

University Instructor Perceptions of Teaching Multimedia Case Studies

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Introduction

Case studies are an effective pedagogical tool with many advantages for the student such as learning gains and promoting critical thinking (Bonney, 2015; [authors], 2017; Popil, 2011; Yadav et al., 2007). Lynn (1999) said using the case study teaching method helps “learners reach specific learning objectives with the teaching case as a basis for discussion” (Lynn, 1999, p. 2). This pedagogical approach is also classified as an activate learning strategy (Naumes & Naumes, 2012). Zimmerman (2002) described several types of case studies to demonstrate the flexibility and variety of formats possible. Case studies enhanced with the addition of videos, audio clips, web resources, and illustrations are classified as multimedia case studies, which provide more context and “bring the problem alive” (Chattaraman, Sankar, & Vallone, 2010, p. 187).

Conceptual Framework

In their study of faculty members’ competence and importance of various teaching areas, Blickenstaff, Wolk, Falk, and Foltz (2015) reported the teaching areas of student engagement and encouraging critical thinking would benefit from additional professional development. This study also identified lack of time and resources as the most significant barriers instructors faced when attempting to improve their teaching ability. Rocca (2010) identified “alternative teaching methods” as the top instructional activity faculty members wanted in professional development. Other areas in the top 10 included motivating students, discussion-based instruction, and case studies. Despite the learning impact case studies can provide, researchers have found faculty members rated their ability to implement case studies lower than traditional teaching approaches such as lectures (Rocca, 2010; Wardlow & Johnson, 1999).

In consideration of this need, we developed five multimedia case studies designed to build postsecondary students’ critical thinking and communication skills. The case studies addressed the following topics: framing water conservation, rural community resiliency, food recalls and crisis communication, antibiotics in animal agriculture, and invasive species. To better adapt the curriculum for others to consider adopting, the purpose of this study was to explore other instructors’ experiences using the case studies in their courses.

Methodology

The sample consisted of instructors from five universities. Eight agreed to implement three to five multimedia case studies, and one agreed to implement one in their classrooms ($N = 9$). They all received a different mix of cases that best fit their class, which provided feedback from at least four instructors on each one. These instructors were selected because they taught an agricultural communication or agricultural issues course in the 2017-2018 academic year. These instructors had no role in the development of the case studies. A questionnaire was created and distributed via Qualtrics asking instructors to rate the perceived usefulness of the curriculum materials, length of preparation time, and provide qualitative insights through three open-ended questions. The collected data were then analyzed to fulfill the research purpose.

Findings

Participants rated the usefulness of the various curriculum components highly (Table 1). Eight (88%) reported spending about one week of class time (2.5-3 hours total) on each case study. Instructors reported spending two to three hours preparing to teach each case study, with 88% ($n = 8$) spending at least three hours.

Table 1. *Perceived Usefulness of Curriculum Materials*

	Instructor Guide <i>M (SD)</i>	PowerPoint <i>M (SD)</i>	Activities & discussion questions <i>M (SD)</i>	Images & Videos <i>M (SD)</i>
Community resiliency (<i>n</i> = 5)	4.00 (1)	5 (0)	4.50 (.5)	5.00 (0)
Invasive species (<i>n</i> = 4)	4.50 (.5)	5 (0)	4.75 (.5)	5.00 (0)
Food recall/crisis comm (<i>n</i> = 5)	4.60 (.6)	5 (0)	4.80 (.5)	4.80 (.5)
Antibiotics in animal ag (<i>n</i> = 4)	4.75 (.5)	5 (0)	5.00 (0)	4.75 (0)
Water conservation (<i>n</i> = 4)	4.75 (.5)	5 (0)	4.75 (.5)	4.75 (0)

Note. Scale was 1 = *Not useful* to 5 = *Extremely useful*

Open-ended questions prompted instructors to share their most positive and negative experiences and recommendations to improve each case study's curriculum. The most common positive aspects were using the discussion questions, being able to assess how students were thinking about the issue, and helping them apply the concepts to their geographic area. The videos were also often mentioned as a highly appreciated aspect. As one participant wrote, "Loved the inclusion of multimedia and different activities and discussion to engage students." They also generally liked having fresh content for their class. A participant said, "Being able to supplement my 'usual' lesson on this topic with new ideas and perspectives and resources [was the most positive experience]."

Participants' most common cited negative experience was having to pare down the case studies or not having enough time to cover what was included. One participant recommended to have two versions for each: one with "the essentials" and another that offers a "deep dive." In response to the invasive species case study (which also covered citrus greening) and the water conservation (specific to Texas), instructors cited challenges in helping students relate to these issues. However, they reported facilitating additional discussion to help students make connections to the topics. A common recommendation was to improve the discussion questions after some of the videos, so they go beyond asking students to summarize key points.

Implications & Recommendations

As previous researchers have noted, instructors want to implement active teaching strategies that encourage critical thinking. Based on this study, we recommend using case studies as one approach to doing this. In general, this study's participants rated the PowerPoints and multimedia as the most useful components of the teaching materials, with the others falling closely behind. This corroborates the qualitative feedback detailing their appreciation for fresh content and activities, particularly the videos. To improve the case studies and reduce the amount of time instructors need to spend prepping (usually by cutting content), different time-length versions of each case study should be developed. Finally, the discussion questions should be carefully re-examined for the depth of thinking they require of students. Additional research is necessary to identify areas for professional development to help instructors implement this teaching strategy.

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