

# Emerging Issues and Sustainability in International Agriculture: A Study Abroad Program to Vietnam

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## Abstract

Extension educators, faculty and students must be prepared to function in a marketplace and society that is increasingly global in scope. Study abroad programs offer an opportunity for participants to experience and appreciate cultures from around the world. The objective of this project was to develop a study abroad program to Vietnam with an emphasis on the understanding of culture, opportunities and challenges in international agriculture as a means for improving students' and extension educators' ability to locally address global issues. A total of nine participants (four undergraduate students, four extension educators and one faculty member) traveled to Vietnam from March 1-March 10, 2013. The program consisted of site visits to local farms and industry operations as well as interaction with faculty and students at Hanoi University of Agriculture. Several cultural activities were also included throughout the visit. During spring semester 2013, students regularly met with faculty to discuss key issues related to climate change and international agriculture. Additionally, program participants completed the Intercultural Development Inventory (IDI) both before and after travel. The IDI provided information on the orientation of the group toward cultural commonalities and differences and evaluated the cultural competence of the group. Results indicated minimal change in the intercultural competence of the group, but did support an increased ability for the group to reach a consensus on how the group responded to perceived cultural challenges.

## Introduction

By 2050, it is estimated that there will be between 9.2 and 11 billion people in the world (United Nations, 2005). In order to feed animal protein to this many

people at even current intake rates, global production of animal products will have to increase. Global animal protein intake rates are anticipated to increase between now and 2050 because as household income increases the amount of animal protein intake increases as well (FAO, 2009; Dyck and Nelson, 2003). At the same time, there are continuing global challenges to livestock and poultry producers, including access to international markets, global competitiveness and the impact of world politics. Solutions to U.S. problems may be found in other regions of the world. Much can be learned from those engaged in livestock and poultry production in other countries and then be adapted and implemented at operations in the U.S. that face increasing environment regulation. In addition, enhanced understanding of challenges and situations elsewhere in the world will improve the ability of U.S. agriculture to internationalize their own enterprises.

Extension serves a critical role in the implementation of technology for livestock and poultry production. Extension faculty, specialists and educators need to have knowledge and experience to provide education and guidance for production and markets. Extension staff must have access to new technology and information not just from scientists and peers within the U.S. but from scientists and peers all over the world.

In addition, undergraduate students studying agriculture must have an appreciation for the global issues facing agriculture. These students are the future of the industry and thus are critical to balance the success of livestock and poultry production with environmental challenges. Imparting global perspectives and experiences on students majoring in agricultural disciplines will help build the next generation that can form a link between

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## Emerging Issues

production agriculture and the consumer while addressing environmental concerns. Hands-on opportunities such as study abroad programs offer in-depth experiences for undergraduate students that cannot be replicated in a formal classroom environment. Undergraduate students returning from study abroad programs are reportedly more interested in international affairs, friendlier toward people from other countries, more independent and more self-assured compared with peers who have not studied abroad (Hadis, 2005). Furthermore, students studying for a semester abroad may have greater intercultural proficiency, increased openness to cultural diversity and become more globally minded (Clarke et al., 2009).

Vietnam is not unlike many other tropical and subtropical regions of the developing world in that there is a strong desire to increase animal protein consumption through domestic production. National goals for 2020 include a 72% increase in meat production, a 218% increase in egg production and 327% increase in dairy production (Nguyen Tien Von, Hue University of Agriculture and Forestry, Vietnam; personal communication). At the same time, climate change in Vietnam poses a challenge in that a 100 cm rise in sea level corresponds to loss of land for 23% of the population. Yet this is a nation where 2007 per capita consumption of meat and milk was 20 kg and 3 kg, respectively (one-third of U.S. consumption) and most of this intake was imported. As Vietnamese animal agriculture expands, a unique opportunity is presented to work with and learn from the Vietnamese on environmental and social concerns related to large-scale animal agriculture production.

The primary objective of this study abroad program is to enhance the understanding of culture, opportunities and challenges in international agriculture as a means for improving undergraduate students' and extension educators' ability to locally address global issues.

## Program Development and Implementation

In fall 2011, two faculty members from the Department of Animal Science at Michigan State University traveled to Vietnam for a five-day site visit. The primary objectives of this visit were to determine the logistical details to organize an effective study abroad program, develop relationships with colleagues and agricultural universities and establish connections with industry collaborators.

Based on the outcomes of this visit, a formal study abroad program was submitted and approved by the MSU Office of Study Abroad. It was anticipated that at the end of the program, students would be able to discuss global implications of environmental change on agriculture, understand the role of extension in modern

agriculture and enhance their professional and personal development. During fall 2012, undergraduate students and extension educators were recruited to enroll in the program. Recruitment included presentations at Extension meetings, participation in study abroad fairs and direct advertisement in key undergraduate courses within the MSU College of Agriculture and Natural Resources. Faculty at MSU worked closely with faculty and staff at Hanoi University of Agriculture to organize the program.

A unique feature of the program was the anticipated interaction between the undergraduate students and extension educators. Each educator had a unique area of interest. Previous experiences and interest of the educators allowed for a greater breadth of information to be covered on the program. Undergraduate students learned from the previous experiences of the educators as well as shared in the acquisition of new knowledge while traveling in Vietnam.

Four undergraduate students and four extension educators enrolled in the program. Students enrolled for three credits of ANS 480 (Animal Systems in International Development). The course regularly met on campus for 2 hours each week during spring semester 2013 and discussion was facilitated with a designated faculty leader. Topics discussed during pre-departure meetings included climate change, challenges to global food production, global food security, as well as issues related to cultural differences between the two countries. During the meetings, students and extension educators met to discuss expectations, goals and concerns they had prior to departure. This meeting was also used as time for the group to interact and begin to develop a relationship. Class meetings after the travel included reflective discussions, continued discussions on sustainability, as well as class presentations.

From March 1 through March 10, 2013 the four undergraduate students, four extension educators and one faculty leader from MSU Department of Animal Science traveled to Vietnam (Table 1). Three of the undergraduate students were juniors majoring in Animal Science and one student was a freshman who had not yet declared a major. Interests of the extension educators included crop, livestock and bioenergy production, food safety and environmental issues. The trip was designed to provide a general overview of agriculture in Vietnam as well as understand the nation's longer-term agricultural goals. In addition, the goal was for participants to gain an appreciation for the history and culture of the Vietnamese people because this may influence their agricultural practices and goals. Participants had the opportunity to interact with producers and visit several types of agricultural production, including farms with dairy cows, sows and laying hens.

**Table 1. Itinerary for Vietnam study abroad from March 1 – March 10, 2013<sup>1</sup>**

Day	Activity
1.	Depart United States for Hanoi, Vietnam
2.	Arrive in Vietnam
3.	Cultural day: Organized city tour of Hanoi
4.	Visit with faculty and students at Hanoi University of Agriculture
5.	Site visits to poultry, pig, and fish farms
6.	Homestay at Mai Chau Village in Hoa Binh province
7.	Farm visits in Hoa Binh province
8.	Visit to dairy cattle farms
9.	Cultural day: tour of Ha Long Bay; depart for United States
10.	Layover: city tour of Seoul, South Korea; arrival in United States

<sup>1</sup>Students met weekly for 6 weeks prior to departure and for 4 weeks upon return to MSU campus.

## Program Objectives and Assessment

Assignments in the course were designed to evaluate the following course learning objectives: 1) to enhance student understanding of culture, opportunities and challenges in international agriculture as a means for improving students' ability to locally address global issues; 2) to promote student inquiry and scholarship around topics of personal, professional and academic interest; and, 3) to enhance students' skills and ability to communicate effectively, contribute to a team and function in an unfamiliar and changing environment. Student grades were assigned using the following: attendance at pre and post departure classes, active participation on-campus and abroad, a semester reflective journal, pre-departure presentation, final project and contribution to blog entries while abroad ([http://www.canr.msu.edu/undergraduate/study\\_abroad\\_in\\_canr/canr\\_study\\_abroad\\_students/](http://www.canr.msu.edu/undergraduate/study_abroad_in_canr/canr_study_abroad_students/)). The detailed point distribution for these assignments is outlined in Table 2.

For the final project, students worked with extension educators to select an agricultural area of importance identified while traveling in Vietnam. Students prepared a written proposal, outline, paper and a twenty minute presentation on their selected topic. Topics included: exploration of the Duroc/Pietran cross boar, the growing export industry of aquaculture, implementation of anaerobic digesters and improved utilization of rice straw in ruminant diets. Students were asked to prepare the paper in a popular press format, with the anticipation that they would work with the extension educators and faculty to submit articles for publication in extension bulletins or trade journals.

## Intercultural Development Inventory

The impact of this program on the development of the participants' intercultural competence was also assessed using the Intercultural Development Inventory (IDI) (Hammer and Bennett, 1998). The use of IDI and experimental design were approved by the Michigan State University Institutional Review Board. Intercultural

**Table 2. Point distribution and grading scale for undergraduate students enrolled in ANS 480 (Animal Systems in International Development)**

Point Distribution	Points
Predeparture meetings	75
Predeparture presentation	25
Active participation	50
Reflective journal	25
Blog contributions	25
Final Project	75
Total Points	275

Grading Scale <sup>a</sup>	Assigned Course Grade <sup>b</sup>
93 and up	4.0
88 to 92	3.5
80 to 87	3.0
73 to 79	2.5
66 to 72	2.0
55 to 65	1.0
54 or lower	0.0

<sup>a</sup>Grading scale as a percentage or points earned out of the possible total points

<sup>b</sup>Course grade reported on a scale of 0.0 to 4.0

Competence, as measured by the IDI, is the capability to shift cultural perspective and adapt behavior to cultural commonality and difference. The IDI is both a quantitative and qualitative assessment tool, with 50 items, expanded demographic questions and a set of four contextualizing (qualitative) questions. The nine program participants completed the initial IDI 6 weeks prior to departure to Vietnam and then again 3 weeks after their return to the United States. The survey was located online and could be voluntarily accessed once by a unique email link sent to each participant. Participants were asked to answer all 50 items. Table 3 describes the demographics of the group. A group report, as well as individual reports, was generated upon completion of each IDI. Participants had access to the IDI Group Profile Reports, which were summarized in two 45 minute debriefing sessions with an IDI Qualified Administrator. Individual report information was kept confidential between the facilitator and the participant.

Prior to departure, the group met to identify goals and challenges related to the program (Table 4). The primary goals expressed by both students and educators were academic and professional in nature. The group sought a better understanding of the future role of agriculture in Vietnam and how this fit on a global level. Several were particularly interested in gaining a better understanding of Asian culture. The majority of the challenges centered around cross-cultural and intercultural concerns. Participants were concerned how they would navigate the language barrier, understand cultural norms, deal with different food and respect the lifestyle of the Vietnamese. Participants were also aware of the diversity within their cohort of travelers. There was some concern that individual interests would not be accommodated in such a diverse group.

**Table 3. Demographic characteristics of 9 program participants completing the Intercultural Development Inventory**

Demographic Category <sup>1</sup>	Percentage of Respondents (%)
Gender,	
Female	75
Male	25
Age	
18-21	44
41-50	11
51-60	33
Education Level (completed)	
Secondary (high) school graduate	33
Post secondary (university) graduate	11
M.S. degree or equivalent graduate degree	33
Ph.D. degree or equivalent graduate degree	11
Total Time Lived in Another Country	
Never lived in another country	78
Less than 3 months	11
Over 10 years	11
Regions of the World Visited	
Africa	11
Western Europe	11
No travel outside of the U.S.	11
Travel to multiple regions outside of U.S.	67

<sup>1</sup>Each category represents responses from all 9 program participants.

**Table 4. Participant Identified Goals and Challenges Related to the Program<sup>1</sup>**

Goals
Cross-Cultural/Intercultural
Better understand Asian culture
Academic
Study agriculture in Vietnam and how it is difference from agriculture in Michigan
Study how climate change is impacting agriculture and affecting crop production
Learn the impact of modern technology on farm decision making
Understand impact that large companies have on agriculture in Vietnam
Understand new and emerging agricultural practices in a developing country
Professional
Further collaborate with the university
Find ways to promote cultural and technical exchanges between U.S. and Vietnam
Challenges
Cross-Cultural/Intercultural
Navigate the language barrier
Dealing with different types of food
Understanding norms and how not to offend someone
Understanding traditions
Being respectful of lifestyle, food, and religion
Personal
Accommodating the interests of all group members
Processing the trip upon return to U.S. and applying information learned in the future

<sup>1</sup>Goals and challenges represent responses from all 9 program participants.

The IDI Development Continuum assesses intercultural competence based on the Developmental Model of Intercultural Sensitivity (DMIS) of Bennett (1986 and 1993). Paige and colleagues (2003) reported that the IDI was a sound tool to measure intercultural sensitivity. The continuum consists of five categories (denial, polarization, minimization, acceptance and adaptation), demonstrating a movement from a monocultural to an intercultural or global mindset. Groups with monocultural mindsets tend to utilize their own cultural values

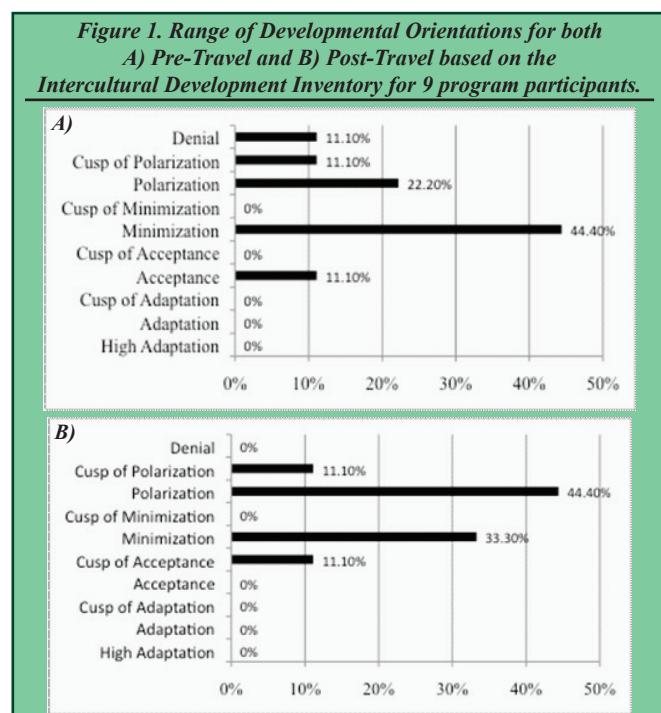
and practices when identifying commonalities and differences between groups. They tend to miss, judge or de-emphasize difference. Those with an intercultural mindset use their own cultural values and practices as well as others when determining cultural difference between groups. They tend to deeply comprehend and to form bridges across difference. Denial is an orientation that may recognize observable cultural differences but does not notice deeper cultural issues, such as value systems and conflict resolution styles. People in this orientation may try to avoid or withdraw from cultural difference. Polarization indicates an orientation that interprets cultural differences and commonality in a judgmental us versus them way. People with a minimization orientation highlight cultural commonality and emphasize universal values. In the next state, acceptance, people tend to recognize and appreciate cultural differences and commonality. Finally, people in the adaptation orientation are able to shift cultural perspective and change their behavior in ways that are culturally appropriate. The Group Profile Report, generated after both the pre and post administration of the IDI, allowed the group to engage in deep discussion regarding how they, as a group, collectively experience cultural differences and therefore how they might address challenges and situations in a foreign culture.

### Results of IDI

Each of the IDI Group Profiles contained information on the perceived orientation (PO), a reflection on where the group as a whole places itself along the intercultural development continuum and the developmental orientation (DO), the group's primary orientation as assessed by the IDI. Prior to departure, the group's PO score was 117.0, which indicated acceptance. However, the DO for the group was 86.7, considered minimization. This 30.3 point difference between PO and DO is represented by the orientation gap and is considered significant if the gap is seven points or higher. The group's score indicates a substantial overestimation of its level of intercultural competence. Minimization reflects an orientation that tends to view other cultures, values and principles through their own cultural lens. This is in contrast to acceptance, which recognizes that each culture has its own differences and ways of viewing values and principles. Results of the group profile upon return to the U.S. indicated little difference between the first report, with a PO of 117.2 and DO of 86.5. There are several potential explanations for this lack of orientation change. One may be due to the length of the program. The program was relatively short and although intensive, still allowed for only eight days in Vietnam. Another explanation may be the timing of the second IDI admin-

istration. Three weeks after return to the U.S. may not be enough time for program participants to reflect on their experiences abroad.

Next, the range of development orientations was evaluated for the group. This range is important because it suggests how the group will respond when confronted with various situations during the program. A narrow range suggests a more consistent perspective amongst group members and a wider range indicates a lack of consensus on how the group responds to perceived cultural challenges. Prior to departure, the group displayed orientations ranging from denial to acceptance with 44% representing minimization and 22% polarization (Figure 1A). Upon return to the U.S., the group narrowed these orientations and ranged from cusp of acceptance to the cusp of polarization (Figure 1B). Thirty-three percent of the group was identified as minimization orientation, while 44% of the group was polarization. Potential reasons for the narrowing of the orientations may be due to the fact that the group had a common experience and this may have impacted how individuals answered the IDI. Furthermore, the 9 group members were very diverse in age, educational level and interests. This narrowing may also represent the need for the group to determine ways to work together.



## Summary

As society becomes increasingly global it becomes imperative for graduating students, extension educators and faculty to have an appreciation for the global issues facing agriculture. Gaining a better understanding of the challenges faced elsewhere in the world will allow for an improved ability to consider agriculture in the U.S. with international perspective. The eight day study abroad program described in this paper served as a first step in exposing students, extension educators and faculty to unique problems related to agricultural expansion in Vietnam. Although the overall program, as indicated by the IDI, did not alter the group's intercultural competence, it did show an increased ability of the group to respond to cultural challenges in a consistent manner.

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