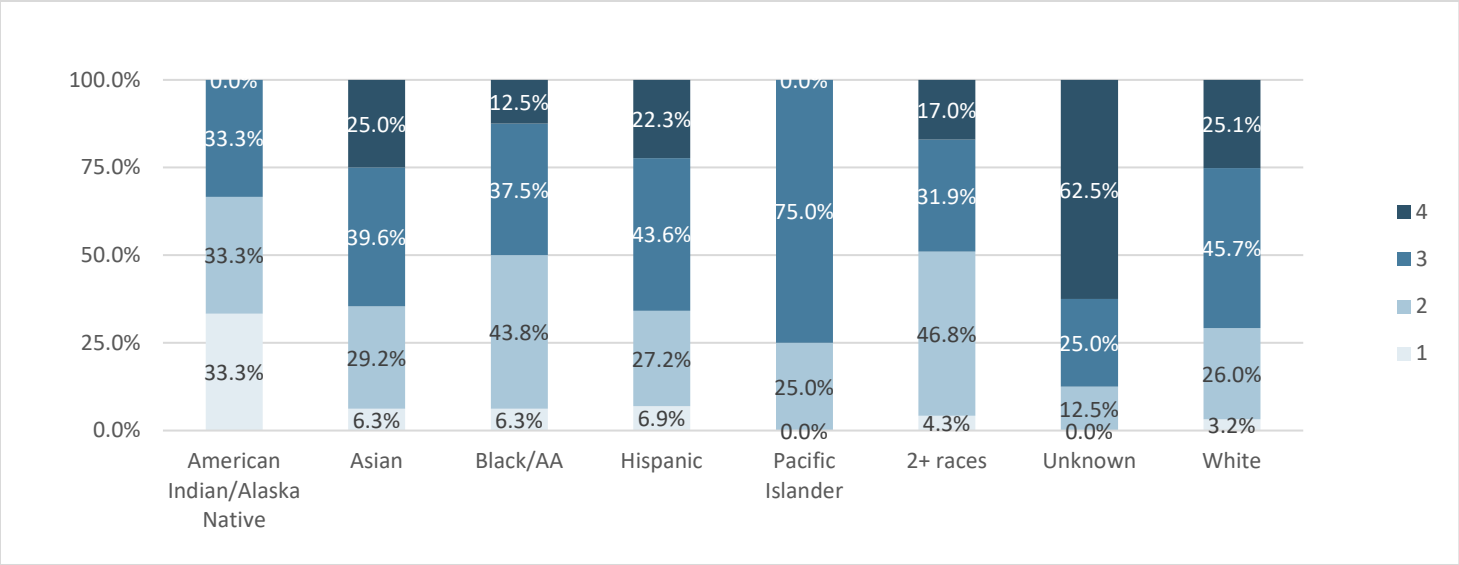
	n	Average Score
American Indian/Alaska Native	3	2.00
Asian	48	2.76
Black/African American	16	2.42
Hispanic	202	2.74
Pacific Islander	4	2.75
Two or More Races	47	2.54
Unknown	16	3.43
White	219	2.86
N/A*	27	2.31

**Please note*: One faculty member did not provide student ID numbers to preserve student anonymity. These students could not be tied back to student records (*n*= 27).

- A oneway ANOVA revealed significant differences in the Inquiry, Analysis, and Independent Thinking scores of students of different ethnic backgrounds, F (7, 547) = 3.65, p< .001.

- Specifically, students of unidentified ethnicity (*M* = 3.42, *SD* = .36, *N*= 16) generated significantly higher Inquiry, Analysis, and Independent Thinking scores than Black (*M* = 2.41, *SD* = .74, *N*= 16), Hispanic (*M* = 2.73, *SD* = .81, *N*= 202), and multiracial (*M* = 2.54, *SD* = .76, *N* = 47) students.
- Small samples of several ethnic groups render it difficult to assess whether these trends would generalize to the larger population of students. More observations of students within these inadequately represented groups will be necessary to establish trends in this area.

Figure 7: Average Inquiry, Analysis & Independent Thinking Score by Ethnicity



**Please note*: One faculty member did not provide student ID numbers to preserve student anonymity. These students could not be tied back to student (*n*= 27).

INTERCULTURAL COMPETENCE & RESPECT FOR DIVERSE PERSPECTIVES

- Students were assessed across the following areas for Intercultural Competence & Respect for Diverse Perspectives:
  - **Knowledge**: Cultural self-awareness
  - **Knowledge**: Knowledge of cultural worldview frameworks
  - **Skills**: Empathy
  - **Skills**: Verbal and non-verbal communication
  - **Attitudes**: Curiosity and openness

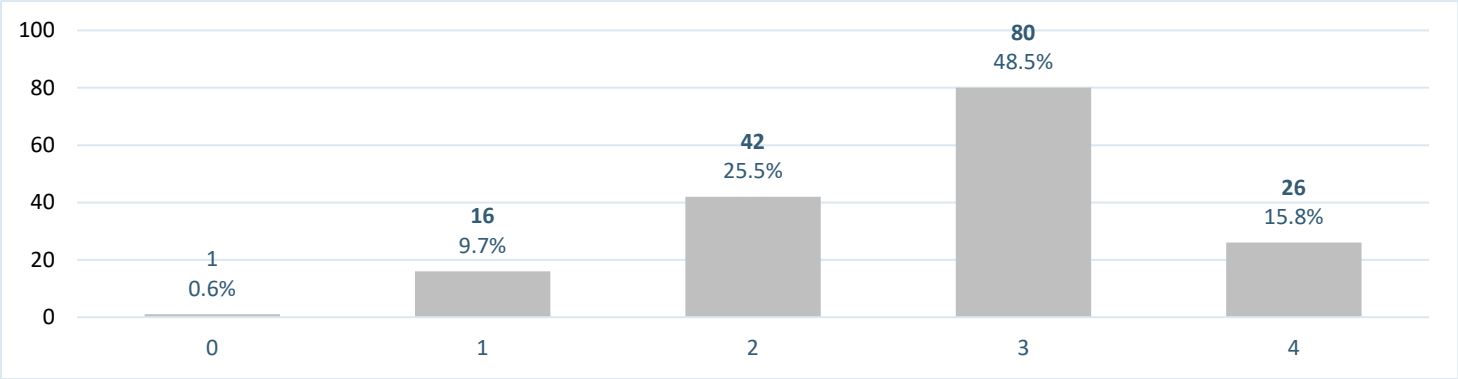
Table 9: Intercultural Competence & Respect for Diverse Perspectives Summary

Number of Course Sections	8
Students Rated (Duplicated)	165
Average Rating	2.70

- Eight faculty in 8 different sections participated in the assessment of this core competency
- 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 165 duplicated (163 unduplicated) students were included in the evaluation process

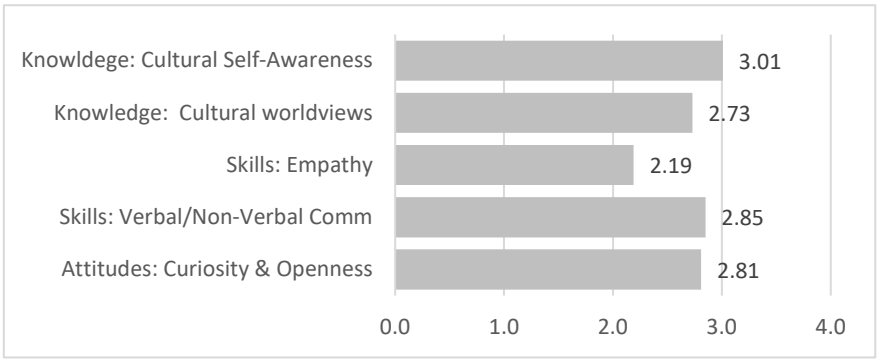
- The most commonly awarded score was “3”

Figure 3: Number of Students by Average Intercultural Competence & Respect for Diverse Perspectives Rating



INTERCULTURAL COMPETENCE AND RESPECT FOR DIRVERSE PERSPECTIVES BY COMPONENT

Figure 4: Average Score by Intercultural Competence & Respect for Diverse Perspectives Dimension



- Average scores on these dimensions ranged from 2.19 to 3.01
- Skills in **Empathy**, where students demonstrate their ability to interpret experiences from several worldviews and act in a manner supportive of the feelings of another cultural group, generated the lowest average scores.
- **Knowledge: Cultural self-awareness**, where students demonstrate the ability to articulate their own cultural rules and biases, generated the highest average scores.

INTERCUTURAL COMPETENCE AND RESPECT FOR DIVERSE PERSPECTIVES SCORE BY GRADE RECEIVED

- Rubric scores were compared with grades received in the course to see if there was a relationship between the two variables Statistical analysis confirms that Intercultural Competence & Respect for Diverse Perspectives scores and course grades were positively related, r (157) = .50, p < .001)
- This suggests that as course grades increased (*from F to A*) so too did Intercultural Competence & Respect for Diverse Perspectives scores

- It is unknown to what extent this finding is accurate and can be generalized, as many grade categories have a minimal number of observations and the potential to produce spurious findings.[3]

Table 10: Average Intercultural Competence & Respect for Diverse Perspectives Score by Grade Receive

Grade Received	Number of Students	Average Overall Score
A	107	3.01
B	25	1.94
C/P	13	2.57
SP	4	3.50
D	2	2.10
F/NP	14	1.67

- The heat map below suggests a relationship between the grade received and Intercultural Competence & Respect for Diverse Perspectives scores
- Of the students who earned the grade of "A", over 80% earn an average score of "3" or "4"
- Over 70% of those who earned a grade of "F" received a score of "1" or "2"

Table 11: Intercultural Competence & Respect for Diverse Perspectives Heat Map

	Intercultural Competence & Respect for Diverse Perspectives Score				
Course Grade	0	1	2	3	4
A	0.0%	1.9%	17.8%	59.8%	20.6%
B	0.0%	28.0%	48.0%	24.0%	0.0%
C/P	0.0%	7.7%	46.2%	23.1%	23.1%
SP	0.0%	0.0%	0.0%	75.0%	25.0%
D	0.0%	50.0%	0.0%	50.0%	0.0%
F/NP	1.7%	35.7%	35.7%	21.4%	0.0%

[3] Only credit grades A, B, C/P, D, & F were used in this analysis

UNITS ATTAINED

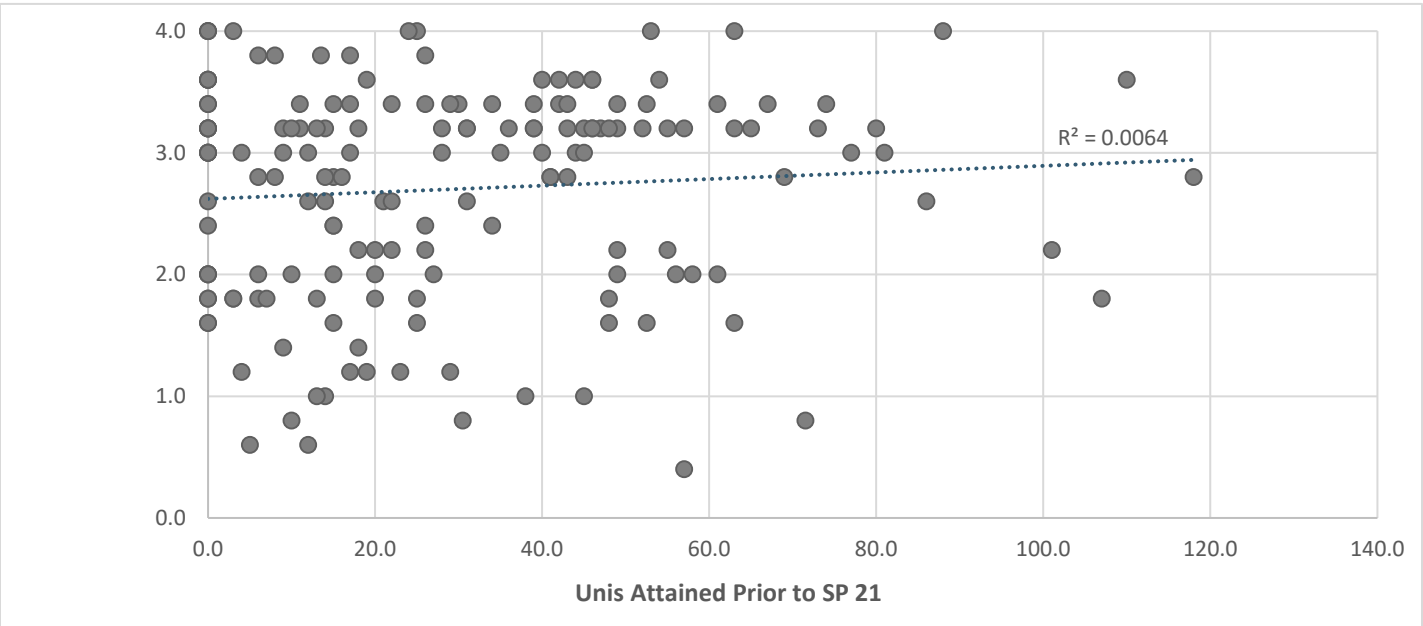
- The highest average Intercultural Competence & Respect for Diverse Perspectives scores were generated by students who attained 0 units or those that had between 31 and 45 units, prior to Spring 2021.

Table 12: Average Intercultural Competence & Respect for Diverse Perspectives Score by Units Completed

	n	Average Score
0 Units	26	2.92
1-15 Units	38	2.41
16-30 Units	32	2.60
31-45 Units	26	2.88
46-60 Units	23	2.74
More than 60 Units	20	2.86

- A Pearson correlation reveals that units attained was not significantly related to Intercultural Competence & Respect for Diverse Perspectives scores, r (165) = .08, p = .31.
- Future observations will help determine whether the development of Intercultural Competence & Respect for Diverse Perspectives occurs as students progress in their education.

Figure 10: Average Intercultural Competence & Respect for Diverse Perspectives Score by Units Completed Prior to 2021



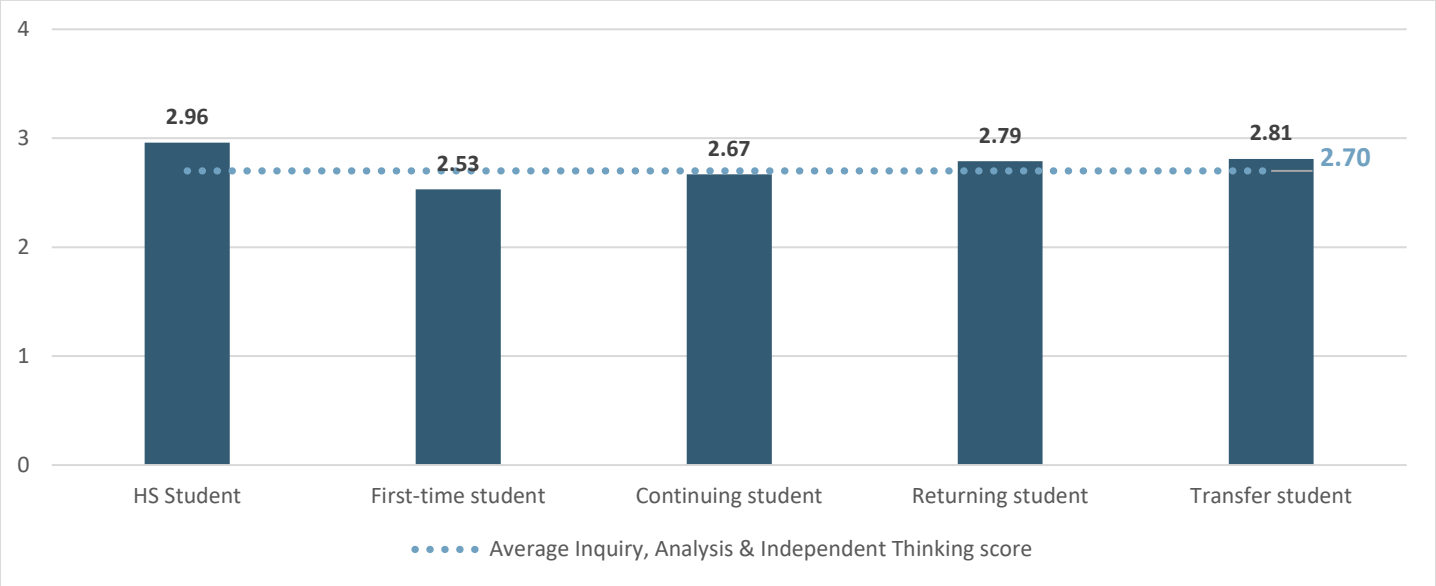
ADMISSION STATUS

- Among more well-represented Admission Status groups ($n > 25$), Intercultural Competence scores were lowest on average among First-time students, while Transfer students generated the highest scores.
- The small sample of High School students makes it unclear if these students scored higher on this competence at random and whether this trend would generalize to High School students overall.
- Statistical analysis revealed no significant differences across Admission Status groups and the Intercultural Competence & Respect for Diverse Perspectives scores they generated, F (4,160) = .58, p = .69.

Table 13: Average Intercultural Competence & Respect for Diverse Perspectives Score by Admission Status

	n	Average Score
High School Student	5	2.96
First Time Student	25	2.53
Continuing Student	78	2.67
Returning Student	30	2.79
Transfer Student	27	2.81

Figure 11: Average Intercultural Competence & Respect for Diverse Perspectives Score by Admission Status



AGE

- The highest Intercultural Competence scores were seen in older student groups (31-40; 41-50, & 50+).

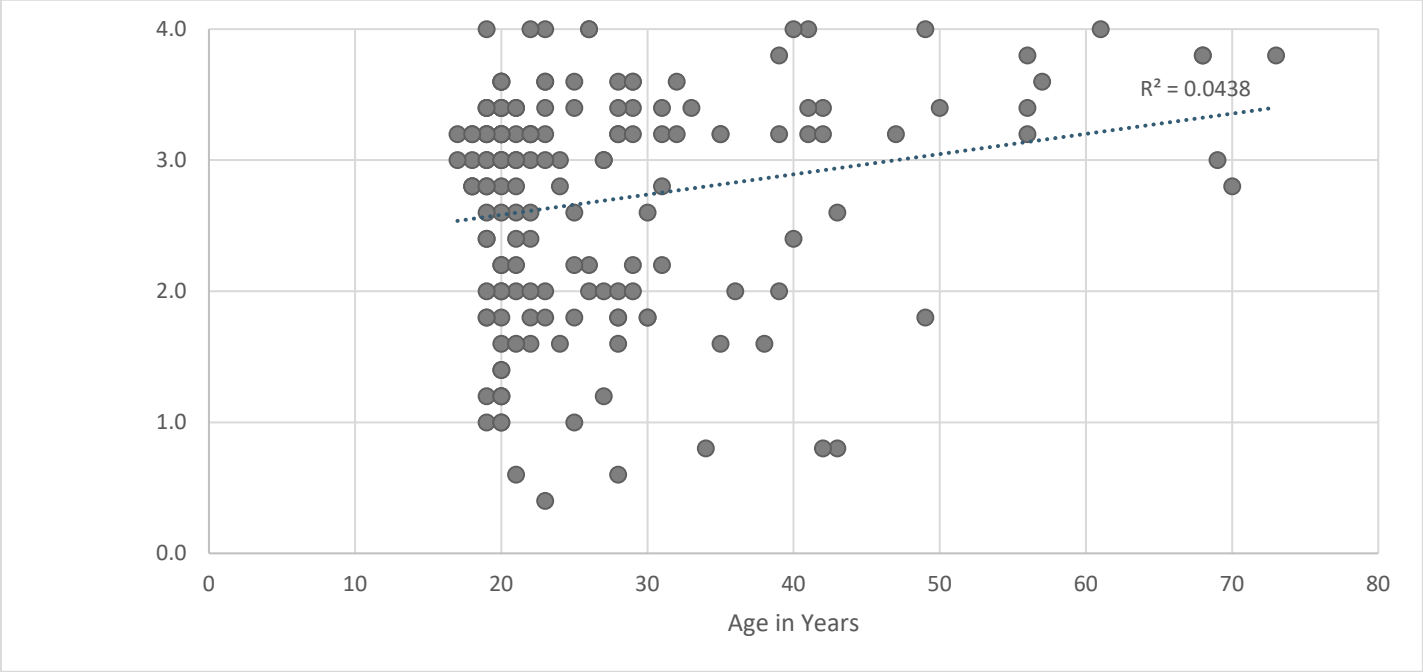
- Small samples of students age 41+ renders it difficult to determine whether these students score higher at random and whether this trend would generalize to the population of older students.

Table 14: Average Intercultural Competence & Respect for Diverse Perspectives Score by Age Group

	n	Average Score
17 and Under	2	3.10
18-24	91	2.63
25-30	32	2.54
31-40	18	2.76
41-50	12	2.82
Over 50 Years Old	10	3.52

- Significance testing revealed a significant positive correlation between student age and the Intercultural Competence & Respect for Diverse Perspectives scores they generated, r (165) = .21, p < .01, with older students tending to generate higher scores than younger students

Figure 12: Average Intercultural Competence & Respect for Diverse Perspectives Score by Age



GENDER

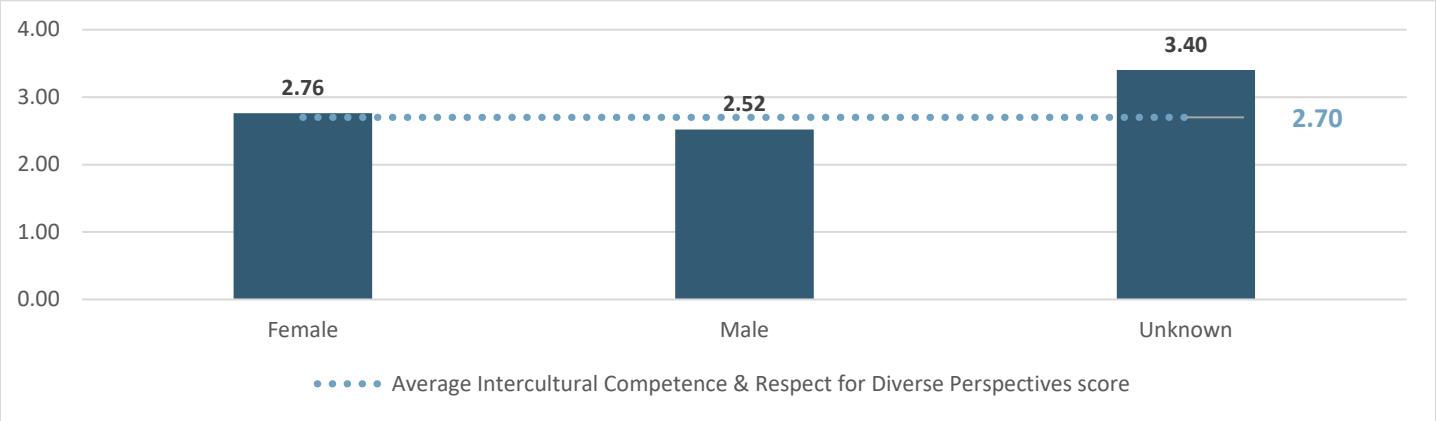
- Female students generated higher Intercultural Competence scores than males, on average.

Table 15: Average Intercultural Competence & Respect for Diverse Perspectives Score by Gender

	n	Average Score
Female	123	2.76
Male	41	2.52
Unknown	1	3.40

- Statistical analysis revealed no significant difference in Intercultural Competence & Respect for Diverse Perspectives scores between male and female students, *t* (162) = 1.49, p = .14

Figure 13: Average Intercultural Competence & Respect for Diverse Perspectives Score by Gender



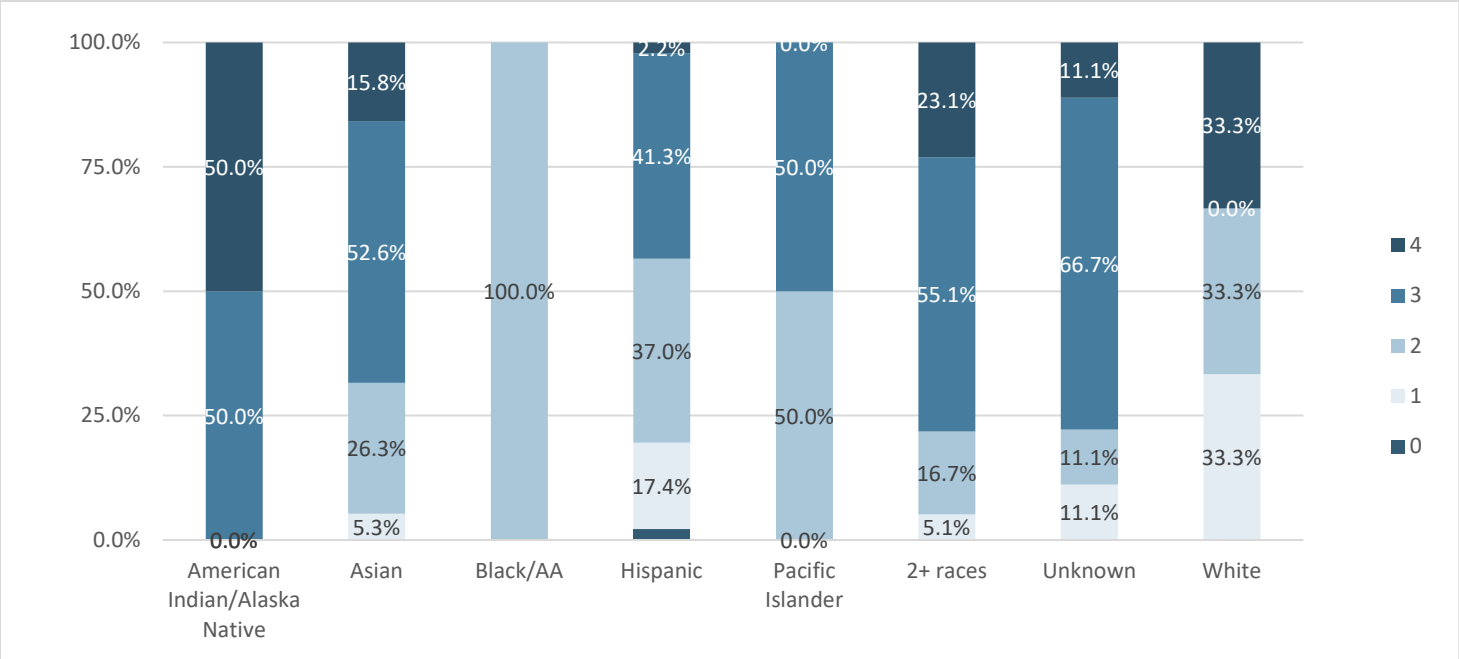
ETHNICITY

- Small sample sizes for most ethnic categories make it difficult to discern meaningful trends from the Intercultural Competence scores generated by these groups
- Between the more robustly represented groups (*n* < 30) White students generated much higher scores on average, than their Hispanic counterparts.
- Statistical analysis revealed that this difference in Intercultural Competence & Respect for Diverse Perspectives scores between White & Hispanic students was the only significant comparison thus far, *t* (157) = 4.73, *p* < .001

Table 16: Average Intercultural Competence & Respect for Diverse Perspectives score by Ethnicity

	n	Average Score
American Indian/Alaska Native	2	3.40
Asian	19	2.80
Black/African American	3	2.00
Hispanic	46	2.24
Pacific Islander	2	2.80
White	78	2.97
Two or More Races	9	2.91
Unknown	6	2.23

Figure 14: Average Intercultural Competence & Respect for Diverse Perspectives Score by Ethnicity



SUMMARY

- **Inquiry, Analysis & Independent Thinking** scores and **Intercultural Competence & Respect for Diverse Perspectives** scores were positively related to *course grades* received by students in the course they were assessed in, for the term. However, small samples in lower grade categories (D & F), make it difficult to ascertain whether this finding is externally valid.
- **Inquiry, Analysis & Independent Thinking** scores were also found to differ for students of varying ethnic backgrounds, specifically with students of undesignated ethnicity producing higher scores than their Black, Hispanic and White counterparts, though small samples have the potential to undermine the conclusions that can be drawn from this analysis.
- **Intercultural Competence & Respect for Diverse Perspectives** scores were also found to differ by ethnicity, with White students tending to score higher in this area than Hispanic students
- **Inquiry, Analysis & Independent Thinking** scores were not found to differ on the basis of age, gender, units attained, or admission status.
- **Intercultural Competence & Respect for Diverse Perspectives** scores significantly increased as students got older, but did not vary significantly on the basis of any of the other demographic dimensions like gender, admission status group, or units attained.