# Salisbury University Global Perspective Inventory Second Language or Culture Assessment Report, Fall 2015

This report, authored by SU office of University Analysis, Reporting & Assessment (UARA) staff, discusses Second Language or Culture-related survey data collected during fall 2015 GULL Week sessions.

## Executive Summary

### Background and Findings

1. Faculty and UARA staff agreed that the Global Perspective Inventory (GPI) General Form is aligned with Second Language or Culture General Education student learning outcomes.
2. The GPI instrument has 35 Likert-type items with 6 scale scores. There are also National norm values which can be used for comparison, but raw data are not available for those and therefore statistical analysis is not possible between SU and National norm data.
3. The results of our administration of the GPI instrument supported its validity and reliability:
   a. GPI scores demonstrated validity:
      i. <u>Content Validity</u>: student and expert review of items and subsequent revision of the item pool
      ii. <u>Scale Validity</u>: Classical Test Theory (CTT) scale analysis via exploratory factor analyses, which resulted in a six factor solution; confirmatory factor analysis with SU data supported the six factor solution
      iii. <u>Criterion and Construct Validity</u>: when students had an intervention (e.g., study abroad experience) related to the GPI measure, they had subsequent gains on the scale scores of the GPI
   b. GPI scale scores demonstrated reliability or approached reliability ($\alpha \sim .7$) in either the initial study and/or in this SU administration
4. In general, the demographics of the students that took the GPI instrument were similar to the non-test-takers, but due to the nature of the GULL Week sampling method there were groups that were not well represented.
5. In general, SU students' average scores on the GPI scales were similar to the national averages. Unfortunately, we cannot perform statistical tests to evaluate if there are significant differences between SU and National norm groups' scale scores.

### Action Items

1. Consider the need to determine unacceptable/acceptable "agreement" levels for each of the GPI scales and/or consider the use of the values from this GPI administration to be the benchmark values to which any subsequent GPI administration's scores will be compared.
2. Consider the use of pre- and post-testing or longitudinal studies with the GPI, for future testing, to better evaluate changes in "agreement" levels for each of the GPI scales.
3. Evaluate the need to revise the current SU Second Language or Culture General Education student learning outcomes.
4. Faculty, General Education Steering Committee, and other relevant parties should consider whether or not the GPI instrument is aligned well with current (or revised) Second Language or

Culture General Education student learning outcomes. If it is not aligned, then an alternative assessment that is aligned should be identified.

5. Consider results from the assessment to develop interventions or review and update curriculum to align with areas that need improvement.
6. Determine a timeline to re-collect assessment data related to Second Language or Culture General Education student learning outcomes.
7. Increase student participation in future GULL Weeks, to increase the likelihood of participant samples that are representative of the entire SU student population, via competitions and marketing to both students as well as faculty that might offer course-embedded incentives for their students that participate.

## Contents

## Detailed Second Language or Culture Report

### GPI Instrument

The GPI General Student Form (Version 9) assessment is a 35 Likert-type item instrument with additional related demographic questions. See the form and its items' alignment with dimensions and scales identified in the instrument in Appendix 1. Details about the instrument can be found at the GPI website (GPI Home 2015-2017; http://www.gpi.hs.iastate.edu/). The Research Institutes for Studies in Education (2017) described the GPI's 3 dimensions (bold) and 6 scales (italicized):

> **Cognitive domain.** Cognitive development focuses on knowledge and epistemology (i.e., understanding what is true and important to know). It includes viewing knowledge and knowing (i.e., epistemology) with greater complexity and taking into account multiple cultural perspectives. Through the cognitive development process, one's reliance on authorities to have absolute truth gives way to relativism when making commitments within the context of uncertainty. The two scales are:
> - *Knowing*. recognizing the importance of cultural context in judging what is important to know and value
> - *Knowledge*. understanding and awareness of various cultures and their impact on society
>
> **Intrapersonal domain.** Intrapersonal development focuses on becoming more aware of and integrating personal values and self-identity into one's personhood. Intrapersonal development culminates in a sense of self-direction and purpose in life; becoming more self-aware of strengths, values, and personal characteristics; and viewing development in terms of one's self-identity. As one develops a confident self-identity, one incorporates different—and often conflicting—ideas about them self within an increasingly multicultural world. The two scales are:
> - *Identity*. being aware of and accepting one's identity and sense of purpose
> - *Affect*. respecting and accepting cultural differences and being emotional[ly] aware
>
> **Interpersonal domain.** Interpersonal development is centered on one's willingness to interact with others who have different social norms and or come from different cultural backgrounds. It also focuses on the willingness to accept of others and be comfortable when relating to others. Interpersonal development includes being able to view others differently, seeing one's own uniqueness, and relating to others moving from dependency to independence to interdependence, which is a paradoxical merger. The two scales are:
> - *Social Responsibility*. being interdependent and having social concern for others
> - *Social Interactions*. engaging with others who are different and being culturally sensitive

Faculty and UARA staff agreed that the GPI instrument is aligned with the General Education Second Language or Culture Area and student learning outcomes (Table 1).

**Table 1.** The SU General Education student learning goal, outcomes, and area mapping related to Second Language or Culture.

| Student Learning Goal | Outcome | Area Mapping |
|---|---|---|
| 2.1e. Second Language or Culture | 2.1e.1. Describe intercultural similarities and differences. | IIA |
| | 2.1e.2. Identify the global interconnections between linguistic or cultural differences. | IIA |
| | 2.1e.3. Describe diverse aspects of society and how they impact social and individual behavior. | IIA |
| | 2.1e.4. Demonstrate broad knowledge of the implications and importance of human diversity. | IIA |

Related to Second Language or Culture, results from this instrument can: provide a benchmark of student outcomes at SU; inform instructional efficacy and possible interventions; evaluate curricular strengths and weaknesses; and continuously improve student outcomes if we use this instrument for future GULL Week administrations.

## Methodology and Sample

Data were collected from volunteer students at SU that self-selected and signed up to participate in various Gaining Understanding as a Lifelong Learner (GULL) Week testing sessions during a week in September, 2015. GULL Week sessions were open to the entire SU undergraduate student population. The assessments were administered in a proctored computer lab setting and lasted approximately one hour, of which ~20 minutes was dedicated to the GPI instrument administration, ~25 minutes was dedicated to a different assessment aligned with a separate General Education Area, and ~5 minutes were used for a Student Opinion Scale (SOS) Survey (Appendix 2; Sundre & Thelk 2007). The SOS Survey estimates the GULL Week participant's perceived importance of the assessment and effort expended by the participant in completing the assessment (i.e., the GPI instrument).

Some faculty offered incentives (such as extra credit) to participating students, some mentioned GULL Week and encouraged students to participate, and some did not interact with students about GULL Week. The office of University Analysis, Reporting & Assessment (UARA) publicized GULL Week across campus via many avenues. Particularly, competitions between both Schools and Sororities & Fraternities were set up to improve participation.

In all, n = 1359 undergraduates participated in fall 2015 GULL Week and of those, n = 571 students completed the GPI instrument (17.3% and 7.3% of total SU fall 2015 undergraduate enrollment (n = 7849), respectively). Demographic analyses of the non-GPI test-takers (n = 7278; 92.7%) were compared to the test-takers that completed GPI to evaluate the extent to which the sample of test-takers was representative of the entire SU undergraduate population during fall 2015. Further analyses within the test-takers were performed to evaluate the validity and reliability of the instrument administration at SU as well as to determine whether or not scores on the instrument varied by student characteristics. The students with data for both GPI and the SOS Survey were analyzed to evaluate student responses on those scales.

Results

Demographic Comparison of Test-takers vs. Non-test-takers

In general, the demographics of the students who took the GPI instrument were similar to the non-test-takers (Tables 2-7; lack of significance annotations). However, female test-takers (Table 3), SU native first time students (Table 4), and juniors (Table 5) were disproportionately high and in two cases of student success metrics (i.e., High School GPA and SU Cumulative GPA), the test-takers of the GPI instrument were significantly more successful than the non-test-takers (Table 7). Although it should be considered that another set of success metrics (i.e., SAT total, SAT math, and SAT verbal scores) did not reveal any significant differences between the two groups. Although the unclassified non-degree undergraduates (Table 5) and undeclared (in terms of major) students (Table 6) as groups are not large groups at SU in general, they were disproportionately low in the GPI participant sample. Therefore, the sample of GPI test-takers was fairly representative of the entire SU undergraduate population during fall 2015. In the future, efforts to publicize GULL Week should be targeted more directly to males, transfer students, seniors and unclassified non-degree undergraduates, undeclared students, and those that represent the less successful students (in terms of GPA) as well as continuing previous publicity efforts to ensure even further representative sampling.

**Table 2.** Student Race/Ethnicity Compared between the GPI Test-takers, Non-test-takers and All SU Undergraduates

| Race/Ethnicity | Test-taker | Non-test-taker | Total |
|---|---|---|---|
| **African American** | 81 (14.2%) | 972 (13.4%) | 1053 (13.4%) |
| **American Indian/ Alaska Native** | 0 (0%) | 42 (0.6%) | 42 (0.5%) |
| **Asian** | 20 (3.5%) | 215 (3.0%) | 235 (3.0%) |
| **Caucasian** | 386 (67.6%) | 5120 (70.3%) | 5506 (70.1%) |
| **Hispanic** | 24 (4.2%) | 299 (4.1%) | 323 (4.1%) |
| **Native Hawaiian/ Pacific Islander** | 2 (0.4%) | 9 (0.1%) | 11 (0.1%) |
| **Non-resident Alien** | 9 (1.6%) | 129 (1.8%) | 138 (1.8%) |
| **Two or more races** | 26 (4.6%) | 256 (3.5%) | 282 (3.6%) |
| **Unknown/ Not specified** | 23 (4.0%) | 236 (3.2%) | 259 (3.3%) |
| **Total** | 571 (100.0%) | 7278 (100.0%) | 7849 (100.0%) |

*Note.* Cell values are counts with percentages reported parenthetically.

**Table 3.** Student Gender Compared between the GPI Test-takers, Non-test-takers and All SU Undergraduates

| Gender (code) | Test-taker | Non-test-taker | Total |
|---|---|---|---|
| **Male** (1) | 165 (28.9%)* | 3206 (44.1%)* | 3371 (43.0%) |
| **Female** (2) | 406 (71.1%)* | 4067 (55.9%)* | 4473 (57.0%) |
| **Total** | 571 (100.0%) | 7273 (100.0%) | 7844 (100.0%) |

*Notes.* Cell values are counts with percentages reported parenthetically. Significant difference of participation categories between test-takers' and non-test-takers' proportions are indicated by an asterisk (*), p ≤ .05.

**Table 4.** Student Admit Type, to SU, Compared between the GPI Test-takers, Non-test-takers and All SU Undergraduates

| SU Admit Type (code) | Test-taker | Non-test-taker | Total |
|---|---|---|---|
| **First time student** (F) | 400 (70.5%)* | 4305 (61.1%)* | 4705 (61.8%) |
| **Transfer** (T + U) | 167 (29.5%)* | 2736 (38.9%)* | 2903 (38.2%) |
| **Total** | 567 (100.0%) | 7041 (100.0%) | 7608 (100.0%) |

*Notes.* Cell values are counts with percentages reported parenthetically. Significant difference of participation categories between test-takers' and non-test-takers' proportions are indicated by an asterisk (*), p ≤ .05.

**Table 5.** Student Undergraduate Class Level Compared between the GPI Test-takers, Non-test-takers and All SU Undergraduates

| Class Level (code) | Test-taker | Non-test-taker | Total |
|---|---|---|---|
| **Freshmen** (1) | 127 (22.2%) | 1468 (20.2%) | 1595 (20.3%) |
| **Sophomores** (2) | 135 (23.6%) | 1549 (21.3%) | 1684 (21.5%) |
| **Juniors** (3) | 176 (30.8%) | 1951 (26.8%) | 2127 (27.1%) |
| **Seniors (and +)** (4) | 125 (21.9%)* | 1957 (26.9%)* | 2082 (26.5%) |
| **Unclassified non-degree undergrads** (7) | 8 (1.4%)* | 353 (4.9%)* | 361 (4.6%) |
| **Total** | 571 (100.0%) | 7278 (100.0%) | 7849 (100.0%) |

*Notes.* Cell values are counts with percentages reported parenthetically. Significant difference of participation categories between test-takers' and non-test-takers' proportions are indicated by an asterisk (*), p ≤ .05.

**Table 6.** Student School Enrollment Compared between the GPI Test-takers, Non-test-takers and All SU Undergraduates

| School | Test-taker | Non-test-taker | Total |
|---|---|---|---|
| **Fulton** | 144 (25.2%) | 1858 (25.5%) | 2002 (25.5%) |
| **Henson** | 161 (28.2%) | 1881 (25.8%) | 2042 (26.0%) |
| **Perdue** | 130 (22.8%) | 1494 (20.5%) | 1624 (20.7%) |
| **Seidel** | 119 (20.8%) | 1566 (21.5%) | 1685 (21.5%) |
| **Undeclared** | 17 (3.0%)* | 479 (6.6%)* | 496 (6.3%) |
| **Total** | 571 (100.0%) | 7278 (100.0%) | 7849 (100.0%) |

***Notes.*** Cell values are counts with percentages reported parenthetically. Significant difference of participation categories between test-takers' and non-test-takers' proportions are indicated by an asterisk (*), p ≤ .05.

**Table 7.** Student Success Metrics compared between GPI Test-takers and Non-test-takers

| Success Metric | Test-taker | | Non-test-taker | |
|---|---|---|---|---|
| | n | Avg (SD) | n | Avg (SD) |
| **High School GPA** | 233 | 3.62 (.47)* | 2900 | 3.55 (.48)* |
| **SAT Verbal** | 392 | 527 (76) | 4474 | 529 (76) |
| **SAT Math** | 392 | 541 (81) | 4475 | 536 (78) |
| **SAT Cumulative** | 392 | 1068 (144) | 4474 | 1066 (134) |
| **SU Cumulative GPA** | 410 | 3.17 (.54)** | 5327 | 2.97 (.62)** |

***Notes.*** Cell values are sample sizes (n) or averages with standard deviation reported parenthetically. Significant difference of participation categories between test-takers' and non-test-takers' average values are indicated by an asterisk (*), p ≤ .05, or two (**), p ≤ .001.

## Validity and Reliability of the GPI Instrument Administration at SU

The results of our administration of the 35-item GPI instrument supported its validity and reliability. Much of the validity of the GPI instrument was described in Braskamp *et al*. (2014).  Content validity was achieved via the steps of student and expert review of items and subsequent revision of the item pool. Criterion and construct validity of the instrument was supported based on the fact that when students had an intervention related to the GPI measure (e.g., study abroad experiences) they had subsequent gains on the scale scores of the GPI. Scale validity of the instrument was evaluated with Classical Test Theory (CTT) scale analysis via exploratory factor analyses of 9773 responses to the 2012-2013 GPI General Form. The six factor solution of both the conservative orthogonal (Promax) as well as the oblique (Varimax) analyses supported the GPI scales.

Based on the SU student responses in fall 2015, criterion and construct validity was supported for two of the GPI scales. For both the Cognitive Knowing and Interpersonal Social Interaction scales, on average, students that participated in at least one study abroad experience prior to taking the GPI in fall 2015 had significantly higher scores than students that had not participated in a study abroad experience (Table 8). On average, there was no significant difference (p > .05) between the groups of students that had and not had a study abroad experience for the other four GPI scales.

**Table 8.** GPI Scales in which Test-takers' groups, based upon characteristic of participation in a study abroad experience, were significantly different

| Scale | "No Study Abroad" | | "Study Abroad" | |
|---|---|---|---|---|
| | n | Avg (SD) | n | Avg (SD) |
| **Cognitive Knowing\*** | 543 | 3.47 (.50) | 29 | 3.73 (.53) |
| **Interpersonal Social Interaction\*** | 543 | 3.35 (.68) | 29 | 3.70 (.67) |

***Notes.*** Cell values are sample sizes (n) or averages with standard deviation reported parenthetically. Significant difference of average values of scale scores by groups defined as having had or had not participated in a study abroad experience are indicated by an asterisk (\*), p < .05.

Also based on the SU student responses in fall 2015, scale validity was supported. We evaluated whether or not the six scales in the 35-item instrument were supported with a 6 factor confirmatory factor analysis with Varimax rotation, as was described in the methods of Braskamp *et al*. (2014). In accordance with the original analysis by Braskamp *et al*. (2014) we removed three items that were not aligned with any GPI scale (10, 11, and 15; Appendix 1 Table 1) as well as two items, 16 and 19, that were "forced into [the Cognitive Knowing] factor based on conceptual underpinnings of [the Cognitive Knowing] scale and not included in the factor analysis." The subsequent results based on the fall 2015 SU GPI student response data supported the factor structure and item alignment most favorably with all factor loading values >.300 (Table 9). In several instances an item had a primary, with the higher loading value, as well as secondary loadings >.300. In every instance except one (item 28) the primary loading aligned the item with the "correct" GPI scale. From this analysis, it was also determined that sampling size (n = 571) was sufficient via the Kaiser-Meyer-Olin (KMO) test of sampling adequacy. The KMO value of .850 was well above standards for acceptable sampling, which is typically ≥ .7 (Kaiser 1974).

**Table 9.** Factor loadings and reliability analysis values, Cronbach's alpha (α), for GPI scales (n = 571)

| Item | Cognitive Knowing | Cognitive Knowledge | Intrapersonal Identity | Intrapersonal Affect | Interpersonal Social Responsibility | Interpersonal Social Interaction |
|---|---|---|---|---|---|---|
| *α (items in scale)* | .535\* (7) | .744 (5) | .731 (6) | .689 (5) | .685 (5) | .645 (4) |
| **1**. When I notice cultural differences, my culture tends to have the better approach. (R) | .471 | | | | | |
| **6**. Some people have a culture and others do not. (R) | .483 | | | | | |
| **7**. In different settings what is right and wrong is simple to determine. (R) | .538 | | | | | |
| **20**. I rely primarily on authorities to determine what is true in the world. (R) | .730 | | | | | |
| **30**. I rarely question what I have been taught about the world around me. (R) | .663 | | | | | |
| **8**. I am informed of current issues that impact international relations. | | .601 | | | | |
| **13**. I understand the reasons and causes of conflict among nations of different cultures. | | .717 | | | | |

| Item | Cognitive Knowing | Cognitive Knowledge | Intrapersonal Identity | Intrapersonal Affect | Interpersonal Social Responsibility | Interpersonal Social Interaction |
|---|---|---|---|---|---|---|
| **17**. I understand how various cultures of this world interact socially. | | .615 | | | | |
| **21**. I know how to analyze the basic characteristics of a culture. | | .607 | | | | |
| **27**. I can discuss cultural differences from an informed perspective. | | .706 | | | | |
| **2**. I have a definite purpose in my life. | | | .726 | | .324 | |
| **3**. I can explain my personal values to people who are different from me. | | | .644 | | | |
| **9**. I know who I am as a person. | | | .709 | | | |
| **12**. I am willing to defend my own views when they differ from others. | | | .495 | | | |
| **18**. I put my beliefs into action by standing up for my principles. | | .333 | .512 | | | |
| **28**. I am developing a meaningful philosophy of life. | | .423 | .313 | | | |
| **22**. I am sensitive to those who are discriminated against. | | | | .470 | .332 | |
| **23**. I do not feel threatened emotionally when presented with multiple perspectives. | | | | .616 | | |
| **25**. I am accepting of people with different religious and spiritual traditions. | | | | .704 | | |
| **31**. I enjoy when my friends from other cultures teach me about our cultural differences. | | | | .575 | | |
| **33**. I am open to people who strive to live lives very different from my own life style. | | | | .674 | | |
| **5**. I think of life in terms of giving back to society. | | | | | .719 | |
| **14**. I work for the rights of others. | | .403 | | | .548 | |
| **26**. I put the needs of others above my own personal wants. | | | | .345 | .453 | |
| **32**. I consciously behave in terms of making a difference. | | | | .319 | .518 | |
| **34**. Volunteering is not an important priority in my life. (R) | | | | | .630 | |
| **4**. Most of my friends are from my own ethnic background. (R) | | | | | | .703 |
| **24**. I frequently interact with people from a race/ethnic group different from my own. | | | | .399 | | .558 |

| Item | Cognitive Knowing | Cognitive Knowledge | Intrapersonal Identity | Intrapersonal Affect | Interpersonal Social Responsibility | Interpersonal Social Interaction |
|---|---|---|---|---|---|---|
| **29**. I intentionally involve people from many cultural backgrounds in my life. | | .340 | | | | .507 |
| **35**. I frequently interact with people from a country different from my own. | | | | | | .693 |

*Notes.* **-**An asterisk denotes that all 7 items, including 16 and 19 which were excluded from the factor analysis, were included in the reliability analysis of this scale. When the reliability analysis was run without 16 and 19, the α value did not increase appreciably (α = .553).
-(R) denotes item and scale averages were calculated after reverse scoring of certain items.
-All items were measured on a five-point Likert-type scale that ranged from 5 (strongly agree) to 1 (strongly disagree).
-A six factor solution confirmatory factor analysis of items in the inventory was performed using a principal component analysis with a Varimax rotation based on 571 responses to the fall 2015 SU responses to Version 9 of the GPI General Form. Only factor loading values >.300 are reported. A total of 30 items in the inventory were included in the analysis. See Appendix 1 for more details about the items and their alignment to the GPI scales.

Also, Cronbach's alpha (α) is a measure of reliability, or consistency, of data. Typically, an α score ≥ .7 is considered indicative of a reliable scale (DeVellis 2012). The SU fall 2015 GPI instrument's value was α = .843, and therefore the instrument demonstrated reliability. However, one of the individual scales had an α score that was not supported as reliable although the other scales were either supported as reliable or approached reliability (Table 9). Aside from consistency of responses to items in a scale, Cronbach's α is affected by both sample size and the number of items in a scale, with increasing values in either resulting in increasing α values. In terms of the former, in the original study (Braskamp *et al*. 2014) with large sample sizes (n = 9773) α values for all scales, except Cognitive Knowing, were >.7. Braskamp *et al*. (2014) reported α = .657 for the Cognitive Knowing scale, which approaches reliability, whereas with the smaller SU sample size (n = 571) α = .535 for that scale. Also, the Cognitive Knowing scale may be more difficult to support in reliability analyses because, unlike the other GPI scales, most of the items in it are negatively worded and therefore have to be reverse scored. Even when the two items that were removed from the scale for the factor analysis (items 16 and 19) were also removed for the reliability analysis, the α value did not increase appreciably for the SU Cognitive Knowing scale (α = .553).

## SU Student Scores on the GPI Instrument
Salisbury University (SU) is a public institution that offers bachelor's and master's degrees. On average, the scale scores of all SU students that participated (n = 571) were similar in level of agreement to the similar group of schools' National norm average scale scores on the GPI (Braskamp *et al*. 2014; Table 10). Unfortunately, because we do not have access to the raw data we cannot determine whether or not there is a statistically significant difference between the SU and norm groups. Student scores ranged in agreement from either "Disagree" or "Strongly Disagree" by some individuals to "Agree" and "Strongly Agree" with other individuals. The average scale scores' level of agreement, for both SU and National norms, is between the values of 3.00 ("Neutral") and 4.00 ("Agree") for most scales – in particular, those aligned with the Cognitive and Interpersonal domains. However, the average scale scores' level of agreement, for both SU and National norms, is between 4.00 ("Agree") and 5.00 ("Strongly Agree") for the Intrapersonal domain scales.

**Table 10.** Summary of SU (white columns) and National Norms (gray column) Students' Average Scores on the GPI Scales (n = 571)

| Scale | SU Minimum *Qualitative Category* | SU Maximum *Qualitative Category* | SU Avg (SD) *Qualitative Category* | National Norm Avg *Qualitative Category* |
|---|---|---|---|---|
| Cognitive Knowing | 2.14 *Disagree* | 4.86 *Agree* | 3.49 (.40) *Neutral* | 3.63 *Neutral* |
| Cognitive Knowledge | 1.40 *Strongly Disagree* | 5.00 *Strongly Agree* | 3.65 (.62) *Neutral* | 3.53 *Neutral* |
| Intrapersonal Identity | 2.00 *Disagree* | 5.00 *Strongly Agree* | 4.11 (.48) *Agree* | 4.01 *Agree* |
| Intrapersonal Affect | 2.40 *Disagree* | 5.00 *Strongly Agree* | 4.16 (.46) *Agree* | 4.15 *Agree* |
| Interpersonal Social Responsibility | 1.40 *Strongly Disagree* | 5.00 *Strongly Agree* | 3.76 (.57) *Neutral* | 3.82 *Neutral* |
| Interpersonal Social Interaction | 1.50 *Strongly Disagree* | 5.00 *Strongly Agree* | 3.37 (.68) *Neutral* | 3.11 *Neutral* |

**Notes.** Scale averages were calculated after reverse scoring of certain items (see Table 9). All items were measured on a five-point Likert-type scale that ranged from 5 (strongly agree) to 1 (strongly disagree). Minimum and Maximum values are the average of the items in the scale by individual, reported for only the lowest and highest, respectively student(s)'s scores. Avg is the average of each of the average individuals' scale's values for all participants. National Norm Avg values used were based on the "Public BA and MA" institutional type (Braskamp *et al*. 2014).

There was no significant difference between average scores of SU native first time students and transfer students on any of the GPI scales. (Table 11).

**Table 11.** Student Admit Type, to SU, Average Scores on the GPI Scales

| Scale | SU Admit Type (code; sample size) Avg (SD) | |
|---|---|---|
| | First time student (F; n = 400) | Transfer (T + U; n = 167) |
| Cognitive Knowing | 3.47 (.50) | 3.52 (.52) |
| Cognitive Knowledge | 3.63 (.60) | 3.69 (.68) |
| Intrapersonal Identity | 4.09 (.46) | 4.15 (.52) |
| Intrapersonal Affect | 4.16 (.45) | 4.17 (.49) |
| Interpersonal Social Responsibility | 3.77 (.55) | 3.75 (.59) |
| Interpersonal Social Interaction | 3.34 (.66) | 3.44 (.74) |

The SU students' average scores on the GPI scales are very similar, by class level, with the National norms (Table 12). As mentioned previously, because we do not have access to the raw data we cannot determine whether or not there is statistically significant difference between the SU and National norm groups. There was no significant difference between average scores of class level groups for any of the GPI scale scores. Cognitive Knowing average scale scores have a trend of increasing with class level, for both SU and National data. Otherwise, trends are not consistent with either increasing or decreasing class level for both SU and National data.

**Table 12.** SU (white columns) and National Norm (gray columns; Braskamp *et al*. 2014) Student Undergraduate Class Level Average Scores on the GPI Scales

| Scale | Class Level (code; sample size) Avg (SD) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | First time students (1; n = 127) | First-Years | Sophomores (2; n = 135) | Sophomores | Juniors (3; n = 176) | Juniors | Seniors (and +) (4; n = 125) | Seniors | Unclassified non-degree undergrads (7; n = 8) |
| Cognitive Knowing | 3.39 (.53) | 3.51 | 3.48 (.47) | 3.65 | 3.49 (.49) | 3.68 | 3.58 (.52) | 3.70 | 3.50 (.49) |
| Cognitive Knowledge | 3.64 (.55) | 3.62 | 3.67 (.57) | 3.56 | 3.63 (.65) | 3.57 | 3.64 (.70) | 3.63 | 3.87 (.66) |
| Intrapersonal Identity | 4.12 (.47) | 4.05 | 4.13 (.48) | 4.01 | 4.07 (.50) | 4.03 | 4.12 (.47) | 4.07 | 4.04 (.53) |
| Intrapersonal Affect | 4.12 (.50) | 4.10 | 4.19 (.46) | 4.15 | 4.14 (.43) | 4.16 | 4.19 (.46) | 4.17 | 3.92 (.72) |
| Interpersonal Social Responsibility | 3.80 (.57) | 3.69 | 3.79 (.56) | 3.71 | 3.69 (.56) | 3.73 | 3.78 (.56) | 3.74 | 3.55 (.98) |
| Interpersonal Social Interaction | 3.44 (.60) | 3.42 | 3.32 (.61) | 3.35 | 3.31 (.72) | 3.30 | 3.43 (.79) | 3.36 | 3.37 (.57) |

Student performance by SU School is listed in Table 13. Although for most GPI scales there was no significant difference between schools, there was a significant difference in the Intrapersonal Affect and Interpersonal Social Responsibility scale scores between schools at SU. However, the difference in average scores between groups was quite small based on effect size value interpretation ($F_{(4, 103.356)}$ = 3.522, $p$ = .01, $r$ = .153, Intrapersonal Affect; $F_{(4, 566)}$ = 3.525, $p < .01$, $r$ = .156, Interpersonal Social Responsibility; Field 2013). Post hoc comparisons, via the Tukey HSD test, were used to identify which schools' average scores were significantly different. Tests revealed significant pairwise differences between the average scores of both scales for students whose primary major is in Perdue as compared to Henson and Seidel, $p < .05$, where Perdue students' average scores were lower. Students whose primary major is in Fulton or who are undeclared do not significantly differ from the other groups, $p > .05$.

**Table 13.** Student School Enrollment Average Scores on the GPI Scales

| Scale | School (sample size) Average (SD) | | | | |
|---|---|---|---|---|---|
| | Fulton (n = 144) | Henson (n = 161) | Perdue (n = 130) | Seidel (n = 119) | Undeclared (n = 17) |
| Cognitive Knowing | 3.49 (.47) | 3.54 (.53) | 3.48 (.50) | 3.41 (.50) | 3.57 (.51) |
| Cognitive Knowledge | 3.68 (.67) | 3.64 (.60) | 3.72 (.56) | 3.54 (.66) | 3.62 (.47) |
| Intrapersonal Identity | 4.06 (.52) | 4.12 (.46) | 4.13 (.46) | 4.11 (.47) | 4.16 (.61) |
| Intrapersonal Affect | 4.18 (.48) | 4.20 (.48)[a] | 4.03 (.45)[b] | 4.21 (.39)[a] | 4.11 (.46) |
| Interpersonal Social Responsibility | 3.76 (.56) | 3.81 (.52)[a] | 3.63 (.59)[b] | 3.85 (.57)[a] | 3.54 (.77) |
| Interpersonal Social Interaction | 3.37 (.71) | 3.39 (.66) | 3.34 (.70) | 3.36 (.70) | 3.38 (.48) |

**Notes.** School Enrollment is based on student's primary major. Significant difference, $p < .05$, of categories' average scores are indicated by group letters [a] and [b], where the group [a] categories differ significantly compared to the group [b] category.

Although not presented here, student performance by primary major is available <u>upon request</u> to programs or Departments when at least 30 students in that major participated in this instrument's administration. These data can be used for informal review and improvement efforts, or for more formal program review and improvement efforts such as Academic Program Review required reporting related to assessment of program student learning outcomes aligned with this instrument, when applicable.

## GPI and SOS Survey Student Responses

The GPI test-takers also took the SOS Survey (n = 564; Table 14). We were able to evaluate the reliability of both subscales within the SOS Survey. The *Importance* subscale, which addresses the extent to which the student thought it was important to do well on the GPI instrument, demonstrated reliability (α = .720). Similarly, the *Effort* subscale, which addresses the extent to which the student fully engaged in effortful behavior on the GPI instrument, demonstrated reliability (α = .717). The validity of the instrument is discussed in the SOS Survey Manual (Sundre & Thelk 2007). The 10 items, five in each subscale, are measured in a 1 to 5 scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. There are four items that are negatively worded, and their scores were reverse coded prior to analysis.

In general, students "Agree" based on their responses for both the *Importance* and *Effort* subscales. For *Importance,* this indicates that students thought that their scores on the GPI instrument would affect them in a positive way. For *Effort*, it indicates that students put in a moderate effort towards completing the GPI instrument. The two subscales had a positive correlation with one another, r = .385 (p < .001; medium effect size; Field 2013). The SOS subscales were also positively correlated with some of the GPI scale scores (Table 15). When a positive correlation existed for the *Importance* scale, it indicates that the students that self-reported that the test was important to them also scored higher on the particular GPI scale score than those who did not self-report that the test was as important to them, although all effect sizes were small. Similarly, when a positive correlation existed for the *Effort* subscale, it indicates that the students that self-reported exerting more effort on the GPI assessment also scored higher on the particular GPI scale score than those who did not self-report exerting as much effort. Similar to the *Importance* subscale correlations, the *Effort* subscale correlations' effect sizes were also small.

**Table 14.** Student Opinion Scale (SOS) Survey subscales' administrative results for the students that also participated in the GPI instrument administration.

| SOS Subscale | Number of Items | Reliability (α) | n | Average Score (out of 25) | SD |
|---|---|---|---|---|---|
| **Importance** | 5 | .720 | 562 | 16.2 | 3.5 |
| **Effort** | 5 | .717 | 564 | 18.1 | 3.0 |

**Table 15.** SOS Subscale Correlation Results with Average GPI Scale Scores (n = 557).

| Scale | SOS Subscale Effect Size (p value) | |
|---|---|---|
| | Importance | Effort |
| Cognitive Knowing | n/a | .183 (p < .001) |
| Cognitive Knowledge | n/a | n/a |
| Intrapersonal Identity | n/a | .125 (p < .01) |
| Intrapersonal Affect | .165 (p < .001) | .205 (p < .001) |
| Interpersonal Social Responsibility | .150 (p < .001) | n/a |
| Interpersonal Social Interaction | n/a | n/a |

***Note.*** n/a denotes no significant correlation present.

Discussion

Based on the results presented here it seems that there is room for improvement in student learning outcomes related to Second Language or Culture at SU. Several action items are suggested below towards this end.

1. We should be able to determine whether or not our students are meeting SU expectations for Second Language or Culture. One option for doing this is by having objective faculty and/or staff with expertise in the discipline or assessment of Second Language or Culture determine unacceptable/acceptable "agreement" levels for each of the GPI scales. In addition or as a second option, assuming that SU plans on administering the GPI again in the future, the average GPI scale scores reported here based on this initial administration of the GPI at SU could be used as benchmark values. Therefore, if there are interventions or if Second Language or Culture needs to be assessed again in the future, then if the GPI is administered the updated average scale scores can be compared to the benchmark values collected at SU in fall 2015.

2. Consider the future administrations of the GPI at SU such that it will be more statistically powerful. For example, having GPI data collected for an individual as "pre" as well as "post" or longitudinal studies (with more than two measurement time points) allow matching and therefore a change variable for each individual (i.e., change variable value = later test average scale score – earlier test average scale score). This can occur over the course of a semester, an academic year, or even a particular intervention (e.g., study abroad experience; college tenure). Then, even if no changes are evident in overall student average scale scores, the change in matched scale score(s) by individual can be averaged to learn more about potential gains in "agreement" levels within the GPI scales.

3. Faculty, the General Education Steering Committee, and any other relevant parties should evaluate the need to revise the current SU Second Language or Culture General Education Area student learning goal and outcomes. Is Second Language or Culture still a General Education goal? Does the current student learning goal and its outcomes align with our expectations of students' skills in Second Language or Culture that should be achieved during their tenure at SU? Is the language clear? Are the outcomes assessable? These should be targeted at the institutional level, but other levels of student learning goals and outcomes related to Second Language or Culture may be generated as well to address program or course-level assessment needs.

4. Based on discussions and decisions related to #3 above, relevant parties such as faculty and the General Education Steering Committee should consider whether or not the GPI instrument is aligned well with the current (or revised) SU Second Language or Culture General Education Area student learning outcomes. If it is not aligned, then alternative assessment(s) that is (are) aligned should be identified or developed.

5. Relevant stakeholders at SU should consider the results from the GPI assessment to develop interventions or review and update curricula to align with areas that need improvement. Successful projects at other institutions may be considered to guide instructional interventions at SU. As compared to the National norms (Table 10), we can suggest that SU focus on interventions that work to improve global perspectives related to the Cognitive Knowing and Interpersonal Social Responsibility scales. Otherwise, a group that would benefit most from intervention(s), in particular aligned with the Intrapersonal Affect and Interpersonal Social Responsibility scales, would be students with a primary major in Perdue (Table 13).

6. Based on discussions and decisions related to #1-5 above, a timeline for re-assessment of the SU Second Language or Culture General Education Area student learning outcomes should be

proposed. This will allow an analysis of whether or not there is change in student learning outcomes based upon either a change in assessment or instructional or curricular interventions.

7. Attempt to increase student participation in future GULL Weeks, particularly in traditionally disproportionately low groups, to increase the likelihood of participant samples that are representative of the entire SU student population. This can be done via efforts that have occurred in the past, such as competitions and marketing to both students as well as faculty that might offer course-embedded incentives for their students that participate. However, new ways to incentivize participation of traditionally disproportionately low groups should also be identified and implemented.

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Appendices
Appendix 1. The GPI General Student Form (Braskamp 2013-15) and item alignment with scales
Appendix 2. Student Opinion Scale (SOS) Survey (Sundre & Thelk 2007)

Appendix 1. The GPI General Student Form (Braskamp 2013-15) and item alignment with scales
*Note*: The administration of the GPI has been transferred to Iowa State University as of 2015, therefore, some of the General Student Form, below, was modified for the SU administration of the GPI in fall 2015. The survey was administered using Qualtrics and copies are available upon request.

*You have been invited to respond to the Global Perspective Inventory. You should be able to complete the survey in 15-20 minutes.*

*Participation is voluntary. There are no foreseeable risks involved in responding to this survey beyond those experienced in everyday life. By completing the GPI, you are agreeing to participate in research. You are free to stop responding at any time. Confidentiality will be maintained to the degree permitted by the technology used and to the extent allowed by law. No absolute guarantees can be made regarding the confidentiality of electronic data. You will not be identified in anything written about this study.*

*If you have questions about this survey, please contact us through our website address, gpi.central.edu. If you have questions about your rights as a participant you may contact Central College, Institutional Review Board, Dr. Keith Jones, Campus Mailbox 0109, 812 University Street, Pella, IA 50219; phone: (641)628-5182.*

*Please enter the four-digit Access Code provided to you here _____ (If applicable)*

*INSTRUCTIONS: There is no time limit, but try to respond to each statement as quickly as possible. There are no right or wrong answers, only responses that are right for you.*
*You must complete every item for your responses to count. Thank you for your cooperation.*

| Item | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| 1. When I notice cultural differences, my culture tends to have the better approach. | SA | A | N | D | SD |
| 2. I have a definite purpose in my life. | SA | A | N | D | SD |
| 3. I can explain my personal values to people who are different from me. | SA | A | N | D | SD |
| 4. Most of my friends are from my own ethnic background. | SA | A | N | D | SD |
| 5. I think of life in terms of giving back to society. | SA | A | N | D | SD |
| 6. Some people have a culture and others do not. | SA | A | N | D | SD |
| 7. In different settings what is right and wrong is simple to determine. | SA | A | N | D | SD |
| 8. I am informed of current issues that impact international relations. | SA | A | N | D | SD |
| 9. I know who I am as a person. | SA | A | N | D | SD |
| 10. I feel threatened around people from backgrounds very different from my own. | SA | A | N | D | SD |
| 11. I often get out of my comfort zone to better understand myself. | SA | A | N | D | SD |

| | | | | | |
|---|---|---|---|---|---|
| 12. I am willing to defend my own views when they differ from others. | SA | A | N | D | SD |
| 13. I understand the reasons and causes of conflict among nations of different cultures. | SA | A | N | D | SD |
| 14. I work for the rights of others. | SA | A | N | D | SD |
| 15. I see myself as a global citizen. | SA | A | N | D | SD |
| 16. I take into account different perspectives before drawing conclusions about the world around me. | SA | A | N | D | SD |
| 17. I understand how various cultures of this world interact socially. | SA | A | N | D | SD |
| 18. I put my beliefs into action by standing up for my principles. | SA | A | N | D | SD |
| 19. I consider different cultural perspectives when evaluating global problems. | SA | A | N | D | SD |
| 20. I rely primarily on authorities to determine what is true in the world. | SA | A | N | D | SD |
| 21. I know how to analyze the basic characteristics of a culture. | SA | A | N | D | SD |
| 22. I am sensitive to those who are discriminated against. | SA | A | N | D | SD |
| 23. I do not feel threatened emotionally when presented with multiple perspectives. | SA | A | N | D | SD |
| 24. I frequently interact with people from a race/ethnic group different from my own. | SA | A | N | D | SD |
| 25. I am accepting of people with different religious and spiritual traditions. | SA | A | N | D | SD |
| 26. I put the needs of others above my own personal wants. | SA | A | N | D | SD |
| 27. I can discuss cultural differences from an informed perspective. | SA | A | N | D | SD |
| 28. I am developing a meaningful philosophy of life. | SA | A | N | D | SD |
| 29. I intentionally involve people from many cultural backgrounds in my life. | SA | A | N | D | SD |
| 30. I rarely question what I have been taught about the world around me. | SA | A | N | D | SD |
| 31. I enjoy when my friends from other cultures teach me about our cultural differences. | SA | A | N | D | SD |
| 32. I consciously behave in terms of making a difference. | SA | A | N | D | SD |
| 33. I am open to people who strive to live lives very different from my own life style. | SA | A | N | D | SD |
| 34. Volunteering is not an important priority in my life. | SA | A | N | D | SD |
| 35. I frequently interact with people from a country different from my own. | SA | A | N | D | SD |

36. My age in years (e.g., 21) _____
37. My gender is
        a. Female
        b. Male
        c. Other
38. Select the one that best describes your current status
        a. American student at an American college/university
        b. Non-American student at an American college/university
        c. Other _____

*****If answered "b" to item 38, also respond to 38a and 38b*****
38a. How long have you lived in the United States? _____ years [fill-in-the-blank numeric]
38b. What is your country of origin? _____ [fill-in-the-blank alpha]
39. Select the one ethnic identity that best describes you:
        a. Multiple Ethnicities
        b. African/African American/Black
        c. Asian/Pacific Islander
        d. European/White
        e. Hispanic/Latino
        f. Native American
        g. I prefer not to respond
40. My status at the college/university in which I am enrolled
        a. Freshman
        b. Sophomore
        c. Junior
        d. Senior
        e. Graduate student
        f. Faculty
        g. Administration/staff
        h. Other
41. My major field of study is (mark only one)
        a. Agriculture and Natural Resources
        b. Arts and Humanities
        c. Business and Law
        d. Communications and Journalism
        e. Education and Social Work
        f. Engineering
        g. Health and Medical Professions
        i. Social and Behavioral Sciences
        j. Other
42. What was the highest level of formal education for either of your parents?
        a. Less than high school
        b. High school graduate
        c. Some college, but less than a BA, BS degree
        d. College degree
        e. Some Graduate school
        f. Graduate degree (Masters, Doctorate, MD, etc.)
43. Are you a transfer student at the college or university where you are enrolled?
        a. Yes
        b. No
        c. Not Applicable
44. What is your average grade earned in college?
        a. A or A+
        b. A-
        c. B+
        d. B
        e. C
        f. D

**Since coming to college, how many courses have you taken in the areas listed below?**

| | | | | | | |
|---|---|---|---|---|---|---|
| 45. Multicultural course addressing issues of race, ethnicity, gender, class, religion, or sexual orientation | 0 | 1 | 2 | 3 | 4 | 5 or more |
| 46. Foreign language course | 0 | 1 | 2 | 3 | 4 | 5 or more |
| 47. World history course | 0 | 1 | 2 | 3 | 4 | 5 or more |
| 48. Service learning course | 0 | 1 | 2 | 3 | 4 | 5 or more |
| 49. Course focused on significant global/international issues and problems | 0 | 1 | 2 | 3 | 4 | 5 or more |
| 50. Course that includes opportunities for intensive dialogue among students with different backgrounds and beliefs | 0 | 1 | 2 | 3 | 4 | 5 or more |

**Since coming to college, how often have you experienced the following with your faculty?**

| | | | | | |
|---|---|---|---|---|---|
| 51. Discussed course topics, ideas, or concepts with a faculty member outside of class | Never | Rarely | Sometimes | Often | Very often |
| 52. Discussed your academic performance with a faculty member | Never | Rarely | Sometimes | Often | Very often |
| 53. The faculty challenged students' views and perspectives on a topic during class | Never | Rarely | Sometimes | Often | Very often |
| 54. The faculty presented issues and problems in class from different cultural perspectives | Never | Rarely | Sometimes | Often | Very often |

**Since coming to college, how often have you participated in the following?**

| | | | | | |
|---|---|---|---|---|---|
| 55. Participated in events or activities sponsored by groups reflecting your own cultural heritage | Never | Rarely | Sometimes | Often | Very often |
| 56. Participated in events or activities sponsored by groups reflecting a cultural heritage different from your own | Never | Rarely | Sometimes | Often | Very often |
| 57. Participated in religious or spiritual activities | Never | Rarely | Sometimes | Often | Very often |
| 58. Participated in leadership programs that stress collaboration and team work | Never | Rarely | Sometimes | Often | Very often |
| 59. Participated in community service activities | Never | Rarely | Sometimes | Often | Very often |
| 60. Attended a lecture/workshop/campus discussion on international/global issues | Never | Rarely | Sometimes | Often | Very often |
| 61. Read a newspaper or news magazine (online or in print) | Never | Rarely | Sometimes | Often | Very often |
| 62. Watched news programs on television | Never | Rarely | Sometimes | Often | Very often |
| 63. Followed an international event/crisis (e.g., through newspaper, social media, or other media source) | Never | Rarely | Sometimes | Often | Very often |
| 64. Discussed current events with other students | Never | Rarely | Sometimes | Often | Very often |

65. Have you ever participated in a living-learning program with a global/international theme?
        a. Yes
        b. No
66. **Prior to this semester**, how many semesters have you studied abroad?
        a. None
        b. Short term – summer session, January term
        c. One term
        d. Two terms
        e. More than two terms

| | | | | | |
|---|---|---|---|---|---|
| 67. I have a strong sense of affiliation with my college/university. | SA | A | N | D | SD |
| 68. I feel that my college/university community honors diversity and internationalism. | SA | A | N | D | SD |
| 69. I understand the mission of my college/university. | SA | A | N | D | SD |
| 70. I am both challenged and supported at my college/university. | SA | A | N | D | SD |
| 71. I have been encouraged to develop my strengths and talents at my college/university. | SA | A | N | D | SD |
| 72. I feel I am a part of a close and supportive community of colleagues and friends. | SA | A | N | D | SD |

73. (optional) Provide your ID number here: _____

**Appendix 1 Table 1.** GPI Alignment of dimensions, scales, and items

| GPI Dimension | GPI Scale | GPI Items |
|---|---|---|
| Cognitive | Knowing | 1 (R), 6 (R), 7 (R), 16, 19, 20 (R), 30 (R) |
| | Knowledge | 8, 13, 17, 21, 27 |
| Intrapersonal | Identity | 2, 3, 9, 12, 18, 28 |
| | Affect | 22, 23, 25, 31, 33 |
| Interpersonal | Social Responsibility | 5, 14, 26, 32, 34 (R) |
| | Social Interaction | 4, 24, 29, 35 |
| N/A | N/A | 10 (R), 11, 15 |

**Note.** (R) denotes item and scale averages were calculated after reverse scoring of this item.

Appendix 2. Student Opinion Scale (SOS) Survey (Sundre & Thelk 2007)

| Item | Item Text | Subscale |
|---|---|---|
| 1 | Doing well on these tests was important to me. | Importance |
| 2 | I engaged in good effort throughout these tests. | Effort |
| 3* | I am not curious about how I did on these tests. | Importance |
| 4* | I am not concerned about the scores I receive on these tests. | Importance |
| 5 | These were important tests to me. | Importance |
| 6 | I gave my best effort on these tests. | Effort |
| 7* | While taking these tests, I could have worked harder on them. | Effort |
| 8 | I would like to know how well I did on these tests. | Importance |
| 9* | I did not give these tests my full attention while completing them. | Effort |
| 10 | While taking these tests, I was able to persist to completion of the tasks. | Effort |

* Denotes items that are reversed prior to scoring.