

Frugal Innovation Practicum 2 Report

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Introduction to the FIP

This report provides a brief overview of the Frugal Innovation Practicum(FIP) and its development over the past two years. It goes onto suggest modifications for FIP3, which is scheduled to take place during the summer of 2017.

The Frugal Innovation Practicum is an experiential, cross-cultural, service-learning course for students from Michigan State University (MSU) and Lilongwe University of Agriculture and Natural Resources (LUANAR) in Malawi. The summer program runs over the course of seven weeks and is comprised by a mix of online, in-class, and field-based learning. Field-based learning has thus far taken place in four of Lilongwe's 'wet markets,' where students collaborate with small-scale urban food traders to identify and mitigate critical problems as identified by traders. Wet markets are a major forum for employment and food access, but many are dilapidated and face numerous problems that make working and shopping there unpleasant and even dangerous. In addition, due to poor maintenance, neglect, and underinvestment in the sector, traders and consumers bear costs that should otherwise be assumed by municipal government.

The concept of innovation is the organizing theme of the FIP. In contrast to perspectives that see 'innovation' as a uniformly and universally good thing, students in this practicum are challenged to think about innovation as a *contested socioeconomic* process that happens in relation to specific needs and local systems. Our approach to innovation highlights how *sustainable* and *equitable* social and technological innovation are produced in contextually-specific ways. Our approach also stresses the often overlooked point that innovation is socially situated and serves particular interests. In the case of the FIP, our interest is in serving the well-being of people who rely on local wet markets for both livelihood and food.

FIP Development to Date

FIP1 students positively evaluated the course, especially in relation to the field practicum. Students accomplished a great deal in terms of clearly articulating the underlying and profound problems that prevent entrepreneurial innovation in the small-food sector in Lilongwe. Though the actual implementation of 'frugal innovations' did not occur,¹ students made substantial in-roads by breaking through the inertia that paralyzes this sector by building trust and goodwill with small-scale traders and the municipal government. They did this through respectful engagement with all stakeholders and by presenting clear and professional presentations and policy briefs that communicated the perspectives of traders to municipal decision-makers.

During the FIP2 planning phase, project managers explored how the second round of students might move beyond problem identification and into innovation development and implementation. Two major curriculum changes were instituted.

- A 'design-thinking' component was added to the course, the intent of which was to quickly propel students and collaborators through problem-identification mode into solution-development mode.

¹ The major solution to come from FIPI was the passage of a policy by the municipality to invest 25% of tax revenue back into markets. Though this law is now on the books, it has yet to be enacted.

- Three thousand dollars was collected prior to the practicum that was divided equally among the four markets.² The money served several purposes. In addition to the obvious need for material resources to implement solutions, finite parameters helped to determine what was/was not possible during the design process. In addition, the money provided an impetus to continue on with the design and implementation process after the practicum was finished. Lastly, all students have enjoyed tracking the progress of what they started, especially the LUANAR students.

Student Composition, Calendar of Activities, and Main Components of FIP2

Eight students from MSU and ten students from LUANAR participated. Of the eight MSU students, two were men and six were women. Of the LUANAR students, four were male and six, female. The table shows student academic focus.

LUANAR			MSU		
Sex	Department	Program/Major	Sex	Department	Program/Major
F	Extension	Ag Extension	M	Broad Business School	Supply Chain Management
F	Extension	Ag Extension	F	Agriculture	Agribusiness
M	Crop and Soil Science	Agriculture General	F	Arts and Letters	Experience Architecture
M	Crops and Soil Science	Agriculture General	F	Natural Resources	Environmental Studies and Agriscience
F	Extension	Ag Extension	F	Geography	Health and Medical Geography and Environmental Science and Policy
M	Crop and Soil Science	Agriculture General	F	James Madison	International Relations
F	Agribusiness	Agribusiness Management	F	Lyman Briggs	History, Philosophy, Sociology of Science / Public Health
F	Extension	Ag Extension	M	Food Science and Human Nutrition	Food Science
M	Horticulture	Biotechnology			
F	Crop and Soil Science	Agriculture General			

Weeks One-Four: Online activities on MSU's online learning platform. Students read a number of academic and news articles and watch selected videos. Subject covered during this portion of the practicum include innovation

² This money came from two major sources. (1) A student from the FIPI cohort was awarded \$1200 from a university-based grant-making organization, and (2) Crowdfunding using MSU's online platform, CrowdPower. A smaller amount of money was collected from a local chapter of the Kiwanis Club after an FIP1 student did a presentation about the course.

systems, urbanization and food security, informal economy and city planning, and food safety in context. Students write and share their observations and significant 'lessons learned' in MSU's online platform, D2L.

Week Five: In-class. During the in-class portion of the FIP, students reviewed their understanding of the innovation systems framework and discussed methods for carrying out community inquiries and design thinking. Through a field trip, students were introduced to components of the local food system and, using the innovations systems framework, reflected on how it has developed.

Weeks Six and Seven: Field-based practicum. The field practicum takes place in Lilongwe, Malawi, where students will conduct community-based inquiries in urban retail food markets, also known as 'wet markets.' They will engage in two 'design charrettes' that will be attended by municipal officials, market representatives, and faculty members. These design charrettes are the primary forum for identifying problems in markets and designing appropriate solutions for addressing those problems. "Appropriateness" is determined through group exercises in which participants explore the various kinds of resources available to them, some of which may have never previously been considered. Student learning in markets will be reinforced and complemented by a number of in-class presentations and discussions.

Student deliverables:

1. Three artifacts that document the student's learning.
2. One final group presentation in Lilongwe, presented to the Lilongwe City Council.
3. One group research brief
4. One final individual presentation at Michigan State University (for MSU students).

FIP II Feedback and Observations; Implications for FIP III

FIP1 and FIP2 student feedback confirms that this model of 'education abroad' provides meaningful and profound learning experiences for students. Students report that the most valuable learning results from interdisciplinary collaboration, cross-cultural interaction, and grappling with real problems from the perspectives of multiple stakeholders. Both FIP1 and 2 students highlight the value of participatory engagement with people in markets, and the FIP2 students positively reviewed the design thinking component. Through an online evaluation, FIP2 students provided advice for improving the curriculum for FIP3, primarily in relation to the online and practicum components. For example, it was suggested that additional exercises could be added to the online component to improve the interactivity. It was also suggested that faculty members provide additional guidance during the fieldwork to minimize the chances that any one student carry a disproportionate part of the workload.

In addition to students' suggested adjustments to the curriculum, it has become clear to program managers that there is a need to be very clear about goals and intended beneficiaries. Originally, the FIP was envisioned as a student experiential learning activity that would also provide meaningful outcomes to benefit urban small-scale food traders. While this vision still guides the curriculum, it has become evident that there is a need to designate the FIP as primarily a *student* activity designed to enable learning through experiential activities. A clear understanding that the FIP is a student activity, rather than a community development activity, is a necessary 'touchstone' that can help make decisions about program direction and how time and resources are allocated.

This realization, in turn, has prompted the development of proposals to scale up the community development aspect of what students do, based on the knowledge base, relationships, and processes they have initiated. To meaningfully address the issues that have been exposed by the students' work, and to maintain good relationships with people in markets, it is necessary to develop one or more long-term year-round research and

engagement strategies. Thus far, one proposal to scale the FIP to a year-round engagement activity has been submitted and a research proposal is being developed.³

Though primarily a student activity, the model of engagement used during FIP2 did allow the development and realization of discrete projects. The availability of additional resources and the structured 'design thinking' process of engagement, coupled with the documented learning from FIP1, allowed FIP2 students and community members to develop solutions, which are currently being implemented. As of this writing, market community groups have accomplished the following:

- Area 25A has constructed two toilets for men and two for women. They are waiting for the water connection from the Lilongwe Water Board.
- Area 47 has erected a gate, and is preparing to put the finishing touches on it.
- Tsoka market underestimated the costs of electrification and are collecting additional funds from market members, which will be added to the money supplied by the FIP.
- Shortly after students finished FIP2, Central Market burned down. The market committee will keep the funds in a bank account until they are at a point in the rebuilding process to draw on it. Follow up by faculty members is planned.

Though the specific activities are not yet planned for FIP3, the overall operating philosophies will remain and will guide curriculum planning. Objectives that serve students will remain paramount, while we will also make an effort to continue to build good relationships with people doing the hard work of food-provisioning cities and to build a knowledge base that documents how they do this and what support they need to do it better.

Additionally, as it pertains to recruitment and planning for FIP3, the following items need to be considered:

1. Budget (student share of cost, additional ways to reduce costs, additional sources of funding students, is crowdfunding necessary?)
2. Institutionalization through MSU's Education Abroad programs
3. Methods of recruitment (probably should happen earlier, need to reach out to departments so that students can source departmental funding)
4. Curriculum planning based on goals

³ The scaling grant proposal was submitted to the Alliance for African Partnership at Michigan State University. It proposes to develop a scholar-practitioner research and design lab at LUANAR that will promote innovation towards a sustainable food economy in Lilongwe. The forthcoming research will develop an empirical (and 'actionable') knowledge base to support food security through a city-region food systems approach.