Salisbury University Conversation Skills Rating Scale Interpersonal Communication Report, Spring 2016

This report, authored by SU office of University Analysis, Reporting & Assessment (UARA) staff, discusses Interpersonal Communication survey data collected during spring 2016 GULL Week sessions.

Executive Summary

Background and Findings

1. Faculty and UARA staff agreed that the Conversation Skills Rating Scale (CSRS) Rating of Self Form is aligned with Interpersonal Communication General Education student learning outcome.
2. The CSRS instrument has 30 Likert-type items with 3 subscale skill/competency scores. Unfortunately, there are no National norm values which can be used for comparison, but average scores for the entire scale or subscales can indicate areas which need improvement.
3. The results of our administration of the CSRS instrument supported its validity and reliability:
    a. CSRS scores demonstrated validity:
        i. Content Validity: items and forms developed based on a literature search of relevant measures, reviews, and studies; iterative revision and removal of items based on pilot study results
        ii. Cultural Validity: an open-ended pilot study was performed
        iii. Scale Validity: various Classical Test Theory (CTT) scale analysis via exploratory factor analyses, which resulted in a three- to five-factor solutions with similar subscales; this study's exploratory and confirmatory factor analysis with SU data supported the three-factor solution with similar subscales to previous literature
        iv. Criterion and Construct Validity: the CSRS correlates with external measures [see Appendix 3 in Spitzberg (2007)] as well as internally between the Molar subscale with the entire Molecular subscale and respective subscales
    b. CSRS scale and subscale scores demonstrated reliability ($\alpha > .7$) in previous studies as well as in this SU administration
4. Generally, the demographics of the students that took the CSRS instrument were representative of the overall and non-test-taker populations at SU.
5. In general, SU students' average scores on the CSRS subscales (≥84% proficiency) provided evidence of student efficacy in Interpersonal Communication.

Action Items

1. Consider the need to determine unacceptable/acceptable self-efficacy rating levels for the overall CSRS scale as well as subscales and/or consider the use of the values from this CSRS administration to be the benchmark values to which any subsequent CSRS administration's scores will be compared.
2. Consider triangulating CSRS forms and assessment data in a more authentic academic environment.

3. Consider the use of pre- and post-testing or longitudinal studies with the CSRS, for future testing, to better evaluate changes in "skill/competency" levels for the overall CSRS scale and subscales.
4. Evaluate the need to revise the current SU Interpersonal Communication General Education student learning outcome.
5. Faculty, General Education Steering Committee, and other relevant parties should consider whether or not the CSRS instrument is aligned well with current (or revised) Interpersonal Communication student learning outcome(s). If it is not aligned, then an alternative assessment that is aligned should be identified.
6. Consider results from the assessment to develop interventions or review and update curriculum to align with areas that need improvement.
7. Determine a timeline to re-collect assessment data related to Interpersonal Communication General Education student learning outcome(s).
8. 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 Interpersonal Communication Report

CSRS Instrument

The CSRS Rating of Self Form (Inadequate ←→ Excellent scale) assessment is a 30 Likert-type item instrument. See the form, its items aligned with pedagogical subscales identified in the instrument, as well as previous studies scale analysis results in Appendix 1. The CSRS manual includes the forms as well as details about the instrument (Spitzberg 2007), including the purpose, description, and scale of the instrument:

> **Purpose:** To assess the conversational competence in interpersonal settings.
>
> **Description:** The CSRS consists of 25 molecular skill items (e.g., speaking rate, articulation, posture, questions, etc.), and five molar items (e.g., inappropriate interactant--appropriate).
>
> The behavioral items can be subdivided into four [subscales or] skill clusters:
> - attentiveness (i.e., attention to, interest in, and concern for conversational partner),
> - composure (i.e., confidence, assertiveness, and relaxation),
> - expressiveness (i.e., animation and variation in verbal and nonverbal forms of expression), and
> - coordination (i.e., the nondisruptive negotiation of speaking turns, conversational initiation, and conversational closings).
>
> An additional five molar or general impression items are included to provide a validating (or dependent) measure to which the behavioral items are expected to relate.
>
> **Scaling:** The skill items are…scaled on a 5-point competence continuum as follows:
> 1 = INADEQUATE (use is awkward, disruptive, or results in a negative impression of communicative skills)
> 2 = FAIR (occasionally awkward or disruptive, occasionally adequate)
> 3 = ADEQUATE (use is sufficient but neither very noticeable nor excellent. Produces neither particularly positive nor negative impression)
> 4 = GOOD (use was better than adequate, but not outstanding)
> 5 = EXCELLENT (use is smooth, controlled, results in positive impression of communicative skills)
>
> Generally, students whose [average] scores on a subscale, or whose absolute score on a given item, fall in the 1 (INADEQUATE) or 2 (FAIR) categories, can be considered in need of improvement.

Faculty and UARA staff agreed that the CSRS instrument is aligned with the General Education Interpersonal Communication and student learning outcome (Table 1). In particular, this assessment was preferred for measuring Interpersonal Communication at SU since it has two other forms (Rating of Partner Form and Observer Rating of Conversant Form) that use the same scale. Therefore, one or both of those can be used in conjunction with the Rating of Self Form, which was used in this administration, during authentic assessment of conversation in classrooms or other academic venues to triangulate assessment responses.

Table 1. The SU General Education student learning goal, outcome, and area mapping related to Interpersonal Communication.

Student Learning Goal	Outcome	Area Mapping
1.5. Interpersonal Communication	1.5.1. Participate actively and respectfully in meaningful discussions.	IA, IIIA, IVA

Note. The Interpersonal Communication student learning outcome is also cross-listed as being a student learning outcome for both 1.2c. Command of Language-Speaking and 1.2d. Command of Language-Listening, but for simplicity's sake, is referred to as aligning with only the Interpersonal Communication goal and outcome throughout this document.

Related to Interpersonal Communication, results from this instrument can: provide a benchmark for the student outcome at SU; inform instructional efficacy and possible interventions; evaluate curricular strengths and weaknesses; and continuously improve the student outcome 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 February, 2016. 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 ~10 minutes was dedicated to the CSRS instrument administration, ~25-45 minutes was dedicated to a different assessment, and ~5 minutes for a Student Opinion Scale (SOS) Survey (Appendix 2; Sundre & Thelk 2007). The SOS Survey estimates the GULL Week participants' perceived importance of the assessment and effort expended by the participant in completing the assessment (i.e., the CSRS 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 Schools as well as Sororities & Fraternities were set up to improve participation.

Based on the manual for the CSRS (Spitzberg 2007), the administration of the instrument is typically between 5 and 15 minutes. Although no defined cutoff was identified in the manual, if a student spent less than 1.5 minutes on the CSRS, then his/her responses were discarded from the analysis. The students whose data were discarded (n=21) were then coded as non-test-takers for the respective instruments.

In spring 2016, n=1179 undergraduates participated in GULL Week and of those n=756 students completed the CSRS instrument with quality responses (15.6% and 10.0% of total SU spring 2016 undergraduate enrollment (n=7542), respectively). Demographic analyses of the non-CSRS test-takers (n=6786; 90.0%) were compared to the test-takers that completed CSRS to evaluate the extent to which the sample of test-takers was representative of the entire SU undergraduate population during spring 2016. 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 CSRS 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 that took the CSRS instrument were similar to the non-test-takers (Tables 2-7; lack of significance annotations). However, African American students (Table 2), females (Table 3), SU native first time students (Table 4), freshmen (Table 5), and Perdue majors (Table 6) were disproportionately high in the test-taker sample and, in one case of student success metrics (i.e., SU Cumulative GPA), the test-takers of the CSRS 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 and one success metric, SAT verbal, revealed a significant difference where the test-takers of the CSRS were significantly less successful than the non-test-takers (Table 7). 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 CSRS participant sample. Therefore, the sample of CSRS test-takers was fairly representative of the entire SU undergraduate population during spring 2016. In the future, efforts to publicize GULL Week should be targeted more directly to Caucasian students, males, transfer students, seniors and unclassified non-degree undergraduates, Seidel and undeclared students, and those who represent the less successful students (in terms of SU Cumulative GPA) as well as continuing previous publicity efforts to ensure even further representative sampling.

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

Race/Ethnicity	Test-taker	Non-test-taker	Total
African American	129 (17.1%)*	907 (13.4%)*	1036 (13.7%)
American Indian/ Alaska Native	5 (0.7%)	36 (0.5%)	41 (0.5%)
Asian	28 (3.7%)	188 (2.8%)	216 (2.9%)
Caucasian	495 (65.5%)*	4735 (69.8%)*	5230 (69.3%)
Hispanic	37 (4.9%)	266 (3.9%)	303 (4.0%)
Native Hawaiian/ Pacific Islander	3 (0.4%)	9 (0.1%)	12 (0.2%)
Non-resident Alien	25 (3.3%)	155 (2.3%)	180 (2.4%)
Two or more races	22 (2.9%)	260 (3.8%)	282 (3.7%)
Unknown/ Not specified	12 (1.6%)*	230 (3.4%)*	242 (3.2%)
Total	756 (100.0%)	6786 (100.0%)	7542 (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 (*), $p \leq .05$.

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

Gender (code)	Test-taker	Non-test-taker	Total
Male (1)	251 (33.2%)*	2999 (44.2%)*	3250 (43.1%)
Female (2)	505 (66.8%)*	3787 (55.8%)*	4292 (56.9%)
Total	756 (100.0%)	6786 (100.0%)	7542 (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 (*), $p \leq .05$.

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

SU Admit Type (code)	Test-taker	Non-test-taker	Total
First time student (F)	512 (68.6%)*	4006 (61.1%)*	4518 (61.9%)
Transfer (T + U)	234 (31.4%)*	2549 (38.9%)*	2783 (38.1%)
Total	746 (100.0%)	6555 (100.0%)	7301 (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 (*), $p \leq .05$.

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

Class Level (code)	**Test-taker**	**Non-test-taker**	**Total**
Freshmen (1)	152 (20.1%)*	1082 (15.9%)*	1234 (16.4%)
Sophomores (2)	160 (21.2%)	1373 (20.2%)	1533 (20.3%)
Juniors (3)	218 (28.8%)	1775 (26.2%)	1993 (26.4%)
Seniors (and +) (4)	213 (28.2%)*	2245 (33.1%)*	2458 (32.6%)
Unclassified non-degree undergrads (7)	13 (1.7%)*	311 (4.6%)*	324 (4.3%)
Total	756 (100.0%)	6786 (100.0%)	7542 (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 (*), $p \leq .05$.

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

School	**Test-taker**	**Non-test-taker**	**Total**
Fulton	220 (29.1%)	1819 (26.8%)	2039 (27.0%)
Henson	160 (21.2%)	1617 (23.8%)	1777 (23.6%)
Perdue	244 (32.3%)*	1319 (19.4%)*	1563 (20.7%)
Seidel	111 (14.7%)*	1633 (24.1%)*	1744 (23.1%)
Undeclared	21 (2.8%)*	398 (5.9%)*	419 (5.6%)
Total	756 (100.0%)	6786 (100.0%)	7542 (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 (*), $p \leq .05$.

Table 7. Student Success Metrics Compared between CSRS Test-takers and Non-test-takers

Success Metric	**Test-taker**		**Non-test-taker**	
	n	**Avg (SD)**	**n**	**Avg (SD)**
High School GPA	284	3.58 (.46)	2619	3.55 (.49)
SAT Verbal	498	518 (79)**	4182	530 (75)**
SAT Math	498	537 (80)	4183	536 (78)
SAT Cumulative	498	1055 (142)	4182	1066 (134)
SU Cumulative GPA	710	3.08 (.61)*	6258	3.01 (.64)*

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 (*), $p \leq .05$, or two (**), $p \leq .001$.

Validity and Reliability of the CSRS Instrument Administration at SU

The results of our administration of the 30-item CSRS instrument supported its validity and reliability. Much of the validity of the CSRS instrument was described in Spitzberg (2007). Content validity was supported by a literature search of relevant measures, reviews, and studies prior to development of the items in the instrument. Also, both content and cultural validity were supported by the use of an open-ended pilot study for individuals to self-report behavioral cues that could be used to evaluate one's conversational competence, followed by iterative revision and removal of items from the instrument. Also, in addition to external measures of criterion and construct validity [see Appendix 3 in Spitzberg (2007)], the instrument includes a subscale comprised of 5 overall or "molar" items which are typically highly correlated with the entire molecular subscale (25 items) and further narrowed, factor-supported molecular subscales.

Although Spitzberg (2007) stated that, "it is difficult to compare factor structures across studies, especially given differences in reporting formats, factor definition criteria, rotational decisions, and samples, there is evidence that the CSRS is best viewed as a factorially complex instrument, typically tapping three to five factors: attentiveness, composure, expressiveness, coordination, and vocalics." However, of the 11 studies summarized by Spitzberg (2007), the same general factors emerge (see here): attentiveness, composure, coordination, expressiveness, and vocalics. The first four factors are described in pedagogical terms here, whereas vocalics are a specific aspect of the pedagogical expressiveness subscale (Spitzburg & Hurt 1987). Therefore, we evaluated whether or not the subscales in the 25-item instrument were supported by performing an exploratory factor analysis with Oblimin rotation as well as 2-, 3-, and 4-factor confirmatory factor analysis with Oblimin rotation. Oblimin rotation was selected since there was clear correlation between the factors, which would invalidate use of an orthogonal rotation that forces no correlation between factors (DeVellis 2012).

The exploratory factor analysis yielded a 5-factor solution (attentiveness; two composure factors; expressiveness; and vocalics); however, since one composure factor included only two items and typically three are required, this collapses to a 4-factor structure. The scree plot indicated either a 3- or 5-factor solution, and since one of the factors collapsed and therefore the 5-factor solution was not valid, this supports the 3-factor solution. Also, in the 5-factor solution several items loaded onto more than one factor and several items had factor loadings on the primary factor of <.400, which is less than optimal (Field 2013). The 2- and 4-factor confirmation factor analyses had similar issues regarding factor loading and therefore were determined suboptimal, particularly since the latter did not include several items on any factor. The 3-factor confirmatory factor analysis included all 25 items on factors that aligned with 1. a combination of attentiveness & coordination; 2. a combination of vocalics & composure; and 3. expressiveness (Table 8). All primary loadings of items were >.400 and only three items had a primary, with the higher loading value, as well as secondary loadings >.300 (gray cells in Table 8). These, in conjunction with the scree plot support of a 3-factor solution provided the most support for the 3-factor solution. Although there is no "correct" alignment of items onto the subscales, this study's factor analyses do seem to support three separate CSRS subscales, for all 25 items, that combine all five subscales found in other factor analyses in the literature, therefore supporting the scale validity of the instrument. From this analysis, it was also determined that sampling size (n=756) was sufficient via the Kaiser-Meyer-Olin (KMO) test of sampling adequacy. The KMO value of .924 was well above standards for acceptable sampling, which is typically ≥ .7 (Kaiser 1974).

Table 8. Factor loadings and reliability analysis values, Cronbach's alpha (α), for CSRS subscales (n=756)

Item	Attentiveness & Coordination	Vocalics & Composure	Expressiveness
α (items in scale)	*.882 (12)*	*.828 (10)*	*.744 (3)*
1. Speaking rate (neither too slow nor too fast)		.670	
2. Speaking fluency (pauses, silences, "uh", etc.)		.703	
3. Vocal confidence (neither too tense/nervous nor overly confident sounding)		.634	
4. Articulation (clarity of pronunciation and linguistic expression)		.655	
5. Vocal variety (neither overly monotone nor dramatic voice)		.550	
6. Volume (neither too loud nor too soft)		.488	
7. Posture (neither too closed/formal nor too open/informal)		.465	
8. Lean toward conversational partner(s) (neither too forward nor too far back)		.439	
9. Shaking or nervous twitches (aren't noticeable or distracting)		.644	
10. Unmotivated movements (tapping feet, fingers, hair-twirling, etc.)		.594	
11. Facial expressiveness (neither blank nor exaggerated)		.387	-.509
12. Nodding of head in response to conversational partner(s) statements			-.674
13. Use of gestures to emphasize what is being said			-.559
14. Use of humor and/or stories	.518		
15. Smiling and/or laughing	.555		-.442
16. Use of eye contact	.492		
17. Asking of questions	.698		
18. Speaking about conversational partner(s) (involvement of partner as a topic of conversation)	.730		
19. Speaking about self (neither too much nor too little)	.658		
20. Encouragements or agreements (encouragement of conversational partner(s) to talk)	.682		
21. Personal opinion expression (neither too passive nor aggressive)	.653		
22. Initiation of new topics	.749		
23. Maintenance of topics and follow-up comments	.760		
24. Interruption of conversational partner(s) speaking turns	.434		-.349
25. Use of time speaking relative to conversational partner(s)	.627		

Notes. -All items were measured on a five-point Likert-type scale that ranged from 1 (inadequate) to 5 (excellent).
-A 3-factor solution confirmatory factor analysis of the 25 "molecular" CSRS items was performed using a principal component analysis with an Oblimin rotation based on 756 responses to the spring 2016 SU responses to the CSRS Rating of Self Form. Only factor loading values >.300 are reported and any secondary loadings (those loadings on a second factor with a lesser loading value than that on the primary factor) are highlighted gray.
-See Appendix 1 for more details about the items and their alignment to the CSRS pedagogical subscales.

Spitzberg (2007) states that with Cronbach's alpha (α) as a measure of reliability, or internal consistency, "throughout all research, internal consistencies of both the overall CSRS and its component factors subscales and molar evaluation subscale have been acceptable," and that is supported by this study's reliability analyses. Typically, an α score ≥ .7 is considered indicative of a reliable scale (DeVellis 2012). The SU spring 2016 CSRS instrument's value including the molar items (30 items total) was α = .928 and with only the molecular items (25 items total) was α = .914, and therefore the instrument demonstrated reliability. Also, the three subscales of the 25-item instrument, identified via the factor analysis detailed above, had α scores that demonstrated reliability (Table 8). Similarly, the 5 molar items were supported

as a reliable subscale (α = .886), and therefore could be used as a separate scale with which the 25 molecular items could be validated via correlation (Table 9). As predicted based on previous studies, and in alignment with criterion and construct validity, the subscales of the CSRS are significantly correlated with one another with either medium or large effect sizes.

Table 9. Correlation of the CSRS subscales (n=756)

CSRS Subscale (# of items in subscale)	**Molecular** (25 items)	**Attentiveness & Coordination** (12 items)	**Vocalics & Composure** (10 items)	**Expressiveness** (3 items)	**Molar** (5 items)
Molecular (25 items)	1	.892*	.876*	.702*	.612*
Attentiveness & Coordination (12 items)	--	1	.591*	.529*	.575*
Vocalics & Composure (10 items)	--	--	1	.558*	.536*
Expressiveness (3 items)	--	--	--	1	.351*
Molar (5 items)	--	--	--	--	1

Notes. Cell values are correlation coefficients. Asterisks (*) denote significant correlation at the .01 level (2-tailed). Correlation coefficients > .5 are evidence of large effect sizes and those ≥ .3, but ≤ .5 are evidence of medium effect sizes (Field 2013). The repeated values under the diagonal are replaced with -- to simplify the table.

SU Student Scores on the CSRS Instrument

On average, the self-reported scale scores of all SU students that participated (n=756) were Adequate to Good (Spitzberg 2007; Table 10). Molecular item-related subscale individual student scores ranged in self-report of competency from “inadequate” to either “good” or “excellent.” The average molecular item-related subscale scores’ level of self-reported competency is between the values of ~3 (“adequate”) and ~4 (“good”) for all subscales. The Molar subscale individual student scores ranged from the lowest (1) to the highest (7) rating of self-competency, which depended on the particular item. The average Molar subscale score level of self-reported competency was beyond neutral to the higher end of the range. The overall CSRS scale has a possibility of range from 1.07 – 5.33. Therefore, for individual student scores, the overall CSRS minimum value of 2.27 is above expected and the maximum value of 5.33 is the absolute maximum possible. Also, the average overall CSRS scale score value of 4.12 is on the higher end of the range. Unfortunately, there are no National norm data available with which to compare our average values. However, Spitzberg (2007) states that, “Generally, students whose [average] scores on a subscale, or whose absolute score on a given item, fall in the 1 (inadequate) or 2 (fair) categories can be considered in need of improvement.” Therefore, there is evidence for a targeted need for improvement in the “Vocalics & Composure” and “Attentiveness & Coordination” subscales since there were percentages greater than 10% in the “Needs Improvement” category (Table 10).

Table 10. Summary of SU Students' Average Scores on the CSRS overall scale and subscales (n=756)

Scale (*Subscales)	**SU Minimum** ***Qualitative Category***	**SU Maximum** ***Qualitative Category***	**SU Avg (SD)** ***Qualitative Category***	**Proficiency (% of students)**	
				Proficient	**Needs Improvement**
Overall	2.27 *n/a*	5.33 *n/a*	4.12 (.55) *n/a*	n/a	n/a
*Molecular	1.80 *Inadequate*	5.00 *Excellent*	3.77 (.52) *Adequate*	93.8%	6.2%
**Attentiveness & Coordination	1.08 *Inadequate*	4.58 *Good*	3.57 (.54) *Adequate*	88.1%	11.9%
**Vocalics & Composure	1.70 *Inadequate*	5.00 *Excellent*	3.57 (.61) *Adequate*	84.7%	15.3%
**Expressiveness	1.00 *Inadequate*	5.00 *Excellent*	4.03 (.68) *Good*	96.0%	4.0%
*Molar	1.00 *Lowest range value*	7.00 *Highest range value*	5.85 (.99) *Towards high end of range*	n/a	n/a

Notes. All molecular items were measured on a five-point Likert-type scale that ranged from 1 (inadequate) to 5 (excellent), whereas the molar items were measure on a 7-point Likert-type scale that presented ends of a range based on the particular item question (see Appendix 1). Number of asterisks (*) denotes hierarchical level of subscales; subscales with two asterisks were identified based on SU student response data from the form during this administration. 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. Proficiency is defined as follows: Proficient = students with scores ranging from Adequate to Excellent; Needs Improvement = students with scores ranging from Inadequate to Fair. Highlighted values denote percentages >10% in the "Needs Improvement" category.

There was no significant difference between average scores of SU native first time students and transfer students on the CSRS scale or subscales. (Table 11).

Table 11. Student Admit Type, to SU, Average Scores on the CSRS overall scale and subscales

Scale (*Subscales)	**SU Admit Type** (code; sample size) **Avg (SD)**	
	First time student (F; n=526)	**Transfer** (T + U; n=235)
Overall	4.14 (.53)	4.11 (.60)
*Molecular	3.79 (.49)	3.76 (.58)
**Attentiveness & Coordination	3.58 (.50)	3.56 (.61)
**Vocalics & Composure	3.60 (.59)	3.55 (.65)
**Expressiveness	4.06 (.65)	3.98 (.74)
*Molar	5.85 (.98)	5.89 (1.03)

The SU students' average scores, by class level, on the CSRS overall scale and subscales are very similar (Table 12). There was only significant difference between average scores of class level groups for the CSRS Vocalics & Composure subscale. However, the difference in average scores between groups was quite small based on effect size value interpretation ($F(4, 766) = 2.503$, $p < .05$, $r = .114$; Field 2013). Post hoc comparisons, via the Tukey HSD test, were used to identify which class levels' average scores were significantly different. Tests revealed significant pairwise differences between the average scores of the Vocalics & Composure subscale between first time students and juniors. Otherwise, there are no significant pairwise differences between the other groups. None of the scores (scale or subscale) exhibit a trend of increasing with class level.

Table 12. SU Student Undergraduate Class Level Average Scores on the CSRS scale and subscales

Scale (*Subscales)	**Class Level** (code; sample size) **Avg (SD)**				
	First time students (1; n=153)	**Sophomores** (2; n=163)	**Juniors** (3; n=223)	**Seniors (and +)** (4; n=219)	**Unclassified non-degree undergrads** (7; n=13)
Overall	4.05 (.49)	4.15 (.54)	4.15 (.57)	4.15 (.59)	3.92 (.59)
*Molecular	3.71 (.46)	3.78 (.51)	3.82 (.53)	3.80 (.57)	3.56 (.57)
**Attentiveness & Coordination	3.53 (.46)	3.60 (.56)	3.57 (.54)	3.59 (.57)	3.40 (.49)
**Vocalics & Composure	3.47 (.58)[a]	3.56 (.59)	3.65 (.60)[b]	3.60 (.65)	3.38 (.79)
**Expressiveness	4.01 (.63)	3.99 (.70)	4.07 (.64)	4.06 (.73)	3.72 (.72)
*Molar	5.77 (.90)	5.98 (.99)	5.80 (1.05)	5.90 (1.01)	5.71 (.86)

Notes. Significant difference, $p < .05$, of categories' average scores are indicated by group letters [a] and [b], where the group [a] category differs significantly compared to the group [b] category.

Student performance by SU School is listed in Table 13. Although for the CSRS overall scale and most subscales there was no significant difference between Schools, there was a significant difference in the Vocalics & Composure and Molar subscale scores between Schools at SU. However, the difference in average scores between groups was quite small based on effect size value interpretation ($F(4, 766) = 2.651$, $p < .05$, $r = .117$, Vocalics & Composure subscale; $F(4, 766) = 2.536$, $p < .05$, $r = .114$, Molar subscale; 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 the Molar subscale for students whose primary major is in Henson as compared to Seidel, $p < .05$, where Henson students' average scores were lower. Students whose primary major was in Fulton, Perdue, or who are undeclared do not significantly differ from the other groups, $p > .05$. Post hoc comparisons did not reveal any significant differences between School groups' average scores on the Vocalics & Composure subscale.

Table 13. Student School Enrollment Average Scores on the CSRS scale and subscales

Scale (*Subscales)	**School** (sample size) **Avg (SD)**				
	Fulton (n=222)	**Henson** (n=162)	**Perdue** (n=251)	**Seidel** (n=115)	**Undeclared** (n=21)
Overall	4.15 (.55)	4.05 (.56)	4.16 (.57)	4.14 (.51)	3.92 (.63)
*Molecular	3.80 (.52)	3.72 (.52)	3.81 (.53)	3.81 (.53)	3.77 (.51)
**Attentiveness & Coordination	3.59 (.54)	3.54 (.52)	3.58 (.55)	3.57 (.52)	3.44 (.55)
**Vocalics & Composure	3.60 (.61)	3.48 (.64)	3.64 (.60)	3.57 (.57)	3.33 (.75)
**Expressiveness	4.07 (.69)	4.03 (.66)	4.02 (.66)	4.03 (.72)	3.79 (.81)
*Molar	5.91 (.93)	5.67 (1.05)[a]	5.89 (1.05)	6.01 (.89)[b]	5.63 (.95)

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] category differs significantly compared to the group [b] category.

Although not presented here, student performance by primary major is available upon request 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.

CSRS and SOS Survey Student Responses

Many of the CSRS test-takers also took the SOS Survey (n = 747; 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 CSRS instrument, demonstrated reliability (α = .726). Similarly, the *Effort* subscale, which addresses the extent to which the student fully engaged in effortful behavior on the CSRS instrument, demonstrated reliability (α = .796). The validity of the instrument is discussed in the SOS Survey Manual (Sundre & Thelk 2007). The 10 items, five in each subscale, are measured using 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 CSRS instrument would affect them in a positive way. For *Effort*, it indicates that students put in a moderate effort towards completing the CSRS instrument. The two subscales had a positive correlation with one another, $r = .332$ ($p < .01$; medium effect size; Field 2013). The SOS subscales were also positively correlated with the CSRS overall scale and some of the subscale 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 CSRS scale or subscale 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 CSRS assessment also scored higher on the particular CSRS scale or subscale 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 CSRS administration.

SOS Subscale	Number of Items	Reliability (α)	n	Average Score (out of 25)	SD
Importance	5	.726	747	16.0	3.6
Effort	5	.796	747	19.0	3.4

Table 15. SOS Subscale Correlation Results with Average CSRS scale and subscales (n=747).

Scale	SOS Subscale Effect Size (p value)	
	Importance	Effort
Overall	.101 (p < .01)	.158 (p < .001)
*Molecular	.111 (p < .01)	.177 (p < .001)
**Attentiveness & Coordination	.107 (p < .01)	.140 (p < .001)
**Vocalics & Composure	.090 (p < .05)	.150 (p < .001)
**Expressiveness	.093 (p < .05)	.203 (p < .001)
*Molar	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 the student learning outcome related to Interpersonal Communication 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 Interpersonal Communication. We can do this by either having objective faculty and/or staff with expertise in the discipline or assessment of Interpersonal Communication determine unacceptable/acceptable self-efficacy rating levels for each of the CSRS scales. In addition or as a second option, assuming that SU plans on administering the CSRS again in the future, the average CSRS overall scale and subscale scores reported here based on this initial administration of the CSRS at SU could be used as benchmark values. Therefore, if there are interventions or if Interpersonal Communication needs to be assessed again in the future, if the CSRS is administered the updated average overall and subscale scores can be compared to the benchmark values collected at SU in spring 2016.
2. Consider triangulating CSRS forms and assessment data in a more authentic academic environment. For example, in a classroom setting, or even during SUSRC presentations, either conversational partners or observers can complete the respective forms of the CSRS as well as having the individual(s) in question complete the Rating of Self Form. These data can then be compared to see if there is agreement between raters for identifying strengths and weaknesses in Interpersonal Communication for SU students.
3. Consider the future administrations of the CSRS at SU such that it will be more statistically powerful. For example, having CSRS data collected for an individual as “pre” as well as “post” or longitudinal studies (i.e., more than two measurement time points) allow matching and therefore change variable(s) 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., Communication Arts, English, Modern Language, or other related course; college tenure). Then, even if no changes are evident in student average overall or subscale scores, the change in matched scale score(s) by individual can be averaged to learn more about potential gains in “skill/competency” levels within the CSRS subscales.
4. Faculty, the General Education Steering Committee, and any other relevant parties should evaluate the need to revise the current SU Interpersonal Communication General Education Area student learning goal and outcome. Is Interpersonal Communication still a General Education goal? Does the current student learning goal and outcome align with our expectations of students’ skills in Interpersonal Communication that should be achieved during their tenure at SU? Is the language clear? Is (are) the outcome(s) assessable? These should be targeted at the institutional level, but other levels of student learning goals and outcomes related to Interpersonal Communication may be generated as well to address program or course-level assessment needs.
5. Based on discussions and decisions related to #4 above, relevant parties such as faculty and the General Education Steering Committee should consider whether or not the CSRS instrument is aligned well with the current (or revised) SU Interpersonal Communication General Education Area student learning outcome(s). If it is not aligned, then alternative assessment(s) that is (are) aligned should be identified or developed. It should be noted that the faculty that agreed that this assessment aligned with the Interpersonal Communication student learning outcome were also interested in developing a scenario-based multiple choice assessment that would give more

authentic evidence as opposed to self-report data. Development of such an instrument would require iterative drafts as well as steps to ensure validity and reliability.

6. Relevant stakeholders at SU should consider the results from the CSRS assessment to develop interventions or review and update curricula to align with areas that need improvement. Based on SU student results (Table 10) we can suggest that SU focus on interventions that improve Interpersonal Communication related to the Attentiveness & Coordination and Vocalics & Composure subscales. Otherwise, groups that would benefit most from intervention(s), would be first time students (Table 12; with regards to the Vocalics & Composure subscale) and students with a primary major in Henson (Table 13; with regards to the Molar subscale).
7. Based on discussions and decisions related to #1-6 above, a timeline for re-assessment of the SU Interpersonal Communication General Education Area student learning outcome(s) should be proposed. This will allow an analysis of whether or not there is change in student learning outcome(s) based upon either a change in assessment or instructional or curricular interventions.
8. 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 CSRS Rating of Self Form (Spitzberg 2007) and item alignment with subscales

Note: As suggested in the CSRS manual (Spitzberg 2007), the CSRS was modified for the SU administration in spring 2016 to align with a proctored session. This included changing the instructions so that they were generalizable as well as replacing "partner" with "conversational partner(s)" in the items themselves. The survey (see below) was administered using SurveyMonkey.

IN GENERAL, rate how skillfully you use, or don't use, the following communicative behaviors in conversations, where:

Inadequate = use is awkward, disruptive, or results in a negative impression of communicative skills
Fair = occasionally awkward or disruptive; occasionally adequate
Adequate = sufficient but neither noticeable nor excellent; produces neither strong positive nor negative impression
Good = use was better than adequate but not outstanding
Excellent = use is smooth, controlled; results in positive impression of communicative skills

Choose the single most accurate response for each behavior:	**Inadequate**	**Fair**	**Adequate**	**Good**	**Excellent**
1. Speaking rate (neither too slow nor too fast)					
2. Speaking fluency (pauses, silences, "uh", etc.)					
3. Vocal confidence (neither too tense/nervous nor overly confident sounding)					
4. Articulation (clarity of pronunciation and linguistic expression)					
5. Vocal variety (neither overly monotone nor dramatic voice)					
6. Volume (neither too loud nor too soft)					
7. Posture (neither too closed/formal nor too open/informal)					
8. Lean toward conversational partner(s) (neither too forward nor too far back)					
9. Shaking or nervous twitches (aren't noticeable or distracting)					
10. Unmotivated movements (tapping feet, fingers, hair-twirling, etc.)					
11. Facial expressiveness (neither blank nor exaggerated)					
12. Nodding of head in response to conversational partner(s) statements					
13. Use of gestures to emphasize what is being said					
14. Use of humor and/or stories					
15. Smiling and/or laughing					

16. Use of eye contact					
17. Asking of questions					
18. Speaking about conversational partner(s) (involvement of partner as a topic of conversation)					
19. Speaking about self (neither too much nor too little)					
20. Encouragements or agreements (encouragement of conversational partner(s) to talk)					
21. Personal opinion expression (neither too passive nor aggressive)					
22. Initiation of new topics					
23. Maintenance of topics and follow-up comments					
24. Interruption of conversational partner(s) speaking turns					
25. Use of time speaking relative to conversational partner(s)					

For the next 5 items, rate your OVERALL general conversational performance. I am a(n)...

26.

Poor Conversationalist						Good Conversationalist
○	○	○	○	○	○	○

27.

Socially Unskilled						Socially Skilled
○	○	○	○	○	○	○

28.

Incompetent Communicator						Competent Communicator
○	○	○	○	○	○	○

29.

Inappropriate Communicator						Appropriate Communicator
○	○	○	○	○	○	○

30.

Ineffective Communicator						Effective Communicator
○	○	○	○	○	○	○

Appendix 1 Table 1. CSRS alignment of pedagogical classification of skills subscales and items (Spitzberg 2007)

CSRS Subscale	**CSRS Subscale Description**	**CSRS Items**
Attentiveness	"attention to, interest in, and concern for conversational partner"	8, 12, 18, 19, 20, 21, (17)
Composure	"confidence, assertiveness, and relaxation"	2, 3, 6, 7, 9, 10, (16)
Expressiveness	"animation and variation in verbal and nonverbal forms of expression"	4, 5, 11, 13, 14, 15, 16
Coordination	"the nondisruptive negotiation of speaking turns, conversational initiation, and conversational closings"	1, 17, 22, 23, 24, 25, (2)

Note. (#) denotes item number in parentheses is redundant in this subscale because it primarily aligns with another subscale.

Appendix 1 Table 2. Summary of CSRS factor structure studies' results (Spitzberg 2007)

Study	Analysis Details*	Factor Solution	Att	Comp	Coor	Exp	Voc	Other
Spitzberg & Hurt (1987)	Self-report form, 25 items, factor solution based on eigenvalues and scree plot, orthogonal rotation	3	Yes	Yes	--	Yes	--	--
	Observer form, 25 items, factor solution based on eigenvalues and scree plot, orthogonal rotation	3	Yes	Yes	--	--	Yes	--
Chin & Ringer (1986)	Not described in Spitzberg (2007)	4	Yes	Yes	--	Yes	Yes	--
Wood (1991), unpublished	Not described in Spitzberg (2007)	5	Yes	Yes	Yes	Yes	Yes	--
Huwe, Hellweg, & Spitzberg (1991)	Small sample size	4	Yes	Yes	--	Yes	Yes	--
Karch (1995)	Not described in Spitzberg (2007)	3	Yes	Yes	--	--	Yes	--
Huwe (1990)	25 items	4	Yes	Yes	--	Yes	Yes	--
Brundidge (2002)	Oblique rotation	3	Yes	Yes	Yes	--	--	--
Spitzberg (2006)	Principle components analysis, oblique rotation	4	Yes	Yes	--	Yes	Yes	--
Sophie (2004)	30 items, orthogonal rotation	7	Yes	Yes	--	Yes	--	General interpersonal competence; Comp+Exp
Spitzberg, Brookshire, & Brunner (1990)	Confirmatory factor analysis, 4 factors	4	Yes	Yes	--	Yes	--	Interaction management (related to composure)
	Confirmatory factor analysis, 5 factors	5	Yes	Yes	Yes	Yes	Yes	--

Note. Attentiveness (Att) was formerly known as altercentrism (Spitzberg 2007); Composure (Comp); Coordination (Coor); Exp (Expressiveness); Vocalics (Voc) is expressiveness specifically describing vocal expressiveness, such as vocal variety, vocal volume, and vocal confidence (Spitzburg & Hurt 1987). Since most cases do not describe the actual items in each factor, anything that aligns with the description of the scales (see above) is marked as "Yes" in this table. Asterisk (*) denotes that this includes, when described in Spitzberg (2007), type of rotation where oblique allows items to correlate on more than one factor and orthogonal does not.

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.