

Takeaways from Integrating Multimedia Project-based Learning into Food Studies Curricula Amidst the Digital Education Environment of the COVID-19 Pandemic

Sally Frey*, Emily Schostack

Food Studies Department, Chatham University, Pittsburgh, PA, USA.

How to cite this paper: Sally Frey, Emily Schostack. (2023). Takeaways from Integrating Multimedia Project-based Learning into Food Studies Curricula Amidst the Digital Education Environment of the COVID-19 Pandemic. *The Educational Review, USA*, 7(7), 1031-1036. DOI: 10.26855/er.2023.07.034

Received: June 30, 2023

Accepted: July 29, 2023

Published: August 30, 2023

Corresponding author: Sally Frey, Food Studies Department, Chatham University, Pittsburgh, PA, USA.

Abstract

The pivot to distance learning spurred by the COVID-19 pandemic forced professors to adapt to using virtual tools and modify their curricula for a digital world. In the case of education centered on food, this meant translating a tactile and communal subject typically grounded in experiential learning for a remote environment. The New York City-based nonprofit Food Education Fund (FEF) developed *Pass the Spatula (PTS)* during this period as a means for culinary and hospitality-focused high school students to continue building skills at a time when the restaurant industry was largely shut down. The creation of the first issue of *PTS* exceeded the organization's expectations and engaged students in critical thought around food, while also advancing their development of both cognitive knowledge and transferable skills. An examination of the *PTS* program revealed many elements of project-based learning embedded in its framework. Inspired by FEF's work, this paper explores how project-based learning in the form of a food multimedia project can be adapted for the higher education level. Over the past two years, undergraduate and graduate Food Studies students at Chatham University in Pittsburgh, PA have participated in the creation of digital multimedia projects as a component of their coursework. Through the intentional use of technology, mentorship, and collaboration, student projects included the creation of digital magazines and a blog. Examining interviews with individuals involved in the creation of *PTS* and their publications, alongside Chatham completed assignments and student feedback, we report here how projects of this nature can impact student outcomes: (1) creation of multimedia projects contributed to student development of both cognitive knowledge and transferable skills, (2) utilization of mentorship and interaction with industry experts helped to bridge knowledge gaps and facilitate dynamic learning, (3) increased student agency created a sense of empowerment and engagement with both course content and current events. Challenges implementing multimedia assignments at the higher education level include the input of time and funding, assessment, and adequately supporting students who have chosen to explore a topic beyond the professor's area of expertise. However, the use of digital tools, a layered assessment strategy, and interdepartmental collaboration can assist with overcoming these obstacles. Although this study is focused on multimedia projects within a

university Food Studies department and an after-school program for high school students, the tenants of the takeaways discussed in this article could translate to other interdisciplinary fields of study.

Keywords

Project-based learning, experiential learning, food studies, multimedia, food media, pedagogy, curriculum, COVID-19, digital education

1. Introduction

At the start of the COVID-19 pandemic, educators across all age groups and disciplines were tasked with modifying their curricula for a digital world. The pivot to distance learning forced instructors and students to quickly adapt to using virtual communication tools that they may have had little to no experience with before. In the case of education centered around food, a notoriously tactile and communal subject, this meant needing to figure out exploring flavor, culinary techniques, and collaboration in a remote environment.

As one solution to these challenges, Food Education Fund (FEF) developed *Pass the Spatula (PTS)* in the spring of 2020 as a means for culinary and hospitality high school students in New York City to continue building career-specific skills at a time when the restaurant industry was largely shut down. This student-run magazine began as a means to provide students with a chance to examine food-related topics that they are passionate about through a creative medium situated outside of the kitchen. Over the following years, the program has continued to evolve and serve a growing number of students through both in-person and virtual programming. Each year, the program, now in its fourth issue, concludes with the publishing of a physical magazine composed of original student work that is available for national public sale.

We came to know *PTS* through our connection with FEF as a former employee of the organization and mentor for the program. Inspired by the way that culinary students engaged in complex discussions around food, we wanted to explore how this form of project-based learning (PBL) can enhance student curiosity and complement experiential learning at the higher education level. The Food Studies department at Chatham University in Pittsburgh, PA, where one author is an alumnus and the other is a current faculty member, serves students through a transdisciplinary program that emphasizes experiential learning and systems thinking. Over the past two years, undergraduate and graduate Food Studies students have participated in the creation of multimedia projects as a component of their coursework, for which one author was the professor. Through the intentional use of technology, professional mentorship, and collaboration, student projects included the creation of digital magazines and a blog. Looking to improve the connection between experiential learning and other assignments, these projects served to help students synthesize their overall educational experience.

Examining interviews with individuals involved in the creation of *Pass the Spatula* (six program facilitators and four students) and their publications, in tandem with Chatham completed assignments and student feedback (29 participants), the objective of this article is to share how this form of assessment can impact student outcomes. The projects discussed in this article were all born out of and shaped by the pandemic as a way to facilitate dynamic learning. Through the creation of their respective multimedia projects, students were able to engage their critical thinking and analytical skills, while also exploring their own interests and abilities.

2. Chatham University Food Studies Pedagogical Practices

The transdisciplinary nature of food studies lends itself to a variety of pedagogical approaches. Hilimire et al. (2014) recommend a balance of experience, theory, and practical skill development as an approach to academic sustainable food systems programming. The Food Studies department, housed within the Falk School of Sustainability & Environment at Chatham University, serves both undergraduate and graduate students, as well as students pursuing a minor in the subject. Experiential learning is embedded into the program's curriculum, taking the form of field work and trips, culinary skill development, interaction with industry experts, and exploring food as commensality. These activities serve to complement what students are learning in the classroom and further the development of both cognitive knowledge and transferable skills.

When Chatham University, along with academic institutions around the world, transitioned to digital instruction in the spring of 2020, the typical breadth of experiential learning opportunities was not available to students. Even when

the university shifted to a hybrid model, the pre-pandemic level of hands-on learning was still not achievable. This added an additional challenge for faculty to creatively navigate in order to keep the Food Studies department's pedagogical approach in practice. In courses that we examined for this study, project-based learning, in the form of digital multimedia projects, proved to be useful in bolstering the experiences that students were having, while also bridging the gap between applied and more traditional coursework. They were taught by one author and included two joint undergraduate and graduate Sustainable Fermentation sections (digital magazines, Spring 2021 and Spring 2022), graduate level Sustainable Gastronomy (blog, Fall 2022), and undergraduate level Sustainable Production (digital magazine, Spring 2022).

As educators, continuously improving ways to connect experiential learning with what is happening in the classroom and encourage student reflection is of utmost importance. "On its own, experience is merely contact with observation. In order to become meaningful, experience must be reflected upon" (Hilimire et al., 2014, p. 728). Project-based learning is widely recognized as a teaching method that actively engages students in the learning process, and when used to complement practical assignments, it provides an opportunity to engage students in this form of reflection. PBL can be identified as a teaching methodology that emphasizes learning through working towards a meaningful goal or the completion of an artifact rooted in real-world application. Based on constructivist education principles, it advocates for learning that is context-specific, puts student agency at the center of the learning process, and champions collaboration and knowledge transfer (Kokotsaki, Menzies, & Wiggins, 2016; Railsback, 2002). The interdisciplinary nature of PBL means that students participating in the process integrate knowledge from other academic subjects as they work. As Garando-Alcón et al. note, "Interdisciplinary work through PBL helps to overcome students' difficulties perceiving academic subjects not as isolated content but interrelated" (2020, p. 3). This skill is particularly vital when it comes to a wide-ranging discipline such as Food Studies.

3. Food Education Fund's Pass the Spatula Program

Food Education Fund is a New York City-based 501(c) (3) nonprofit that works with culinary-focused public high school students to provide experiential learning in culinary arts and entrepreneurship. Of the students that the organization supports, 97% identify as BIPOC and 85% live below the poverty line (*Who We Are*, 2023). *Pass the Spatula*, a product of FEF's food media program, is a student-run magazine that provides students with a chance to explore food beyond the kitchen. What began in 2020 as a fully remote program out of necessity, has transformed into a full academic year after-school program that incorporates in-person experiences with elements of distance learning. Structured to be truly student-driven, at the beginning of the program participants are split into teams. Taking charge of interviews, recipe development, editorial content, creative design, and podcasting, the students are responsible for holding accountable and supporting each other as they work towards the common goal of producing the final magazine. In closely examining the *PTS* food media program, we have identified it to be a form of project-based learning situated outside of student coursework.

In speaking with Food Education Fund staff who worked with students on *Pass the Spatula*, there was a common emphasis that the magazine assignments were about more than completing the final publication. They mentioned the way in which this project helps participating students to build confidence and develop critical soft skills such as communication, time management, and collaboration. Among higher education institutions, interest in expanding student education to include transferable skills in addition to cognitive knowledge and industry-specific skills is gaining in recognition (Guo et al., 2022). PBL situates students within an inquiry-based, student-driven learning environment that is designed for them to have agency over their education. These curriculum features permit students to ask questions and explore their interests and have the potential to enhance motivation and cultivate curiosity (Guo et al., 2022; Markham, Larmer, & Ravitz, 2003; Railsback, 2002). In *How We Think*, John Dewey states that "The most vital and significant factor in supplying the primary material whence suggestion may issue is, without doubt, curiosity" (Dewey, 1910/1997, p. 30). In fields like Sustainability and Food Studies, which face an overwhelming volume of challenges, curiosity can enable risk taking and openness to unconventional ideas. Cultivating this skill in a classroom setting has the potential to benefit students in both their academic and professional careers.

4. Impact on Students

4.1 Creation of multimedia projects contributed to student development of both cognitive knowledge and transferable skills

Striking a balance between the overall student learning experience and the quality of the final magazine guides the

program design of *PTS*. An FEF team member described the skills that students gain through participation in the program as “transformative.” Beyond building industry-specific media skills, the program helps students build transferable soft skills, such as stronger communication and personal responsibility, as well as confidence and leadership. The abilities acquired by *PTS* participants can be carried into their academic and future careers. Additionally, student involvement in *PTS* helps to reinforce what they are learning in school, while also showing them a myriad of food industry career opportunities beyond restaurants.

Throughout the creation of their projects, Chatham University students were able to translate long-format written work and research into other forms, utilizing hands-on learning and reflection throughout the process. Food Studies as a subject is inherently nuanced, often lacking answers that are purely black and white. These open-ended multimedia projects reflect this, showing students that there are innumerable ways to approach both the topic and assignment as a whole. Furthermore, these creative projects permitted students to develop different skills within their field. At the completion of the course, one Sustainable Fermentation student reflected: “Working on the magazine this semester gave me the opportunity to build a portfolio and gave me the confidence to apply for food media jobs” (Spring 2021). Using poetry, photography, graphic design, and recipe development, along with research and writing, students exercised a diverse range of skills that helped them to develop both creatively and academically.

4.2 Utilization of mentorship and interaction with industry experts helped to bridge knowledge gaps and facilitate dynamic learning

As part of the *PTS* program, FEF works with food media professionals to introduce students to various topics and skills that they might not have access to otherwise. These individuals help to further connect students with a range of knowledge and voices across the industry. Over the duration of the program’s existence, this has taken the form of both one-on-one collaboration and larger workshops (both virtual and in-person) covering topics such as photography and storytelling. This access to leaders among various sectors can help students build a specific skill, while also expanding their network for professional growth and long term post-secondary success.

In a university setting, in addition to working with outside professionals, as is already embedded into Chatham’s Food Studies pedagogical practice, there is the added possibility of expanding interdepartmental collaboration through PBL. For example, in the Spring 2022 joint undergraduate and graduate Sustainable Fermentation course, participants collaborated with graduate-level Package Design students (part of the University’s Media Arts program) to create a kombucha which they called Chaboo - Chatham Kombucha. Along with their professors, they collectively completed product development, designed the brand, as well as the advertising for the digital magazine, *Behind the Ferment: Sustainable Foodways*. To further align the project to course objectives, the two groups connected over a community lunch to share food, materials, and knowledge. The project showcased ways that food can be used to build community as well as facilitate knowledge transfer among students via shared projects. It also met a vital need of creating a positive learning environment that practiced teamwork, allowing for organic side conversations that were not commonplace during the COVID-19 pandemic. These instances of mentorship and collaboration from both *PTS* and Chatham coursework showcase a means for students to build diverse skill sets and broaden their perspectives and may provide a foundation for friendships that can function as a support network.

4.3 Increased student agency created a sense of empowerment and engagement with both course content and current events

A running theme among the FEF team members that we interviewed was that students are not seeing their voices reflected in food media and they’re eager to be heard on their own terms. A play on “pass the mic,” *Pass the Spatula* is intended to be a space for students to communicate in a way that speaks to them. One facilitator commented: “What they (FEF students) have to say is changing. I think the conversation and our perception of so many of the topics (is changing). They wrote about (the issues) in really nuanced and refreshing ways.” Representation is important to FEF students and ensuring that they can see their own potential through their mentors is critical. Through the widespread adoption of virtual communication that resulted from the COVID-19 pandemic, FEF has been able to bring in a diverse range of guest speakers and workshop leaders from around the country to work with their students.

In reading the first issue of *PTS* from the spring of 2020, we identified that this project surpassed FEF’s goal of building industry-specific skills and engaged students in critical thought around food that is more typically found in an academic Food Studies setting. With a focus on uplifting chefs of color, issue 1: *POC-Luck*, as told by the student Editor in Chief: “describes how we, as the future chefs, are inheriting the knowledge and wisdom of the pioneers who went through obstacles so we wouldn’t have to go through what they did.” (Atkins, 2020, p. 2). Through original articles,

poetry, interviews, and artwork, this issue, and those that followed, reveal students who are thinking about food far beyond the plate. Reflecting upon their work with students creating *PTS*, one facilitator noted that they consider the magazine to be “a way for students to build coalition together so that the issues they care about, in their own specific way, have a vehicle and a vessel to amplify that by their own means.”

Similarly, an underlying theme across the projects and feedback from Chatham University students was the sense of empowerment and autonomy gained by participants. Through their respective multimedia projects, centering students in the learning process allowed for them to focus on issues or topics that mattered to them within the context of the class, both as a group and individually. Emphasizing peer-to-peer interaction, feedback, and reflection provided a chance for students to learn from each other, not just the instructor. In their feedback, one student commented, “It (digital magazine project) definitely helped me see sustainability topics through more of a social lens. Reading my classmate's articles let me open my eyes to social topics I hadn't thought much about before” (Sustainable Production, Spring 2022).

In a period marked by disruptions across all sectors, the social and political unrest exacerbated by the pandemic was on student minds and this was reflected in the work that they created. By looking at their completed multimedia projects, it is evident how both FEF and Chatham students related project objectives to larger concepts within the Food Studies discipline and the world around them through their chosen themes of food justice (*Pass the Spatula: The Food Justice Issue*, issue 2) and food sovereignty (*Digest*, Sustainable Production, Spring 2022), respectively. As the field expands and mainstream food media continues to face a reckoning, project-based coursework can encourage students to establish a new framework; one that extends beyond standard forms of assessment and empowers students to explore food through creativity. These types of projects employ students' imaginations and appeal to different learning styles in a fun and empowering way, while permitting them to draw connections between what they are learning in other courses and experiencing in their lives.

5. Challenges Implementing Multimedia Project-Based Learning

As a program facilitated by the Food Education Fund, *Pass the Spatula* is allocated staff and funding to support students in the creation of the magazine. The FEF staff we interviewed expressed that it takes a long time to do things well and equitably, while also keeping things student-driven. Proper resources, volunteers, and sufficient staffing and time are critical. After guiding students through the creation of content, FEF contracts a graphic designer, copy editor, and commercial printer to help pull everything together. Decisions and edits are made in collaboration with the students to ensure that their voices and personalities are retained in the final product. Completed issues of the magazine are available for public purchase and ad space is sold to cover the cost of printing, distribution, and the creation of future issues. Striking this balance between overall student learning and a high-quality magazine is of utmost importance to the program leaders. The lengthy program timeline and financial input situate a program such as *PTS* beyond the scope of most higher education projects. However, we found that it is possible to retain many of the core benefits to students through collaboration, creating digital projects instead of utilizing print formats, and by defining a goal that is achievable within a shorter timeline.

As an extracurricular program, *PTS* does not require formal grades to be assigned to each student. In the case of modifying these types of projects for a university setting, the question of assessment must be considered. A method that worked well in the Chatham Food Studies courses that we analyzed was a layered assessment strategy. Students completed self-evaluation and peer-to-peer assessment at the middle and conclusion of the project. Additionally, they met individually with the professor on a weekly basis to discuss project goals and progress. Final grades were partially based upon how students met the targets that they created as individuals as well as a group. The largest class size in the study had ten students so this amount of time and attention would be more challenging with a larger group.

As discussed throughout this article, project-based learning models create the opportunity for students to explore a topic through the lens of their own interests. From the professor perspective, this opens up the possibility of them not necessarily having the expertise required to fairly evaluate a students' project or fully support their pursuits. If the opportunity is available, consulting colleagues from relevant disciplines can be helpful in navigating these challenges.

6. Conclusion

Through the creation of their respective multimedia projects, students were able to employ their critical thinking and analytical skills while also exploring their own interests and abilities during the exceptional era of the COVID-19 pandemic. As the education environment returns to normalcy, we argue that there is a place to utilize what we have learned from the digital transformation of education to our benefit. We found that the integration of multimedia project-based learning into university Food Studies curricula can provide students with opportunities to distill information and engage

with their learned experiences, strengthening the impact of the coursework while building career-specific skills and cognitive knowledge. Although this study is focused on multimedia projects within a university Food Studies Department and an extracurricular program for food-focused high school students, the tenants of the takeaways discussed in this article could translate to other interdisciplinary fields of study.

References

- Atkins, J.D. (2020). Editor's Letter. *Pass the Spatula, POC-Luck: Shining a light on chefs of color* (1), 2.
- Dewey, J. (1997). *How We Think*. Dover Publications, Inc. (Original work published 1910). <https://doi.org/10.1037/10903-000>.
- Garando-Alcón, M.C., Gómez-Baya, D., Herrera-Guitérrez, E., Vélez-Toral, M., Alonso-Martín, P., Martínez-Frutos, M.T. (2020). Project-Based Learning and the Acquisition of Competencies and Knowledge Transfer in Higher Education. *Sustainability*, 12, (23). <https://doi.org/10.3390/su122310062>.
- Guo, P., Saab, N., Post, L.S., Admiraal, W. (2022). A review of project-based learning in higher education: Student outcomes and measures. *International Journal of Educational Research*, 102. <https://doi.org/10.1016/j.ijer.2020.101586>.
- Hilimire, K., Gillion, S., McLaughlin, B.C., Dowd-Uribe, B., Monsen, K.L. (2014). Food for Thought: Developing Curricula for Sustainable Food Systems Education Programs. *Agroecology and Sustainable Food Systems*, 38, 722-743. <https://doi.org/10.1080/21683565.2014.881456>.
- Kokotsaki, D., Menzies, V., Wiggins, A. (2016). Project-based learning: A review of the literature. *Improving Schools*, 19(3), 267-277. <https://doi.org/10.1177/1365480216659733>.
- Markham, T., Larmer, J., & Ravitz, J. (2003). *Project-Based Learning Handbook: A Guide to Standards Focused Project-Based Learning for Middle and High School Teachers*. Novato, CA: Buck Institute for Education.
- Railsback, J. (2002). *Project-Based Instruction: Creating Excitement for Learning*. Northwest Regional Educational Laboratory.
- Who We Are*. (2023). Food Education Fund. Retrieved July 16, 2023 from <https://www.foodeducationfund.org/who-we-are>.