

Emergence and Repetition: Teaching Food and Culture Using a Foods Lab

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Introduction

For almost a decade, a small group of teachers and hundreds of students at the University of Vermont have been involved in building an innovative pedagogy that combines learning about food (and associated issues) with learning how to cook. ‘Innovative’ might sound presumptuous, given the history of home economics courses in primary, secondary and post-secondary American education since the early 20th century. However, our pedagogy, developed in a former home economics kitchen/classroom, integrates more recent theories as to the merits of experiential education, thus moving beyond the didactic instruction typical of home economics courses over the past fifty years. We have created a learning environment in the kitchen/classroom that more easily fits into a continuum between service learning, study abroad, and the newer ‘maker spaces’ now popular in business and engineering programs.

The pedagogy for this Food and Culture course involves the clear, constant, and consistent integration of thematic concepts (most consistently from anthropology, environmental studies, and food science) with a set of skills that enables students to develop a ‘trained practice,’ or an embodied form of knowledge. This pedagogy allows for an enactment of a complete experience that is often difficult to sustain in the traditional organization of higher education. One important consequence of integrating the learning, cooking, and eating of food lies in the creation of a community through shared practices and commensality. Making and eating food together enhances learning, certainly by allowing a more complete engagement but also by creating or recreating familial spaces that are often missing in students’ everyday lives. After teaching Food and Culture for many years and instructing hundreds of students, the time has come to figure out just what is so unique and important about what happens in foods lab. Why is the transformation of a student into a cook so pedagogically powerful? Why do we, as teachers, have such a sense of satisfaction at the end of each course, with strong student engagement, excellent assessments and clear group cohesion? Finally, is there a larger potential for this approach, beyond The University of Vermont, involving courses other than Food and Culture? We explore these questions, individually and as a group, in this essay.

Part One: Deciding to Design a Food and Culture Course with a Foods Lab (Amy Trubek)

Learning from experience works for students *and* teachers. In fact, for me, learning about teaching in the midst of running a course consistently serves as a pleasurable and rewarding experience. Even the

first time I design and implement a course, I spend significant time considering what I will do *next* time I teach it. The iterative process of creation, analysis, revision, compromise, and then again, happens with each and every course. When I stop cycling through these actions and reactions, I know it is time to move on. I am bored. The thrill is gone because I can no longer see my way to another round of creation and revision.

My experiences designing and implementing a course on Food and Culture has been different. This course involves a weekly lab session where students cook meals reflecting or responding to scholarly themes. Even though I have taught a version of this course multiple times, I never feel the urge to move on. Something that happens in the dynamic interaction between theory and practice, between cooking and eating, between teacher and student, is so rich, complex, and rewarding that I never want to stop. Yes, sometimes I want to redesign a certain lab and often I want to change or update the readings. But teaching about cooking and teaching about food and culture through cooking, this framework simply delivers so much potential for intellectual growth - in the classroom, in the lab, at the shared meal, during the sensory analysis and discussion. Why stop?

The course was first taught during the fall semester of 2006. The course design was developed using a mash-up of culinary classes, anthropological fieldwork, and the classical lecture and lab design of American science courses, especially biology and chemistry. The 3-credit lecture course met twice a week and consisted of lecture, discussion, and some small group work rooted in the explanation of important concepts about the relationship between food and culture while the 1-credit lab met once a week, and attempted to illustrate, illuminate, or complicate the concepts covered in lecture. At the same time, the lab was developed to also teach basic culinary skills. The central assumption was learning by doing: as students learn how to use a microscope in biology while they learn how to watch cell division, students learn how to hold a knife, organize their work station, and practice other culinary skills while they are enacting social hierarchy, or exploring purity and pollution rules. In a sense, the formal structure of the pedagogy for Food and Culture followed very traditional assumptions about the relationship between lecture and lab in course design. However, what actually happened seemed anything but typical.

An approach to designing the lab as a teaching laboratory for both skills and knowledge made sense given that I have a culinary background and that my teaching occurs within a Nutrition and Food Sciences department. Our department for a long time housed the Home Economics program and always had a laboratory kitchen space. Home economics as an academic discipline fell into disrepute, especially during the 1970s and the advent of the women's movement, and the department no longer identified itself explicitly as teaching home economics. However, a single course, Basic Concepts of Foods, had continued over the years, still using the laboratory kitchen space. The space was not fully used. Also, at the time, the Basic Concepts of Foods lab was taught not to enhance culinary skills, but to have students cook food primarily to compare results, in the style of a traditional biology or chemistry lab. The cooking process was not an area of focus, nor was the meaning of the food, from any point of view. Students made the same dish using different ingredients or techniques, analyzed the results, and then left. With my culinary training and scholarly training in cultural anthropology, watching students work like that in the foods lab seemed a waste of so much pedagogical potential. I wanted to do more, and so the Food and Culture lecture and lab course was created.

A Food and Culture lab, I felt, could not rely solely on the lab design of science courses. In order to understand how food makes culture and culture makes food, students were going to need to develop analytic skills about the entire process of making *and* eating food. The discipline of anthropology, long full of cacophony as to how and why to study the human experience does have one area of agreement: context always matters. The lab needed to create a context for the various concepts covered in the course but the students also needed to be responsible for the entire context of transforming ingredients from the natural world into cultural objects. This included knowing the ingredients, learning culinary skills, developing the ability to explain the sensory experiences of the food, and sharing the food in a culturally appropriate and meaningful manner.

In many ways, designing this course felt like flying solo over unfamiliar terrain. My academic training in cultural anthropology included specializing in food and culture, but at the time, there were very few

systematic considerations of the link between studying food and teaching about culture, or more specifically, the discipline of anthropology through food. My many previous years teaching at a culinary school gave me insights into how to teach about culinary skills clearly and systematically. But to combine both, in a new course in a new job in a department where the entire faculty were trained in basic and applied sciences? No simple task. Luckily, I had allies. The department chair was a nutritional scientist doing research on obesity; she *wanted* students in the department to understand food more broadly and providing culinary skills made good sense as well. As well, a former colleague from the culinary school where I taught, Cynthia Belliveau, was now pursuing an EdD and wanted to join in the process of designing and implementing the Food and Culture course. She decided to make the foods lab central to her dissertation project. Together, a truly remarkable pedagogical adventure was launched.

I have often wondered whether my sense of satisfaction about this style of teaching merely reflects broader theories of pedagogy that argue for the benefits of experiential learning. Also, my expertise *is* cooking, and to be able to do more than talk about cooking but to actually show people how to do it as well is liberating and exhilarating. Is this the same way a music professor feels when talking about music versus having students play and or listen to music? Or is there a singularity about cooking that sets whatever does happen apart in a real and meaningful manner: between student and teacher, and food and concept, and cooks and eaters? In the ten years since I first designed and implemented my first Food and Culture course (in collaboration with Cynthia Belliveau – see below), I have taught the course multiple times - as a sole instructor, as a co-instructor, and as part of a team. Every time the course was over, anyone involved in the experience, particularly witnessing what happened in lab, felt it was in some way a singular experience. What no one anticipated in the process of designing and implementing a course teaching about food and culture through cooking while also creating communities and context with cooking, was the power of making *students* into *cooks*. The transformation of identity, and the purpose of this identity, both inside and outside the classroom, created a new type of learner. Sociologist Richard Sennett, in his book *The Craftsman* points out that '[m]odern education fears repetitive learning as mind numbing. Afraid of boring children [sic], avid to present ever-different stimulation, the enlightened teacher may avoid routine – but thus deprives children [sic] of the experience of studying their own ingrained practice and modulating it from within. [Sennett: 2010: 38]' The structured experiences, the combination of skillful thinking *and* doing, the shared conversations and meals, allowed the students to move from passive participants to active agents. We unleashed potential without real intention.

Part Two: Deciding to Use John Dewey in the Foods Lab Design and Implementation (Cynthia Belliveau)

Amy and I worked together for many years at New England Culinary Institute, where we developed original curricular content and design with a small group of innovative chef faculty. This cutting-edge curriculum created a series of courses blending theory and practice in an undergraduate, albeit vocational, setting. Several years later, Amy and I migrated to The University of Vermont and, because of our past collaboration, wanted to build on our innovative pedagogy within a university setting. As Amy noted above, I happened to be finishing my dissertation and wanted to experiment with Dewey's kitchen pedagogical ideas, based on his premise that all educational aims and ends must be 'instrumental,' meaning that ideas are instruments and function as guides to action. He believed that students need to be experientially involved with the objective world in order to see the consequences of their transactions with it. It is here, in the quest for the continuity of action in real experience, that Dewey turned to the kitchen activity as the ideal environment for his educational philosophy to be realized.

My intention was to facilitate the design of Food and Culture so that the lab was not auxiliary to a separate, primary lecture in the classroom, but to reverse the construct. Thus, the lab component became the central learning environment, leaving the lecture as informational and dependent upon the lab experience. I ended up calling this place the kitchenroom.

John Dewey, a pragmatist, boiled his philosophy down to this claim: '*People are the agents of their own destinies, and nothing is predetermined*' (Dommeyer: 477). In the kitchenroom, Dewey in 1959 found the ground for overcoming the social and intellectual dualisms he felt distorted social and intellectual pursuits. For him, this was the bridge that connected life and school: learning how criteria are used in making value judgments; how means and ends are coordinated; how consequences are weighed; how

social costs are deliberated; and how priorities are set. For me, this kind of learning engenders student agency and is key for self-determination. The kitchenroom is an excellent medium for experiential education; through the actions of preparation, cooking, and eating together, students begin to understand and then learn the subject matter, enriched by senses of smell, taste, and touch often unused in a college-classroom environment. This last semester, Teresa Mares and I embarked on a seamlessly integrated experience: even though lecture and lab in this case were separated, we merged the two by having Teresa come to the Foods Lab in order for her content to be introduced through action.

How does this pedagogy create such seamless integration? Each class started with Teresa and I connecting her lecture with my kitchen activity. We discussed key lecture points and how they would extend to the preparation. Our pedagogical intent was to reinforce the past with the future through the action of the Foods Lab. Each lesson also started with sensory activities through a tasting and demonstration. Students were presented with 12 commonly used fresh herbs and asked to identify them. I urged the students to pick them up, tear them, push their noses close to absorb their fragrance, and taste them. Typically, they are unsure, even when I prod them to touch, tear, and smell, as if touching and exploring is somehow forbidden. In the demonstrations, students watch as I perform careful knife skills with various vegetables, or make pastry, or fabricate a chicken. As we repeat this exercise throughout the semester, their willingness to touch, smell, and taste extends to other foods and experiences and most potently what they are learning in the classroom.

The uniqueness of the kitchenroom is that it is a contained place, where life is ‘happening’ and can be explored. Paradoxically, one of the more salient aspects of the experience is that teaching and learning in a kitchen is not really about food and cooking. Of course, food and cooking are part of culture, and more prominent in this course, but not the main focus. Cooking is the byproduct of learning other lessons about the world and one’s place in it. Consistent with Dewey’s thought, I am interested in increasing my students’ capabilities with more intensity so that they can participate in the world with greater awareness. In essence, my students are not learning to cook, but cooking to learn. Kitchen tasks can engender student agency and self-determination. For example, there are many tools for preparing food in a kitchen. Knives, pots, pans, stove, and oven are recognizable, tangible instruments for performing the task. Less visible are the cognitive tools used to cook and assess process to final product. I have developed several instruments for students to use, which help sharpen their cognitive ability to perform the task.

First in the preparation cycle is to organize the activity by ‘visualizing’ what will happen. *Mise en place*—‘everything in its place’—refers to having all ingredients for a dish placed and ready to combine prior to the point of cooking. For this mental scaffolding to occur, students must read the recipe and create a vivid mental picture of what is to be cooked, complete with aromas and tastes. The ability to ‘see’ before the experiment begins enhances students’ understanding and, ultimately, thinking. *Mise en place* provides the ability for scenario planning. Students write and draw what is *going* to happen: how rice will be measured and cooked; whether chicken will be sautéed or pan-fried; if onions will be sliced or diced; which will go first, steaming the vegetables or mixing the rub; which of the two partners will do what. Once drawn and visualized, students can assimilate recipe adjustments more easily, should any deviations occur. Their ability to express what they will undertake helps define the future intra-action. Their time management, fluidity of motion, and accuracy in data gathering all improve when *mise en place* is done well.

My experience working with American college students is that they have not been trained to ‘taste’ their food. Most have had no experience around a dinner table, use table manners, or can describe the flavor of what they are eating. As a result, after they have prepared their meal and placed it on the kitchenroom table, I require 30 minutes of *Taste Profiling*, a method to compartmentalize and categorize what they are tasting. They learn that the five traditional basic tastes are sweet, sour, salty, bitter, and savory while reviewing a taste descriptor handout that gives them poetic license to describe what they taste. Using their unexercised senses of smell and taste reinforces and sharpens their critical thinking skills. Then, in the section called *It reminds me of...*, they describe what the taste/mouth-feel reminds them of, because it is often remembering that allows the connection to future learning.

Another section of their report is comparative. *Palate Solving* allows for a transformation from their palate to another's, using critical-thinking skills. Students taste their final preparation first, then compare it to two other dishes prepared by other teams. Students must fine-tune their senses to note subtle nuances, using terminology and opinion without judgment. They must use their palate and olfactory to negotiate the sensory experience. Similarly to *mise en place*, students find palate solving difficult at first, as their ability to sit quietly and 'taste' their food and the food prepared by others is a unique experience in a lifetime of mindless gulping. The skill development is in recognizing ingredient attributes, and the critical thinking involves making the distinction between what 'you don't like' and what could be done to improve it. Through the process of *mise en place* and palate solving, students gain new confidence.

In these courses, the students' advancement to intellectualize what they have been experiencing first-hand is one of a series of transformative moments that build on one another exponentially. Their cooking technique improves, which allows subordination of the practical skills and movement to make more multifaceted connections to the discussions and the readings. They deepen their analysis and include multiple perspectives in their writing. Over time, they no longer struggle with the practical skills of cooking, and, as a result of their new intimacy with the kitchenroom, their nascent mastery inspires them to consider larger global food issues. Their papers and discussions reveal a cumulative understanding of the material gleaned from their practical work. Ultimately, this integration with various operations and materials constitutes what they now describe as 'cooking.'

The experiences of 'Rachael' reveal the dramatic growth in skill and confidence that is possible in just one semester. As described in a related study on food agency by our teaching and research assistant Maria Carabello (2015), Rachel's self-described cooking skills and confidence at the beginning of the fall 2014 semester were very limited relative to her peers. Although she looked forward to the change in her academic routine that the lab would provide, she was doubtful that there would be any lasting impacts on her own cooking practices or her engagement with food outside of the classroom. A successfully browned eggplant prepared as part of a ratatouille recipe in a unit on Seasonality provided the turning point for Rachael's sense of food agency and enjoyment in the kitchen.

Having mastered the skill of sautéing a particularly fussy vegetable after using salt to draw out its bitterness, Carabello documents the enthusiasm that Rachael expresses about her success and the acknowledgement from both her supportive lab partner and Cynthia in a moment of true group learning. Later that same evening, Cynthia was pleased to receive the following (unprompted) email from Rachael:

I just wanted to reach out and thank you for today's lab. I've never cooked like that before, so determined and self-confident, and I've definitely never received praise for my cooking skills. I went home and even though I was tired and swamped with work, I looked at what I had in the fridge and turned on the oven with confidence. I made asparagus and pasta with tomato sauce, which to you probably sounds like nothing, but for me it was a huge step. I showed all my roommates and had them all try it. I'd attach a picture but I still haven't nailed the appearance aspect of cooking. Feeling like I was completely in control of what I was putting in my mouth gave me a lot of energy and enthusiasm, something I needed to start my homework. That's super cool and it's all thanks to you! I'll never forget this day; in the future when I'm a super accomplished chef and I'm making something amazing for my kids I'll tell them about my eggplant. Have a good night!

Here, in the self-reflection and awareness expressed by Rachael, we see the power of this kind of experiential learning and how increased student confidence in the area of cooking can quite literally fuel the energy they devote to their other academic pursuits.

Part Three: Inheriting Food and Culture and the Student Experience (Teresa Mares)

Reflecting on Student Experience in the Foods Lab: It's Not Just Fun with Food

For the past four years, registration week at the University of Vermont has meant many things: seniors nervous about not graduating on time, first-year students contemplating new majors, and a slew of emails begging for an override into my anthropology of food courses, particularly Food and Culture. Students desperate for a seat in the course tell me about their plans to become an organic farmer after

they finish their studies, about working in soup kitchens and food pantries because of their concern for the hungry, and about their experiences WWOOFing in Europe. While each of these students stands to benefit from enrolling in Food and Culture, fewer than half of interested students eventually complete the course given the course capacity. This heavy demand for food-related courses reflects not only the innovative research and teaching activities pertaining to food systems at the University of Vermont, but the growing influence of a national conversation about the food systems that sustain us.

Although Amy and I are both food anthropologists, we teach in different departments on campus. We thought it would be interesting to combine our courses and our students, as I inherited Food and Culture from my colleague and co-author Amy Trubek in the fall of 2013. Prior to that semester, I was teaching a similar course entitled Food, Culture, and Politics that focused more specifically on the political economy of food and the social movements that seek to transform our food system. This course was a version of one I had taught as a graduate student at the University of Washington during the furious summers of dissertation research and writing. Here, I had collaborated with a colleague to develop experiential exercises related to food, but these were limited to small feasts that could be done without access to a full kitchen lab, including a pizza lab and a bento box lab. To complete these, we relied upon the kindness of the UW dining staff who loaned us the use of their space during less busy hours to prepare pizza dough for use in the campus wood-fired oven, and our own efforts to bring an odd assortment of equipment from home to prepare bento boxes in the anthropology seminar room.

What originally interested me in the Food and Culture class was the opportunity to integrate experiential education in the form of the kitchen labs that are described throughout this article. In that initial semester of teaching the course, Amy and I offered the 3-credit course with an associated and required 1 credit lab, both at the 100 level. The next year, my co-author Cynthia and I repeated this structure, having been convinced by the course's success, for students and faculty, the previous year.

Over sixty students participated; each semester we enrolled 32 students in the course, with two lab sections of 16 each. While 100 level courses are intended for sophomores or juniors with some level of familiarity of the disciplinary background, many of the students who have enrolled have been seniors, given that seniors have first priority during registration. The majority of these students were anthropology majors and minors, but the course also saw considerable enrollment from the departments of Nutrition and Food Science and Environmental Studies. These students attended lecture three times each week and lab once per week. Compared to other, more traditional, courses I teach where the human and financial resources available for teaching are limited, Food and Culture has garnered significant resources in the form of paid graduate teaching assistants, food expenses, and instructor's time. These resources and the hands-on learning they facilitate have translated into exceptionally positive teaching evaluations and long-term student investment in the topic, as evidenced through related honors thesis projects that I have supervised, enrollment in other food-related courses that I teach, and students declaring a minor in Food Systems.

In the first iteration of this course, the syllabus was a combination of themes and topics that I had taught in Food, Culture, and Politics and those designed by Amy in her version of the course. Over fifteen weeks, students considered the influence of the African diaspora on US foodways, the centrality of corn in Mesoamerican diets, and the seasonality of fresh ingredients in a harvest-themed meal, among other topics. The careful integration of reading materials, class discussions, and recipes was appreciated by students, who expressed comments in final course evaluations along the lines of: *'The lab portion was awesome and [a] great way to connect the course material'* and *'I also loved learning the material in class and further understanding it by cooking the food associated with it.'*

Each week, as the main instructor for the course, I attended one of the lab sections to help guide discussion, observe and evaluate the success of the integrated format, and help to address student questions and concerns. Fortunately for me, I was also invited to join in the shared meal that students and teaching assistants enjoyed at the end of the class. As a trained anthropologist and chef, Amy also helped to field questions about anthropological content as she guided students through the lab exercises and their development of culinary agency. The following year, Cynthia (also a trained chef) and I replicated this approach, though we spent more time reviewing the anthropological content given that her doctoral training is in Educational Leadership and Policy Studies. As discussed previously in this

article, the experiential nature of the course was particularly compelling for her pedagogical and research interests connected to John Dewey's approach to education.

Following the fall 2014 semester, we received comments on final course evaluations along the lines of: *'The lab integration allows for a deeper understanding of the topics we discuss. The lab component also creates a sense of community in the class which I think is conducive to group discussion'* and *'This course is a fascinating, informative and delicious way to learn about food and food culture. The readings were for the most part accessible (not too dense or tedious) and the lab really added to my understanding of most of the topics we studied.'* One student in particular appreciated the John Dewey-inspired approach to the lab, as reflected in the following comment: *'The integration of the lab and the weekly writing assignments really emphasized the type of learning that John Dewey believed in and that I have craved throughout my academic career at UVM. The format really allows us to challenge concepts and practice them in order to internalize them and I doubt it would have been as effective without the lab.'* It became clear that the format of the course was working for a majority of the students and that the extra time that the course entailed was worth it for students and faculty alike.

Conclusion

We all share a belief that a student's ability to individually develop a 'trained practice' and collectively build a sense of community is crucial to the success of the course. Furthermore, the expansion in all students' capacity to analyze what they experience first-hand is one of a series of transformative moments that build upon each other exponentially. As cooking technique improves, the practical skills become subordinate to more multifaceted connections to the discussions and the readings. In other words, students' nascent practical mastery propels them to consider larger concepts and theories; ultimately, this integration with various operations and materials constitutes what they will now describe as 'cooking.'

One of the paradoxes of modern higher education lies in the general acceptance that learning *by* experience and *through* experience is a gold standard yet the varying ability to actually make it happen. The roots of this paradox are not for this discussion, but we too, have struggled with the high costs of this very powerful pedagogy. The costs are not simply the financial investments (which are substantial, given that we were feeding 30-35 a full meal every week for 14 weeks) but also the time commitments and the layers of expertise needed for such complex instruction. There is also the very real fact that Amy and Cynthia have professional culinary experience and Teresa does not. The likelihood of teachers without culinary expertise having the confidence to coordinate a complex series of lab exercises in a kitchen space full of hot burners and sharp knives is not that high.

There may be concern that our approach is expensive, both from a financial and a human resource perspective. Ensuring fair compensation and workload requires at least two instructors and two teaching assistants for 32 students per semester, which can be an economic challenge for institutions wrestling with flat tuition rates and escalating costs. The push for larger classes and more 'efficient' modes of information delivery may appear contradictory to establishing a model like ours, as clearly the one described above is resource intensive. Our pedagogical approach is a gold standard, so to speak, but it is not an all-or-nothing method, as many elements of our pedagogy can be used in traditional classrooms that allow students to have this experience.

For the co-authors of this piece, rather than signal a death sentence for this style of teaching, we have grown more convinced of the need for sequencing courses and providing some sort of sensory experience that examines the intersections of food and culture, rather than address the entirety of the topic in a short fifteen-week period. Sequencing courses in this way will allow for some of the fundamental concepts to be covered at the introductory level, deepened at the 100-level, and then applied in an experiential format at an advanced level. This will open the door for more of the would-be organic farmers and food systems visionaries to enroll in the lower-division courses and redirect scarce lab resources to those students who have demonstrated a commitment to the field of study. In addition, there are myriad ways to include tactile experiences to enrich the classroom experience all along the introductory through advanced lesson continuum.

Recently, the first two authors (with other collaborators) have devoted significant effort to formalizing a research project in order to document the learning that occurs in this space (what we are calling *food agency*). In the most recent iteration of the course, we video-recorded a subset of students over the course of the semester so that we could look closely at what happens as it is happening. A graduate student on the larger study served as both a TA and a researcher, which proved to be extremely helpful for data collection and analysis. We decided to capture the emergence of cooks, as it happened, to help us identify these moments of transformation in skill, in knowledge, and in identity. Using these data will allow us to consider the potential of this kind of pedagogy in other educational spaces and models, as well as in nutritional interventions.

Our commitment to this pedagogical approach runs deep, and we have all truly reveled in teaching these courses, as we have witnessed students' development and our own as educators. Perhaps our greatest lesson across the many different courses we have taught is that this type of learning in a kitchen environment offers something unique from both laboratory and lecture classrooms across academic disciplines. As students develop skills through repetition, as they make connections to theories through experiencing commensality, and as they practice cooperation and collaboration, they learn lessons not bound to the classroom or to the kitchen, but rather extend across diverse and unexpected aspects of their everyday lives.

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