Sustainable Communication:
Using an Agricultural Sustainability Framework to Communicate Global Scientific Issues

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Introduction

Sustainable agriculture has been a hot communication topic in recent years due to its connection to environmental, economic, and social implications. Even still, there are different approaches used to teach and communicate to the public about practices supporting sustainable agricultural endeavors (Janker et al., 2019). Agricultural educators, Extension specialists, and communication professionals are often tasked with the duties of breaking down this complex subject to varying audiences, but many times, the definitions and approaches are inconsistent, which particularly leaves students confused about the best approach to communicate the concept. The varying approaches to evaluating agricultural sustainability is also a global issue (Kavvada et al., 2020). Most international agricultural producers share a common goal to increase or sustain yields while decreasing inputs and resource usage (Janker et al., 2019). Most sustainable agricultural practices are often evaluated by metrics regarding food productivity, food safety, resource protection, quality of life, and environmental quality (Stockle et al., 1994). However, the inconsistency in global interpretations make communicating the science of sustainability difficult when trying to reach lay audiences. As a result, the purpose of this innovative idea was to expose students to descriptors of sustainability (Stockle et al., 1994) to improve confidence when communicating to lay audiences about sustainable agriculture.

How it Works

We adapted Stockle et al.'s (1994) framework for evaluating sustainable agricultural production systems to teach students (n = 19) in an advanced agricultural science communications course at New Mexico State University how to communicate global sustainability. Students enrolled in the "Global Issues in Agricultural Communications" course studied abroad to Spain and Portugal in May 2023. During the 10-day faculty-led international program, students observed and learned about varying European agricultural production techniques, including many focusing on sustainable agriculture. The course was open to all majors and encompassed a diverse group of students with varying experiences in agriculture.

Prior to visiting an organic olive farm in Madrid, known for their communication efforts regarding sustainable production, we asked students to write their personal definitions of sustainability in their reflective notebooks. Students shared their definitions with a partner and the class. We, then, shared Stockle et al.'s (1994) tenants for sustainable agricultural systems—food productivity, food safety, resource protection, quality of life, and environmental quality—and asked students to define each term. Next, we exposed students to nine attributes used to evaluate the effectiveness of those sustainable tenants (Stockle et al., 1994)—profitability, productivity, soil quality, water quality, air quality, energy efficiency, fish and wildlife habitat, quality of life, and social acceptance. Students then selected one attribute to compare and contrast communication efforts between the Spanish farm and practices observed in [State].

Next, students toured the organic olive farm. Here, the owner of the farm, who was a third-generation Spanish farmer, led a walking tour of the olive orchard, the facility where oil

was pressed, and the teaching classroom where they highlighted key marketing techniques. After the tour concluded, students returned to their notebooks and journaled about the similarities and differences of communication efforts regarding sustainability between the Spanish farm and practices observed in [State] and the United States prior to departure. Finally, we asked students to identify and share which of the nine sustainability attributes most stood out to them about how the farm communicated about sustainability. We purposively placed this activity in the second half of the international experience to allow students time to experience varying Portuguese and Spanish agricultural production operations, as well as allow adequate time for students to journal about follow-up interpretations of sustainable practices after touring the organic olive farm.

Results to Date

Most students defined sustainability as the ability for agricultural producers "to grow more with less" and further defined "less" as farms that needed less resources (e.g., water, fertilizer) and had "less" impact on the environment. Students also expressed there were notable differences between what they observed on the farm versus what they have studied in the United States. As for communication efforts, most students noted energy efficiency, social acceptance, and productivity as the primary sustainability attributes with observable differences. Regarding the differences in food productivity, one student stated, "In the United States, it seems that producers often focus on using technology to leverage sustainable practices on larger tracts, while the Spanish olive farmer seemed to direct more productivity communication efforts to the local level." Regarding how agriculturists communicated about the "quality of life" related to sustainability, another student commented that American agricultural producers seem to leverage sustainability when communicating about needs related to "quantity" while European producers focused on using sustainability communication strategies to leverage "quality."

Advice to Others

We observed that students learned more about sustainability when they had a chance to reflect on previous knowledge and share with their peers before we introduced the nine attributes of sustainability (Stockle et al., 1994). Providing a time limit of thirty seconds to one minute for students to share their definitions also encouraged them to think and speak succinctly. The reflective approach also allowed students to use critical thinking skills to evaluate efforts toward communicating issues regarding sustainability. By comparing what students learned from previous experiences in the United States prior to departure to what they observed while studying abroad, we noticed students increased their understanding of environmental awareness, energy efficiency, social acceptance, and productivity. Finally, allowing students to compile thoughts in their notebooks and share observations with peers allowed the group to engage in meaningful dialog about key issues related to sustainable practices. Students expressed that through sharing and listening to their peers, they gained a deeper perspective on domestic and international approaches to agricultural production, which in turn, helped them gain confidence when communicating about issues related to sustainability.

Costs/Resources Needed

Students will need a notebook, but there are no other associated costs.

References

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