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Reflection on 10 Years of Community-Engaged Scholarship in the Faculty of Land and Food Systems at the University of British Columbia-Vancouver

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Abstract

In this article, the authors describe a cultural transformation to embrace community-engaged scholarship by faculty members in the Faculty of Land and Food Systems at the University of British Columbia–Vancouver. They describe a transition from community-inquiry faculty projects to community-engaged action research projects achieved through organizational restructuring, curricular revision, and new teaching approaches; discuss the concepts that grounded their curricular revision; and report on the outcomes of their Faculty's transition.

Introduction

In this article, the authors describe a cultural transformation to embrace community-engaged scholarship by faculty members in the Faculty of Land and Food Systems at the University of British Columbia–Vancouver. They reflect on their 10 years of experience learning and teaching about food security and sustainability using community-engaged scholarship techniques *(Boyer, 1996)*. First, they describe a transition from community-inquiry faculty projects to community-engaged action research projects via organizational restructuring, curricular revision, and new teaching approaches. Second, they describe the concepts that grounded their curricular revision. Finally, they report on the outcomes of their Faculty's transition, including changes within the Faculty of Land and Food Systems, and lessons learned from implementing the Land, Food, and Community course series curriculum.

Transition from Community-Inquiry Faculty Projects to Community-Engaged Action Research Projects

In this section, the authors describe a transition from community-inquiry faculty-led projects to community-engaged action research team-led projects—a transition that was prompted by an

organizational restructuring, subsequent curricular revision, and the adoption of new teaching approaches within the Faculty of Land and Food Systems at the University of British Columbia–Vancouver between 1998 and 2012.

Organizational Restructuring

By the late 1990s, the then–Faculty of Agricultural Sciences at the University of British Columbia–Vancouver (UBC) was in crisis due to a decline in student enrollment and curricular relevance. Moreover, the UBC Faculty of Agricultural Sciences was losing relevance to the food and agriculture industry, as it did not reflect the realities of the province of British Columbia, Canada, with its diverse range of small-scale agricultural operations, strong organic farming movement, relatively stable number of family farms, and active local food and environmental movements. A concurrently growing demand for professionals in the fields of food, nutrition, and health required the faculty most involved in food research and teaching to adapt the undergraduate learning to address the local realities and demands. The Faculty was given a strong mandate by the UBC administration to reinvent itself. Around the same time, UBC signed the Talloires Declaration, committing to become a sustainability leader in North America. These internal and external conditions led to an organizational restructuring of the University of British Columbia–Vancouver's Faculty of Agricultural Sciences that included dissolving all the departments; reviewing courses and majors; training faculty members to use problem-based learning teaching techniques; discussing strategies to encourage participatory, learner-centered pedagogy; and creating a new integrative curriculum centered on sustainability. The restructuring also resulted in changing the unit's name from Agricultural Sciences to Land and Food Systems in 2005. Table 1 outlines the differences in this Faculty before and after this transformation.

Table 1. The Transformation From the Faculty of Agricultural Sciences (pre-2005) to the Faculty of Land and Food Systems (post-2005)

	Faculty of Agricultural Sciences: Pre-2005	Faculty of Land and Food Systems: Post-2005
Departments	Animal Science Plant Science Soil Science Food Science Agricultural Economics	N/A
Undergraduate programs	Animal Science Plant Science Soil Science Food Science Agricultural Economics Home Economics Nutrition and Health	Food, Nutrition and Health; Global Resource Systems; and Applied Biology (AB), which includes Food and Environment (Agroecology); Animal AB and Plant AB
Primary pedagogy (or teaching approaches)	Traditional lectures, tutorials, labs, field trips	Community of Learners (Problem-based learning; Community-based learning, including community-based research and community service-learning)
Integrative academic core	Did not exist	Creation of academic core, required for all students in the faculty: the Land, Food, and Community course series

Curricular Revision

To ensure that the academically diverse student body in this newly constituted Faculty of Land and Food Systems had access to a common experience, an interdisciplinary faculty team was charged with the development of a core undergraduate curriculum, consisting of three required courses, Land, Food, and Community (LFC) 250, 350, and 450, each exploring topics through integrative questions about community food security and food system sustainability. Each course hosts a community-based action research project:

- LFC I (LFS 250), the Food Security in Vancouver Project;
- LFC II (LFS 350), the Food Security in British Columbia (BC) Project; and

- LFC III (LFS 450), the University of British Columbia–Vancouver Food System Project.

The three courses in the series parallel the sequential development of the undergraduate learner. LFC 250 is designed to bring about awareness and initiate inquiries in the communities of the city; LFC 350 allows students to become more familiar with the methods associated with community-based research and learning, and shows how to use those methods in projects in communities of the province of British Columbia; and LFC 450, the capstone course, integrates experiences, knowledge, and skills of 4th-year students through application projects focused on the transformation of the campus's food system. The project associated with each course incorporates six principles of food security: affordability, availability, accessibility, appropriateness (culturally, morally, and nutritionally), safety, and ecological sustainability.

New Teaching Approaches

The integrative emphasis of the course series necessitated new learning contexts and teaching strategies, which led the curricula developers to community-based experiential learning (e.g., community-based research and hands-on community service-learning). For example, a project-based approach was instituted in which interdisciplinary student teams work in partnership with their teaching team and community leaders to address community-identified issues. The community leaders include farmers, teachers, community nutritionists, waste managers, food processors and retailers, and municipal and provincial government personnel. The projects are pedagogical explorations geared to blending teaching and research, and connecting the university to community concerns.

Between 1998 and 2012, the nature of the student team projects has changed from those beginning with university-identified questions (e.g., what do various community food systems look like?) and centered on community inquiry activities (e.g., students conducting surveys for their own, or previously determined, research questions), to more profound community experiences that provide deeper student engagement (e.g., helping to plan and facilitate community workshops and develop and evaluate resources as identified by the community).

The transition to a Faculty of Land and Food Systems, including the integrative, community-based Land, Food, and Community course series, continues to be encouraged and supported by a larger

trend at UBC to make the university a leader in sustainability *(UBC, 2010)*.

Concepts Grounding the Land, Food, and Community Course Series

The praxis of the Land, Food, and Community course series was derived from concepts associated with community-engaged scholarship, including ecology of knowledge, community-university engagement research partnerships, systems perspective, and food security and food system sustainability.

Ecology of Knowledge

In the Land, Food, and Community course series, attention is given to the setting and physical arrangement of spaces where learning takes place. Strategies are used to create cooperative and safe environments for student-centered learning. Building on Gregory Bateson's *(1972, 1979)* work on "the necessary unity of mind and nature," the authors feel that these considerations can be regarded as integral to an "ecology of knowledge" *(Rojas, 2009)*. Beginning from Bateson's ecology of the mind, the authors view an ecology of knowledge as the process of examining how knowledge is created, and re-created, in the diverse contexts in which it emerges. An ecology of knowledge also encompasses exploring how knowledge is produced, distributed, shared, and accepted. Ecology of knowledge is about the relationships that shape and link any learning subject or object to its environment. In other words, ecology of knowledge practitioners pay particular attention to the context of knowledge, and to the relationships involved in learning objects and their environment. For example, a study of "healthy" diets needs to include the quality of the soil, water, and air, and the overall health of the ecosystems sustaining that diet. This content is pursued through team-based, cooperative, and collaborative work that brings the students out of the university and into the communities to investigate problems on the ground. The goal is for students to become aware that what they have learned in the past affects what they will learn in the future, and that how they have learned in the past will affect how they will respond to future ways of learning.

An ecology of knowledge approach can be facilitated by two complementary teaching approaches: "learning with life" *(Rojas, 2009; Rojas, Richer, & Wagner, 2007)* and "transformative sustainability learning" *(Sipos, Battisti, & Grimm, 2008)*.

Learning with life approach.

Learning with life is an approach that challenges the notion that students must disregard their personal experiences and conditions in order to be successful learners and researchers. Rather, the personal experiences and conditions of passion, emotion, dreams, personal stories, and imagination inevitably influence learning.

The learning with life approach informs most activities in the Land, Food, and Community course series by purposefully seeking the integration of three dimensions of knowledge:

1. students' personal experiences and interests related to food;
2. accounts of reality as "it is" (the current situation), as represented in the literature on food systems, and through students' own investigations; and
3. reality as "it should be," as represented by the course participants' collective envisioning of a sustainable food system in general and a sustainable community food system in particular.

The integration of these three learning dimensions coalesces into the "realm of the potential," where past experiences, scholarly knowledge, and utopian ideals direct academic pursuits. Working in the realm of the potential allows students to become more engaged in their subject in a manner more reflective of the complete persona of the learner.

Transformative sustainability learning approach.

The transformative sustainability learning approach facilitates personal and collective experiences that can profoundly affect knowledge, skills, and attitudes about socioeconomic and ecological justice *(Sipos et al., 2008)*. This approach advances "head, hands, and heart" as an organizing principle for integrating transdisciplinary study (head), practical skill development (hands), and translation of passion and values into behavior (heart). The LFC teaching teams encourage students to consider which domains of learning are engaged via the different course activities. As an example, students are asked to reflect on the relationship between community-based experiential learning and sustainability, and specifically consider (a) differences between the experiences of community-based research (generally more "heads-on" cognitive learning) and community service-learning (generally more

"hands-on" activities within the psychomotor domain), and (b) similarities in these experiences (in that they can both engage the "hearts-on" or affective domain). The explicit inclusion of these three domains results in opportunities that are, as with learning with life, more reflective of the complete persona of the learner and therefore more personally meaningful.

Community-University Engagement Research Partnerships

As highlighted by The Research University Civic Engagement Network (TRUCEN) in its 2007 report, "engaged scholarship" at research universities will progress only with a more nuanced understanding of this concept *(Stanton, 2007)*. Engaged scholarship promotes a deeper conceptualization of research, bridging basic and applied orientations, toward "use-inspired research" or what has been considered as Pasteur's quadrant *(Stokes, 1997)*. Specifically, Pasteur's quadrant refers to the intersection of research that aims for fundamental understanding of a problem, as well as contributing to its solution and the betterment of society; much of sustainability science, for example, falls within this quadrant *(Clark, 2007)*. TRUCEN participants developed a series of figures to demonstrate the range of dimensions within engaged scholarship, including research purpose, collaborative processes, and community/academic outcomes *(Stanton, 2007)*.

To further contribute to this discourse, the authors offer another representation of considerations for engaged scholarship, focusing on the intersection of two continua: (1) community-based action ranging from inquiry to engagement, and (2) research agendas ranging from university-generated to community-generated. This crossing creates a graph that visually represents the histories of the authors' community-based action research (CBAR) projects (see Figure 1). The authors posit that research projects that fall within the top-right quadrant best characterize community-engaged scholarship. The specific projects provide students with opportunities along the community inquiry–community engagement axis of the graph. By embedding community-based experiential learning projects into the Land, Food, and Community course series, professors, students, staff, and community members have become better positioned to learn, exchange, and discover together. The voices of the community members now influence and strengthen the research agendas of team projects. The focus of projects has shifted from inquiry to engagement, and from university-generated to community-generated research agendas.

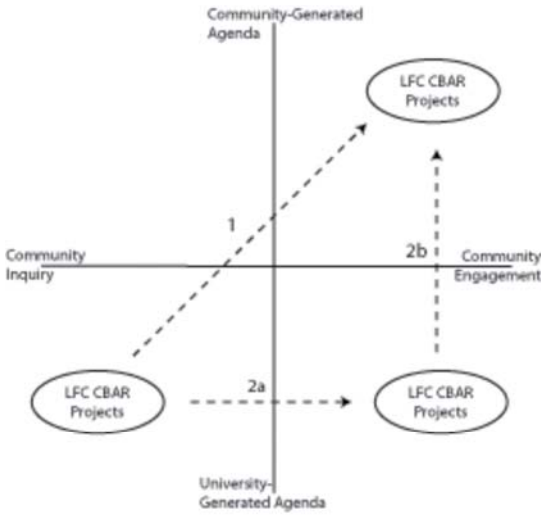

Figure 1. Trajectories of LFC CBAR projects through the map of community-university research approaches

Graph of community-university research approaches.

The x-axis describes the continuum of activities that can take place in research programs, from gathering information from secondary sources, observation, surveys, and structured interviews to rapid rural appraisal techniques and co-developing, facilitating, and evaluating outreach interventions with community partners. The y-axis describes who initiates a research agenda. The authors utilized this graph to map the trajectories of the Land, Food, and Community community-based action research projects over time. As seen in Figure 1, each project began in the bottom-left quadrant, with a desire to work with community stakeholders; some initial, university-generated research questions; and cautious movement through a community inquiry process. Although all the projects ultimately found their way to the top-right quadrant of community-engaged scholarship, the pathways to reach this realm are varied, as is the conceptual space it contains. LFC 450 and the University of British Columbia-Vancouver Food System Project traversed the landscape in a fairly direct way to reach the top-right quadrant (trajectory 1). LFC 250 and 350 traveled a more meandering route through the bottom-right quadrant (trajectory 2a), where the path to fuller engagement with community partners took a longer time and more iterations to establish (trajectory 2b). The varied routes of the LFC CBAR projects demonstrate two pathways that courses and projects may travel, as university teaching and learning

teams invite and prepare for community-based learning and ever-increasing complexity.

Systems Perspective

A systems perspective draws upon complexity theories and an ecosystem approach to understand and connect seemingly separate activities as part of one complex global system *(Holling, 2001; Kay & Schneider, 1994)*. A systems perspective is appropriate for food security study, as it acknowledges that the component parts of the whole food system are interconnected and interdependent. This perspective also recognizes how these relationships create emerging properties both in the system and in the process of learning about it. Each course in the Land, Food, and Community series is grounded in food system analysis and sustainability, with a focus on community food security. Through this perspective, students study different scenarios within food systems at local, regional, national, and global levels. Emphasis is placed on "integrative focusing," an approach that makes it possible to identify and recognize patterns within a food system that exist at each level. For example, due to the global nature of today's food system, a regional manifestation, such as a university campus food system, has many of the components and symptoms of the global food system, from production on the campus farm to distribution and processing through the university food retailers to waste management and resource recovery on site *(Rojas et al., 2007)*. Thus, the study of the food system of the UBC campus, Vancouver, or the British Columbia region provides opportunities to practice integrative focusing such that patterns of the global system are identified at the local level. This awareness of common attributes and benchmarks allows students to study local systems and confidently apply that knowledge to other food system levels.

"A systems perspective is appropriate for food security study, as it acknowledges that the component parts of the whole food system are interconnected and interdependent."

The faculty members teaching the Land, Food, and Community course series are experimenting with forms of collaborative inquiry and learning *(Moore, 2005)* to overcome the difficulties of teaching systems perspectives in a culture deeply rooted in the fragmentation of knowledge. One strategy for the LFC series has been the

explicit creation of a "community of learners" that emphasizes dialogue, collaboration, and positive appreciation of diversity *(see Community Food Security Coalition, 2005), Packham, & Valentine, 1984; Bawden & Packham, 1993; Misanchuk, Schwier, & Boling, 2000; Selznik, 1996)*. The particular definition of community of learners for the LFC series includes undergraduate students, teaching teams (faculty and graduate students), university staff, and community partners. Students are supported in a variety of ways through their development as members of student teams and the larger community of learners. They explore their personality traits and cognitive styles and how these influence their learning; they are provided with opportunities to articulate and share their stories and personal experiences and ideals on the subject being studied. The results of those experiences are then compared to scholarly literature on the subject under investigation. This process is complemented by field trips, personalized writing of experiential and advocacy journals, and individual as well as team-based integrative assignments.

Food Security and Food System Sustainability

Today's global food system has delivered a revolutionary, unprecedented capacity to increase food production, but it has also produced negative environmental and social implications. For example, today's food system has depleted natural resources without addressing global food insecurity and widespread malnutrition *(Smith et al., 2007)*. According to the recent High Level Conference on World Food Security, "securing world food security in light of the impact of climate change may be one of the biggest challenges we face in this century" *(FAO, 2008)*. In the past, food security was associated primarily with obtaining sufficient food. The concept has evolved, however, to encompass a broader set of social, ecological, and economic considerations, including nutrition, moral and cultural acceptability and appropriateness, safety, ecological sustainability, self-reliance, and social justice and human dignity *(Community Food Security Coalition, 2005; Lang & Heasman, 2004; World Food Summit, 1996)*.

Food security in Canada.

Although food security issues may be most apparent in developing countries, hunger, obesity, and vulnerability to ecological crises also exist in Canada *(Canadian Agri-Food Policy Institute, 2011; Canadian Population Health Initiative, 2004, 2008; Rainville & Brink, 2001)*. According to the Statistics Canada *(2006)* census on agriculture, the farm population currently accounts for only 2.2% of

Canadians; in contrast, approximately 1 in 3 (31.7%) Canadians lived on a farm in 1931. Lang and Heasman *(2004)* argue for action to foster a "food culture" that better respects connections between food production, environmental health, and human health. To support this food culture, Canada needs to develop integrated food policy, and consumers must become "food citizens" to understand the impacts of their food choices on social, ecological, and economic sustainability.

In British Columbia, the British Columbia Agriculture Plan, Strategy 20, directly identifies the growing divide between youth and the origins of their food and stresses the need to reconnect young people with the land, link urban and agricultural communities together, and provide hands-on learning opportunities to the leaders of tomorrow *(Ministry of Agriculture and Lands, 2008)*.

The Land, Food, and Community course series and the University of British Columbia–Vancouver's Faculty of Land and Food Systems contribute directly to this effort. The course series is now relevant to the large numbers of students interested in the human health implications of nutrition and food. Students are now able to explore systemic linkages demanded by global and local sustainability needs.

Outcomes of the Transition to Community-Engaged Teaching and Research

In this section, the authors report on the outcomes of their Faculty's transition, including changes within the Faculty of Land and Food Systems, and lessons learned from the Land, Food, and Community course series.

Changes within the Faculty of Land and Food Systems

Prior to the reorganization of the University of British Columbia–Vancouver's Faculty of Agricultural Sciences into a Faculty of Land and Food Systems, the organizational culture fostered isolation among its members. Research and teaching were marked by a lack of dialogue and cross-fertilization between the different program specializations. Moreover, its members were failing to address the larger problems of agriculture and food. Since the unit reorganization, the authors have observed some changes in the unit's culture. For example, increased faculty and student engagement in the Land, Food, and Community course series has led to the adoption of community-based learning practices in other

courses in the Faculty of Land and Food Systems. Such practices often require funding for travel to the communities and university, community partner celebrations, additional teaching assistants to support reflective learning, and graduate student project coordinators. Essential financial support has come from the Faculty of Land and Food Systems, the UBC Community Learning Initiative, Sustainability Office, and student course fees; such funding both enables and encourages the emergence of a culture of collaboration and engagement within the Faculty.

"[T]he unassuming nature of the undergraduate students now provides a non-threatening element that catalyzes community interactions."

In addition, the unassuming nature of the undergraduate students now provides a non-threatening element that catalyzes community interactions. For example, initial student efforts in a community, as part of a class assignment, often instigate relationships with partner organizations. The informality of the students' approach helps break down the stereotype of university activity as conducted by researchers in ivory towers.

Lessons Learned

The authors have distilled three main lessons learned from the 10-year transformation in the Faculty of Land and Food Systems: relationship building takes time; integrative issues support collaboration; and large class size in community-engaged courses can be challenging, as well as offer great opportunities to increase the scope of university-community collaboration.

Relationship building takes time.

Relationship building takes time, and is aided through iterative cycles of activities, starting with inquiry and leading to engagement. It is prudent to start small when designing meaningful activities for undergraduate students in and with the community. Inquiry activities allow each student team to slowly acclimate to the processes and to each other. As relationships build and logistical competencies solidify, more complex engagement activities can be undertaken. Through the inherently iterative nature of the school calendar, activities in the community from one year can, ideally,

inform the following round of initiatives. Additionally, there is a possibility to incorporate community-based projects into multiple university courses in the academic year, whereby the activities of one class support the development of assignments in a related class. Although university student populations are transient, the stability of professors and community partners allows this model to be used as a long-term strategy for change.

Integrative issues support collaboration.

Integrative issues create fertile environments for collaboration. For example, issues related to food security are necessarily interdisciplinary, requiring a diversity of perspectives and expertise. Research project teams include students developing a specialization in each aspect of the food system (i.e., nutritional and food sciences, agroecology, animal and plant applied biology, food market economics, global resource systems). Interdisciplinarity also occurs in the Faculty's research programs, where faculty and community members with varying expertise (e.g., dietitians, landscape architects, soil scientists, sociologists, anthropologists, teachers, and organic farmers) compose diverse research teams. This collection of disciplinary lenses becomes an element of strength in recognizing that no one disciplinary approach is sufficient to overcome complex community issues.

"This collection of disciplinary lenses becomes an element of strength in recognizing that no one disciplinary approach is sufficient to overcome complex community issues."

Large class size in community-engaged courses can be challenging and can offer great opportunities to increase the scope of collaboration.

The Land, Food, and Community courses enroll 200 to 370 students per term. The benefit of such large numbers is the potential impact of the activities of hundreds of undergraduate students each year. The primary drawback is the human resource commitment required to coordinate community-based activities. Managing the relationships between community partners, students, and

researchers can become complex. Course coordinators face a risk of not having enough time or resources to make sure that project tasks are clear to all participants and that community needs are met through the project activities. The authors' experience, however, has shown that creativity and enthusiasm guide the teams into finding solutions.

Summary of Lessons Learned

The decade-long iterations of developing community-based projects within large undergraduate courses have enabled the authors, along with many other members of the teaching teams, to identify patterns of practice and opportunities to enhance and advance such practices. The hands-on experience of relationship-building over time, as well as the willingness to identify and collaboratively address the challenges and opportunities associated with community engagement in large classes, demonstrates that this approach is feasible. Further, a decade of positive course evaluations and the high levels of student engagement indicated by the Faculty of Land and Food Systems' scores on the National Survey of Student Engagement provide evidence of the success of the LFC series *(Faculty of Land and Food Systems, 2009)*.

Conclusion

The framework and its graphical representation created by the authors to position their community-based action research projects over time may be useful for the reader interested in mapping efforts to move faculty projects from community-based inquiry to community engagement, and from university-generated research agendas to community-generated research agendas. It could also provide a common frame of reference for situating and managing community-university research partnerships. In addition, it could serve as a diagnostic tool for universities and communities to assess where their projects and approaches lie on the two continuums, and where there is room for movement toward more (quantity and quality) community-engaged projects.

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