Evaluation of the General Education Assessment: Summer 2016

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Executive Summary

This report provides evaluation data from the Fall 2015 and Spring 2016 General Education Pilot and the 9th Annual Summer Assessment conducted Summer 2016. It includes data generated from the pilot designed to address concerns related to collecting student evidence, and the technology used to facilitate this activity. Also included in this report are faculty scores of the student artifacts and faculty recommendations on how to help students better understand and subsequently demonstrate their understanding of these competencies. The faculty evaluation process was intended to provide insight on the quality of student artifacts tagged to Clemson’s general education competencies, as well as the clarity of the scoring rubrics.

Key Findings

Fall General Education Pilot

- Sixteen faculty members participated in the pilot: 8 from AAH, 2 from BBS, 2 from CAFLS, and 4 from CES.
- Nineteen courses (encompassing all course-related competencies, AH, CC, M, NS, SS, STS) some with multiple sections, were included in the study, generating 3543 artifacts as presented in Table 1 below. Overall, the submission rate was 83%.
- Faculty participants ended their reports with their final thoughts on the pilot. Overall, everyone thought the process was simple and straightforward.
- Of the 16 faculty who were part of the pilot, 6, participated in the Summer Assessment Institute, the goal of which was to review a comprehensive sample of student artifacts from the Fall 2015 and Spring 2016 general education pilot.
Table 1. Fall 2015 Submissions

<table>
<thead>
<tr>
<th>Competency</th>
<th>Course</th>
<th>Total # Enrolled</th>
<th>Total # Submissions</th>
<th>Percent Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH</td>
<td>ENGL 2140</td>
<td>28</td>
<td>28</td>
<td>100%</td>
</tr>
<tr>
<td>AH Non-Lit</td>
<td>REL 1010</td>
<td>48</td>
<td>46</td>
<td>96%</td>
</tr>
<tr>
<td></td>
<td>REL 1020</td>
<td>18</td>
<td>18</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>THEA 2100</td>
<td>95</td>
<td>72</td>
<td>76%</td>
</tr>
<tr>
<td>CC</td>
<td>ANTH 2010</td>
<td>47</td>
<td>45</td>
<td>96%</td>
</tr>
<tr>
<td></td>
<td>GEOG 1030</td>
<td>146</td>
<td>143</td>
<td>98%</td>
</tr>
<tr>
<td></td>
<td>REL 1010</td>
<td>48</td>
<td>46</td>
<td>96%</td>
</tr>
<tr>
<td></td>
<td>REL 1020</td>
<td>18</td>
<td>18</td>
<td>100%</td>
</tr>
<tr>
<td>M</td>
<td>MATH 1010</td>
<td>71</td>
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<td></td>
<td>STAT 3090</td>
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<td>89%</td>
</tr>
<tr>
<td>NS</td>
<td>BIOL 1100</td>
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<td>100%</td>
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<tr>
<td></td>
<td>BIOL 1230</td>
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</tr>
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<td></td>
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<td>1385</td>
<td>77%</td>
</tr>
<tr>
<td></td>
<td>CH 1021</td>
<td>395</td>
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<td>47</td>
<td>45</td>
<td>96%</td>
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<td></td>
<td>GEOG 1030</td>
<td>146</td>
<td>142</td>
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<td></td>
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<td></td>
<td>SOC 2010</td>
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<td>STS</td>
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<td>100%</td>
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<td></td>
<td>ENSP 2000</td>
<td>105</td>
<td>101</td>
<td>96%</td>
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<tr>
<td></td>
<td>HIST 1220</td>
<td>120</td>
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<td>96%</td>
</tr>
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<td></td>
<td>HIST 1240</td>
<td>74</td>
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<td>96%</td>
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<tr>
<td></td>
<td>STS 1010</td>
<td>35</td>
<td>34</td>
<td>97%</td>
</tr>
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</table>

|            | 4249     | 3543             | 83%                 |

Spring General Education Pilot

- Seventeen faculty members participated in the pilot: 10 from AAH, 3 from BBS, 2 from CAFLS, and 2 from CES.
- Nineteen courses (encompassing all course-related competencies, AH, CC, M, NS, SS, STS) some with multiple sections, were included in the study, generating 1721 artifacts as presented in Table 2 below. Overall, the submission rate was 81%.
- Faculty participants ended their reports with their final thoughts on the pilot. Overall, everyone thought the process was simple and straightforward.
- Of the 17 faculty who were part of the pilot, 6, 5 of whom also participated in the Fall, participated in the Summer Assessment Institute, the goal of which was to review a comprehensive sample of student artifacts from the Fall 2015 and Spring 2016 general education pilot.
Table 2. Spring 2016 Submissions

<table>
<thead>
<tr>
<th>Column1</th>
<th>Course</th>
<th>Total # Enrolled</th>
<th>Total # Submissions</th>
<th>Percent Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH Lit</td>
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<td>26</td>
<td>89.66%</td>
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<tr>
<td>AH Non-Lit</td>
<td>THEA 2100</td>
<td>88</td>
<td>63</td>
<td>71.59%</td>
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<td>98</td>
<td>90</td>
<td>91.84%</td>
</tr>
<tr>
<td>REL 1020</td>
<td></td>
<td>17</td>
<td>17</td>
<td>100.00%</td>
</tr>
<tr>
<td>PHIL 3450</td>
<td></td>
<td>35</td>
<td>32</td>
<td>91.43%</td>
</tr>
<tr>
<td>PHIL 1030</td>
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<td>52</td>
<td>30</td>
<td>57.69%</td>
</tr>
<tr>
<td>CC</td>
<td>GEOG 1030</td>
<td>120</td>
<td>117</td>
<td>97.50%</td>
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<td></td>
<td>IS 2100</td>
<td>20</td>
<td>16</td>
<td>80.00%</td>
</tr>
<tr>
<td></td>
<td>POSC 1020</td>
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<td>77</td>
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</tr>
<tr>
<td></td>
<td>REL 1010</td>
<td>98</td>
<td>90</td>
<td>91.84%</td>
</tr>
<tr>
<td></td>
<td>REL 1020</td>
<td>17</td>
<td>17</td>
<td>100.00%</td>
</tr>
<tr>
<td>MA</td>
<td>MATH 1010</td>
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<td>82</td>
<td>82.00%</td>
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<tr>
<td>NS</td>
<td>PHSC 1170</td>
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<td>61</td>
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<td>66</td>
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</tr>
<tr>
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<td>Geog 1030</td>
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<td>94.17%</td>
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<td>HIST 1240</td>
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<td>SOC 2030</td>
<td>91</td>
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<td>ENSP 2000</td>
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<td>HIST 3920</td>
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<td>83.33%</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>2127</td>
<td>1721</td>
<td>80.91%</td>
</tr>
</tbody>
</table>

**General Education Summer Assessment**

- The summer assessment team included 17 faculty members from a variety of disciplines across campus. The faculty members worked in groups within the competency areas. Each group was assigned to specific competencies to allow for greater inter-rater reliability.
- Student artifacts for 6 of the 8 general education competencies were examined and scored by 17 faculty evaluators across the university. 1296 artifacts were scored for content and communication.
- The most frequently assessed competency was Arts and Humanities (AH) with 325 artifacts reviewed out 422 artifacts submitted (77%), followed by the Science, Technology in Society (STS) with 268 out of 699(38%) of the total number of artifacts evaluated.
- In terms of scores, STS received the highest average overall score of 2.0 followed by NS with an average score of 1.8 (See Figure 1).
The most pressing recommendation last summer was to revise most of the competencies. Most participants agreed that a closer evaluation of the competencies must occur as some seem to be written beyond an introductory level. Listed below are the competencies and the extent to which they need revising:

- **Arts and Humanities** – The competency has been changed for the upcoming academic year. The new competency reads: *Demonstrate an ability to analyze and/or interpret the Arts and Humanities. The curriculum committee should be charged with developing an accompanying rubric to match these changes.*

- **Cross Cultural Awareness** – The competency has been changed for the upcoming academic year. The new competency reads - *Explain how aspects of culture are integrated into a comprehensive worldview; and then demonstrate how culture influences human behavior. The curriculum committee should be charged with developing an accompanying rubric to match these changes.*

- **Mathematics** – The rubric was revised for the Mathematics competency this summer to be more explicit on what scores for each course should be. This rubric, as well as a list of tips for instructors creating assignments, can be found in Appendix B.

**Natural Sciences** – As evinced from our assessment, lab courses can be well aligned with the natural sciences competencies. We are concerned, however, with science lecture courses which do not have a lab component being able to meet the required competencies because often these courses
focus mainly on parts of the scientific method, but not as explicitly outlined in the rubric. We recommend that a separate rubric be created to adequately address there courses. Tips for instructors created by Bob Kosinski can be found in Appendix B.

- **Social Sciences** – Based on results from SS 2016, it is clear that there is inconsistency among courses as to how well the assignments target the SS rubric. We recommend faculty teaching courses in social sciences be sure to provide assignments that are squarely situated on the core task of the social science competency. This will ensure scores will more closely align the competency of the students with the learning outcomes of the course.

- **Science and Technology in Society** - Competency is fine as written

Also, double-dip artifacts seemed to address only one of the competencies. A review should be made of double-dip courses to make sure all relevant competencies are addressed in the course. All participants agreed that professional development that addresses writing student learning outcomes for syllabi, developing assignments appropriate for the competencies, etc. should be provided to everyone teaching general education courses.

The full list of participant recommendations can be found beginning on page 17 in Appendix A.
What Are the Purpose and Goals of this Report?

This report was written to serve the following purposes:

1. To provide data on the Fall 2015 and Spring 2016 general education pilot.
2. To provide evaluation data from the 9th Annual General Education Summer Assessment conducted Summer 2016.
3. To document faculty scoring of student general education artifacts.
4. To gather information and recommendations about general education and assessment and its key components (competencies, rubrics) to facilitate adjustments and improvements in the future, where and when necessary.
5. To generate support documents for students and faculty.

General Education Pilot, Fall 2015

The primary purpose of the pilot was to review the plan suggested for the assessment of general education particularly related to collecting student evidence and the technology used to facilitate this activity. Participants were encouraged to take part in the 2016 Summer Assessment.

Pilot Goals

- Collect student evidence (work) for course-related general education competencies.
- Evaluate various methods of collecting student work.
- Evaluate the technology used to collect student work.

Sixteen faculty members participated in the pilot: 8 from AAH, 2 from BBS, 2 from CAFLS, and 4 from CES. Sample courses for all course-related competencies (AH, CC, M, NS, SS, STS) were included in the study. More specifically 13 courses, some with multiple sections, generated 3465 artifacts as presented in Figure 2 below. Overall, the submission rate was 83%.
Participants tested the following methods of uploading artifacts:

- Faculty batch upload
- Student upload with in-class support from Bob Brackett
- Student upload with in-class support from the professor
- Instructions on how to upload artifacts emailed to students who then did so outside of class.

Four courses, REL 1020, ENGL 2140, BIOL 1100 and BIOL 2000, yielded a 100% submission rate attributed the fact that these were faculty batch upload of major course assignments. One section, THEA 2100, requiring student upload yielded a 100% submission rate attributed to the fact that the instructor for this courses would not grade the assignments, the final exam, unless they were submitted to the artifact repository. Only one professor, a section of THEA 2100 had in-class support from us, which yielded 25 submissions out of the 31 students enrolled. In an attempt to motivate students to submit evidence to the General Education Assessment Repository (GEAR), some professors gave them extra points for submitting their work while others took the punitive approach of not grading the work unless it had been uploaded. 15 of the 21 courses performed a faculty upload, however 2 of these, CH 1011 and 1021, had students make a voluntary upload for extra points to Blackboard after turning in a hard copy of the assignment for grading. This likely contributed to the lower participation rate in these two courses.
However, the vast majority of the faculty chose to have students upload their assignments to Blackboard for grading then simply downloaded them in a batch and uploaded them the same way. With the exception of the one section of THEA 2100 that would not grade the final exam until it was uploaded to the repository, this was the most efficient and effective method for gathering assignments.

Of the 16 faculty who were part of the pilot, 7 participated in the Summer Assessment Institute, the goal of which was to review a comprehensive sample of student artifacts from Fall 2015 and Spring 2016 general education pilot.

**General Education Pilot, Spring 2016**

Seventeen faculty members participated in the pilot: 10 from AAH, 3 from BBS, 2 from CAFLS, and 2 from CES. Sample courses for all course-related competencies (AH, CC, M, NS, SS, STS) were included in the study. More specifically 22 courses, some with multiple sections, generated 1721 artifacts as presented in Figure 1 below. Overall, the submission rate was 81%.

**Participants tested the following methods of uploading artifacts:**
- Faculty batch upload
- Student upload with in-class support from Bob Brackett
- Student upload with in-class support from the professor
- Instructions on how to upload artifacts emailed to students who then did so outside of class.

Five Courses, BIOL 1110, BIOL 2000, ENSP 2000, HIST 3210, and REL 1020 yielded a 100% submission rate attributed to batch uploading from the course management system. Only one professor, a section of THEA 2100 had in-class support from us, which yielded 22 submissions out of the 29 students enrolled. In
an attempt to motivate students to submit evidence to the General Education Assessment Repository (GEAR), some professors gave them extra points for submitting their work. The vast majority of the faculty chose to have students upload their assignments to Blackboard for grading then simply downloaded them in a batch and uploaded them the same way. 23 of the 30 course sections performed a faculty upload, for an average of 91% success, which includes a 39% success rate for POSC 1020, which submitted an optional assignment to meet the competency. This contributed to the lower participation rate in this course, which was counted twice, as it meets the criteria for both the CC and SS competencies. Students who were tasked to submit the assignments themselves only achieved a 77% submission rate. This supports the claim from most participants that faculty batch uploading is the most efficient method to receive data.

Of the 17 faculty who were part of the pilot, 2 additional participated in the Summer Assessment Institute, the goal of which was to review a comprehensive sample of student artifacts from Fall 2015 and Spring 2016 general education pilot.

**General Education Summer Assessment**

This section provides data on the 9th Annual General Education Summer Assessment Institute and includes faculty scores of the student artifacts, participant recommendations on how to help students better understand and subsequently demonstrate their understanding of these competencies, and participant recommendations related to courses, assignments, faculty and student support, and the competencies. The faculty evaluation process was intended to provide insight on the quality of student artifacts tagged to Clemson’s general education competencies, as well as the clarity of the scoring rubrics.

**Summer Assessment Institute Goals**

- Engage in a discussion of the SACSCOC requirements for general education.
- Learn about the General Education Pilot Assessment and prepare for Fall 2016 pilot.
- Review and revise course syllabi.
- Assess student work generated from the General Education Assessment Pilot.
- Prepare a final report with assessment findings.
Method

Student artifacts for six of the eight\(^1\) general education competencies were examined and scored by 17 faculty evaluators across the university. This process occurred over the period of one week during the college summer session. Nearly 1300 artifacts were scored for content and communication.

The faculty evaluation process was intended to provide insight on the quality of student artifacts tagged to Clemson’s general education competencies, as well as the clarity of the scoring rubrics. In addition, suggestions on how to better support students in the process of artifact development and collection, how to educate and support faculty in the process of course and assignments development, and how to strengthen both general education and the assessment of it were sought from the faculty evaluators.

All artifacts were scored on a 1-4 scale with a score of 4 representing exemplary work, a 3 above average work, 2’s satisfactory work and a score of one indicating that the artifact did not adequately demonstrate competency.

Participants

The summer assessment team included 17 faculty members from a variety of disciplines across campus, 6 of whom participated in the Fall 2015 Pilot with 1 additional coming from the Spring 2016 Pilot. The faculty members who worked in groups within the competency areas. Each group was assigned to specific competencies to allow for greater inter-rater reliability.

Faculty members that participated in the Assessment Institute and their areas are listed below\(^2\):

**Arts and Humanities**
Rick St. Peter – Asst. Prof., College of Architecture, Arts and Humanities
Lucian Ghita – Lecturer, College of Architecture, Arts and Humanities
*Jennifer Ingle – Senior Lecturer, College of Architecture, Arts and Humanities
John Wolfe – Lecturer - College of Architecture, Arts and Humanities

**Cross Cultural Awareness**
*Lance Howard – Sr. Lecturer, College of Architecture, Arts and Humanities
Melissa Vogel – Associate Professor, College of Business and Behavioral Science

**Mathematics**
*Ellen Breazel – Lecturer, College of Engineering and Science

\(^1\) Only the 6 course-connected competencies (AH, CC, M, NS, SS, STS) were included in both the pilot and the assessment. The distributed competencies (CT, EI) were not included.

\(^2\) *Represents faculty that participated in either the Fall 2015 or Spring 2016 pilot.
*Judith Cottingham – Sr. Lecturer, College of Engineering and Science
Jennifer Van Dyken – Lecturer, College of Engineering and Science

Natural Sciences
Jason Brown – Senior Lecturer, College of Engineering and Science
*Minory Nammouz – Lecturer, College of Engineering and Science

Social Sciences
*James Jeffries – Sr. Lecturer, College of Architecture, Arts and Humanities
William Terry – Assistant Professor, College of Architecture, Arts and Humanities

Science and Technology in Society
*Elizabeth Stansell – Senior Lecturer - College of Architecture, Arts and Humanities
David Foltz – Lecturer - College of Architecture, Arts and Humanities
Megan Macalystre – Lecturer, College of Architecture, Arts and Humanities
Tom Owino – Associate Professor, College of Engineering and Science

Goal 1: Engage in a discussion on the SACSCOC requirements for general education

Dr. Penny Brunner, Office of Institutional Effectiveness and Assessment, gave a presentation on the overarch purpose and methodology of SACSCOC. She explained that university programs need to demonstrate that their stated learning outcomes (e.g., pertaining to general education) lead directly to corresponding assessment measures and that these results, in turn, circulate back to the programs (and its faculty) for the purposes of making informed adjustments to improve the scores.

Recommendations based on use of results
Participants suggested that all faculty should have the opportunity to attend an abbreviated session like the one provided by Dr. Brunner in the summer assessment and should be aware of the purpose of assessment and benefit of accreditation. Some suggested faculty teaching general education courses attend a session that informs them of the expectations of assessment and includes a discussion of the meaning of the various competencies. Possibly this can be conducted by competency coordinators, bearing in mind that not all competencies have coordinators. The full list of participant recommendations can be found on page 17 in Appendix A.

Goal 2: Learn about the General Education Spring Pilot Assessment and prepare for Fall 2015 Pilot

Performance expectations
Bob Brackett and members of the Fall and Spring Pilot presented data gained related to faculty time, artifact upload method, and the technology used to facilitate the upload process.
Recommendations based on use of results
Participants pointed out that feedback must be provided to participants in both the pilot programs and the summer assessment in regard to their individual class performance and the overall findings and conclusions of the program in a timely manner. Processes for the collection and assessment of general education artifacts must be fully communicated and transparent to all involved faculty and there must be opportunity for faculty input into both the process and evaluation. The full list of participant recommendations can be found on page 17 in Appendix A, most of which have been implemented.

Goal 3: Review and revise course syllabi
Participants reviewed and revised course syllabi based on knowledge gained from the assessment institute.

Recommendations based on use of results
Participants stressed that all faculty, grad students, lecturers and adjuncts should be provided support to learn how to make any appropriate adjustments to their syllabi and courses related to general education and the competencies. This support can take the form of professional development opportunities (University-wide or within individual department meetings), online training, technical support, email communication, etc. Also, examples of syllabi that exhibit good models for producing successful artifacts should be available to faculty. The full list of participant recommendations can be found beginning on page 17 in Appendix A, most of which have been implemented.

Goal 4: Assess student work generated from the General Education Assessment Pilot
Participants assessed a random sample of student work for the 6 course-related competencies included in the general education Fall 2015 and Spring 2016 Pilot. Faculty assessors were grouped by content area and reviewed a stratified random sample of all artifacts across AH, CC, M, NS, SS, & STS. Twelve hundred and ninety six artifacts were evaluated representing 25% of the total number of artifacts submitted. The most frequently assessed competency was Arts and Humanities (AH) with 325 (77%) artifacts reviewed, followed by the Science Technology in Society (STS) with 38% (N=268) of the total number of artifacts evaluated. Because fewer artifacts were collected for mathematics all accessible artifacts were reviewed. Figure 4 shows the distribution of competencies reviewed.
In terms of scores, NS received the highest average overall score of 2 closely followed by STS with an average score of 1.8 (See figure 5). Table 1 provides percentages of artifacts scored.
<table>
<thead>
<tr>
<th>Competency</th>
<th>N</th>
<th>%</th>
<th>Minimum Score</th>
<th>Maximum Score</th>
<th>Mean</th>
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</thead>
<tbody>
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<td>4</td>
<td>1.5</td>
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<td>CC</td>
<td>167</td>
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<td>4</td>
<td>1.6</td>
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<td>M</td>
<td>204</td>
<td>92</td>
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<td>4</td>
<td>1.6</td>
</tr>
<tr>
<td>NS</td>
<td>182</td>
<td>7</td>
<td>1</td>
<td>4</td>
<td>1.8</td>
</tr>
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<td>STS</td>
<td>268</td>
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<td>4</td>
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</tr>
</tbody>
</table>

Table 3. Descriptive Statistics Broken Down by Competency

Figure 6 shows the five-year trend for content scores across the six competencies.

Overall recommendations related to improving student understanding of content

At the University/College levels participants urged for an internal audit of general education courses to ensure faculty understand and implement the competency throughout the general education curriculum. Perhaps creating a University or college-level ad hoc committee could be convened to guide and oversee general education. The work of this committee could make reporting to SACSCOC an easier process.

Most participants agreed that a closer evaluation of the competencies should occur as some seem to be written beyond an introductory level. Also, double-dip artifacts seemed to address only one of the competencies. A review should be made of
double-dip courses to make sure all relevant competencies are addressed in the course. All participants agreed that professional development addressing writing student learning outcomes for syllabi, developing assignments appropriate for the competencies, etc. should be provided to everyone teaching general education courses.

The full list of participant recommendations can be found beginning on page 17 in Appendix A.

Goal 5: Evaluate Artifacts for Communication

Last summer, the communication-scoring criterion was changed from pass/fail to a 4-category rubric. This new rubric was applied to the artifacts scored this summer. Figure 7 provides a score breakdown for each competency, whereas Figure 8 provides the average communication score for each competency.

Figure 7. Communication Score Breakdown for Each Competency
The following section provides comments and recommendations from the reviewers based on the use of the scoring results.

**Overall recommendations related to improving student communication skills**

Participants agreed that the 4-point Communication Rubric developed at the 2015 summer assessment should be retained. Some participants argued that if the writing is not “college level,” it should not receive a passing score. Currently one can submit a less than college level artifact and receive a “Pass with reservations” score. More discussion about what is “college-level” needs to occur.

**Final Thoughts and Recommendations**

Participants agreed as we move forward in general education assessment, it is essential to have departmental involvement in general education and assessment and that we change the way that general education courses are evaluated such that value is placed upon involvement in general education improvement strategies.

Regarding the Summer Assessment Institutes, most participants think they should continue in roughly the same format and faculty should commit to participating for two consecutive years so that there is overlap from year-to-year. There should be at least one new faculty from each content area each summer. The full list of participant recommendations categorized by competency can be found at the end of the report beginning on page 13, many of which are already in place.
Appendix A

Participant suggestions on issues related to general education and assessment.

1) Student learning outcomes should be written in a measurable way (i.e., Bloom’s taxonomy) using language that can be assessed and actually demonstrate student learning.

2) Professional development should be available for all faculty, grad students, lecturers and adjuncts where they learn about and in some cases create rubrics used in assessment, Bloom’s updated taxonomy information, definition of competency and examples of assignments that fulfill the competency.

3) All faculty, grad students, lecturers and adjuncts should be provided with support to learn how to make any appropriate adjustments to their syllabi and courses as general education assessment methods change. This can include professional development opportunities (University-wide or within individual department meetings), online training, technical support, email communication, etc.

4) A more comprehensive system for collecting and assessing artifacts from all Gen Ed courses.

5) Programs for promoting faculty awareness of the entire scope of the assessment process, and their place within the loop connecting competency descriptions, learning outcomes, assessment of artifacts, and feedback.

6) The transition between a 2 and 3 in the STS content rubric is dramatic and doesn’t provide a consistent, evenly calibrated scale from 1 to 4. Notably, the phrasing of the 2 potentially allows for students to make an off-hand or parenthetical comment about the interactions and still earn a 2. The 3 then requires analysis of multiple impacts. Again, an evenly calibrated scale would more effectively assess artifacts and allow for more streamlined application.

7) The group has concern over passing artifacts where the communication is determined to be “not college writing.” So the phrasing of the category “Pass with Reservations” could be changed, though it would be more effective to rephrase “not college level writing” to “poor writing” or “writing needs notable improvement in grammar and mechanics.”

8) It is recommended that instructors or students provide a rationale statement for each artifact in order for the reviewers to have a full understanding of the expectations for the students. This rationale statement should include information about which parts of the artifact may be most useful in assessing content and communication, and the type of assessment (in class quiz, take home problem).

Ongoing Processes (Carried over from Last Year’s Assessment)

1) Ideally faculty should participate in the summer assessment before participating in the pilot as it can provide clarity on how to form the appropriate assignments to demonstrate outcomes and should commit to working on the summer assessment for two consecutive years so that there is
overlap from year-to-year. (This model is in currently in place though increased participation must be encouraged.)

2) The summer assessment ought to continue in roughly the same format, but we believe that it ought to incorporate more opportunities for the entire group to engage in discussions about recurring overarching challenges to assessment. (Based on these suggestions the location of the summer assessment is a crucial part of the event. It is recommended that the ASC or a similar space be used for the summer assessment as it facilitates group discussions.)

3) There should be at least one new faculty from each content area each summer.

**College/Departmental Level Suggestions** *(Carried over from last year’s assessment)*

1) Colleges should have an internal audit of general education courses to ensure faculty understand and implement the competency throughout the general education curriculum. A mechanism needs to be developed to do that audit and to delete courses from a general education list without the home department having to submit a curriculum change. Perhaps creating a college-level or department-level ad hoc committee to complete this task. The work of this committee could make reporting to SACSCOC an easier process.

2. Each general education course should generate at least one artifact that fulfills the competency.
   a. All general education syllabi should be checked at the departmental level for inclusion of appropriate information (i.e., correct competency statement, specification of artifact, etc.) to ensure that general education courses offered within the department are providing students the opportunity to fulfill the competency.
   b. Review and make suggestions for appropriate language for general education syllabi.

2. For the most part, double-dip artifacts seemed to address only one of the competencies. A review should be made of double-dip courses to make sure all relevant competencies are addressed in the course.

3. Course coordinators (when applicable) should review and make suggestions for syllabi and examples at the course coordinators meeting at the beginning of the semester.

4. Each college should review the competencies for clarity and transferability as the wording of many of them has made assessment unnecessarily difficult.

5. Faculty engagement must be encouraged at the department level with leadership from chairs.
   a. The curriculum committee and undergraduate coordinator (when applicable) should play an active role in educating faculty about the importance of general education and the assessment of it.
   b. Incentives should be offered for faculty members who play a meaningful role in advancing the quality of general education within their departments and the University, as well as those who provide consistent evidence of successfully fulfilling competencies within their own classes. Examples could include the General Education Scholar designation, credit toward
promotion and tenure, course reductions, bonus pay, and professional development funds.

**University Level Suggestions**
1. The need for a change in the way that faculty are evaluated such that value is placed upon involvement in general education improvement strategies.
2. The need for a guiding body for general education on campus.

**Generic general education information for faculty - may require faculty development**
1. The competency descriptions ought to identify basic tasks (suitable for introductory-level courses) that, at the same time, suggest higher levels of sophistication/scoring (i.e., suitable for upper-division courses). (Will require broader conversations among faculty/curriculum committee etc. Thinking along the lines of beginning, developing, mastery).
2. Each faculty member submitting artifacts should submit a bullet point sheet on the assignment and the expectations of the student, including information about which parts of the artifact may be most useful in assessing in terms of content and communication.

**Content Specific Suggestions - may require professional development for faculty, adjuncts and TAs**

**Communication**
1. Some participants argued that if the writing is not “college-level” it should not receive a passing score. Currently one can submit a less than college-level artifact and receive a “Pass with reservations” score. More discussion about what is “college-level” needs to occur.

**Issues Related to Accreditation**

**Can be implemented immediately though may require faculty development**
1) All faculty should be educated and involved in the accreditation process and should be aware of the purpose of assessment and benefit of accreditation.
2) All faculty teaching general education courses should attend a (yearly?) session that informs them of the expectations of assessment and includes a discussion of the meaning of the various competencies. Possibly this can be conducted by competency coordinators, bearing in mind that not all competencies have coordinators.
   a. Communicate to faculty that at least one assignment must be tailored towards demonstration of the competency. Conveying that information will make assessment much more efficient and effective.
Suggestions requiring college/department action

1) As SACSCOC requirements evolve, colleges need to make sure we remain current with the changing system.

Upper level Administration Support Needed

2) Upper administration should provide support to department chairs to ensure
   a. That the minimum requirements for SACSCOC accreditation (as it relates to general education) are met.
   a. That everyone understands both reason for accreditation and the importance of departmental involvement in general education buy-in and assessment.

Mathematics

Recommendations for Mathematics competency based on use of results
- There should be the ability to score a 0 for both content and communication.
- There should be the ability to give a “dash” or “blank” for submissions that are blank or missing/not able to be opened.
- The two points above would help to better distinguish the reasoning for scores of 1 and not include in the average score the artifacts that are missing.
- If possible it is helpful for Math artifacts to ask (in possibly a bonus format) questions that are beyond the scope of the course to gauge the student’s competency in mathematics beyond course content (the higher levels in Bloom’s taxonomy.)

Natural Sciences

Recommendations for NS competency based on use of results
We found that the NS competency as written is too exclusive for all Natural Sciences. The NS competency appears to be biased towards artifacts that are written like manuscripts (lab reports with literature review and literature review articles). Not all Natural Sciences courses should necessarily expect students to be able to produce this kind of work. Additionally, the spirit of the competency seems to be about demonstrating scientific thinking or literacy, which could be demonstrated by other artifacts. For example, a reflective essay in which students are prompted to describe how they used the scientific process during a laboratory exercise or to solve a problem could be an excellent artifact for assessing understanding of scientific process, but would fail to demonstrate the NS competency as currently written.

We also found the original and revised rubrics were not satisfactory for assessing the current competency as written. We recommend using the following rubrics (one for lab reports, one for lit. reviews) to assess the current competency.
NS Competency Text

“Demonstrate the process of scientific reasoning by performing an experiment and thoroughly discussing the results with reference to the scientific literature, or by studying a question through critical analysis of the evidence in the scientific literature.”

NS Competency Rubric (Lab Report)

Doesn't Pass (1) The artifact doesn't meet the competency because either the task that the student performed was not an experiment (e.g., an anecdotal study without replication), there is no discussion, or the discussion is merely a summary of the results. Citations are omitted entirely, or not incorporated into the text.

Pass with Reservations (2) The artifact meets the competency at a basic level. The artifact makes clear that the student has performed a scientific experiment. The discussion includes a conclusion derived from an interpretation of the results. The results and conclusion are given context within the greater body of scientific knowledge by referencing scientific literature. Citations might not be relevant, or scientific literature might be limited (primarily lab manuals, non-scientific sources, websites, etc.).

Good (3) The artifact clearly shows competency. In addition to the features of a score of 2, the discussion is developed by a justification or explanation of the interpretation of the results. Citations of scientific literature are appropriate and relevant.

Excellent (4) The artifact shows mastery of the competency. The discussion includes an eloquent interpretation of results justified and supported by an extensive list of relevant scientific literature citations.

NS Competency Rubric (Literature Review)

Doesn't Pass (1) The artifact doesn't meet the competency because either there is no clear problem posed, evidence presented is not from the scientific literature, and/or the evidence is presented, but not evaluated (High on Bloom's taxonomy!).
Pass with Reservations (2) The artifact meets the competency at a basic level. Presented evidence is evaluated with respect to the problem being studied. Evidence presented is supported by citation. Evidence is judged and given value based on a clear set of criteria. A conclusion is reached after weighing the value of all presented evidence.

Good (3) The artifact clearly shows competency. In addition to the features of a score of 2, the student poses an answer to the question, the primary criterion for evaluation of evidence is scientific merit, and both supporting and conflicting pieces of evidence are presented and judged.

Excellent (4) The artifact shows mastery of the competency. The student poses an engaging or fundamentally important question. More than one answer to the question are considered and the evidence for each is evaluated using relevant scientific literature.

Both of these rubrics have rigorous requirements for student understanding of the science process in order to pass (score of 2 or higher). This explains the lower average scores for the June assessment compared to the May assessment.

We feel this rubric is an effective tool for assessing student artifacts, but does not address the exclusive nature of the NS competency. We suspect that changing the competency to include a broader set of NS Gen Ed courses is a better solution to the difficulties we had in assessing the following course artifacts.
Appendix B

Tips for General Education Faculty

Arts and Humanities

Example of Information Sent to an Arts and Humanities Gen Ed Faculty Member

Text of the competency:

Change in competency:

Demonstrate an ability to analyze and/or interpret the arts and humanities.

A successful artifact will:

- Provide evidence of the competency in a well-organized manner with logical flow,
- Employ appropriate reasoning and support,
- Provide specific details and references from the material being analyzed with minimal spelling and grammatical errors,
- Incorporate literary and/or discipline-specific sources / examples to support ideas by providing citations that are adequate and appropriate (when necessary for assignment),
- Exhibit an understanding of the material as shown in college-level exploration and synthesis of ideas,
- Discuss broader implications of material in relation to the competency.

Further tips to the instructor:

- It is our conclusion that artist conceptual statements do not meet the artifact standards as engagement with art tends to be a very subjective experience. By definition conceptual statements often do not meet the rigor required for academic writing and/or presentations.
- Worksheets, short-answer assignments, multiple choice assignments, descriptions of artistic process, plot summaries, book reports and lesson plans DO NOT demonstrate the Arts and Humanities competency.
Tips for Creating a Mathematics Competency Artifact

Text of the competency:

Demonstrate mathematical literacy through solving problems, communicating concepts, reasoning mathematically, and applying mathematical or statistical methods, using multiple representations where applicable.

A successful artifact from a mathematics course will:

- Correctly use algebra and logic to solve multistep problems;
- Correctly translate between mathematical language and lay language.

OR

- Correctly present and apply a mathematical technique to a real world problem discussed in the specific mathematical area under study;
- Correctly translate between mathematical language and lay language.

A successful artifact from a statistics course will:

- Correctly identify variables and the relationships among them;
- Use appropriate statistical methods to describe quantitative data observed or generated from these variables;
- Correctly present numerical, graphical, and algebraic representations of these data.
- Correctly translate between statistical language and lay language.

Further tips to the instructor:

- The student must perform mathematics in order to demonstrate this competency. The mere discussion of quantitative data will not be sufficient.
- The artifact must describe the context in which the mathematical work is being presented.
- Notes on some common types of artifacts:
  a) A hypothetical mathematical problem could be acceptable if the student describes the context and explains the process used in reaching the solution.
  b) Excel spreadsheets will not qualify unless the student includes explanations of the math and interpretation of results.
  c) Mathematics exams could be sufficient provided that step-by-step calculations are shown, and they include written interpretation of results.
  d) Research papers with statistical calculations are acceptable for this competency, but the calculations must be shown and discussed.
  e) Input/output from statistical software must be presented as a Word file or PDF so that assessors can open the file. Also, the artifact must include explanations of the mathematics and interpretation of results.
Social Sciences

Example of Information Sent to a Social Sciences Gen Ed Faculty Member

Recommendations for faculty members teaching general education Social Sciences courses

a. Artifacts should focus upon human behavior (as opposed to environmental factors, plant behavior, biological processes, etc.) and should identify multiple relevant social science concepts.

b. Artifacts should move beyond simple description of a social science concept or human behavior to:
   i. Apply social science concepts, models, and theories.
   ii. Make connections between social science concepts and human behavior.
   iii. Draw reasonable and logical conclusions based upon relevant social science evidence.

c. Opinion pieces are not appropriate artifacts unless multiple viewpoints are addressed, adequate evidence is provided to support the opinion, and relevant literature is cited.

d. Faculty members teaching large sections may consider assigning group projects, ungraded activities, narrated presentations, and randomly graded assignments.

A successful artifact will:

- **Identify** social factors that are relevant to the explanation of human behavior.
- **Apply** social science concepts, models, and theories to explain these human actions.
- **Establish** meaningful and logical **connections** between social science concepts and human behavior.
- **Provide** sufficient **evidence** to reach conclusions.
- **Draw** meaningful and logical **conclusions** that are supported by evidence.
- If appropriate, discuss the broader implications of the study.

Further tips to the instructor:

- Students’ understanding of core principles within a social science discipline should be evident in the artifact.
- The typical artifact is a paper in which an important social issue is explored. Topics may be historical or contemporary and may relate to the actions of individuals, collectivities, cultures, nations, or world systems.
- Group projects, presentations with narration or substantive speakers’ notes, student-produced videos, or portfolios may also be acceptable.
- Book, article, and literature reviews may fulfill the competency if students critically review social science research and evidence, discuss and analyze issues raised by that research, and draw conclusions which arise from this analysis.
- Outlines, lecture notes, worksheets, short-answer assignments, multiple choice tests, and presentations without narration are unlikely to demonstrate the Social Sciences competency as it is written.