

## **Culturally Engaging Campus Environments Undergraduate and Graduate Surveys 2020**

### **Executive Summary**

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In an effort to gain understanding about University of Denver student experiences with cultural engagement and belonging, the Culturally Engaging Campus environments (CECE) survey was administered to all undergraduate, graduate, and law students enrolled in the fall 2020 quarter. The surveys were administered from October 23 to December 11, 2020. The following summary includes information about participation in the study as well as a review of data that was requested and analyzed in an effort to inform our student support efforts as an institution.

For detailed information about the CECE model and surveys, including language for all of the CECE survey items, please visit [CECE Overview Record video](#).

### **Participants**

For the undergraduate CECE survey, there were 595 survey respondents, which represents 10.4% of the undergraduate enrollment in the fall 2020 quarter.

For the graduate CECE survey, there were 975 survey respondents, which represents 11.5% of the graduate and law student enrollment in the fall 2020 quarter.

Please see the link for a summary of the undergraduate and graduate selected demographics: [CECE 2020 Demographics](#)

### **Cultural Relevance and Cultural Responsiveness**

*The CECE survey indicators are designed to offer understanding about student experiences of cultural relevance and cultural responsiveness. Museus et al. (2018) confirmed that one of the critical components of the surveys is understanding the different lived experiences of students of color and white students. The following summary illustrates each of the group trends around each CECE indicator. Item scores were combined to serve as total scale scores for each of the CECE indicators.*

## Undergraduate Cultural Relevance and Cultural Responsiveness

### Cultural Relevance Total Scale Scores (Undergraduate)

| Scale                                | POC Mean | White Mean | T stat | Significance | Effect Size      |
|--------------------------------------|----------|------------|--------|--------------|------------------|
| <b>Cultural Familiarity</b>          | 17.24    | 21.24      | -9.7   | p <.001      | 0.82<br>(large)  |
| <b>Culturally Relevant Knowledge</b> | 8.68     | 10.17      | -6.13  | p <.001      | 0.51<br>(medium) |
| <b>Cultural Community Service</b>    | 8.44     | 9.89       | -5.94  | p <.001      | 0.50<br>(medium) |
| Cross-Cultural Engagement            | 8.93     | 9.7        | -3.16  | p <.01       | 0.27<br>(small)  |
| <b>Cultural Validation</b>           | 9.16     | 10.61      | -6.16  | p <.001      | 0.52<br>(medium) |

Results indicate that among each of the cultural relevance indicators, students of color’s average total scale scores (POC means) were lower than white students’ scores. Among the indicators, t-test analyses indicated that there was a large effect size for cultural familiarity, a medium effect size for culturally relevant knowledge, cultural community service, and cultural validation, and a small effect size for cross-cultural engagement.

### Cultural Responsiveness Total Scale Scores (Undergraduate)

| Scale                              | POC Mean | White Mean | T stat | Significance | Effect Size    |
|------------------------------------|----------|------------|--------|--------------|----------------|
| Collectivist Cultural Orientation  | 10.48    | 11.17      | -3.55  | p < .001     | 0.3<br>(small) |
| Humanized Educational Environments | 11.99    | 12.14      |        |              |                |
| Proactive Philosophies             | 10.83    | 11.26      |        |              |                |
| Holistic Student Support           | 11.44    | 11.07      |        |              |                |

Results indicate that among the cultural responsiveness indicators, students of color had lower total scale scores on all indicators except for holistic student support. Among the indicators, a t-test analysis showed only a small effect size for differences in collectivist cultural orientation scores.

## Graduate Cultural Relevance and Cultural Responsiveness

### Cultural Relevance Total Scale Scores (Graduate)

| Scale                                | POC Mean | White Mean | T stat | Significance | Effect Size      |
|--------------------------------------|----------|------------|--------|--------------|------------------|
| <b>Cultural Familiarity</b>          | 17.31    | 21.07      | -10.52 | p < .001     | 0.86<br>(large)  |
| <b>Culturally Relevant Knowledge</b> | 8.75     | 10.5       | -8.44  | p < .001     | 0.57<br>(medium) |
| <b>Cultural Community Service</b>    | 8.66     | 10.1       | -6.82  | p < .001     | 0.47<br>(medium) |
| Cross-Cultural Engagement            | 9.37     | 10.09      | -3.13  | p < .001     | 0.23<br>(small)  |
| Cultural Validation                  | 10.03    | 11.01      | -4.99  | p < .001     | 0.3<br>(small)   |

Results indicate that among each of the cultural relevance indicators, graduate students of color's average total scale scores (POC means) were lower than white students' scores. Among the indicators, t-test analyses indicated that there was a large effect size for cultural familiarity, a medium effect size for culturally relevant knowledge, cultural community service, and a small effect size for cross-cultural engagement and cultural validation.

### Cultural Responsiveness Total Scale Scores (Graduate)

| Scale                              | POC Mean | White Mean | T stat | Significance | Effect Size     |
|------------------------------------|----------|------------|--------|--------------|-----------------|
| Collectivist Cultural Orientation  | 11.37    | 11.85      | -2.71  | p < .01      | 0.14<br>(small) |
| Humanized Educational Environments | 12.3     | 12.56      |        |              |                 |
| Proactive Philosophies             | 10.7     | 10.7       |        |              |                 |
| Holistic Student Support           | 11.6     | 11.65      |        |              |                 |

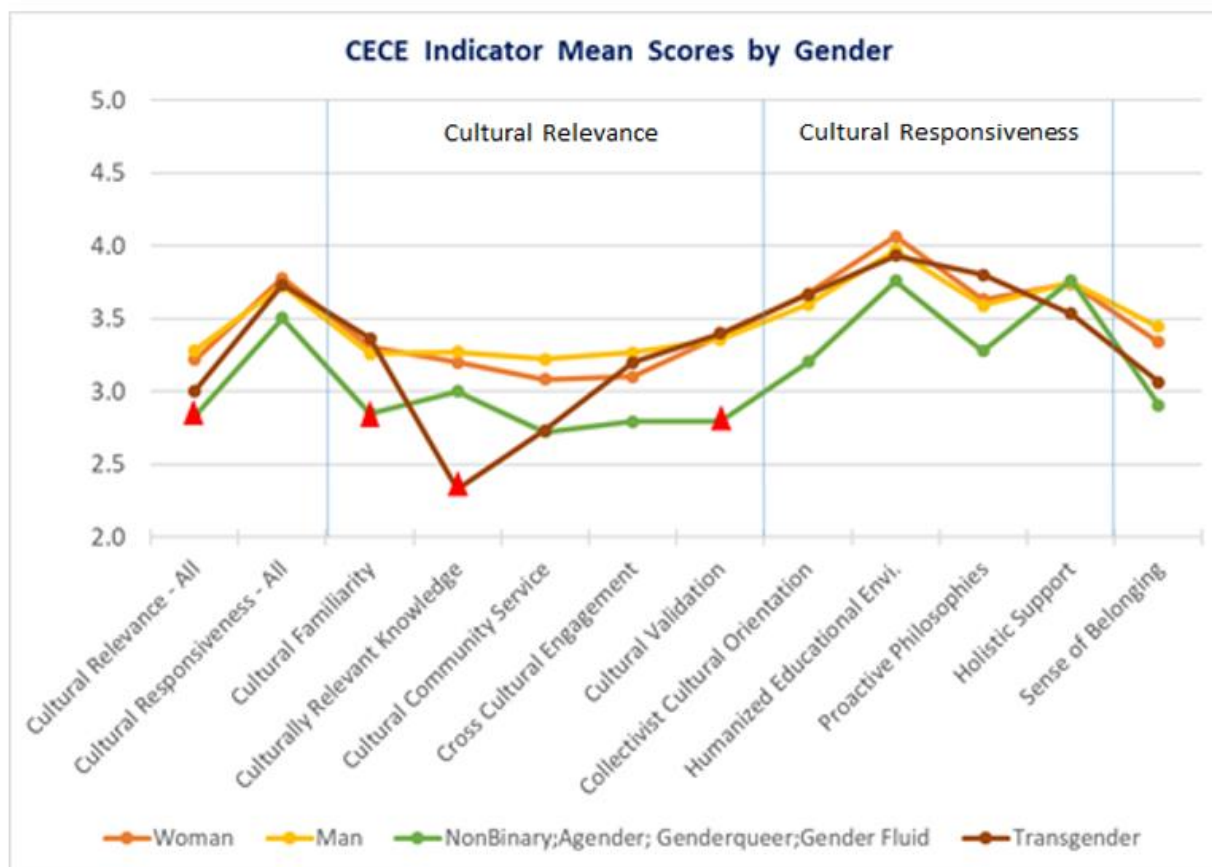
Results indicate that among the cultural responsiveness indicators, students of color had lower total scale scores on the collectivist cultural orientation, humanized education environments, and holistic student support indicators, and equal scores on the proactive philosophies indicator. Among the indicators, a t-test analysis showed only a small effect size for differences in collectivist cultural orientation scores.

## CECE Identity Analysis

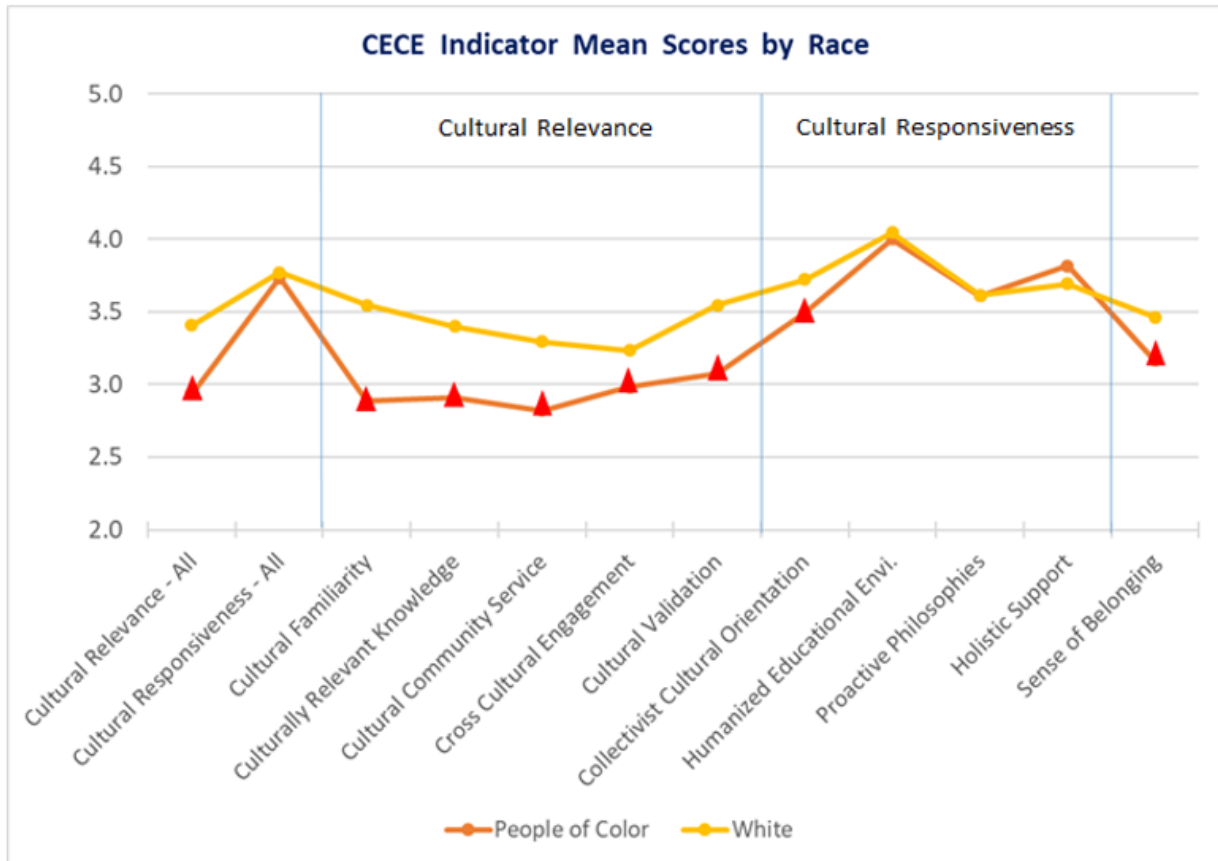
*To understand how identity might interact with CECE indicator scores, as well as measure of belonging, the Office of Institutional Research and Analysis conducted a series of analyses to illustrate any differences in scores by identity.*

### Undergraduate Analyses by Identity

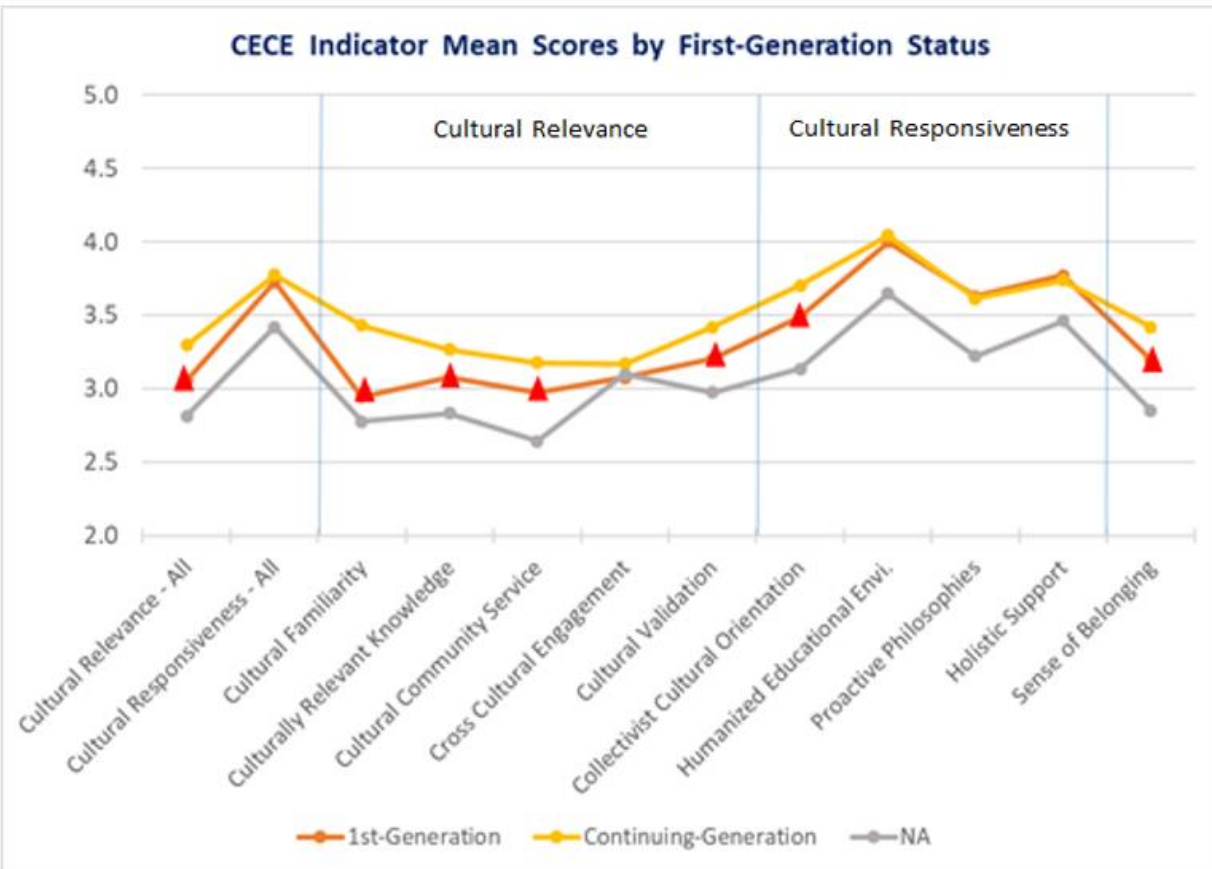
Total participants: N=595



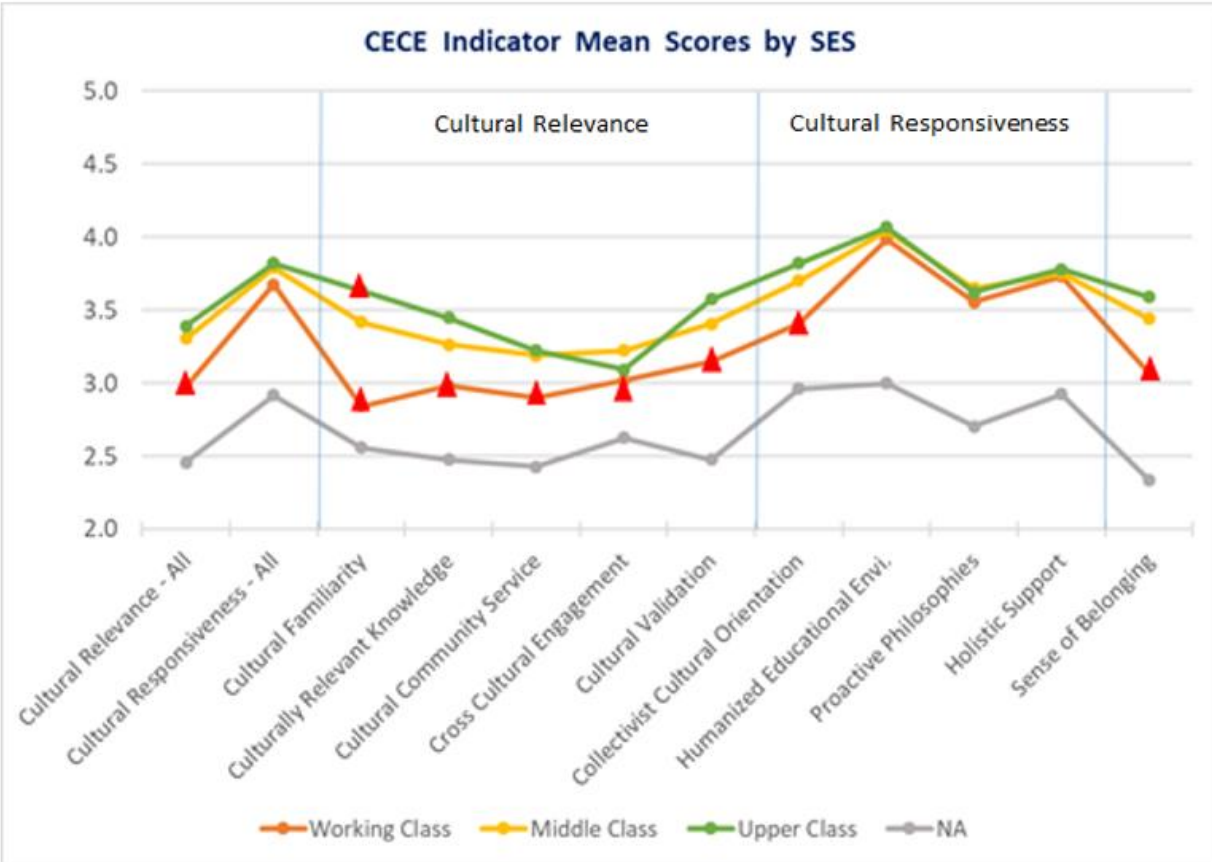
- No significant difference between the **women** (n=389) and the **men** (n=164).
- **The 3rd group** (including Non-Binary, Agender, Genderqueer, and Gender Fluid: n=18) had a significantly lower score than the women and the men on:
  - Cultural Relevance – All
  - Cultural Familiarity
  - Cultural Validation.
- The **transgender** group (n=5) had a significantly lower score on Culturally Relevant Knowledge.



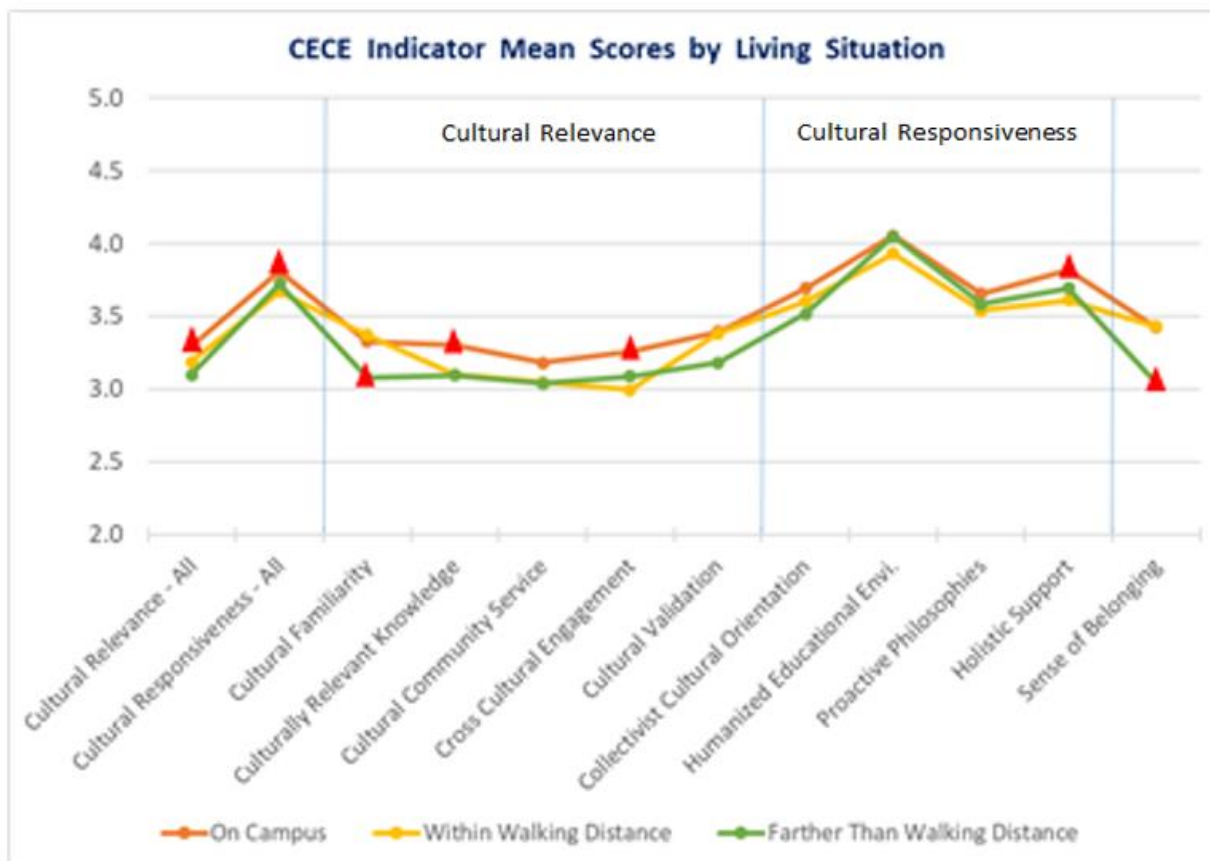
- The **students of color** (n=227) had a significantly lower score than the white students (n=349) on the following indicators:
  - all 5 Cultural Relevance indicators
  - Collectivist Cultural Orientation
  - Sense of Belonging



- The **first-generation** students (n=158) had a significantly lower score than the continuing-generation students (n=419) on:
  - 4 of 5 Cultural Relevance indicators (except Cross Cultural Engagement)
  - Collectivist Cultural Orientation
  - Sense of Belonging
- The 18 students **who did not provide their parents' education information** had a significantly lower score on 9 indicators, except Cross Cultural Engagement.
- *Note:* First-Generation = Neither parent/ guardian received a bachelor's degree.

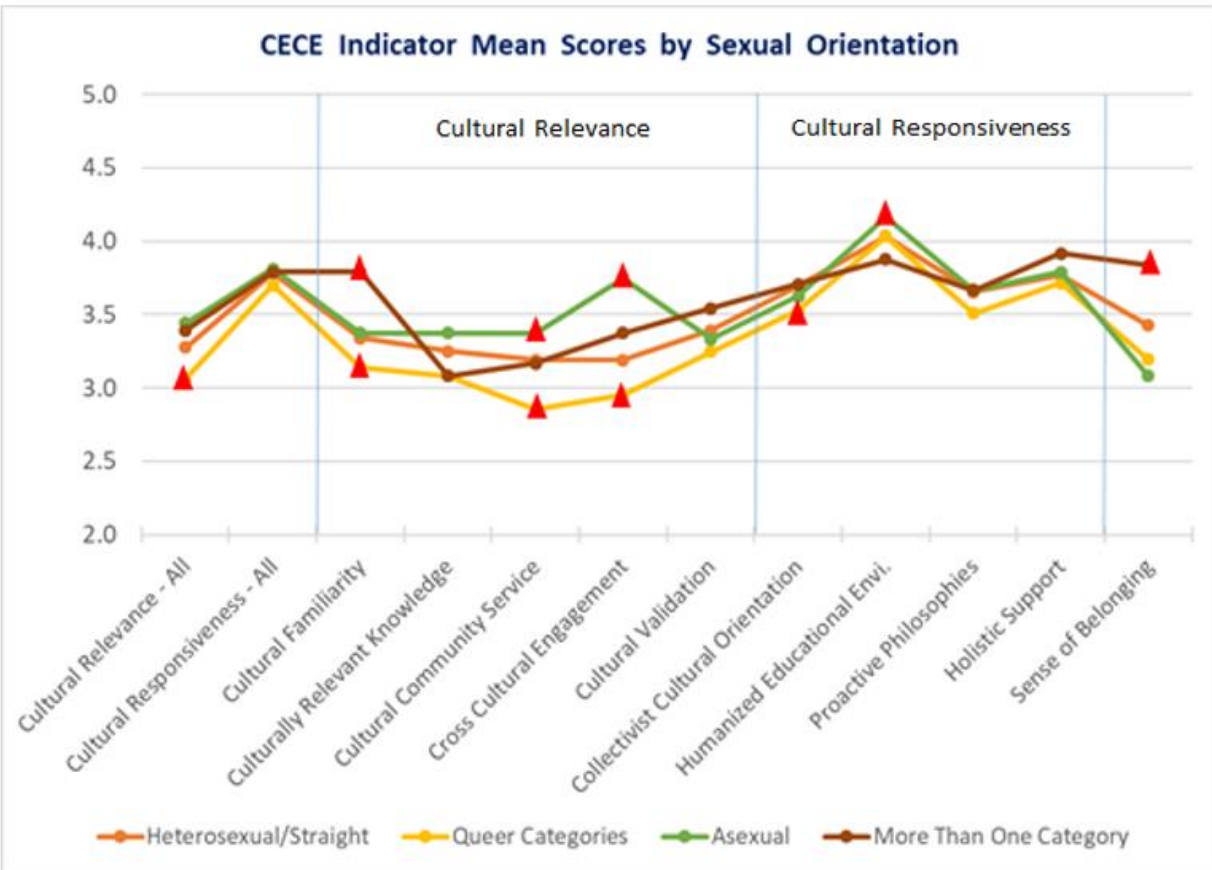


- The students from the **working class** (n=157) had a significantly lower score than the students from the **middle and upper** classes (n=429) on:
  - all 5 Cultural Relevance indicators
  - Collectivist Cultural Orientation
  - Sense of Belonging
- The students from the **upper class** (n=83) had a significantly higher score only on Cultural Familiarity than the students from the middle class (n=346).
- The 9 students **who did not provide their SES information** have a significantly lower score on all 10 indicators.

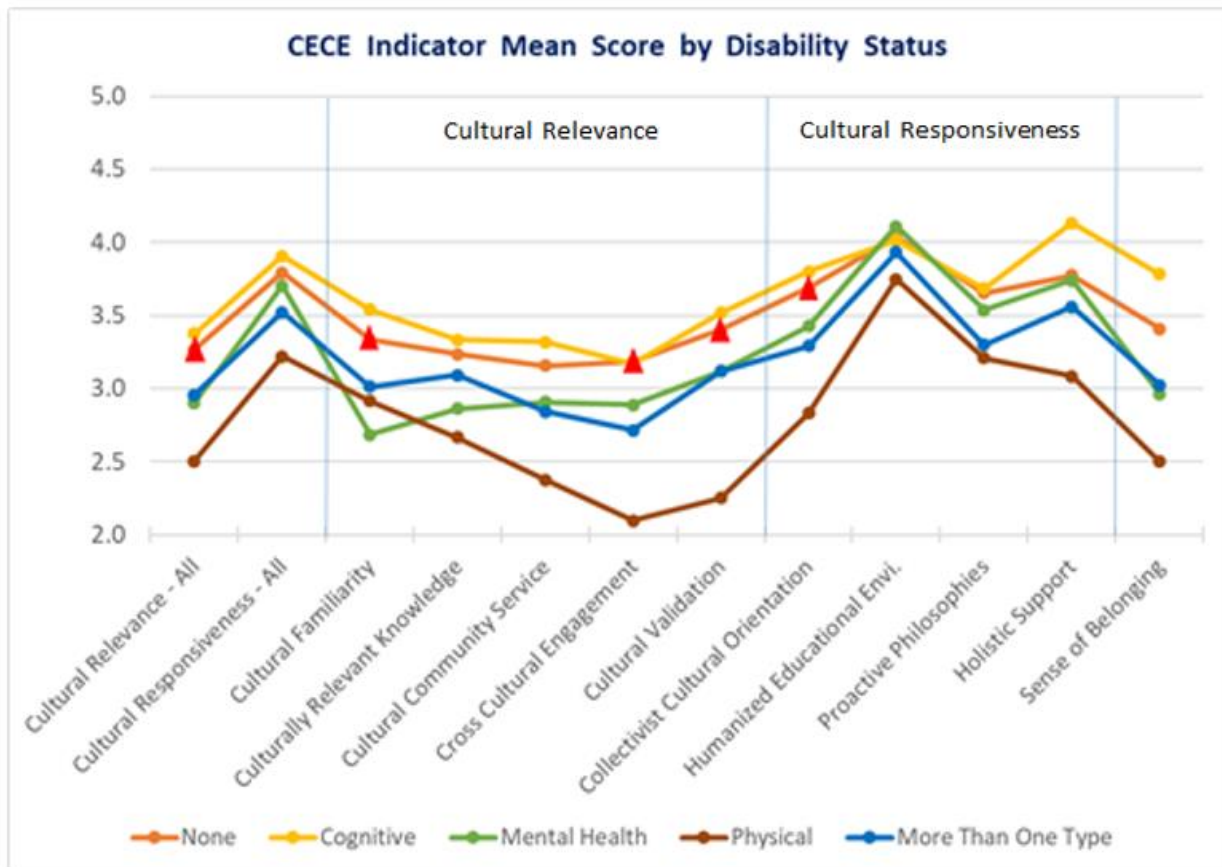


- Overall, the students **living on campus** (n=272) had a higher score than the students **living off campus** (n=298) on most indicators. The students **living on campus** had a significantly higher score on Cultural Relevance / Responsiveness – All, Culturally Relevant Knowledge, Cross Cultural Engagement, and Holistic Support.
- Compared to the students **living within walking distance** to campus (n=182), the students **living on campus** had a significantly higher score on Cultural Responsiveness – All, Culturally Relevant Knowledge, Cross Cultural Engagement, and Holistic Support.
- The students **living farther than walking distance** to campus (n=116) had a significantly lower scores on Cultural Familiarity and Sense of Belonging.





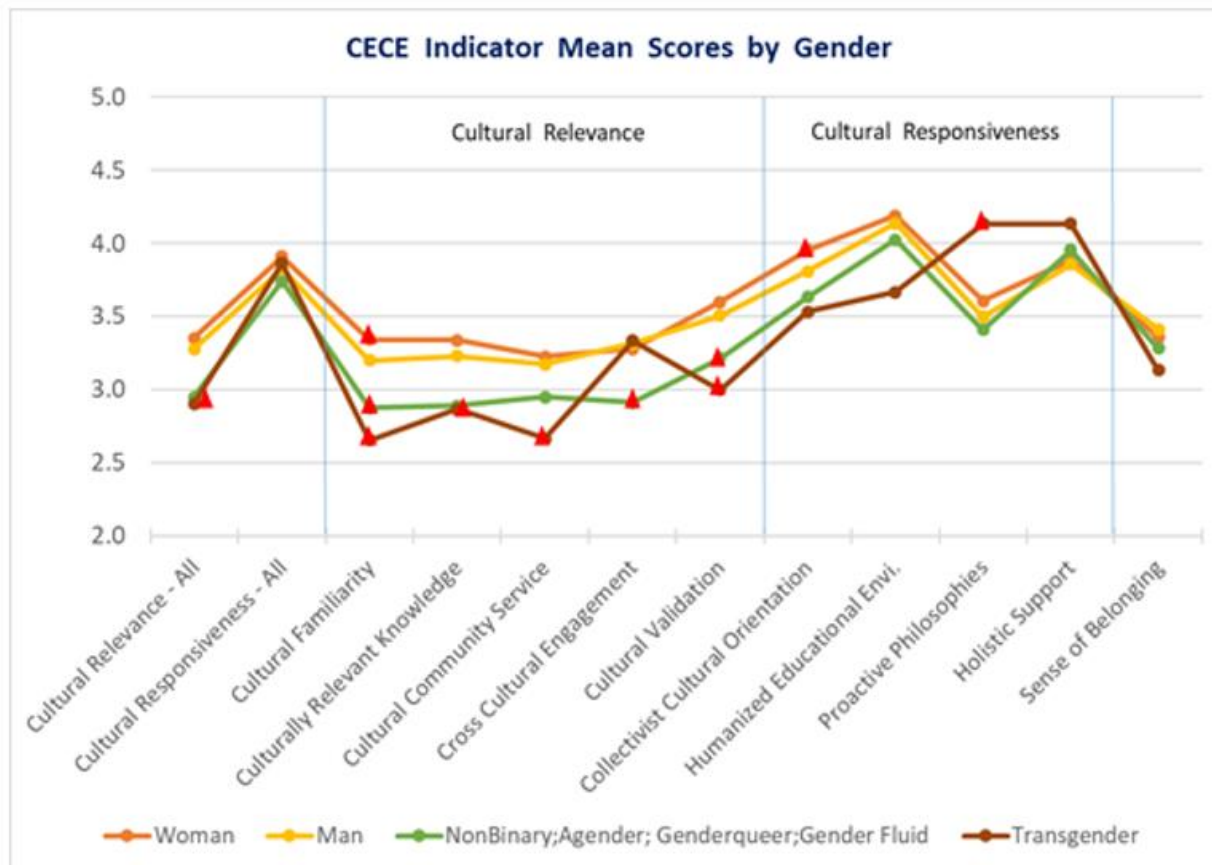
- Compared to the **heterosexual or straight sexual** group (n=398), the group in the **queer categories** (queer, bisexual, pansexual, demisexual, gay, lesbian; n=135) had a significantly lower score on Cultural Relevance – All, Cultural Familiarity, Cultural Community Service, Cross Cultural Engagement, and Collectivist Cultural Orientation.
- The group with an **asexual** orientation (n=8) had a slightly higher score on Cultural Community Service, Cross Cultural Engagement, and Humanized Educational Environment.
- The group with **more than one category of sexual orientation** (n=8) had a slightly higher score on Cultural Familiarity and Sense of Belonging.
- *Note:* 46 students didn't indicate their sexual orientation.



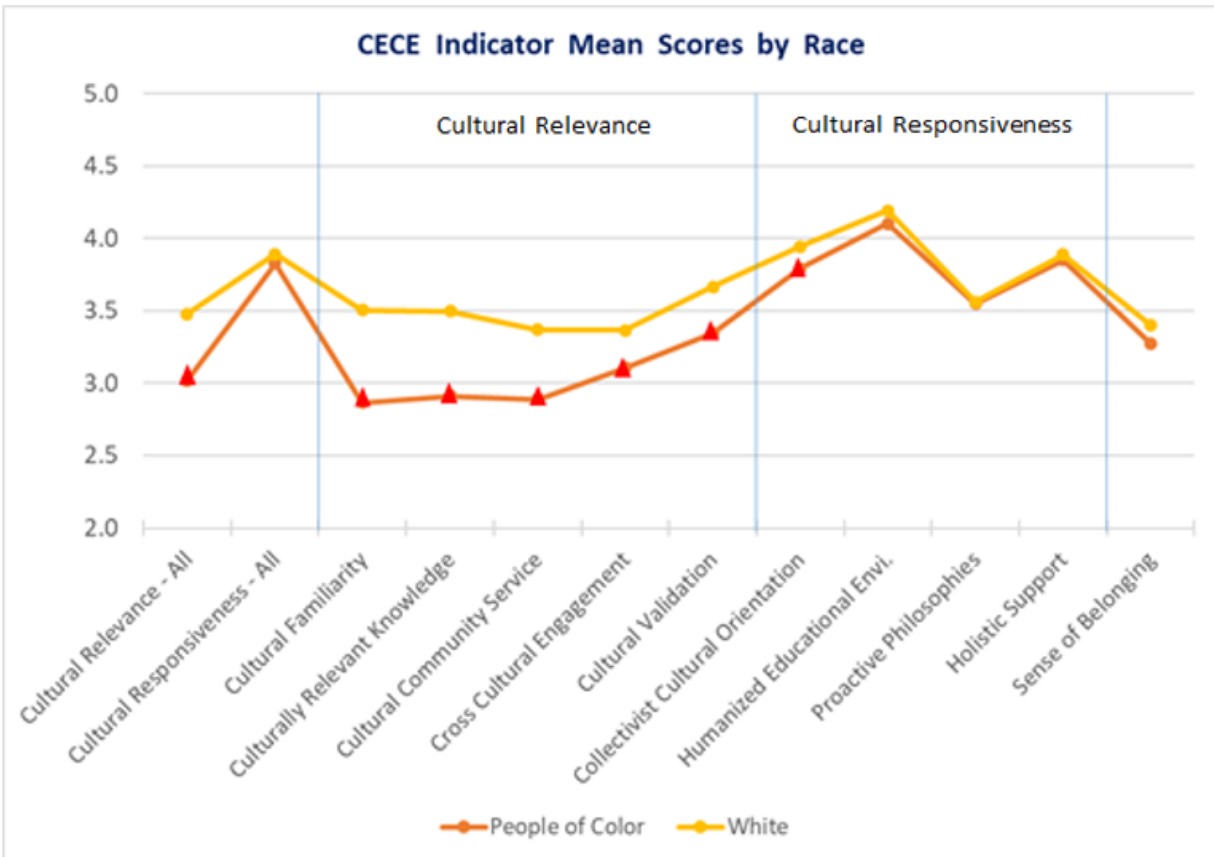
- The **group without a disability** (n=469) had a significantly higher score than the **students with a disability** (n=86) on Cultural Relevance – All, Cultural Familiarity, Cross Cultural Engagement, Cultural Validation, and Collectivist Cultural Orientation.
- The students with a **cognitive or learning disability** (n=20) had a significantly higher score on most indicators than the students with other types of disability.
- The students with a **physical disability** (n=8) had a significantly lower score on most indicators than the other students.
- **Students with mental health disorder:** n=18
- **Students with more than one disability:** n=40
- *Note:* 40 students didn't indicate their disability status.

## Graduate Analyses by Identity

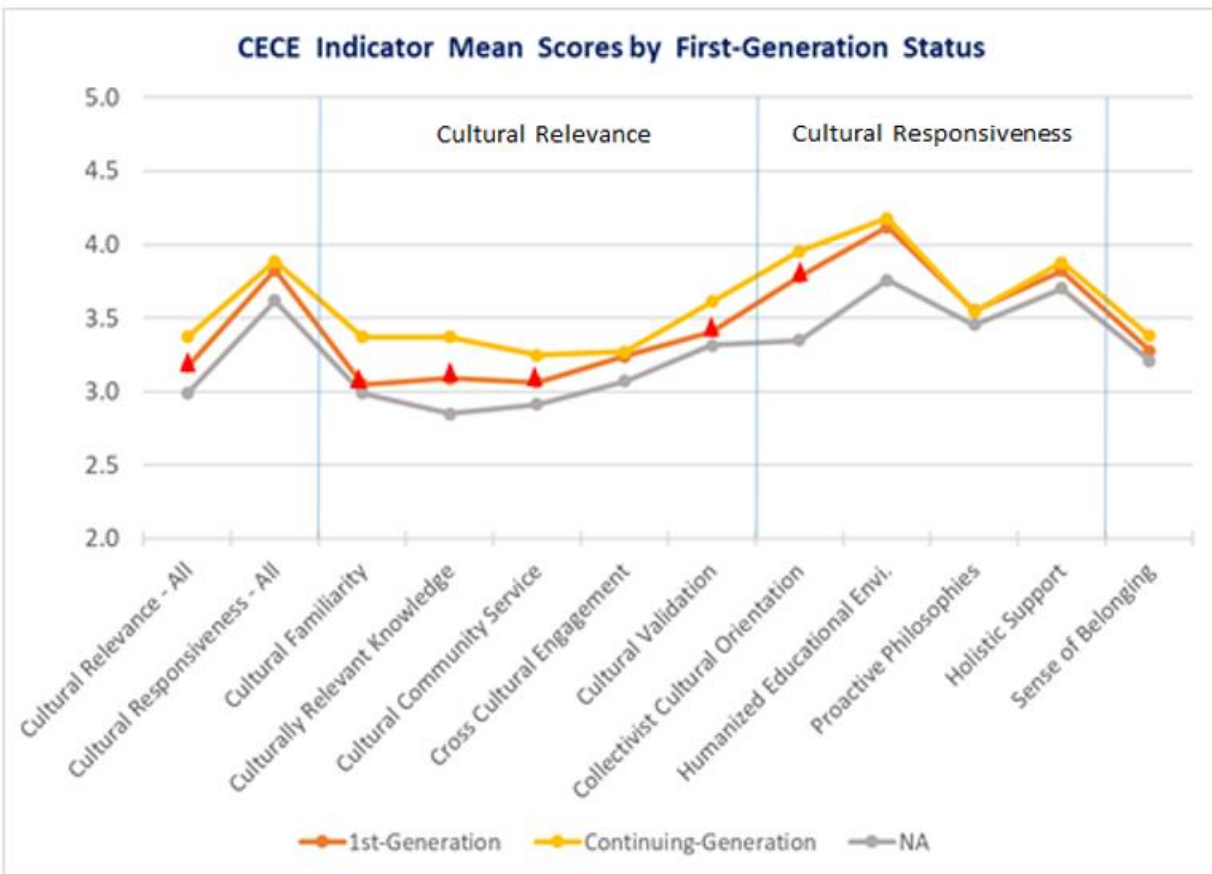
Total participants with scores: N=973



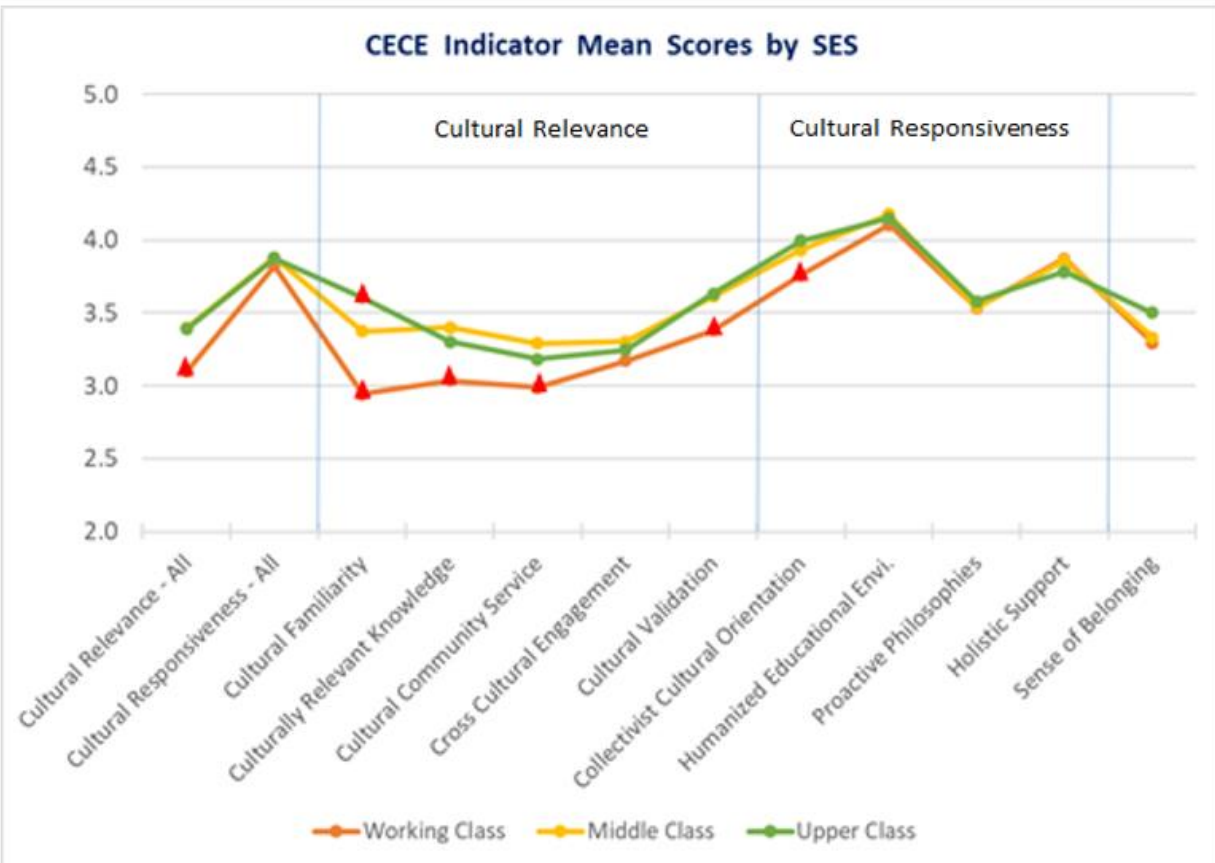
- The **women** (n=620) had a significantly higher score on Cultural Familiarity and Collectivist Cultural Orientation than the **men** (n=287).
- **The 3rd group** (including Non-Binary, Agender, Genderqueer, Gender Fluid: n=39) had a significantly lower score than the women and the men on:
  - Cultural Relevance – All
  - Cultural Familiarity
  - Culturally Relevant Knowledge
  - Cross Cultural Engagement
  - Cultural Validation
- The **transgender** group (n=5) had a significantly lower score on Cultural Familiarity Cultural Community Service, and Cultural Validation, and a significantly higher score on Proactive Philosophies.



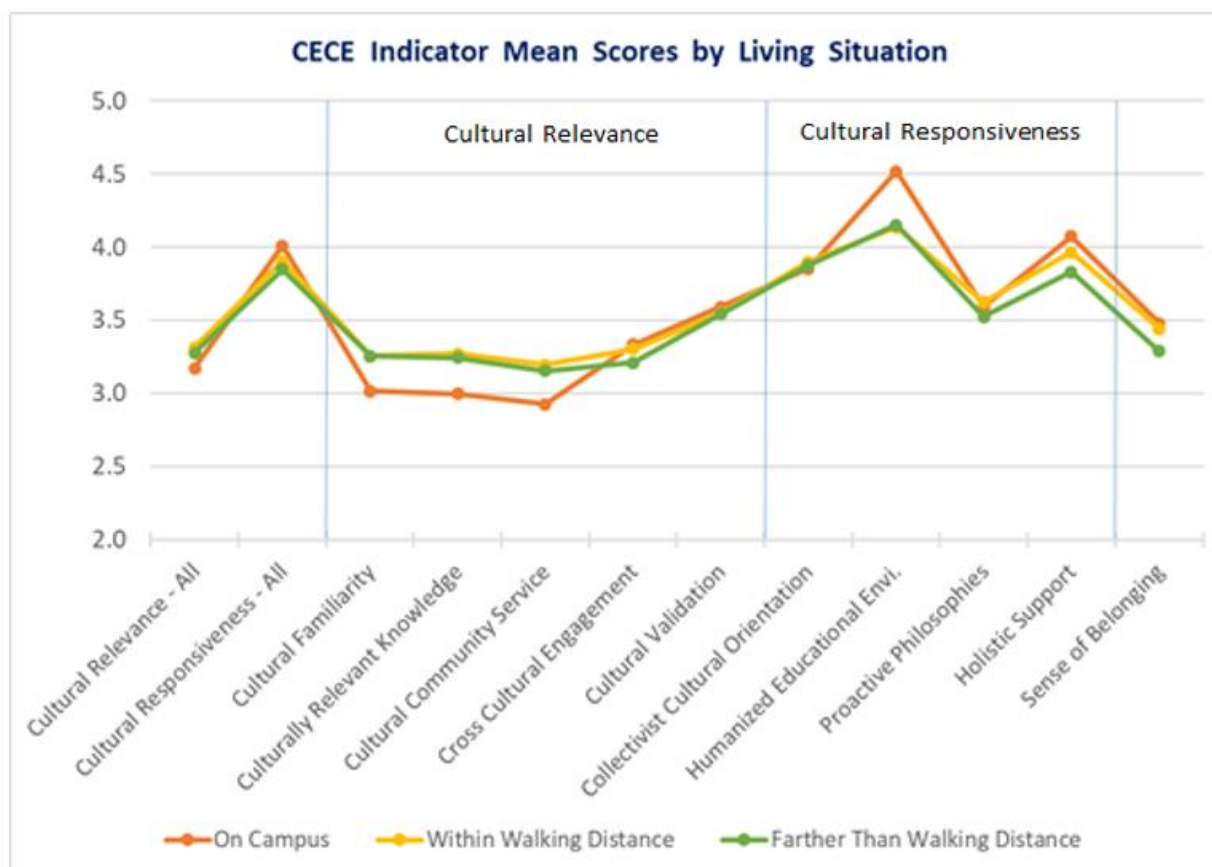
- The **students of color** (n=359) had a significantly lower score than the white students (n=583) on:
  - All 5 Cultural Relevance indicators
  - Collectivist Cultural Orientation



- The **first-generation** students (n=313) had a significantly lower score than the continuing-generation students (n=641) on:
  - 4 of the 5 Cultural Relevance indicators (except Cross Cultural Engagement)
  - Collectivist Cultural Orientation
- The 19 students **who did not provide their parents' education information** had a lower score on all indicators.

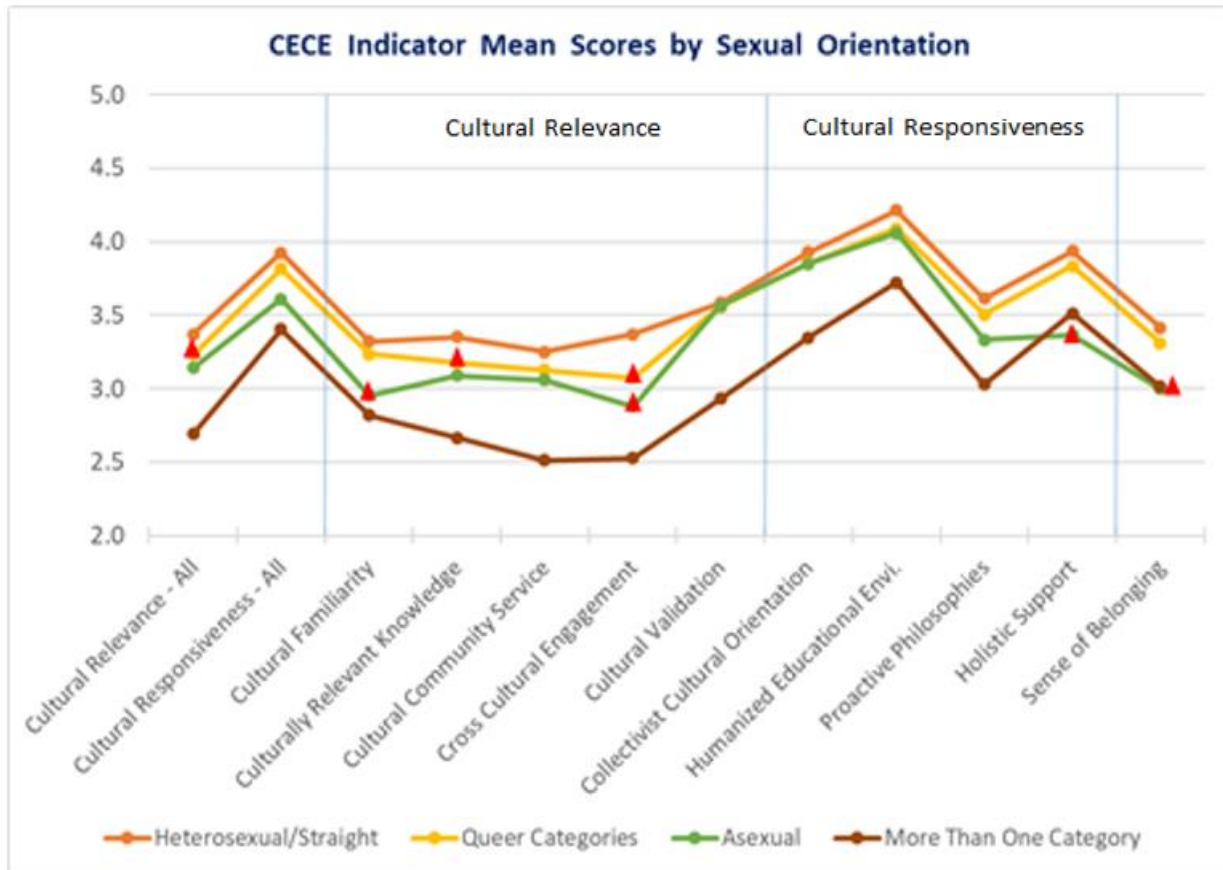


- The students from the **working class** (n=318) had a significantly lower score than the students from the **middle and upper** classes (n=650) on:
  - 4 of the 5 Cultural Relevance indicators (except Cross Cultural Engagement)
  - Collectivist Cultural Orientation
- The students from the **upper class** (n=111) had a significantly higher score only on Cultural Familiarity than the students from the **middle** class (n=539).



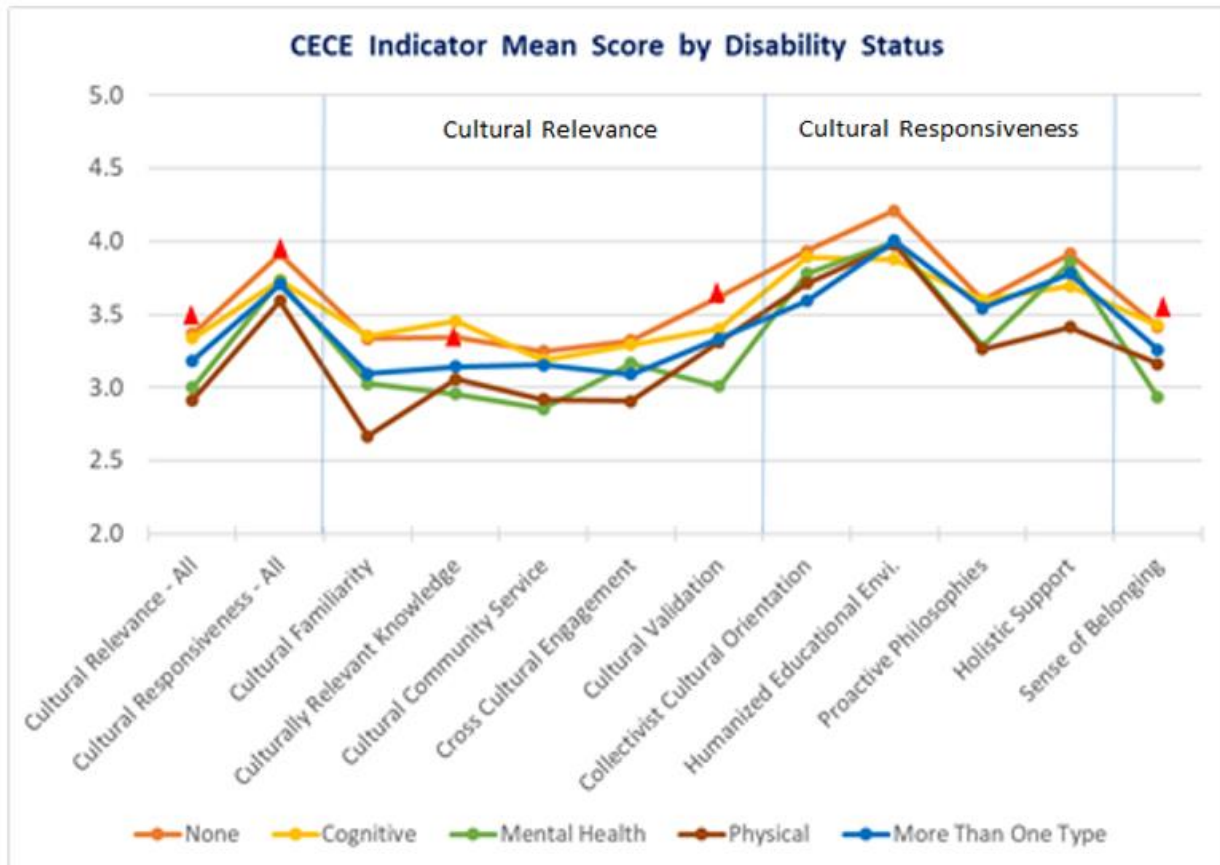
- No significant difference in the CECE scores existed among the **three groups** by living situation.
  - On Campus: n=9
  - Within Walking Distance to Campus: n=193
  - Farther Than Walking Distance to Campus: n=625



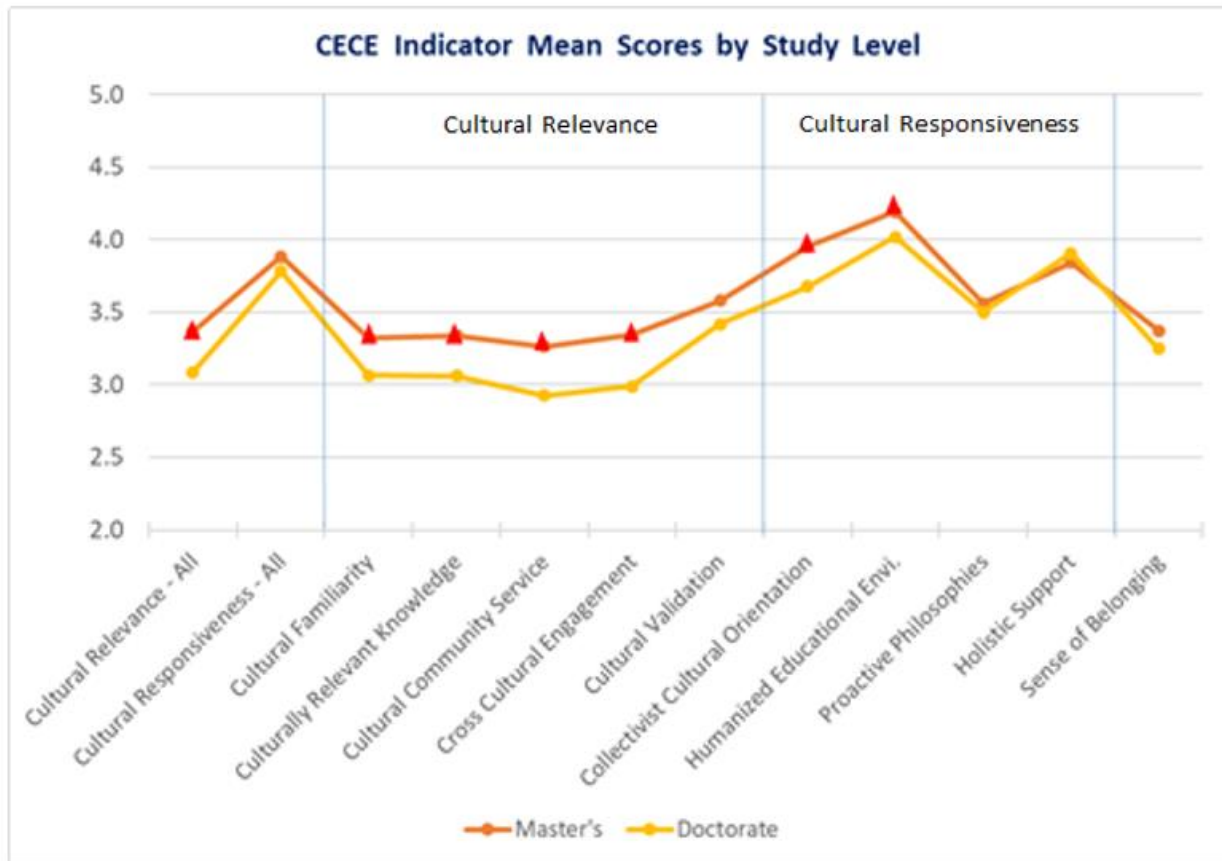


- Compared to the **heterosexual or straight sexual** group (n=654), the group in the **queer categories** (queer, bisexual, pansexual, demisexual, gay, lesbian: n=235) had a significantly lower score on Cultural Relevance – All, Culturally Relevant Knowledge, and Cross Cultural Engagement.
- The group with an **asexual** orientation (n=11) had an obviously lower score on many indicators, especially on Cultural Familiarity, Cross Cultural Engagement, Holistic Support, and Sense of Belonging.
- The group with **more than one category of sexual orientation** (n=24) had a significantly lower score on all indicators.
- *Note:* 49 students didn't indicate their sexual orientation.





- The **group without a disability** (n=749) had a significantly higher score than the **students with a disability** (n=157) on Cultural Relevance / Responsiveness – All, Cultural Familiarity, Culturally Relevant Knowledge, Cultural Validation, and Sense of Belonging.
- The students with a **cognitive or learning disability** (n=25) had a higher score on most indicators than the students with other disabilities.
- The students with a **mental health disorder** (n=44) and the students with a **physical disability** (n=29) had a significantly lower score on many indicators
- **Students with more than one disability:** n=59
- *Note:* 67 students didn't indicate their disability status.



- The students at a **master's** program (n=735) had a significantly higher score than the **doctoral** students (n=238) on many indicators:
  - Cultural Relevance – All
  - 4 of the 5 Cultural Relevance indicators (except Cultural Validation)
  - Collectivist Cultural Orientation
  - Humanized Educational Environment

## Implications of COVID-19 Restrictions

It is important to acknowledge that the CECE survey was administered in November and December 2020 amidst ongoing restrictions to student contact as a result of the COVID-19 virus. As such, participants were given an opportunity to respond to a survey item asking about how they were impacted by the COVID-19 restrictions. The following section includes a detailed summary of each of the themes that were identified among two groups: Students of Color and White Students.

### Common Themes Across Groups

**Missed Community and Networking:** The most prevalent theme amidst all of the written responses includes indications of missed opportunities to engage in social and academic communities and in opportunities to network. Some examples of this theme are included in the following response quotations:

*“COVID has made it more difficult to connect with peers and share community space.”*

*“Virtual learning has prevented me from engaging in any sort of community in my graduate program. I am also unable to network in professional development spaces such as conferences in the way that I might have in-person.”*

**Online Learning and Pedagogy Shift:** Another common theme in the responses included feedback about how students experienced an expected shift into online learning spaces. For students otherwise engaged in in-person learning, the shift brought about disappointment and difficulty navigating expectations, procedures, and pedagogy. Some examples of this theme are included in the following response quotations:

*“[Students] are zoomed out and do not want to attend virtual gatherings/events. This includes me. Even if there are opportunities for graduate students to socialize, I will not get involved if it is virtual.”*

*“Online learning is not the best. Some professors more prepared than others.”*

**Missed Academic Requirements:** Another pressing theme among both groups includes concerns about missing or delaying courses or activities that fulfill academic requirements thereby delaying their projected degree completion dates or resulting in a different research or academic experience than expected. Some examples of this theme include:

*“I haven't been able to go collect preliminary data for research due to Covid. I fear my graduation time by delay as result.”*

*“It caused me to abandon my original thesis project and begin a new one halfway through my program.”*

**Financial Implications:** A number of students described the financial implications that COVID-19 and restrictions brought about. These were usually accounts of being negatively impacted in ways that students were having to reduce their engagement in their educational efforts. Some students also indicated concerns with paying the same amount in tuition in fees despite having a remote experience.

*“I did struggle to focus when I got the notification of being laid off from work since I had to figure out how I will be paying for school from now on.”*

*“I left an online MBA program that was half the price to be in the classroom at DU because I felt like I would learn better, but I'm basically getting an online MBA now (5/7 quarters will be online).”*

**Isolation:**

*“Social isolation has influenced a decrease in quality of life and motivation. It excluded me from feeling a part of the school even more.”*

### **Implications for the University of Denver**

Results from both the undergraduate and graduate CECE surveys illustrate that there is a relationship between student identities and student experiences of cultural engagement and belonging. Specifically, students with marginalized or non-dominant identities tend to select lower ratings on CECE indicators as well as measures of belonging. Regression analyses also confirmed that CECE indicators predict each other in powerful ways. As the COVID-19 restrictions may have deepened the stratification in data, the results from the 2020 CECE administration are critical in informing how we as an institution must address student engagement, especially as we transition back to campus.

### **Relationships of CECE Indicators, Students' Motivation, Satisfaction, and Success: Findings from correlation and multiple regression analyses**

#### **Findings Among Undergraduate Participants**

- The cultural relevance and the cultural responsiveness (measured by the mean scores of their sub-indicators) highly affected the undergraduates' sense of belonging ( $r = 0.63$  and  $0.61$ ) and satisfaction ( $r = 0.54$  and  $0.61$ ) at the university. See Table 1 and Figure 1.
- The cultural relevance and the cultural responsiveness moderately affected the undergraduates' success ( $r = 0.35$  and  $0.44$ ) at the university.
- The cultural relevance and the cultural responsiveness were positively related to the undergraduates' motivation ( $r = 0.20$  and  $0.33$ ), which significantly impacted the students' satisfaction and success ( $r = 0.66$  and  $0.42$ ).
- A multiple regression analysis indicated that in total, the four factors (cultural relevance, cultural responsiveness, sense of belonging, and motivation) account for the

undergraduates' 51.4% of the variance in satisfaction and 30.3% of the variance in success during studying at the university.

- Moreover, undergraduates who encountered *more* culturally engaging campus environments were more likely to (1) commit to their college study ( $r = 0.27$  and  $0.36$ ) and show higher levels of academic performance ( $r = 0.18$  and  $0.27$ ); and (2) identify a positive impact on their cultural communities and on a larger society ( $r = 0.18 - 0.37$ ).

Table 1. Correlations (r) Among CECE Indicators and Other Measures of Belonging, Motivation, and Success: N = 569 – 593 undergraduates

| CECE Indicator          | Cultural Relevance | Cultural Responsiveness | Sense of Belonging | Motivation | College Learning | Strong Grades | Commit Community | Commit Society | Satisfaction | Success |
|-------------------------|--------------------|-------------------------|--------------------|------------|------------------|---------------|------------------|----------------|--------------|---------|
| Cultural Relevance      | 1.00               | 0.61                    | 0.63               | 0.20       | 0.18             | 0.27          | 0.18             | 0.23           | 0.54         | 0.35    |
| Cultural Responsiveness |                    | 1.00                    | 0.61               | 0.33       | 0.27             | 0.36          | 0.34             | 0.37           | 0.61         | 0.43    |
| Sense of Belonging      |                    |                         | 1.00               | 0.28       | 0.22             | 0.29          | 0.30             | 0.33           | 0.66         | 0.42    |
| Motivation              |                    |                         |                    | 1.00       | 0.76             | 0.69          | 0.45             | 0.45           | 0.34         | 0.42    |
| College Learning        |                    |                         |                    |            | 1.00             | 0.64          | 0.49             | 0.54           | 0.39         | 0.44    |
| Strong Grades           |                    |                         |                    |            |                  | 1.00          | 0.43             | 0.44           | 0.28         | 0.38    |
| Commit Community        |                    |                         |                    |            |                  |               | 1.00             | 0.81           | 0.35         | 0.38    |
| Commit Society          |                    |                         |                    |            |                  |               |                  | 1.00           | 0.34         | 0.37    |
| Satisfaction            |                    |                         |                    |            |                  |               |                  |                | 1.00         | 0.48    |
| Success                 |                    |                         |                    |            |                  |               |                  |                |              | 1.00    |

Note:

| Correlation Coefficient r | Strength of Correlation |
|---------------------------|-------------------------|
| $r \geq 0.5$              | Strong                  |
| $0.3 \leq r < 0.5$        | Moderate                |
| $r < 0.3$                 | Weak                    |

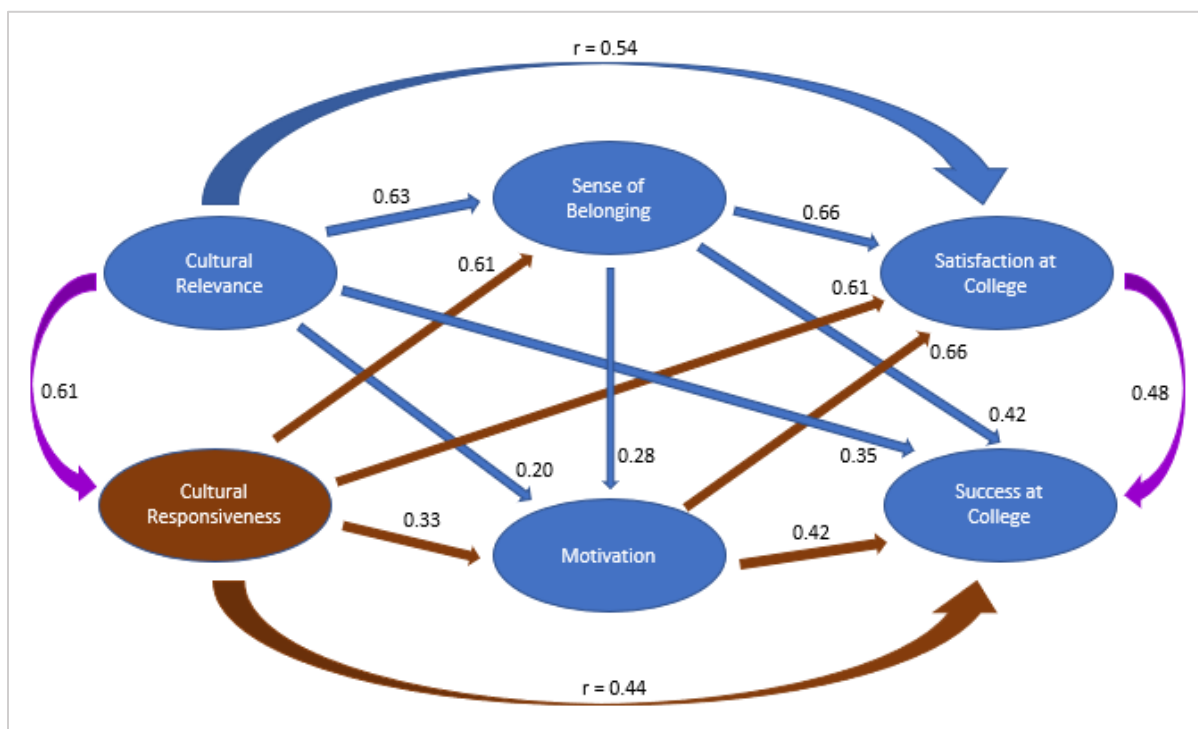


Figure 1. Correlations (r) Among CECE Indicators and Other Measures of Belonging, Motivation, and Success: N = 569 – 593 undergraduates

### Findings Among Graduate Participates

- The cultural relevance and the cultural responsiveness (measured by the mean scores of their sub-indicators) highly affected the graduates' sense of belonging ( $r = 0.58$  and  $0.75$ ) and satisfaction ( $r = 0.55$  and  $0.61$ ) at the graduate schools. See Table 2 and Figure 2.
- The cultural relevance and the cultural responsiveness moderately affected the graduates' success ( $r = 0.35$  and  $0.41$ ) at the graduate schools.
- The cultural relevance and the cultural responsiveness were positively related to the graduates' motivation ( $r = 0.25$  and  $0.28$ ), which moderately impacted the students' satisfaction and success at the graduate programs ( $r = 0.66$  and  $0.42$ ).
- A multiple regression analysis indicated that in total, the four factors (cultural relevance, cultural responsiveness, sense of belonging, and motivation) account for the graduates' 49% of the variance in satisfaction and 26% of the variance in success during studying at the graduate programs.
- Moreover, graduates who encountered more culturally engaging campus environments were more likely to (1) improve their ability to analyze and solve complex problems ( $r = 0.21 - 0.29$ ); (2) commit to their graduate study ( $r = 0.29$  and  $0.33$ ) and show higher levels of academic performance ( $r = 0.25$  and  $0.24$ ); and (3) exhibit a positive impact on their cultural communities and on a larger society ( $r = 0.32 - 0.33$ ).

Table 2. Correlations (r) Among CECE Indicators and Other Measures of Belonging, Motivation, and Success: N = 934 – 973 graduates

| CECE Indicator          | Cultural Relevance | Cultural Responsiveness | Sense of Belonging | Motivation | Analysis Ability | Problem Solving Ability | Graduate Learning | Strong Grades | Commit Community | Commit Society | Satisfaction | Success |
|-------------------------|--------------------|-------------------------|--------------------|------------|------------------|-------------------------|-------------------|---------------|------------------|----------------|--------------|---------|
| Cultural Relevance      | 1.00               | 0.64                    | 0.58               | 0.25       | 0.21             | 0.23                    | 0.29              | 0.25          | 0.32             | 0.32           | 0.55         | 0.35    |
| Cultural Responsiveness |                    | 1.00                    | 0.75               | 0.28       | 0.29             | 0.29                    | 0.33              | 0.24          | 0.32             | 0.33           | 0.61         | 0.41    |
| Sense of Belonging      |                    |                         | 1.00               | 0.27       | 0.33             | 0.33                    | 0.30              | 0.25          | 0.29             | 0.32           | 0.63         | 0.44    |
| Motivation              |                    |                         |                    | 1.00       | 0.27             | 0.31                    | 0.76              | 0.84          | 0.53             | 0.53           | 0.37         | 0.35    |
| Analysis Ability        |                    |                         |                    |            | 1.00             | 0.76                    | 0.32              | 0.24          | 0.28             | 0.31           | 0.29         | 0.50    |
| Problem Solving Ability |                    |                         |                    |            |                  | 1.00                    | 0.32              | 0.29          | 0.31             | 0.33           | 0.27         | 0.52    |
| Graduate Learning       |                    |                         |                    |            |                  |                         | 1.00              | 0.75          | 0.60             | 0.63           | 0.40         | 0.41    |
| Strong Grades           |                    |                         |                    |            |                  |                         |                   | 1.00          | 0.52             | 0.52           | 0.33         | 0.39    |
| Commit Community        |                    |                         |                    |            |                  |                         |                   |               | 1.00             | 0.86           | 0.30         | 0.36    |
| Commit Society          |                    |                         |                    |            |                  |                         |                   |               |                  | 1.00           | 0.34         | 0.40    |
| Satisfaction            |                    |                         |                    |            |                  |                         |                   |               |                  |                | 1.00         | 0.46    |
| Success                 |                    |                         |                    |            |                  |                         |                   |               |                  |                |              | 1.00    |

Note:

| Correlation Coefficient r | Strength of Correlation |
|---------------------------|-------------------------|
| $r \geq 0.5$              | Strong                  |
| $0.3 \leq r < 0.5$        | Moderate                |
| $r < 0.3$                 | Weak                    |

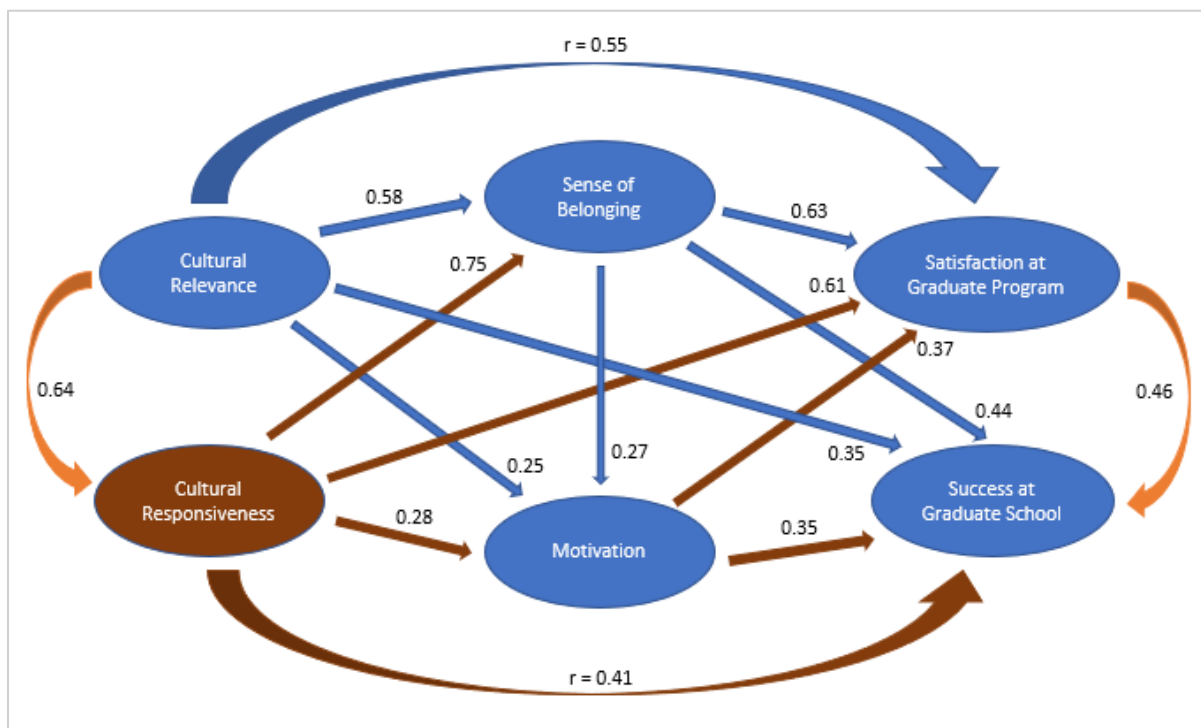


Figure 2. Correlations (r) Among CECE Indicators and Other Measures of Belonging, Motivation, and Success: N = 934 – 973 graduates