

Case Studies for Student Engagement in Undergraduate Extension Education Courses

Introduction

Case studies are useful for engaging students and building problem-solving and critical thinking skills (Sherman et al., 1998). Case studies have been instrumental in revising three undergraduate Extension Education courses at North Carolina State University: Introduction to Cooperative Extension, Planning and Delivering Nonformal Education, and Advanced Issues in Extension Education. This teaching tip describes best practices for creating Extension Education case studies, specifically: (a) searching online, federal court documents pertaining to Cooperative Extension; (b) using case studies from literature in nonformal learning and social change; (c) using case studies developed for Extension professional development in performance appraisal; and (d) writing original case studies from the instructor's professional Extension experiences. The approaches and learning from the three Extension Education courses may inform other courses in the agricultural and human sciences.

Well-developed case studies empower students to apply theories to real-life problems and increase discussion between and among students and faculty. In the college curriculum, case studies are important for helping students to think beyond the classroom, solve workplace problems, and prepare career-ready graduates. Case studies may provide a way to promote social interaction in the classroom, and social interaction is important for understanding rather than just remembering (Dirksen, 2016). Case studies, when used effectively, may provide important authenticity to instruction. Bain (2016) postulates that the best college teachers connect students with content that reflects the work of professionals in the field.

Case studies were instrumental in enhancing three undergraduate Extension Education courses at North Carolina State University: Introduction to Cooperative Extension (Agricultural and Extension Education, 230), Planning and Delivering Nonformal Education (Agricultural and Extension Education, 325), and Advanced Issues in Extension Education (Agricultural and Extension Education, 478). The objectives were to prepare case studies aligned with the Extension Education course objectives and to identify and implement best practices for using case studies for undergraduate students.

Procedure

Sources of case studies were federal court documents, nonformal learning literature, and the author's professional experiences, including the publication, *Case Studies for Assessing Performance Facilitation Guide* (Donaldson, 2017).

Federal Court Documents

Open Jurist is an online database of legal research, law dictionaries, law schools, federal judges, federal courts, and federal contracts. It allows a user to search for federal court documents pertaining to Cooperative Extension to create case studies. As an illustration, the following cases illustrate race discrimination, age discrimination, and/or a lack of fairness in Extension Agent performance appraisal processes: *Wade vs. Mississippi Cooperative Extension*

Service (1976); Elliott v. University of Tennessee Agricultural Extension Service (1985); and Ballinger v. North Carolina Agricultural Extension Service, NC State University, and Board of Warren County Commissioners (1987).

Nonformal Learning Literature

Cafarella and Daffron (2013) make extensive use of case studies faced by nonformal educators to illustrate an interactive model of program planning. One case study described a snowstorm, the night before a conference, that impeded travel for some presenters and attendees. Students proposed solutions through group discussion and then compared their work to that of the expert opinion.

Diffusion of Innovations Literature

In his seminal work, *Diffusion of Innovations*, Rogers (2003) presents 54 different case studies. The case studies directly illustrate the book's content and have direct application to Cooperative Extension. The case study illustrating the work of change agents discusses Cooperative Extension professionals and organization.

Performance Appraisal Resource

The Case Studies for Assessing Performance Facilitation Guide provided in-depth descriptions of the job performance of two Extension Agents (Donaldson, 2017). Students worked in groups of two to four to discuss the case studies and rate Extension Agent performance using the Extension Agent performance appraisal criteria and forms. After groups shared their ratings, they compared their ratings to the answer key. This provided for much discussion of Extension Agent job responsibilities, program evaluation, and performance management.

Sample Case Study for Diffusion of Innovations: *Struggles with Dicamba*

The instructor prepared the following case study from his professional experience in engaging with Extension Agents who have faced struggles with local dicamba drift and the need to deliver effective dicamba educational programs.

Objectives

1. Define the diffusion of innovations and the innovation-decision process.
2. Describe the characteristics of an innovation, including consequences.
3. Explain the different adopter categories.
4. Define change agents and characteristics of effective change agents.

Instructional Strategy

After lectures and discussions in the diffusion of innovations, including adopter categories, the innovation-decision process, and consequences of innovations (Rodgers, 2003), students engage with several case studies, including *Struggles with Dicamba*. (Dicamba is a selective herbicide that controls broadleaf weeds and woody plants, and it is registered for agricultural production.) The instructor explains that the case study provides an opportunity to apply lesson content, promote healthy discussion, and extend our understanding by learning from one another and the experiences of the people we study. The instructor also explains that the dilemma presented: (a) may have no clear right or wrong answers; (b) explores the experiences of one North Carolina farmer, and the findings cannot be generalized to all farmers;

(c) may stir strong feelings; and (d) will elicit divergent viewpoints on dicamba, a controversial topic.

Students watch a news report about a North Carolina tobacco producer who had 100 acres (nearly one-third of his tobacco crop) show signs of exposure to dicamba drift from a neighbor's soybean field ("Farmers Continue Struggles with Dicamba," 2018). The report explains how Extension Agents confirmed that the damage, consistent with dicamba exposure, resulted in a loss of all 100 acres valued at \$4,000 to \$6,000 per acre.

The instructor poses discussion questions so that students consider the adoption-diffusion process in the context of Mr. Gardner's experience. The discussion questions include:

- What are some of the conflicts caused by dicamba drift?
- How did Extension professionals respond to Mr. Gardner's concerns?
- How can a change agent be helpful, if at all, regarding dicamba drift?
- What does this story illustrate about innovations and consequences?

Assessment

Student comments from end-of-semester course assessments indicate an overall positive experience in the Extension Education courses. Representative comments included:

- "This course truly sparked my passion for extension education and made me especially excited to pursue it! Just the right difficulty/workload level to be an effective course while not being overwhelming."
- "It is obvious [the instructor] has made a great effort to learn about North Carolina."

The approaches and learning from the three Extension Education courses may inform other courses in the agricultural and human sciences. Case studies are important instructional tools in diverse disciplines such as agriculture, management, and philosophy, and it is imperative that faculty investigate ways to apply case studies that will empower students' deeper learning, communication skills, and engagement.

Publication Note

A version of this article was presented as poster 2019-0289 at the 2019 NACTA Conference, held at the College of Southern Idaho, Twin Falls.

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