UNIVERSITY COLLOQUIUM COURSE ASSESSMENT

Summer 2018 – Spring 2019

Analysis and Report presented by Brenda Thomas, University Colloquium Program Director

This report presents an analysis of the University Colloquium course assessment administered from Summer 2018 through Spring 2019. The goal of the assessment is to determine if current curriculum and course components are facilitating the achievement of the course's student learning outcomes as listed below. The results will inform changes to curriculum.

University Colloquium Student Learning Outcomes

1. Identify the common ecosystems of SWFL
2. Interpret the interactions between those ecosystems
3. Identify the components (environmental, economic, societal) of sustainability
4. Interpret the interactions between those components
5. Relate the value of sustainable practices to your major/career and lifestyle
6. Describe what sense of place means
7. Explore how an attachment to place affects ethics related to that place

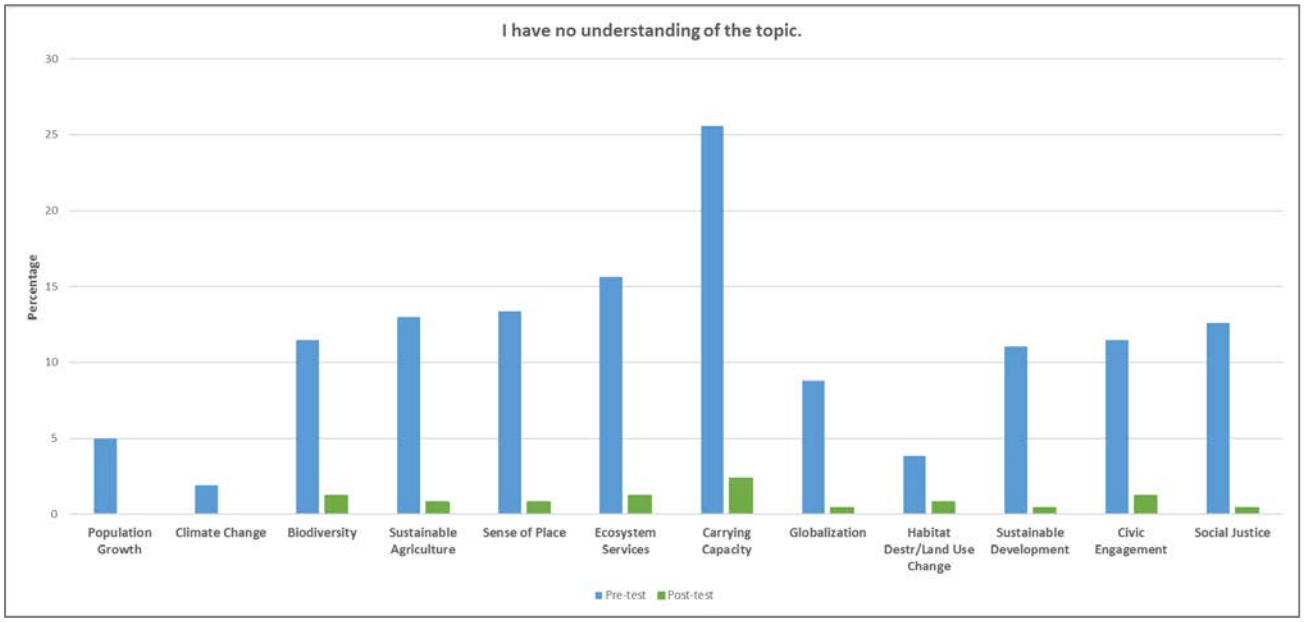
For the assessment, each semester six faculty members were randomly selected and asked to participate. Those who agreed added pre-test and post-test surveys to their Canvas courses and assigned them to students within the first two weeks of the semester and in the last two weeks of the semester, respectively. Anonymous quiz data were downloaded and shared with the Colloquium Program Director.

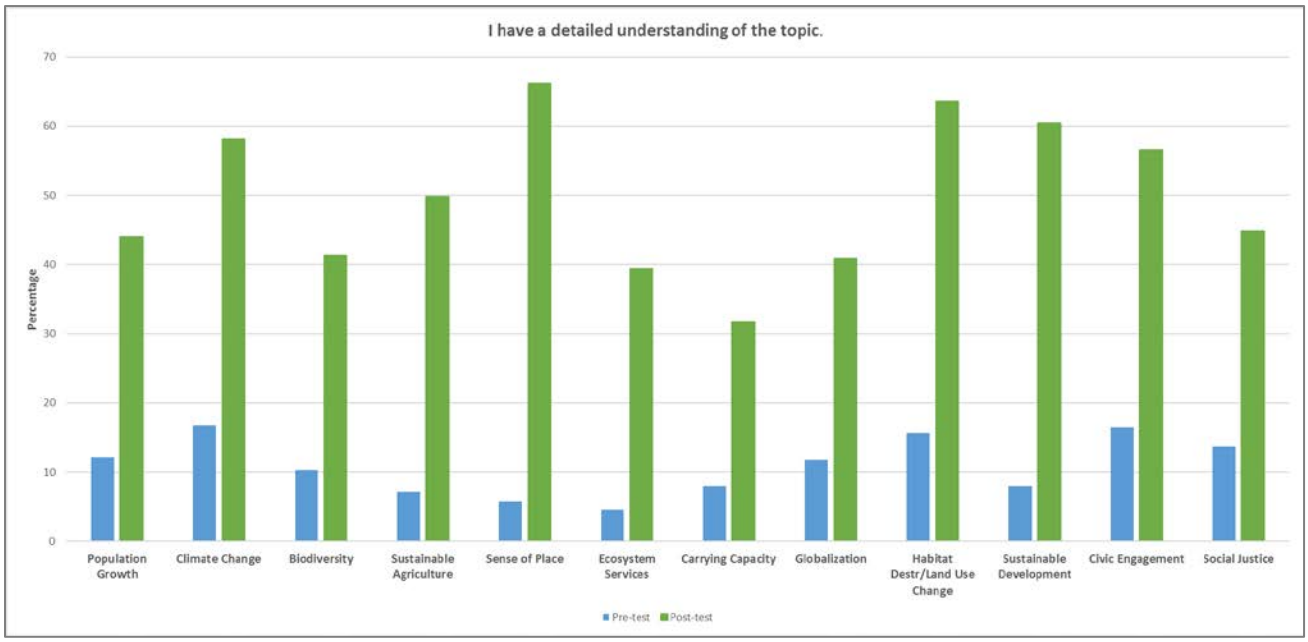
The assessment consisted of both direct and indirect measures of student achievement. First, students self-assessed their understanding of various aspects of sustainability and then demonstrated that understanding through short answer/essay questions. A simple rubric that looked for a cogent answer was used to assess responses for each question.

Pre- and post-test survey questions:

1. From the following list of sustainability-related topics, indicate to what degree (no understanding, little understanding, a general understanding, a detailed understanding) you understand each topic.
2. Which aspect of sustainability will impact you the most?
3. Why will this aspect of sustainability have the greatest impact on you?
4. Are healthy ecosystems important to society and the economy in southwest Florida? Explain why or why not?
5. What is the most important thing you can do to reduce your ecological footprint (your impact on sustainability) in southwest Florida and around the globe?
6. Explain the importance of sustainable agriculture from an environmental, social, and economic perspective.
7. Describe one aspect of climate change that will affect you.
8. Discuss one way that cities can be designed to be more sustainable.

Question 1 - From the following list of sustainability-related topics, indicate to what degree (no understanding, little understanding, a general understanding, a detailed understanding) you understand each topic.

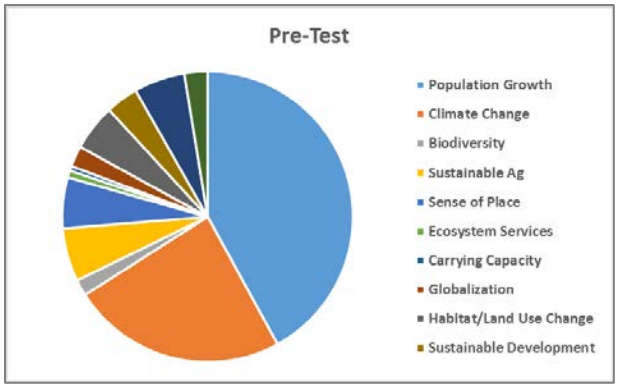


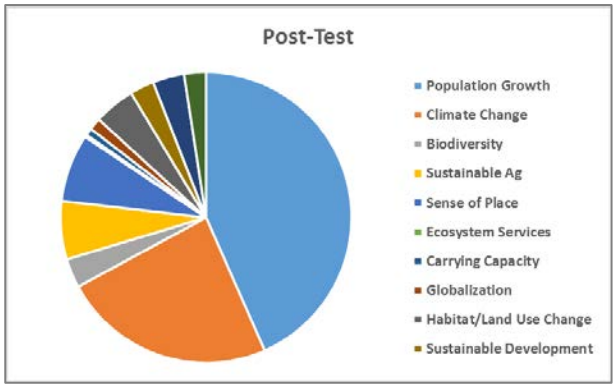


This question gaged students' familiarity with various aspects of sustainability (population growth, climate change, biodiversity, sustainable agriculture, sense of place, ecosystem services, carrying capacity, globalization, habitat destruction/land use change, sustainable development, civic engagement, and social justice) coming into the course and after course completion. Results show a substantial change in students' perception of their understanding of these aspects between the beginning and end of the semester. The greatest improvement in students' perceived understanding

pre-test to post-test occurred in sense of place, sustainable development, and habitat destruction/land use change.

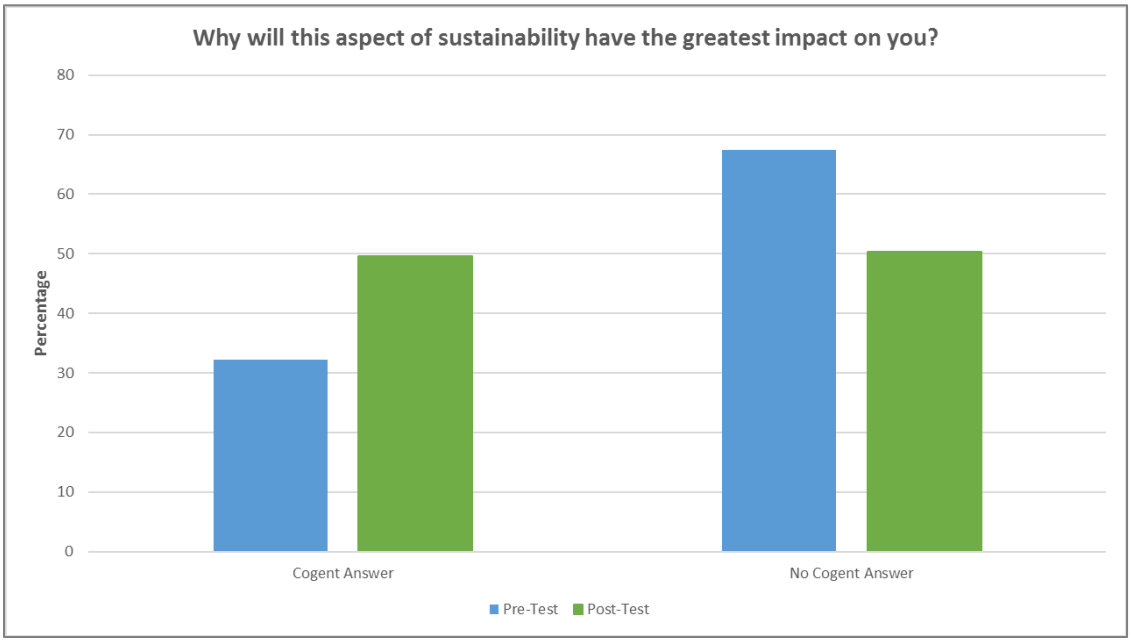
Question 2 - Which aspect of sustainability will impact you the most?





There was very little change between the pre-test and post-test in students' beliefs about the aspect of sustainability that would have the most effect on them. It is interesting that the ranking of student choices mirrors the order of the topics as listed in the survey. Unintentionally, the order reflects the priority given to each aspect by those who composed the survey. For fall 2019, the order of the choices will be shuffled to see if it makes a difference in student ranking.

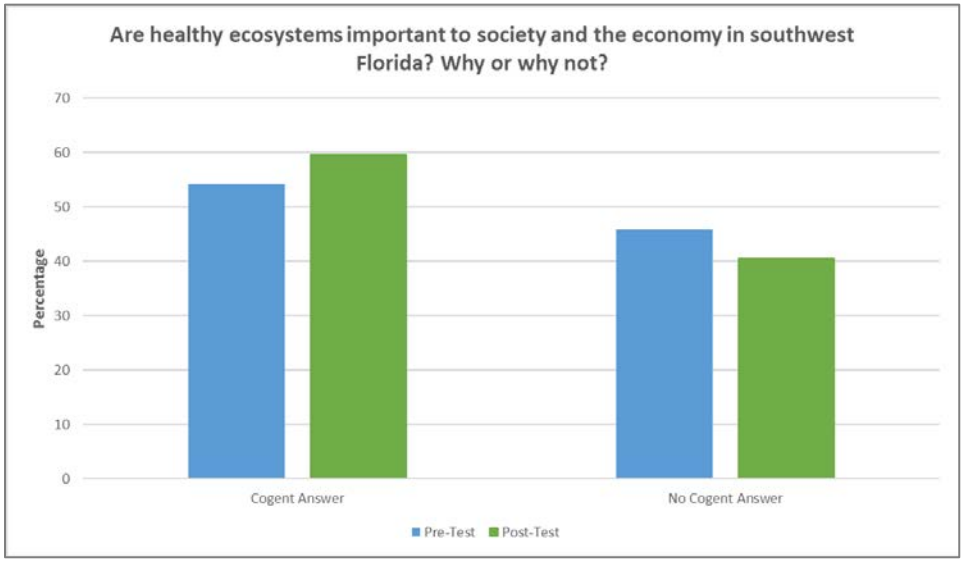
Question 3 - Why will this aspect of sustainability have the greatest impact on you?



This question asked students to reflect on their connection to sustainability. Some considered personal connections, some professional connections, and some both. Although the specific aspects selected did not change much between pre-test and post-test, students' ability to articulate an explanation for their choice improved, perhaps indicating a greater depth of knowledge. Those who selected population

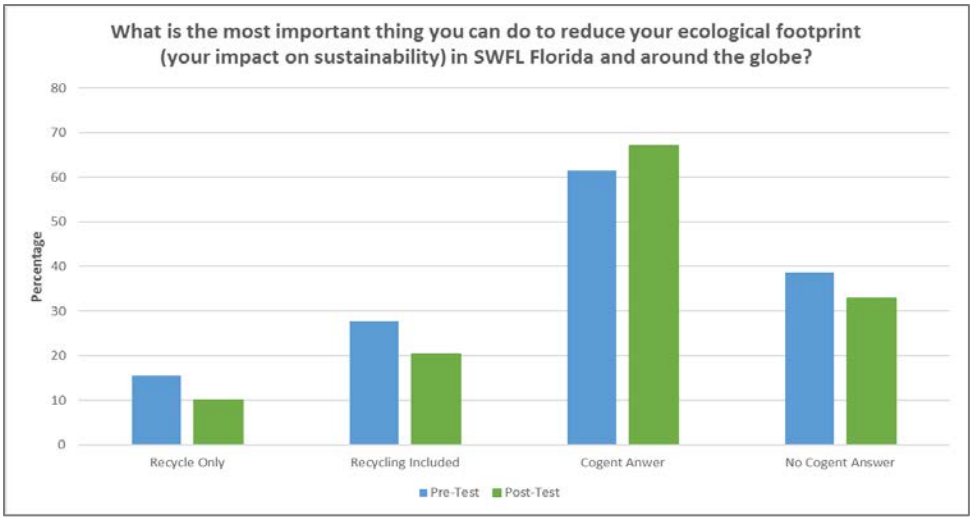
growth as the aspect of sustainability that would have the greatest effect on them saw it as a driver for most of the other challenges. Those who selected climate change typically saw sea level rise being of primary importance to the residents of Florida.

Question 5 - Are healthy ecosystems important to society and the economy in southwest Florida? Explain why or why not?



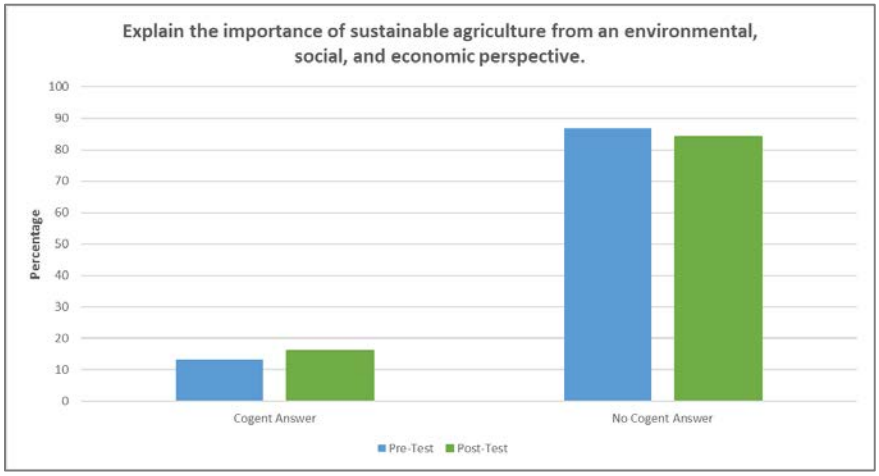
This question was looking for Florida-specific answers, primarily (but not exclusively) the reliance on our tourism-based economy, as well as an understanding of the connection between ecosystem services and economy and society. Not surprisingly, many students focused on last summer's harmful algal blooms. At the end of spring 2018 (see the Spring 2018 Assessment Report), only 31% of students could provide a cogent answer to this question. During the current assessment period, 54% could provide an adequate answer on the pre-test and 60% in the post-test. As devastating as the blooms were for our estuaries and our local economy, they provided a very powerful and tangible lesson for the SWFL community, our students included. Many students referred to agriculture in Florida as being dependent on healthy ecosystems as well, though it could be argued that it is a healthy *environment* generally rather than healthy *ecosystems* specifically that is important for agriculture.

Question 6 - What is the most important thing you can do to reduce your ecological footprint (your impact on sustainability) in southwest Florida and around the globe?



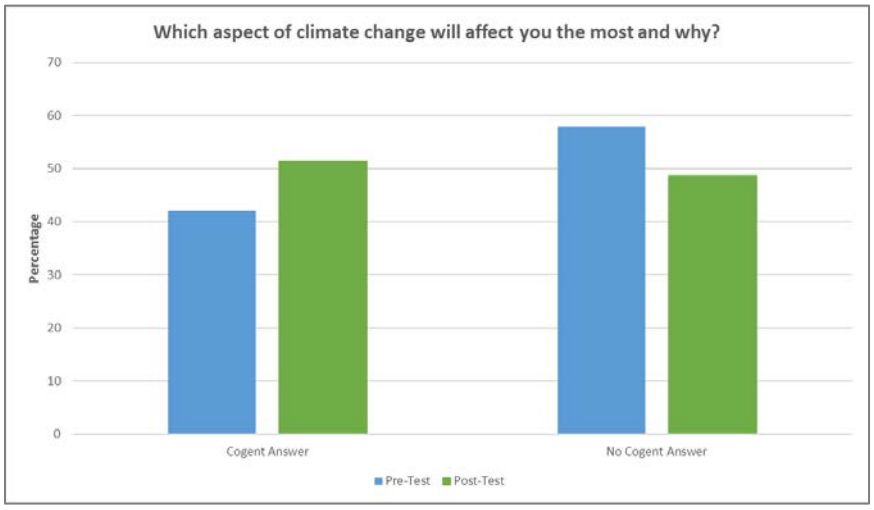
This question also looked for Florida-specific answers, but broader answers were also counted provided they were cogent. Recycling was examined individually because it is the "low-hanging fruit" that many students focus on. Recycling was often included in a list of general topics. A bit disappointing were the number of students who indicated that taking shorter showers or turning off the water when they brushed their teeth was an important part of sustainability. While water conservation is important, these responses seem more elementary in nature than the deeper, critically-examined solutions that are the semester-long goal. On the other hand, it was encouraging to see the number of students that indicated that eliminating single-use plastics, in particular straws and water bottles, was important.

Question 7 - Explain the importance of sustainable agriculture from an environmental, social, and economic perspective.



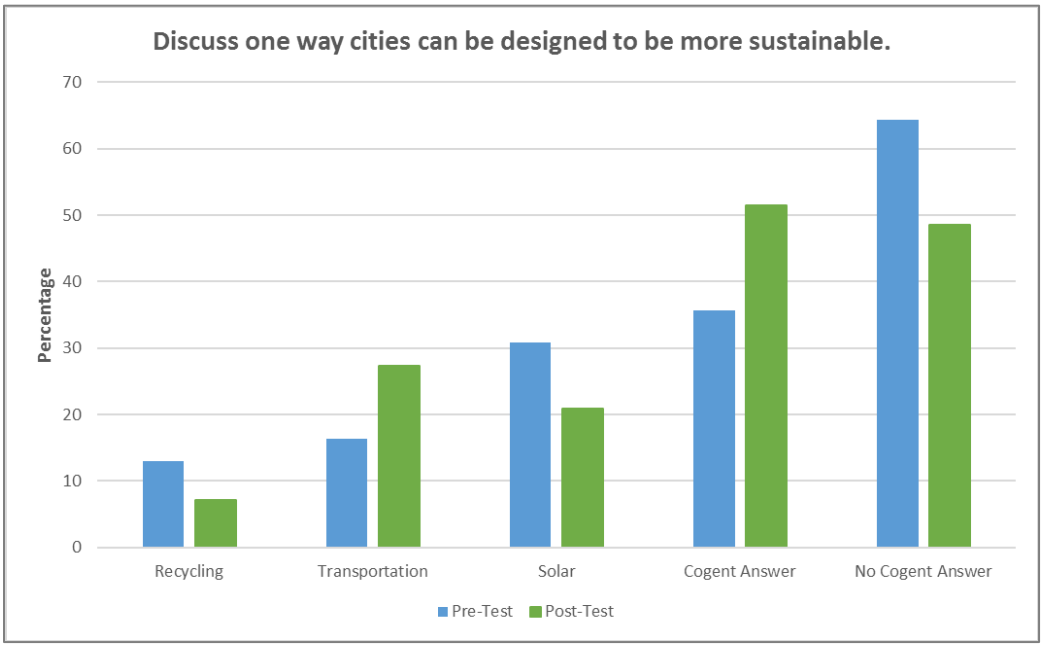
This question assessed students' understanding of what sustainable agriculture is and how it is connected to all three parts of the triple bottom line. The number of students who could answer this question well in the post-test dropped from 22% in spring 2018 (see Spring 2018 Assessment Report) to 13% in this assessment period. Far too many students saw sustainable agriculture as simply making sure they have enough food to eat rather than the complexity of environmental, economic, and social challenges that it is. Perhaps the drop in credible answers between assessment periods indicates a shift in focus over the last year to water quality issues.

Question 8 – Which aspect of climate change will affect you the most and why?



This question assessed students' understanding of the complexities of climate change. Sea level rise and rising temperatures were by far the most common answers, and often these students were able to connect temperate to ice sheets melting and so sea level rising. A large number also indicated that hurricanes and other extreme weather events triggered by changing climate were concerning, perhaps in response to Hurricane Irma here in September 2017 and Hurricane Michael in the FL panhandle in October 2018.

Question 9 – Discuss one way cities can be designed to be more sustainable.



This question asked students to reflect specifically on urban sustainability. This year's evaluation of responses was a bit more rigorous than Spring 2018, looking for discussion and explanation rather than a simple list, even if the list included many good options. Recycling, transportation, and solar panels

were the most common suggestions. A large number of students recommended some form of urban agriculture (rooftop gardens, community gardens, green walls, green infrastructure, and so on). A few also proposed programs for the homeless and the poor that would benefit the environment as well as the economy and this at-risk population.

So what have we learned?

Logistically, changes made to question format and content since the last assessment report have made the data more reliable (and likely, the completion easier for students). Overall, results are positive and indicate that students are making progress toward learning outcomes. Specifically:

- Responses to Question 1 indicate that students are leaving the course with at least some understanding of the complexities of sustainability, though responses to the short answer/essay questions suggest that their understanding may not be as complete as they think.
- The increase since the Spring 2018 Assessment Report in the number of students who could connect a healthy environment to our local economy and society was encouraging, though the increase came at the expense of our local waterways.
- The low number of cogent responses to Question 7 regarding sustainable agriculture were disappointing, though these numbers were low in the Spring 2018 Assessment as well. This may reflect a shift in focus over the last year to more pressing current events. It is important to remember too that sustainability is a very broad topic and University Colloquium is taught by faculty with a diversity of interests, experiences, and expertise. Though it is hoped that each of us at least touch on sustainable agriculture, the depth of focus on this one complex topic likely varies greatly from section to section. It may also be that the question itself is too broad and asks too much. A slight rewording to more effectively guide student thoughts will be considered for the next round of assessment.
- The tendency of students to answer questions that asked for discussion or explanation with one word or a simple list of items is reflected in the sometimes disappointing post-test numbers. It often seemed as though students had a reasonable understanding of the concepts they were asked to reflect on, but they did not take the time to explain what they knew.