

## Course Focus

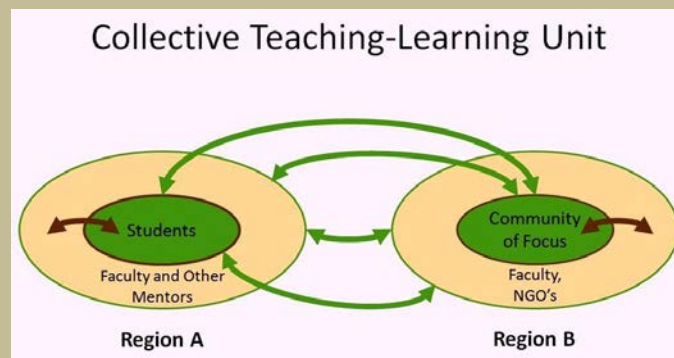
### AGSC 465R – Health, Poverty, Agriculture: Concepts and Action Research By Florence Dunkel



Poverty has no disciplinary home and so this course draws information and students from all disciplines including economics, anthropology, microbiology, cell biology, architecture, agricultural education, film, engineering, as well as plant sciences, health sciences, sustainable foods, and entomology. Food production and health are given equal weight with exploring ways to listen in communities experiencing material-resource poverty. Practicing to communicate leads students to appreciate cultural wealth of the

community-of-focus.

AGSC 465R is a University Core course in Research and Creative Activity. The course is based on the Expansive Collaborative (EC) Model for Service-Learning and Community-Based Research (Dunkel, F.V., A.N. Shams, and C.M. George. 2011. Expansive collaboration: A model for transformed classrooms, community-based research, and service-learning. North American College Teachers of Agriculture. 55 (Dec):65-74.). The (EC) model is built on the holistic process and, as such, serves as a companion course to LRES 421 Holistic Thought and Management.



Communities-of-focus and their site mentors form an off-campus teaching partnership for this course. To qualify, a community must have a long established relationship with the instructor or be an intact, indigenous community of the student. At MSU, communities-of-focus currently are: Sanambele, Mali; Lame Deer, Montana; and Crow Agency, Montana. Site mentors for Mali are

mid-career scientists and one engineer who were brought to MSU for two years for training, some of which occurred in PSPP. Four of the site mentors for Lame Deer spent time in Mali and actually lived in Sanambele. The site mentor for Crow Agency is a former AGSC 465R student, member of the Apsaalooke, and manager of the Community Garden Greenhouse.

Students tackle concepts such as: Easterly's (2006) *"Searchers vs. Planners"*; Ayttey's (2005) *Africa Unchained and Indigenous African Institutions*; Norberg-Hodge's *"Ancient Futures: Learning from Ladakh"*; and Yunus *"The Grameen Bank."* Simultaneously, students are introduced to their community-of-focus and given skills to communicate with them, particularly those of: Savory and Butterfield (1999) *"Holistic Management"*; Chambers et al. (1989) *Farmer First*; and Halvorson et al. (2011) understanding perceptions. Readings were selected by a team of MSU faculty during weekly discussions over a year.

The community selects the research question, or, rather, the topic emerges during holistic discussions with the community. Often community requests require multiple semesters to complete. Students build on predecessors' research. Accomplishments include assisting a village to sustainably stop deaths of their children from malaria. In 2005, MSU students, site mentors, and MSU faculty listened to Sanambelean women and men explain their desire to rid their village of malaria. MSU students began with storytelling the life cycles of mosquitoes that carry the protozoan and life cycle of the protozoan itself that causes malaria. MSU students assisted Sanambelean junior high students initiate a community awareness art project. AGSC 465R faculty and students majoring in French and Business encouraged village women to start a handicraft enterprise. The last time a child died of malaria in this village was during the 2008 malaria epidemic. Students taught villagers how to manage mosquitoes sustainably in the larval stage by using a slurry made from neem leaves, *Azadiracta indica*. Now villagers have a successful, self-contained, integrated system for managing malaria and are sharing the life cycle stories with neighboring villages. Village women developed a handicraft cooperative and microloan system that also involves village men and youth. MSU students now help the village address the current barrier to attaining their desired quality of life: sustainably managing kwashiorkor, protein energy malnutrition. Crop selection, improving dairy forage, cricket farming, and teaching the basics of complete proteins to a village whose adults are 99% illiterate are challenges MSU students have addressed.



*AGSC 465R Share the Wealth Symposium participants Adam Pohl, Taylor Stuck, and Andrew Stermitz pose questions to each other at poster session in the PBB atrium.*

In the Apsaalooke community on the Crow Reservation, issues are similar - health, new knowledge that respects traditional ways, and sustainability. Yunus and the Grammeen Bank began in a similar way with the professor (Yunus) and his students putting into action in local material-resource poor communities, concepts they discussed in the classroom. We encourage more courses to reach out across cultural boundaries to sustainably connect people with plants, health, and traditional knowledge.

AGSC 465R is taught every semester. It is a 4 credit course and meets Thursdays from 4 to 7pm.

Thirty-minute individual weekly mentor meetings with Dr. Dunkel are held in her office and laboratory. Students also are required to communicate with their site-mentors on at least a weekly basis via e-mail, Skype, phone, Polycom, or in person. During the semester each student is required to visit the Northern Cheyenne

Reservation or the Apsaalooke (Crow) Reservation for 2 days with Dr. Dunkel regardless of their specific community-of-focus.



*Hannah Fraser responded to urgent request of Malian villagers about to enter extended period of hunger. She and fellow AGSC 465R students proposed cricket farming. In lab bioassays, Hannah discovered crocheted fabrics made by village women were best to contain crickets in proposed village-made clay brick structures.*

Midway in the semester, students are required to write a take-home exam applying concepts of the 10 author groups to their own community-of-focus. Since the course format is service learning, students are also required to keep a reflective log to monitor their own progress and track their cognitive dissonance. These logs form a basis for discussion at weekly mentor meetings in addition to advice on the research process. At semester's end, students present publically their response to the request of their community and submit their mentored research paper in peer-refereed journal format to site mentors and Dr. Dunkel. All materials, video transcripts, and documents produced by the students are then given to the community-of-focus.