

Utilizing High Impact Practices to Improve First-Year College Experiences

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### Introduction/Purpose of the Study

The College of Agricultural Sciences at Colorado State University faces two challenges in student success. Nearly two-thirds of incoming students at Colorado State University, College of Agricultural Sciences (CAS) do not come from an agricultural background (Jeracki, 2019, Education for the Future) and recent data from Institutional Research, Planning, and Effectiveness (2018, p.53) shows that the College of Agricultural Sciences falls below the University average for first-year retention. With room for improvement, CAS developed Contemporary Agriculture Systems, a first-year experiences course which utilized High Impact Practices (HIPs) (Kuh, 2008, paras.1-2) to achieve the following goals: improved agricultural literacy through experiences across a diverse agriculture industry in Colorado and sense of community between students, student mentors from CAS, industry leaders, and CAS faculty.

Contemporary Agricultural Systems focused on three (HIPs); the first-year experience, multi-faceted collaboration, and intensive writing. Every week students traveled to an agriculture industry site, followed by a collaborative seminar where students are challenged to apply learning in a real-world setting (Kuh, 2008, paras. 3-7) Each week students responded to writing prompts asking them to reflect on learning and apply this to their knowledge. "Agricultural literacy revolves around the ability to think critically and make value judgments about the impact of agriculture" (Powell et al., 2008, p. 86). As an important part of the learning process, "students must be able to... relate their past experiences to the information that they are receiving" (Duckworth, 1977, p. 3). Additionally, the course hoped to strengthen students' sense of connection and to build their community within CAS and the agricultural industry. If students feel a positive common connection, there is ground to establish a community. A community is a diverse set of people who are connected by "social ties, common perspectives, and engage in joint action" (Macqueen et al., 2001. Abstract). Student retention is directly affected by the student's ability to develop a community within an institution. Effective programs establish "personal bonds among students and between students, faculty, and staff members of the institution" (Tinto, 2003, p.7). Development of the course hoped to build a "foundation for learning, critical inquiry, and discovery" and significantly impact the development of a community (Colorado State University, 2020, paras. 1-6). The purpose of this study was to identify if the implementation of HIPs within the Contemporary Agricultural Systems improved student agricultural literacy and perceptions of the community.

### Methods

Utilizing a case study approach, this research utilized student reflection from three-course offerings, 2017 (n=20), 2018 (n=40), 2019 (n=47), to explore student perceptions of the course goals. Utilizing the HIP framework, students would participate in field trip experiences, followed by seminar discussions in large and small groups. Following each experience, students responded to a reflective writing prompt. Responses were downloaded from the course management system, scrubbed of identifiers, provided pseudo-names, and were read by the research team. Utilizing the broad goals of the course, the team read through the reflections allowing the student responses to inform the researcher's views of the themes surrounding the course goals. The researchers met six times to compare themes that emerged in the reflective responses. Once the

initial themes had been decided, researchers once again read and coded the reflections by themes. Standards of rigor were followed for this research including triangulation, member checks, and conducting an external audit with course participants (Creswell, 2005).

## **Results**

Three themes emerged around the purpose of the study: HIP structure facilitated an understanding of a broader agriculture system; HIPs facilitated deeper learning and connection building; HIPs enabled students to express pride in the institution. Regarding the first theme, Alice (2018 cohort) better-understood agriculture supply chains after a field experience in a grocery store: “One thing I found particularly intriguing was the relationship between supply, demand, and different seasons. I knew that produce was grown in seasons related to weather, but I never really thought about how consumer preferences change, like that people barbecue less in the winter. I also didn't know that some produce can be stored for several months before it is even sent to a store.” Similarly, David (2017 cohort) indicated “... I was able to go and see the different systems firsthand and able to apply that knowledge in relation to my other classes.” Dalton, (2019 offering) indicated that the experience followed by collaborative discussions in small groups expanded his thinking: “our discussions [were] much more valuable than they would have been one large group. The group leaders were also great at getting me to think deeper and make connections between experiences I wouldn't have made otherwise.” Regarding the second theme, student responses indicated the experiences promoted connections. Jane (2018 participant) reflected on her peers: “I am not experienced in most of the areas and topics ...[I am] very comforted by the fact that my peers that have been surrounded by these environments still had questions.” Dalton, who participated in 2019, said, “The ranch manager...was one of the presenters whose love for his job I really remember”. Finally, regarding the third theme, student reflection allowed students to express pride for the university and the class. As reflections went on, students began using personal pronouns in their writing. According to Meredith (2018 course), “For me, taking a trip to King Soopers and standing in the middle of the isles was uncomfortable at first ...However, I... think it showed who we are as students, in the College of Agriculture” and Jill who indicated “It was amazing to learn how incredible our equine center is. Knowing we have one of the best in the world is amazing.” Even when students did not always agree with the type of agriculture, they still appreciated the class: “I knew I loved plants, but this class showed me, I have a passion for them. ...the class has expanded my knowledge not only in the subjects I love but the ones I am against as well” (Blake, 2019).

## **Conclusions/Recommendations**

Through analysis of student reflections from the three years of this course, it is evident that the HIPs utilized in the Contemporary Agriculture Systems Course expanded knowledge of agriculture and sense of community. There is the potential for a positive effect on student retention within the college, and further research should be conducted to see if students in the three cohorts have been retained. Implementing HIPs improved the course overall, and it is recommended that other faculty in CAS implement these practices. Collective implementation across many courses may have the broadest impact. Contemporary Agricultural Systems is a model to build a more united, invested, and agriculturally literate agriculture student.

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