

# Video Investigation and Solutions Modeling

## Ecosystem Health Grand Challenges

A CASE STUDY

### COURSE DESCRIPTION

One of the greatest strengths of the student-created media project is its potential to force students to wrestle with nuance, complexity, and prevailing narratives on high-stakes topics that often have few, if any, right answers. The ecosystem health student-created media assignment offers just such a provocation by requiring students to dig deeper into a case study related to ecosystem health challenges. The media assignment was offered in the second iteration of the ecosystem health Grand Challenges Curriculum (GCC) course, a program developed by the University of Minnesota and taught by an interdisciplinary team spanning multiple campus departments and colleges. The GCC uses an interdisciplinary approach to explore real-world problems, such as global health issues, renewable energy, sustainability, and environmental justice. The goal of this program is “to engage students in complex global challenges.”<sup>1</sup>

## ASSIGNMENT DESCRIPTION

According to the assignment documentation, the video should include the following components:

1. Introduction/background to the problem, which includes adequate communication of complexity and systems map.
2. Stakeholder analysis and perspectives.
3. Evaluation of current solutions and/or policy implications.
4. Innovative approaches to optimization and new solutions.<sup>2</sup>

As this assignment incorporates the journalistic-style video investigation and solutions modeling video genres, the final video is essentially two student media projects. Frankly, this is a heavy pedagogical lift for a single semester, resulting in one of the most sophisticated projects supported to date. This example provides an ideal opportunity for load testing and studying student-created media projects' potential and limitations given the assignment sophistication. For this assignment to be successful, the course subject content delivery, written assignments, media assignments, and class presentations need to be precisely mapped and scaffolded in the curriculum, leaving less flexibility for unforeseen circumstances than might otherwise be the case. Fortunately, though challenges have arisen, the instructors have adapted well by maintaining an open, ongoing communication channel with each other, the students, and additional project support professionals as course needs dictate.

## PEOPLE

**Instructor:** Dominic Travis, veterinary population medicine, University of Minnesota

**Subject librarian:** Andre Nault, University of Minnesota Libraries

**Media librarian:** Scott Spicer, University of Minnesota Libraries

## LEARNING OBJECTIVES

The instructor suggests that a significant reason for shifting to the student-created media assignment was because the previous final project of

a conference-style paper presentation was uninspiring, failing to show the impact of these critical issues and the students' work in engaging with this material throughout the semester. Though aware of the potential risks of integrating a student media assignment, the instructor proposed adapting a similar project used in another course that he had previously taught, Health and Biodiversity, offered through the veterinary population medicine department. Previously, I worked with a TA, now a colleague of the instructor, in that course to develop that assignment.

In both courses, I met with the instructors early in the semester, offering assistance in the assignment development and structure. At these meetings, we discussed the general goals for the learning objectives and expectations on topic coverage, curriculum mapping, and project scaffolding tied to related pedagogical milestone activities. We also discussed the specific expectations of the final videos, notably different types of potential project genres, the capture and (re)use of media assets to compose the video, copyright/fair use considerations, academic integrity (citation and attribution), participant photo release forms, expectations on audiovisual technical quality, potential sharing and distribution platforms, accessibility (captioning), and securing authors' rights (i.e., student permissions to share out final projects for educational, scholarly, and promotional reuse beyond the classroom). After articulating these areas, we developed a customized strategy for supporting these projects that consists of resources based in the Libraries, elsewhere on campus, and through quality online services. These conversations also help shape supplemental, customized support documents and media creation coverage for classroom visits.

In response to his proposal to adopt this more intensive media assignment, the instructor suggests that he has a lot of faith in his students (and presumably, his colleagues!), holding a strong belief that they will rise to the challenge. He also describes how the project and having this experience yields additional benefits. These benefits include developing group leadership and collaboration skill sets, honing media-based science communication skill sets, and acquiring the tools and expertise to tackle unexpected big projects that may land in their laps in the workplace. To further support this assertion, given that each group is composed primarily of undergraduates, with a graduate student often serving in a mentorship role, he suggests that a colleague from the School of Public Affairs recommends this class to their graduate students to gain leadership experience. Finally, this emphasis

on developing these skill sets also reinforces several employer surveys regarding desired hard and soft skills described earlier.

The curriculum and assignment milestones challenge students. The goal is to provide an experience that guides them through a course journey, building up to the Film Festival at the end of the semester. Students then collectively screen the final versions of each other's works, culminating in an "aha" moment where everything they experienced comes together. From a rhetorical context perspective, students were aware early in the class that the target audiences for their videos are peers, the instructors, and to some extent the general public. Per the instructor feedback, awareness of the public audience did not appear to be a significant concern. Still, students were likely motivated to work harder on their projects with the knowledge that their peers would be viewing their videos.

As described in the Hierarchy of Student-Created Media Potential, the highest course outcome supported by a student-created media assignment moves students along a continuum from Information Acquisition to Action. This assignment and related activities are an excellent illustration of how student media projects, thoughtfully designed curriculum, and the GCC program can engage students and not only immerse them in the subject matter but, hopefully, inspire them to effect change! To further encourage this action, there is a proposal for this course's components to be included in a newly designed broader ecosystem health program that may offer students the opportunity to turn their ideas into real-world solutions.

## **LIBRARY ENGAGEMENT**

These videos required students to communicate the introduction and background to the problem described in their case study using factual evidence. From content analysis, it is apparent that students successfully achieved this objective. To further support this research process, student groups submitted a written paper early in the semester describing their topic. In the most recent semester, students also presented their systems map to the class.

### **Research Support**

In the initial offering of this course that did not include the media assignment, the subject librarian made an in-class appearance to provide an overview of

relevant quality information sources. With the media assignment added to the second course offering, the subject librarian created a pre-recorded video.

Regarding the benefits of the contributed video, the subject librarian suggests pressure to improve the librarian's online course support presence. This trend began before the pandemic and has since become further emphasized in light of that event. As the veterinary medicine librarian notes, there is also practical value in offering an instructional video to scale course outreach. That said, the subject librarian suggested that he strongly prefers in-person class instruction when possible. It provides a better opportunity not only to deliver content but also to connect with students. From his perspective, this outreach is likely to pay higher dividends with direct library follow-up when students may require additional research support. The subject librarian's point illustrates the challenge of delivering the preferred method of classroom outreach support weighed against curricular and project-specific pedagogical demands. Though I too prefer in-person instruction in most cases, I take a more holistic perspective in assessing the value of our media creation support, which could include alternative methods, such as a pre-recorded video or LibGuide.

Concerning research support, the instructor asks, "So how do we give them [the students] all the resources they need and the introduction to those resources with the limited time we have with them?" He acknowledges the value of the library's research instruction for the class "to assess and find good facts and do bibliographic referencing." He further suggests that it might be helpful for me to produce similar brief media creation support videos for this course and others. This point echoes the subject librarian's thoughts on the value of pre-recorded video for supporting scalability. The instructor also suggests that providing these resources upfront offers greater flexibility for the instructors to call on my expertise to engage more directly with students and troubleshoot when they are further into working on their projects later in the semester.

Though I also generally prefer in-person instruction early in the semester for networking, I also appreciate working with the students during the creation phase of their projects. To reconcile my concerns, I am satisfied when instructors are thoughtful about the quality of research in their students' projects. To that end, the instructor suggests that the students did well in locating facts and using them appropriately. Specifically, the instructors require routine check-ins, written paper assignments, and class presentations to monitor research quality. These milestones also serve to ensure that

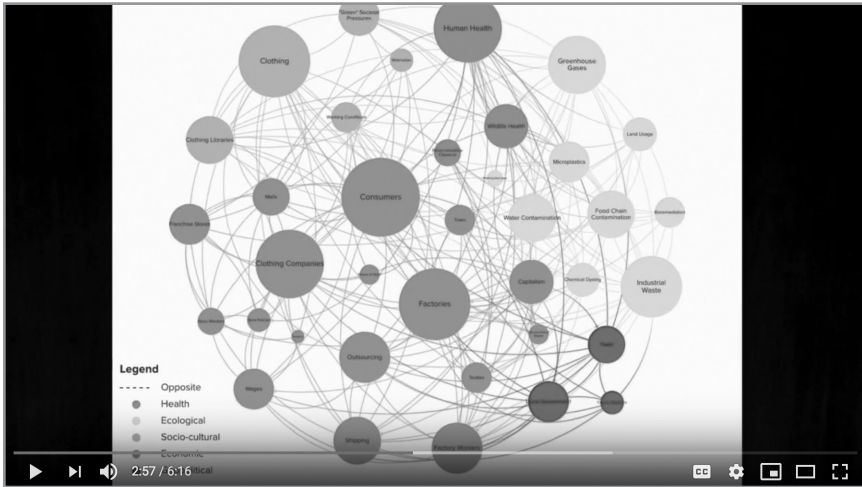
their arguments are evidence-based and not set on emotions. This emphasis on evidence is crucial to reinforcing critical thinking and science communication skill sets that are core to the project learning objectives.

## Media Creation Support

Media Services offers a range of media support services to the ecosystem health course. For example, in addition to the initial media assignment development consultation, I made an initial class visit and covered the following areas: tips for digital story media composition, image selection, locating media resources (e.g., Storyblocks), storyboarding, photo release permissions, copyright, fair use, citation, attribution, and acknowledgments. I also provided an overview of media creation equipment, software, computing, media capture spaces (i.e., 1:Button Studios), and on-demand media project help located in the Libraries, including contact information for professional media creation support staff.

The merger of research and media composition practice is evident in multiple aspects of this assignment. For example, research from the “The Grand Challenge of Fast Fashion” group is apparent through their use of pre-recorded interview footage from a subject expert, voice-over mixed with stock media, and soundtrack. Some of the stock footage came from the university-licensed Storyblocks database product presented to the class during my initial presentation. This group also cited several additional informational sources in their video. In addition to using the Storyblocks product, the subject matter expert recorded her presentation in the 1:Button Studios.

It is evident from the quality of the subject matter expert contribution that much thought went into preparing the group’s interview questions. Quality interview question development is vital for capturing desired content to tell a good story and, pragmatically, quickly sorting through the raw footage on a short timeline to identify relevant information. Developing the appropriate questions requires a decent knowledge of the subject matter (background research), a reasonably articulated sense of what information to convey, and a plan for using media to tell a story. In the case of in-person interview footage capture, technical and interpersonal interview skill sets are also important considerations. Therefore, it is essential to provide adequate lead time in the pre-production phase of the project to acquire enough background information on their topics and articulate a vision for their project in



**FIGURE 7.1** Systems Map from Fast Fashion Video

preparation for the interview. This scaffolding needs to balance with enough time for capturing content and the production process of editing and revision, and the post-production process phase that includes presentation and distribution.

In the Fast Fashion video, further research and media creation are evident in the group's visual description of the complex fashion supply chain and consumer ecosystem systems map (figure 7.1).<sup>3</sup>

## DEMONSTRATED STUDENT LEARNING

Though these projects describe a distinct perspective, what makes these videos more journalistic video investigation and less documentary style is that the students present a multi-perspectival point of view. For example, stakeholder analysis and consideration of unintended consequences demonstrate these perspectives. Surfacing the multiple perspectives of stakeholders and unintended consequences enhances critical thinking skill sets and potentially situates the students for agents of change.

What makes this assignment unique from my experience is that the students were also required to develop an original, innovative solution that does not exist. This requirement aligns well with the goal of the GCC to

effect societal change while also encouraging students to think creatively. This process also engages the students with the subject matter more deeply and forces them to wrestle with its complexity.

One of the student creators of the video, Cristina, suggests that she has since learned to sew her clothes and wears them regularly. Further, she intends to bring visibility to the issue of fast fashion by posting photos of her creations with a link to the group video via social media. This transformative effect illustrates the rich learning potential of a well-constructed media project that motivates students through the Hierarchy of Student-Created Media Potential continuum from subject knowledge acquisition to potential action-changing behavior! The use of social media for action is also an excellent example of the potential of these projects to leverage digital communication platforms that are a core component of the expanded NAMLE media literacy definition. In addition to Cristina's example, the instructor suggests that the media project had enduring transformative effects on several other students. Examples include a student referencing the video on their medical school application, a student who wrote a grant proposal to fund research in a sustainability-related area, and a dental student who went on to work in the place of their topic, while promoting the importance of sustainability-related issues.

## **CURRICULAR, CO-CURRICULAR, OR EXTRACURRICULAR VIEWINGS**

The media project journey culminates with final screenings at the Film Festival. The first event, held in an auditorium at the University of Minnesota St. Paul campus student center, included several guest visitors, such as faculty members from other departments and project support professionals. Students set up their presentations with an introduction to their topics, screened their videos, and finally engaged audience members in discussions through questions and answers. Due to the pandemic, the Film Festival's most recent event took place virtually. The web conferencing software Zoom was used to facilitate the event by having a group member present their topic, followed by a virtual screening of their video and response to audience questions. Though audience members had to supply their popcorn, the virtual environment added an affordance. It also offered a better opportunity for family and friends to attend. This virtual affordance goes beyond making the best of a challenging situation. Notably, the students used this



opportunity to inform one another of their topics (“aha” moment) and engage in science communication and public outreach by offering this event to an expanded audience, which is one of the core goals of this class.

Beyond the classroom instructional context from a co-curricular and extracurricular perspective, the ecosystem health videos are accessible in several instances. For example, the GCC program has a public webpage profile showcasing this project that includes an embed of the video, project description, and interviews from the student creators. This group also presented their project at a GCC event that included instructors and students from other GCC courses. These live and virtual presentations not only advance the challenges of fast fashion communicated in the video as a form of educating the public and advocacy but also serve to highlight the innovative teaching strategies encouraged in GCC courses as well as the value of the GCC program in meeting its mission to tackle societal concerns. Though some students published their videos to their own YouTube accounts, the campus Kultura service also hosts some of them. Out of respect for the author’s rights, the group provided permissions for repurposing their works.

I have also found the Fast Fashion video valuable in my instructional outreach. For example, I adapted aspects of this course’s assignment structure to work with an instructor to help design a similar student-created media project for a Retail Merchandising class. Since purchasing clothing is such an accessible behavior, I also used this example in a couple of workshops for fourth- to twelfth-grade teachers interested in learning potential approaches to integrating concepts and student media creation projects of sustainability and economics in their curriculum.

Finally, I included this assignment on the Student Produced Sustainability Media Gallery website to bring greater visibility to these projects in terms of greater awareness of the ecosystem topics and to showcase the teaching and learning potential of student media projects in general.<sup>4</sup> This website is public for individuals to discover on their own and is also valuable as a tool for me to build off for various service support, instructional, and scholarly contexts. This online documentation serves the core principles of:

1. Bringing visibility to instructor and student work.
2. Demonstrating the potential of these projects in support of library-based services and programming.
3. Engaging research and scholarship on student-created media projects with other educators to improve practice.

## ASSESSMENT

It is essential to have an articulated rubric for assessing a student's quality-created media project. The "Final Video Assessment Rubric" for this class includes assessing the final video product, the Film Festival group live presentation, and a submitted written abstract. The video and presentation assessment merging underscores the instructors' intent for the video's rhetorical context geared toward the instructor, peer, and public audiences.<sup>5</sup> Specific research and media composition elements of the assessment rubric include:

1. For students to achieve the top rating for content, the rubric suggests that the video "Provides clear purpose and subject; addresses the five key elements of the assignment. Supports conclusions and ideas with evidence."
2. The rubric suggests that to achieve the top rating for "visual aspects" (i.e., media composition), "The video has been appropriately edited with audio and lighting that allows the audience to see and hear with ease."

The transformative effects of a student media project also include instructors and support staff. For example, I have connected with the instructors through email and an end-of-semester survey for subsequent iterative assignment design. This outreach is helpful to assess the efficacy of this assignment in meeting its learning objectives (and related media support services). It also enhances collaborative scholarship and public engagement in sharing the assignment design and final videos with other educators (e.g., web resources, conference presentations, this book chapter, and an article). Finally, this collegiality in both the teaching and learning and co-scholarship domains adds a lot of richness to my work, making it one of my favorite aspects of this position!

## NOTES

1. “About Grand Challenges Curriculum,” Grand Challenges Curriculum, <http://gcc.umn.edu/about>.
2. Dominic Travis, Tiffany Wolf, Elizabeth Sopdie, Shaun Kennedy, and Chris Shaffer, “Ecosystem Health Syllabus,” <https://z.umn.edu/EcosystemHealthVideoEvaluation>.
3. Sabrina Southwick, Gillian Innes, and Cristina Toapanta, “The Grand Challenge of Fast Fashion,” May 15, 2019, YouTube video, 6:16, [https://youtu.be/3pjUG\\_6Vigc](https://youtu.be/3pjUG_6Vigc).
4. Scott Spicer, “Student Produced Sustainability Video Investigation + Solutions Video,” <https://z.umn.edu/sustainabilityinvestigationsolutionsvideo>.
5. Dominic Travis, Tiffany Wolf, Elizabeth Sopdie, Shaun Kennedy, and Chris Shaffer, “Final Video Assessment Rubric,” <https://z.umn.edu/EcosystemHealthRubric>.