

Part V:

The Impact Report of the Quality Enhancement Plan

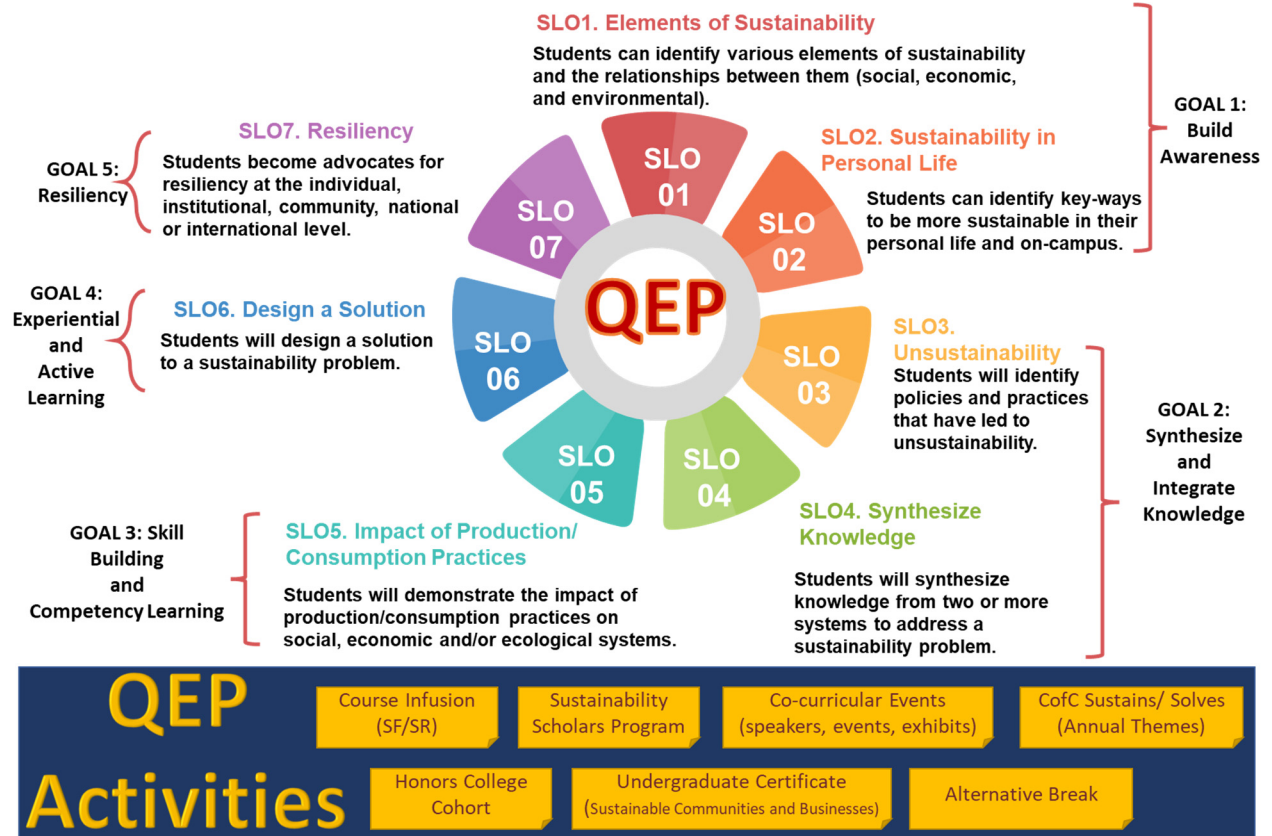
**I. List of the Initial Goals and Intended Outcomes of the QEP**

The central focus of the College of Charleston (CofC) *Sustainability Literacy as a Bridge to Addressing 21<sup>st</sup> Century Problems* initiative was to equip students with the skills and knowledge they will need upon graduation, so they can then advocate for and help design resilient social, economic and environmental systems. To achieve this focus, the initial five goals articulated were:

1. Build Awareness: Build Awareness of the three systems of the Triple Bottom Line (TBL) of sustainability (social, economic, and environmental) and how these three systems are related to one another.
2. Synthesize and Integrate Knowledge: Cultivate sustainability literacy by developing students’ fluency in systems thinking.
3. Skill Building and Competency Learning: Demonstrate the impact of production and consumption practices on the three systems (social, economic, and environmental) of the Triple Bottom Line.
4. Experiential and Active Learning: Enhance student learning through active learning around sustainability literacy by helping students design solutions to various sustainability problems.
5. Resiliency: Students become advocates for resiliency at the individual, institutional, community, national or international level

The original proposal stated that because of the QEP activities, students would be able to achieve the student learning outcomes depicted in **Figure 1**.

**Figure 1. QEP Goals, Student Learning Outcomes and Activities (Interventions)**

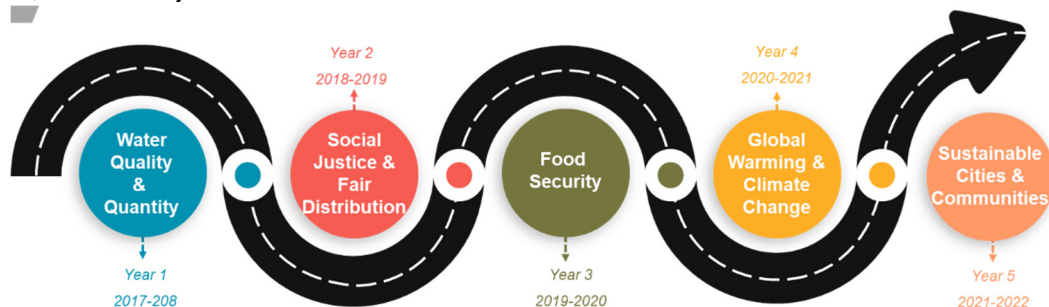


The seven student learning outcomes presented in **Figure 1** were assessed using a robust combination of direct and indirect measures for both formative and summative purposes, including, but not limited to course-embedded assessment (signature assignments with rubrics), surveys, student participation, and journal reviews.

In order to meet the above goals, a variety of QEP activities were implemented. Curricular interventions focused on these topics, such as offering sustainability-focused (SF) or sustainability-related (SR) classes (course infusion) and providing a sustainability literacy module during one of the weekly First-Year Experience synthesis seminars for all freshmen. Additionally, there were co-curricular interventions such as holding a total of 137 Sustainability Literacy Institute (SLI) sponsored and co-sponsored events, supporting various theater productions, and supporting CofC Sustains/Solves-themed Alternative Breaks and days of service.

Given the breadth of 21<sup>st</sup> century problems, an annual theme to help focus explorations of sustainability was implemented. The “CofC Sustains/Solves” themes for the QEP were selected by campus vote, with possible topics taken from Jean MacGregor, et. al.’s “Sustainability Core Topics and ‘Big Ideas’” list, and then for years 4 and 5 from the United Nations Sustainable Development Goals. The themes are presented in **Figure 2**.

**Figure 2. QEP Themes by Year**



The topics helped the campus explore how these interconnected issues impact social, environmental, and/or economic systems. Curricular and co-curricular programming also reflected the goals of educating, empowering, and expressing resiliency regarding how these topics are interconnected at local, regional, national, and global levels.

## **II. Changes Made to the QEP and the Reasons for Making Those Changes**

### **2.1. Operational Changes**

#### **Funding for SR and SF courses**

In years 1 and 2 faculty participation in proposing SR and SF courses was lower than anticipated. As a way to better engage faculty for later years, the Implementation Committee approved increased funding of a year-long faculty cohort model beginning in year 4.

#### **Mini-Grant Program**

Funds were allocated starting in Year 1 for a mini-grant program to support proposed projects from students, faculty, and/or staff. The projects were evaluated using a common rubric for assessment

purposes by the implementation committee members. This program was designed to encourage campus-wide participation with the QEP.

### ***Faculty Advocates***

As suggested by the on-site visiting SACSCOC committee, school-level faculty advocates were recruited in Fall Year 1. The selected faculty members were supported to attend an AASHE (Association for the Advancement of Sustainability in Higher Education) training in Columbia, SC. These advocates were the linchpins for each school to work with the Faculty Engagement Fellow. In year 3, the Outreach Fellow was eliminated, since outreach activities became part of the Center for Sustainable Development (CSD).

### ***SLI Ambassadors***

The original document proposed the hiring of student interns; however, the SLI Outreach fellow and the CSD proposed that the members of the student advisory committee become official SLI Ambassadors, with a more structured role for student engagement as interns with specific expectations and duties.

### ***Innovation Challenge Program***

The name of the original “Innovation Challenge” program changed to “Cougar Changemakers” as a more marketable name that captures student interest to be agents of change. In this program, students apply for projects to be funded (up to \$5,000) and implemented via the CSD.

## ***2.2. Changes in Assessment***

There were changes in the assessment plan over the years, described below.

- There were nine measures for SLO1 but five were eliminated for the following reasons: (1) Students in residence halls were asked to complete a survey to identify the various legs of sustainability. The survey was administered in years 1 and 2. In year 3 both the implementation and assessment committees voted that the data was not providing meaningful results to show any variation in learning just from residence halls, and to avoid survey fatigue it was decided to cancel this measure; (2) Student Affairs cancelled their annual Student Organization Leadership summit so that data was only collected in year 1; (3) The SLI “boot camp” for incoming students was cancelled after having very low enrollments in years 1 (twelve students) and 2 (ten students). The investment and effort to organize it was not justified with such low participation; (4) there were two measures that used the same survey instrument but for different sustainability themed events. The assessment team decided to merge the results from all surveys applied to student participation in all sustainability related events to better streamline reporting and assessment of events.
- There were five measures related to the Sustainability Literacy Scholars program, which is still actively advertised among students. A core requirement to be recognized as a scholar is to submit a portfolio of work. There was only one student interested in participating in the whole program, and hence, only one portfolio submitted such that no assessment data was generated due to low student engagement with this program.
- There were three measures associated with alternative breaks and experiential learning opportunities (service learning, internships, study abroad). After COVID-19 impacted the campus operations in years 3, 4, and 5, there were limited data on these measures.

- The summer student-faculty collaborative research had a low number of applicants in year 1 (three projects) and year 2 (two projects) and therefore, the implementation committee decided to cancel this opportunity in year 3.

In summary, there were a total of thirty-one measures with fourteen of them not providing usable results. At the end of the QEP, there were seventeen measures.

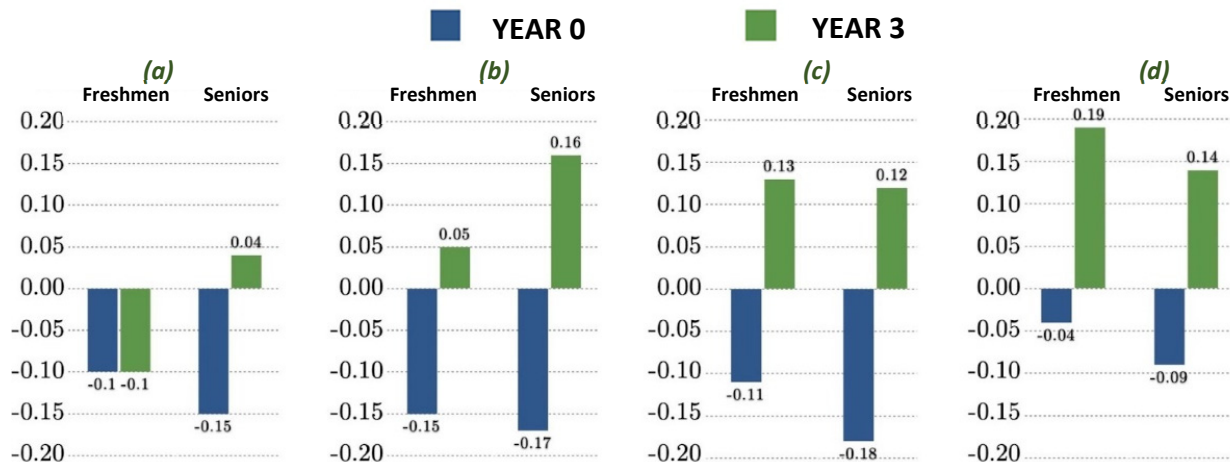
### III. Impact of Student Learning

#### 3.a. National Survey of Student Engagement (NSSE) results

The sustainability module of NSSE was administered to CofC students in year 0 (2016) to generate baseline data and again in year 3 of the QEP (2019) (note NSSE stopped offering the module in 2022 so no data was collected at the end of the QEP via this measure). The questions highlighted in Figure 3 are:

- (a) During the current year, how often have you completed an assignment that evaluates our responsibilities to future generations?, and  
To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in:
  - (b) articulating a vision of a just and sustainable society?;
  - (c) understanding the economic dimensions of sustainability; and
  - (d) understanding issues of social justice?

Figure 3. NSSE results showing differences between CofC and benchmark (pre-QEP: 2016, and during QEP: 2019)

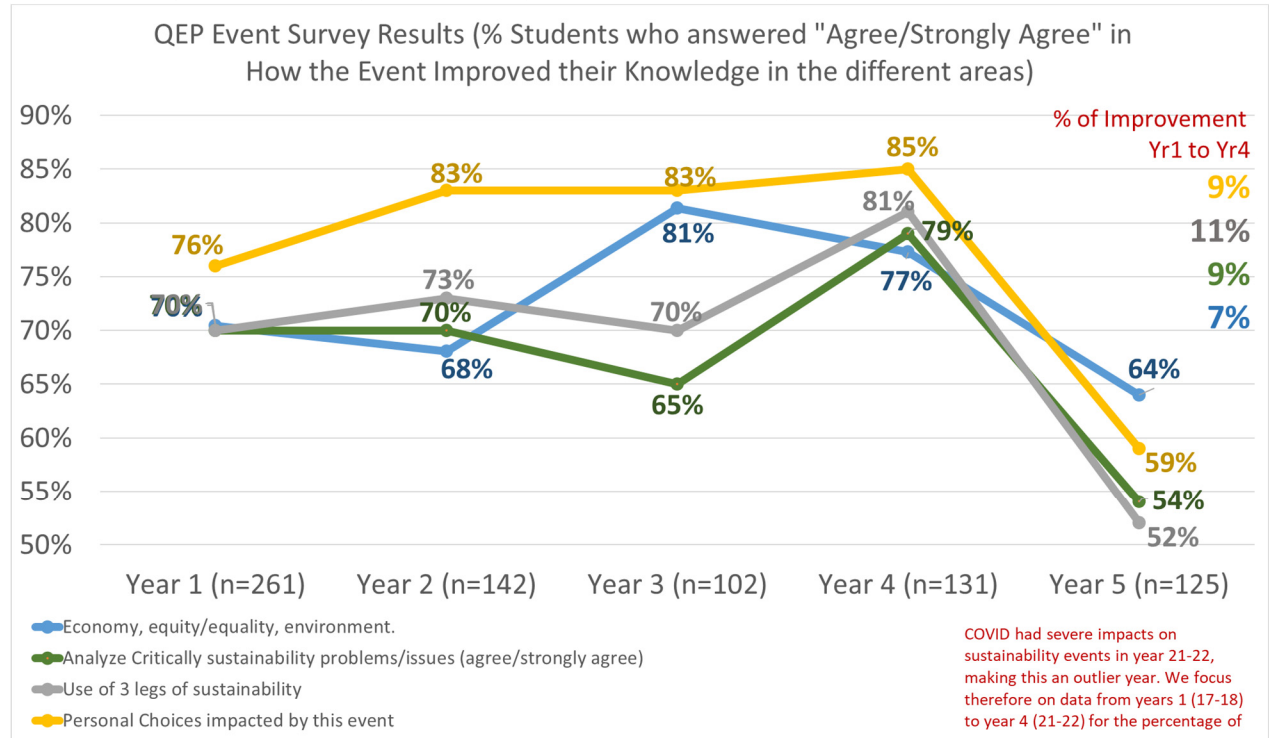


As shown in **Figure 3**, in year 3 of the QEP, based on four questions of a representative selection of NSSE sustainability questions, CofC freshmen and seniors reported significantly higher rates of engagement with sustainability than peers in the externally normed survey cohort. As shown in **Figure 3.b**, there was a 0.05 point improvement in freshmen and a 0.16 point improvement in seniors between year 0 (2016) and year 3 (2019). These rates of improvement are in contrast to before the QEP, indicating that the QEP created an impactful learning environment for student engagement with sustainability literacy, especially on coursework about responsibilities to future generations, the ability to articulate a sustainable society, understanding the economic dimensions of sustainability, and understanding issues of social justice.

### 3.b. QEP Event Survey for Co-Curricular Events

As part of the QEP activities in Figure 1, the SLI sponsored/co-sponsored 137 events, from theater productions to workshops with sustainability experts to campus talks. **Figure 4** shows the results of surveys from different events and the percentage of improvement from year 1 to year 4. For example, in year 1, 70% of students reported having improved their identification of the three legs of sustainability (blue line), compared to 77% in year 4 (an improvement of 7 percentage points). We did not consider year 5 for the percentage of improvement because this data shows the direct impact of COVID and hence, cannot be compared to the other years.

**Figure 4. Survey Results showing QEP Event Impact on student learning.**

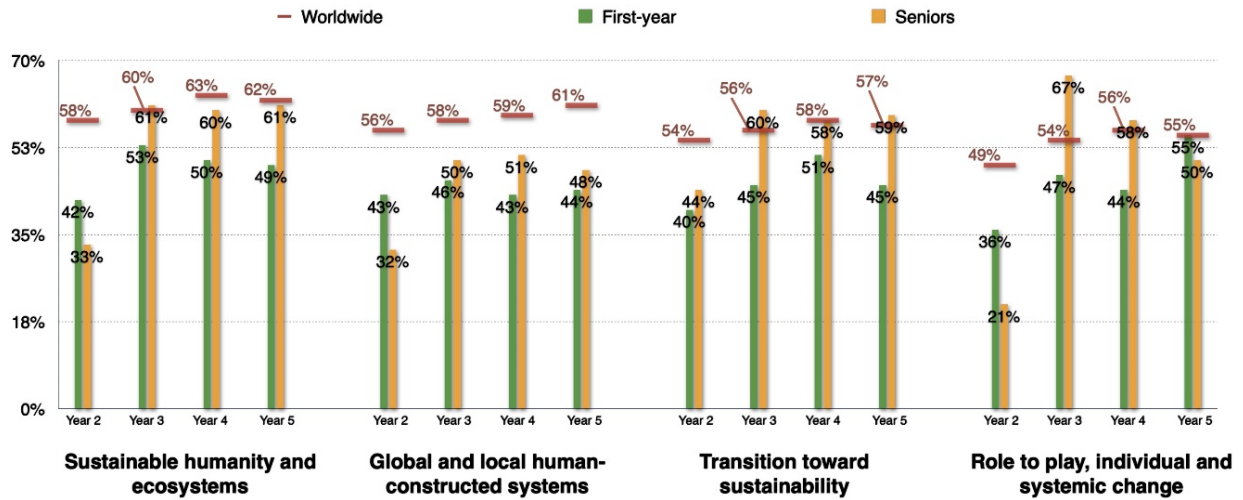


### 3.c. United Nations Sustainability Literacy Test

The United Nations Sustainability Literacy Test (SULITEST) is a globally-normed instrument that measures participants' understanding of certain sustainability principles. The SULITEST produces an aggregate score and four category sub-scores. Student achievement of SLO1 is demonstrated by scores in the first and second categories, "Sustainable Humanity and Ecosystems" and "Global and Local Human-constructed Systems," while achievement of SLO 5 is demonstrated by the third and fourth categories, "Transition Toward Sustainability" and "Role to Play, Individual and Systemic Change."

In years 2-5 of the QEP, the SULITEST was administered to first-year students in First Year Experience (FYE) courses and to seniors in capstone courses. Data in **Figure 5** show how starting in year 3, there is improvement between freshmen (first-year) and seniors in three out of the four categories. Additionally, except for global and local human-constructed eco-systems, seniors are either close to or meet the worldwide benchmark, showing strong evidence of increase in student knowledge of sustainability relative to national and international cohorts.

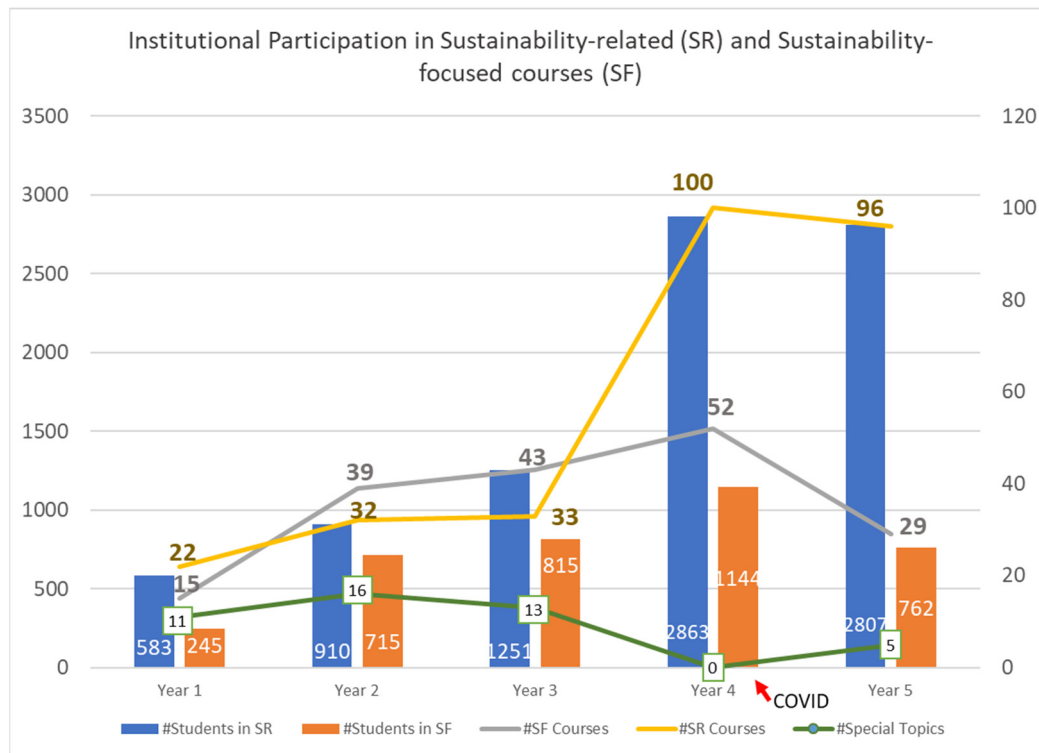
**Figure 5. SULITEST results from pre-test (First-Year students-FYE) and post-test (Seniors – Capstone)**



**3.d. Sustainability-Related (SR) and Sustainability-Focused (SF) courses**

As specified in Figure 1, Course Infusion was one of the main activities of the QEP. As shown in Figure 6, over the years of implementation, the number of students enrolled in both sustainability-related and sustainability-focused-courses increased (from 828 in year 1 to 3569 in year 5) as well as the number of courses offered (from 37 in year 1 to 125 in year 5), showing higher interest in the topic, from both the students and the faculty. A total of 12,095 students participated in sustainability-related (8,414) and sustainability-focused courses (3,681).

**Figure 6. Student and faculty participation in Sustainability-Related (SR) and Sustainability-Focused (SF) courses**



## SLO 1. Elements of Sustainability

As shown in **Figure 7**, over 70% of students were consistently able to identify at least two of the three key elements of the triple bottom line of sustainability (social, economic and environmental) and provide some or a comprehensive description of the relationships between these three systems (score of 3 or 4 on the rubric). This data is coming from course-embedded assignments in SR- and SF-courses assessed by a common rubric.

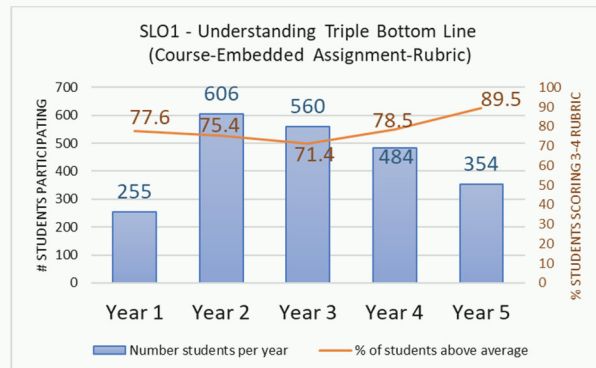
**Figure 8** shows the first-year experience courses, where students were given a pre- and post-survey on the triple bottom line before and after participating in a brief course component on sustainability. The questions addressed SLO1 (**Figure 8**) and SLO2 (**Figure 10**). Results in **Figure 8** show an increase over time of the post-survey (from 87% in year 1 to 90% in year 5) in terms of identifying at least 2 legs of sustainability (sample sizes for pre [blue] and post [orange] survey results are shown as bars in the chart on **Figure 8**).

## SLO 2. Sustainability in Personal Life

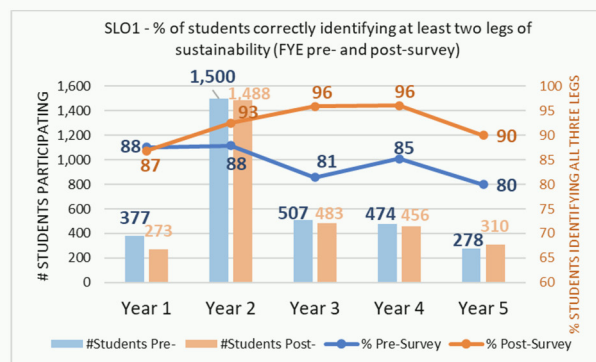
As shown in **Figure 9**, over 50% of students were able to articulate multiple ways to be more sustainable in their personal life, or on campus, and describe how these actions relate to sustainability (score of 3 or 4 in the rubric). This data is coming from course-embedded assignments in SR- and SF-courses assessed by a common rubric. Year 3 was impacted by COVID-19 disruptions.

As can be seen in **Figure 10**, in the First-Year experience courses, when asked how they could become more sustainable in their daily life, by the end of the QEP, almost 40% of first-year students were able to identify a relevant action and some description of its relations to the triple bottom line. The post-survey is part of a larger FYE survey and suggest survey fatigue, doing better pre-survey than post-survey.

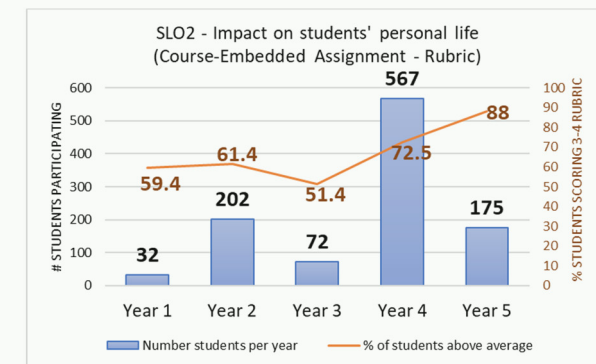
**Figure 7. SLO1 impact on student learning (rubric)**



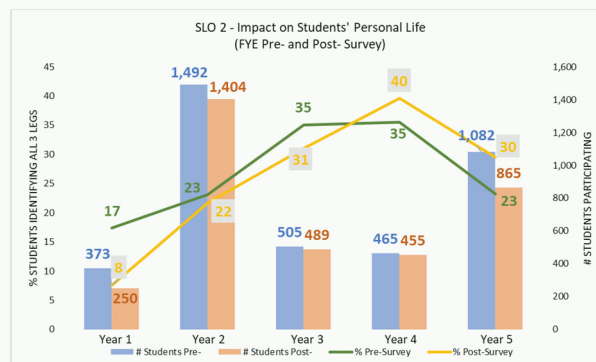
**Figure 8. SLO1 impact on student learning (FYE survey)**



**Figure 9. SLO2 impact on student learning (rubric)**



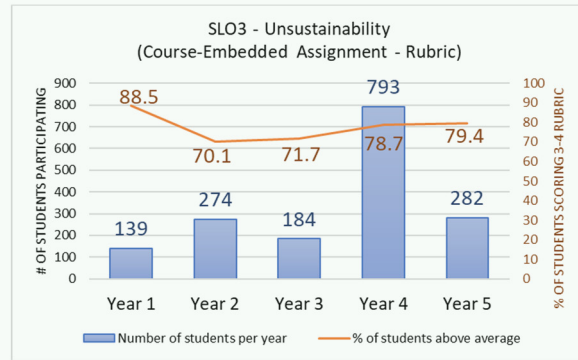
**Figure 10. SLO2 impact on student learning (FYE survey)**



### SLO 3. Unsustainability

**Figure 11** shows that over 70% of students were able to identify and describe multiple policies and practices that have led to unsustainability (score of 3 or 4 in the rubric). This data is coming from course-embedded assignments in SR- and SF- courses assessed by a common rubric.

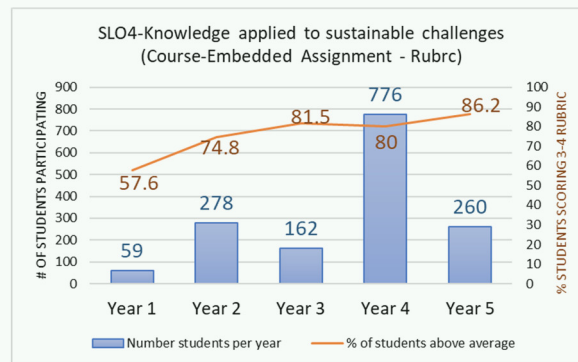
**Figure 11. SLO3 impact on student learning (rubric)**



### SLO 4. Synthesize Knowledge

As shown in **Figure 12**, every year until year 4, a higher percentage of students were able to synthesize knowledge from two or more systems in order to understand and address a 21st century sustainability problem, with average student performance increasing over the course of the QEP (score of 3 or 4 in the rubric). This data is coming from course-embedded assignments in SR- and SF- courses assessed by a common rubric.

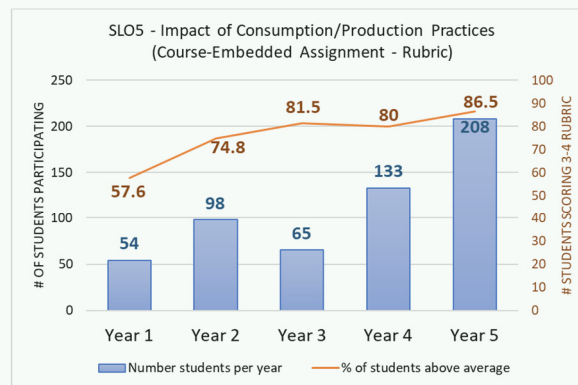
**Figure 12. SLO4 impact on student learning (rubric)**



### SLO 5. Impact of Consumption/Production Practices

**Figure 13** shows that over 60% of students were able to explain the impact of multiple production and consumption practices on social, economic, and/or ecological systems (score of 3 or 4 in the rubric). The decline in year 4 was explained by the faculty as one of the impacts of the transition to online due to COVID-19. This data is coming from course-embedded assignments in SR- and SF- courses assessed by a common rubric.

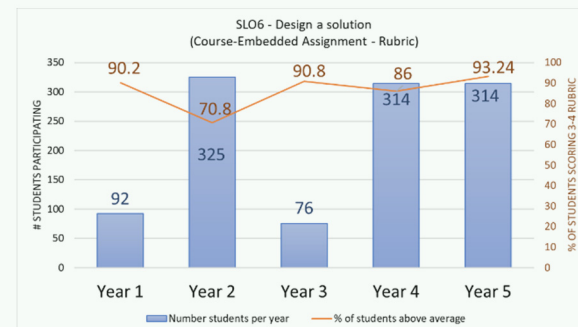
**Figure 13. SLO5 impact on student learning (rubric)**



### SLO 6. Design a Solution

As shown in **Figure 14**, over 70% of students were able to design an effective solution to a 21st century sustainability problem (score of 3 or 4 in the rubric). This data is coming from course-embedded assignments in SR- and SF- courses assessed by a common rubric.

**Figure 14. SLO6 impact on student learning (rubric)**

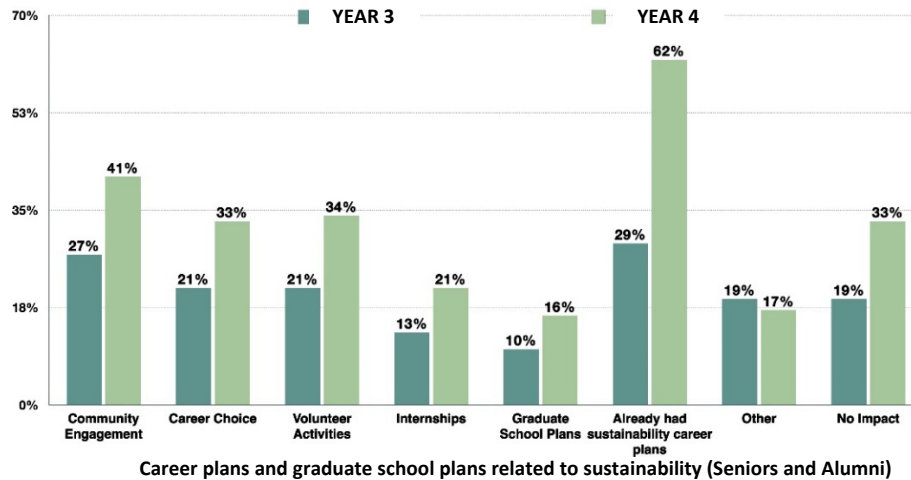




SLO7. Resiliency

Figure 15 shows data from graduating seniors (Senior-Exit survey) and recent graduates (Alumni survey). These surveys are administered by the Office of Institutional Effectiveness. The data suggest an increase between year 3 responses and year 4 responses in terms of career plans, volunteer engagement, community engagement, and graduate school plans related to sustainability. These survey results demonstrate that recent CofC graduates are more engaged with sustainability than were comparable classes of alumnae and graduating students at the start of the QEP.

Figure 15. SLO7 impact on student learning-Senior Exit and Alumni Survey Results



3.e. QEP Involved Faculty as Agents of Change in Sustainability

Figure 16 shows faculty involvement in both QEP activities and faculty development opportunities (faculty as agents of change).

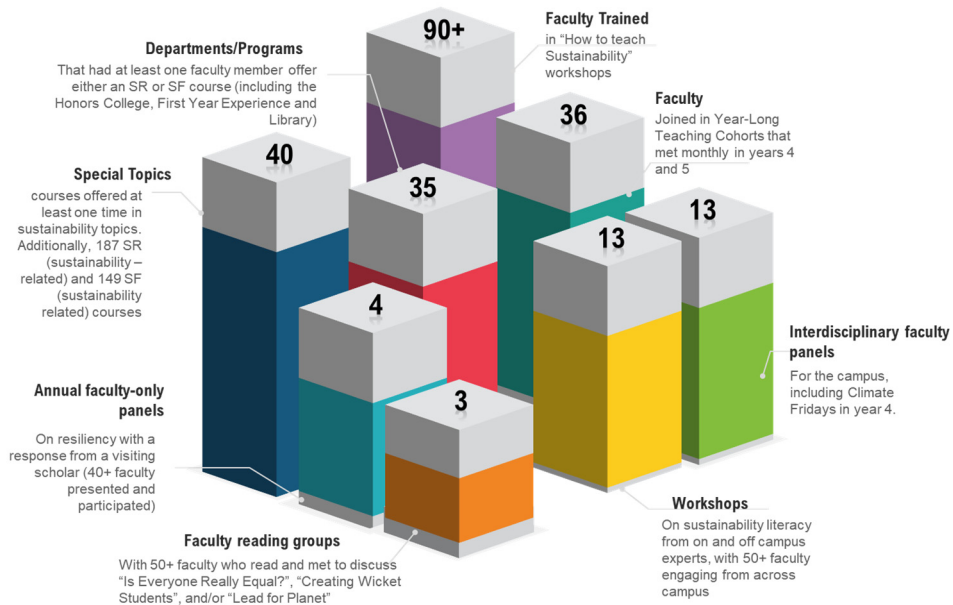
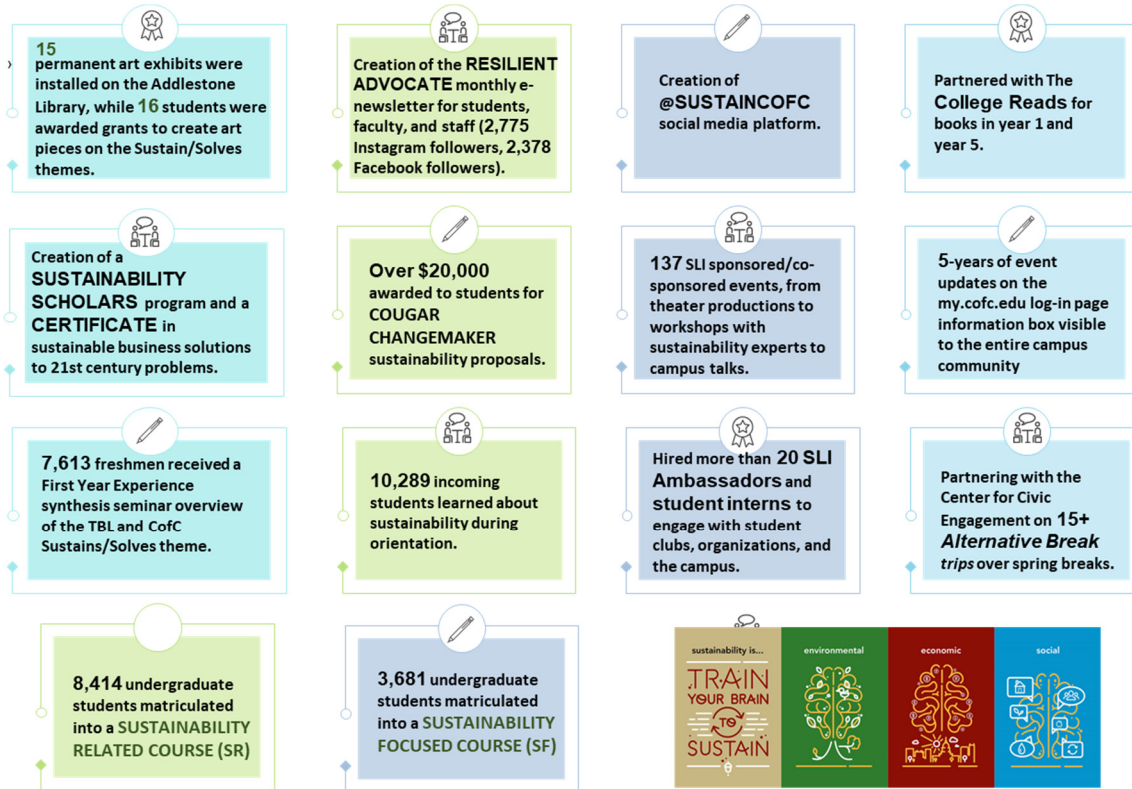


Figure 16. Faculty Engagement in QEP activities

### 3.f. Student Engagement

Figure 17 shows student engagement in different QEP activities.

**Figure 17. Student Engagement in QEP**



### IV. Reflection on What CofC Learned from the QEP Experience

The QEP in sustainability has made a positive impact on students, faculty, staff, and the overall CofC community. Some lessons learned include the simplification of the assessment plan for future projects. The proposal stated seven student learning outcomes with up to seven measures in each outcome, which created a cumbersome process for the institution. CofC also learned that significant gains in student learning are attainable through sustained investment in faculty support and faculty development around a central theme sustained over time.

The Center for Sustainability and the School of Humanities and Social Sciences will continue the efforts for experiential learning in sustainability practices for our students. The impact of the QEP on our academic programs will transcend the five years of implementation. The student learning outcomes have become embedded parts of courses across the curricula, and the faculty created new programs and strengthened old ones for our students to master sustainability concepts. Sustainability has emerged as a priority and identity for our institution. The new mission statement for the College of Charleston (approved on May 2020) shows our commitment to sustainability: “Founded in 1770, the College of Charleston is a public university grounded in the principles of the liberal arts and committed to developing *ethically centered*, intellectually versatile and globally fluent *citizens who create innovative solutions to social, economic and environmental challenges*”.