Globalizing the U.S. Undergraduate Experience: A Case Study of the Benefits of an International Agriculture Field-Based Course

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Abstract

Globalizing the undergraduate experience is increasingly important. Students need opportunities to understand culture, improve language skills, learn about international markets, and possess a contextual awareness of international communities. The purpose of this study was to determine the benefits to students who participated in an international course. The objectives were to evaluate the transferability of a modified rapid appraisal process used to analyze rural communities, to identify the international agriculture content students learned and describe cultural understandings gained by students enrolled in an internationally focused course. The results indicated that students gained knowledge of tropical agricultural production systems, cultural appreciation, and students effectively used rapid appraisal methods to collect data from local farmers. Rapid appraisal techniques are effective methods to promote active student learning. Students reported that they could transfer the needs assessment strategies, learned through applying rapid appraisal techniques, to their communities in Montana. Universities can use this case to improve international learning opportunities for students across colleges of agriculture.

Keywords: International Field-Based Courses, Impact Learning, Active Student Learning

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Introduction
Many scholars see globalizing the undergraduate experiences as an increasingly important university goal. Acker and Scanes (1998) contended that international components are essential, integral, and central to the education, research and outreach mission of the university. According to NASULGC (1997) an educated person in the 21st century will need to function effectively in a global environment. Duffy, Toness, & Christiansen, (1998) suggested that internationalizing the land grant university is an important mechanism to build human capacity in order to manage sustainable development.

It is believed that the responsibility to carry the internationalization of education forward will need to be through land-grant NASULGC member intuitions. The goal according to the NASULGC 1997 report is that all undergraduate students should graduate with an enriched international experience. It was also suggested that students who participated in international experiences could be more effective domestic citizens because they would be able to bring global ideas to the local agribusiness community to ensure that these communities remain viable.

Recommendations to globalize the undergraduate experience typically focus on three key areas: integration of international examples and activities in the curriculum, short and long-term student travel including internships, and a broad range of international experiences for professors. Some believe that to be effective and gain college-level support, the curriculum needs to reflect the transferability of global content to local problems (NASULGC, 1997). Specifically, students need to understand the importance of international markets and their role in helping to set U.S. policies. These cognitive linkages help students by examining basic principles and then tempering these concepts in a global context (NASULGC, 1997).

Cultural understanding and foreign language skills are also important because they help students make connections with people in international settings (GASEPA, 1999). According to Acker & Scanes (2000), multinational companies want to hire graduates who have cross-cultural experiences and language skills. Most scholars believed that the understanding of diversity gained through international experiences helps students bridge the cultural gap. In one domestic study, students who were exposed to another culture were able to demonstrate multicultural competencies (Cooper, Beare, & Thorman, 1990). Banks (2001) argued that through active participation in citizenship education, students can gain a multicultural citizenship that will help them acquire a delicate balance of cultural, national, and global identifications. To gain these understandings, students need to take part in international exchanges, study abroad courses, internships and courses that provide direct contact with foreign nationals. Study abroad in a non-English speaking environment provides valuable ways for students to gain experiences they need to make progress in seeing how others live, work, and learn (Acker and Scanes, 1998).

What is internationalized curriculum? How is it defined? Bremer and van der Wende (1995) defined internationalized curriculum as “curricula with an international orientation in content, aimed at preparing students for performing (professionally/socially) in an international and multicultural context, and designed for domestic students and/or foreign students” (p. 10).

University educators need to consider several important factors before they internationalize the curricula. Instructors need to think about the international implications of the course and its relationship to immediate local applications. In order to accomplish this objective, professors need to understand the context of agriculture within other countries and how international colleagues view the dynamic interrelationships between science, the economy, and the workforce. In addition, there is the benefit of objectivity for both faculty and student. In this case, objectivity comes with an out-of-context experience. There is a benefit gained when learning a process, to practice the process and study the subjects in an unfamiliar environment. This situation allows for more clarity and focus for those who examine the problem within in a new context. Sabbaticals, international project work, and international research provide opportunities for faculty to gain the experiential expertise needed to globalize the curriculum (NASULGC, 1997).
Purpose and Objectives
The purpose of this study was to determine benefits to students who participated in a course that sought to internationalize the curricula. The objectives were to:
1. Evaluate a modified rapid appraisal method applied to the experiential learning component of an international course.
2. Identify the international agriculture content students learned.
3. Describe cultural understandings gained by students enrolled in an internationally focused course.

Background Information
Montana State University successfully obtained a USDA Challenge Grant to globalize the curricula (1999-2002). Subsequently, a group of fourteen students at Montana State University enrolled in a course that focused on using a modified international rapid appraisal method of data collection and analysis. Students studied the modified rapid assessment in a semester course prior to a ten-day field study trip to Puerto Rico. The curriculum was based on a community-based rapid appraisal methodology, Participatory Community Appraisal (PCA), modified by (Bruening, Maretzki, & Semali, 1997).

Methodology
Data were collected using qualitative data collection procedures. An open-ended instrument was used based on survey that Bruening (2001) used to determine the impact of internationally focused courses. This instrument included ten questions intended to provide students an opportunity to provide a descriptive response. Ten questions were asked and five are reported here based on the objectives and primary purpose of this study. The questions were used to elicit as much information as possible from students at the end of the experience, but while the students were in Puerto Rico. Students were asked a range of questions such as how the experience changed them personally to what they learned about tropical agriculture.

A qualitative inquiry method was used to collect the information from students. Patton (1990) defined the purpose of using qualitative data collection as an attempt to understand naturally occurring phenomenon in their natural setting. All students who participated in the travel were interviewed. There were 11 students and three instructors who participated in the internationally focused course and traveled to Puerto Rico.

Results
Selected questions that were asked of students and selected representative student comments are provided. A representative sample of quotes from students can be found after each question.

1. Specifically in agriculture, what new knowledge did you learn in Puerto Rico?
   Agriculture has a lot of support. There is cost sharing for many farming activities including labor, but at the same time it is difficult to find labor. I was surprised at the steep slopes that they used for agriculture. Farmers would never use steep slopes like this in Montana. I learned about the different crops such as coffee and plantains and how they are grown. Some crops that are grown here I have never heard of before such as plantains. We learned in-depth amount of information about technical tropical agricultural production.

   Students learned about the importance of tropical production agriculture in Puerto Rico. Many of the production schemes such as growing tropical fruit were new to these students. Students also discovered that there are a number of similarities in agricultural production regardless of where the production occurs, such as the application of pesticides, problems with labor, and marketing problems. The erosion control practices are different in Puerto Rico, as students found fields that can have slopes of 60% and more. The students also learned first-hand that there is a significant amount of labor associated with working on the intense slopes in the mountainous area Puerto Rico. Students found that there was a much quicker turn around in crop production in Puerto Rico – because of the continual growing seasons found there. But, the students found that farmers there have similar problems that Montana farmers have with marketing commodities. However, some students found that some of the basic farm practices were similar to Montana such as pesticide applications. Students were also surprised at the amount of hand labor that was needed to grow crops such as bananas.
2. What did you learn about the culture?
   I've never been outside of the U.S. except for a trip to Canada. I learned that they have a passion for what they do. I thought that religion would have a greater impact on the culture. The pace was much slower than I thought. At the same time it was richer than I thought it would be. I found out that this is a Spanish speaking culture that functions in an English world. I noted how family-oriented that they were. I found the culture to be warm and receptive to outsiders. The culture is very warm and accepting of other people. My house is your house.

   The second day we went to the beach and this little kid asked us over to drink some coconuts and invited us to his house to drink and he gave each of us coconut. It was impressive how they wanted to share and how they wanted to give us food. The culture is so alive. I was surprised at the proud culture that is Spanish – but at the same time they have a large American influence. I was impressed with their cultural makeup. There is a beautiful blend between the Latin American culture and American culture. Everyone has a fence and they take care of what they have. People here are passionate and they are proud at the same time.

   Students found Puerto Rican people to be very open, warm, and engaging, and were proud of their family-oriented Spanish culture. Students were impressed with the interest and openness that Puerto Ricans expressed. Students also found the culture to be attractive and engaging. Students discovered that the people who they met were passionate about their culture. This aspect perhaps more than any other seemed to impress the students about the people of Puerto Rico. The overall tone articulated by students was a strong positive reaction to the culture and how openly the Puerto Ricans interacted with these students. A number of students commented on that they believed that they should have Spanish speaking skills to improve communication. Students found that people in Puerto Rico are more laidback and they live a less stressful life.

3. What did you learn about the Participatory Community Appraisal (PCA)?
   I learned that the PCA system is much bigger than what we were prepared to understand prior to coming to Puerto Rico. I felt I was below them and I was asking dumb questions. I learned that the PCA is a good approach regardless if you are in Puerto Rico or in Montana. We had a good grasp of the PCA before we came here and we worked well as a team to collect the information. I really learned how to conduct a PCA and that it could be applied locally as well. This is the most interesting thing that I have ever done. We could have learned this in other ways but this was very exciting to me. I can see how it would help to find the problems in farming or a community to help the farmer or the community to better themselves. It did work – just flipping through the manual I thought that it was going to be Mickey Mouse. For the amount of time it took, it was on the money and it was accurate and effective. When we took our part and we conducted the nominal group process – I learned a lot. The time we spent in the field and the time we spent it was a good learning activity. I did not see any reason for it – I did not see how it would help them or us. This was a difficult concept to learn in the classroom.

   Most students were able to see how the PCA could be effectively used to help local people identify problems internationally or in the U.S. Most of these students valued and appreciated the field-based process and they appeared to learn much about the PCA while implementing it in Puerto Rico. Students had roles to play and the students generally reported that they knew what to do when they were in the field. One student felt that the process was a bit overwhelming and another did not see the value in the PCA. Given various student learning patterns and styles that exist in most classroom settings – it is not clear if all students were mentally prepared to participate in the PCA process. The PCA was learned best by doing it in Puerto Rico according to a number of students. Students found the process effective in gathering information at the farm level. Most students found that the instruction in the classroom matched the field based activities. It was also clear that a least one student did not have a positive experience.
4. What did you learn about yourself?

I learned that I am not culturally diverse and I want to get more. I want to learn about others and want to see others’ values in another setting. I also learned about the priorities in my life and how I can take a step back to make changes in a pivotal point in my life. I found that it is fun to broaden your horizons and that I liked doing this sort of stuff and will do more of it in the future. It was interesting to communicate with others even if there is a language barrier. I learned that I deepened my understanding about my interest of international agriculture. This experience has deepened my thoughts and opinions and my career goals about the future of agriculture and how students like me can have an impact.

Student expressed strong feeling about the need to be more knowledgeable about other cultures and people. Many of the students now realized the need to learn Spanish as a means to communicate effectively. Several students mentioned that they would also like to learn Spanish and come back to Puerto Rico. Some students indicated that learning about others was a lot of fun and it was an enjoyable experience. Despite the fact that this field trip was taken in January, a couple of students mentioned the uncomfortable feeling of the intense heat and humidity of Puerto Rico. One student expressed a greater interest in international agriculture as a result of participating in this experience. Overall most students had a positive self-reflective response. For many students, the experience helped them identify and clarify specific personal career development themes. Another student mentioned that they enjoyed learning about others and their culture. One student mentioned that they are not flexible enough and that they need to relax a little bit more. One student mentioned that they were getting better at looking at life in new ways.

5. To what extent were you prepared to participate in this activity and to what extent could you replicate the PCA in the future?

With this experience behind me it would be easier for me to replicate this experience. I was really prepared because of the work of the professors prior to leaving Montana. I come from a small town in Montana but it is amazing how similar these two communities were. It would be relatively easy for me to replicate this in the future. I thought that we were very well prepared and ready to do our parts in Puerto Rico. I was unsure of the objectives and therefore it was difficult to be prepared. The language barrier was harder than I thought. It took a lot longer to communicate points. I wish I had more background in language. I don’t think that I was too prepared when I stepped on the plane in Bozeman. I did not think too much about the PCA when I was on winter break.

The range of preparedness varied between students. A number of students indicated that they felt very confident that they could replicate this process in their home communities. However, there were a few students who were not as confident. At the same time, there was at least one student who was unsure of the objectives of the program in Puerto Rico. Some students recognized the language as a real barrier to overcome. Another student admitted that they really had not thought much about the rapid appraisal process after the class and prior to traveling to Puerto Rico. Preparedness is a critical factor in learning regardless of the location. Perhaps there are additional measures, such as student engagement in teaching each other aspects of the process that could be used in the field to assist student preparedness. Several students mentioned that they were well prepared and could teach students and others how to use this process in their own communities.

Conclusions

The impact of student learning was focused in three key areas. Student reported learning about:

- tropical production agriculture.
- cultural differences and similarities.
- use of a modified rapid appraisal method, Participatory Community Appraisal (PCA).

This course helped to prepare the students to interact socially and professionally in an international context as defined by Bremer & van der Wende (1995). The course contained international content integrated into the university curriculum, students actively participated in an international setting, and the learning approach which caused students to
make connections to international needs assessment processes.

Most students reported that they benefited from participating in this field-based, process-oriented learning course. Many of the students had positive attitudes towards learning about tropical production practices. Furthermore, students were able to identify and describe tropical production practices. Most students also expressed interest in learning new agricultural knowledge and information about an interesting place.

Students appeared to enjoy and appreciate the characteristics of the Puerto Rican culture. Moreover, nearly all of the students identified the value that Puerto Ricans place on their families. In a very short time period, the students immersed themselves in the culture and many expressed interest in learning more language as a result of this brief exposure in the Spanish-speaking community. Most students interviewed radiated the enthusiasm of the culture with their positive responses to the questions. This was a culture that the students had not previously experienced and it appeared they thoroughly enjoyed being a part of it. It is recommended that if more cultural-based programs were implemented earlier in U.S. universities and in field settings such as these, then there might be more student interest in learning language and cultures. However, it is also recommended that more upper division students participate in the future offerings of the course describe in this study to add an international capstone course to enhance their undergraduate degree.

The majority of students had a good idea of how to use the PCA in Puerto Rico. Despite the six-week gap between the end of the course and the field-based experiences, most students reported that they could complete the PCA activities in Puerto Rico. Many students also indicated that they could replicate the activity in their home community. Transferability is an important aspect in anchored instruction (Ruzic & O’Connell, 2002) and it appears that many of these students could use this process to solve problems in their home communities. However, the authors feel that transferability of the instruction would decrease if the teacher/student ratio greater than one instructor to ten students.

There were a couple of students that were not positive about the experience or the learning activity. In any given class it is likely that not all students will appreciate all elements within the learning approach or style. However, it is somewhat surprising that students would spend the resources to participate in such a course without taking the responsibility to learn what was expected of them before they traveled to Puerto Rico. At the same time, this is the first time that this course was taught at MSU and, therefore, it would be expected that in the future that all students would have a better idea of what to expect and all would all know the objectives of the program. Typically nearly all students are eager to travel to a tropical environment in the dead of winter. Perhaps more time could be spent getting students prepared to understand what their responsibilities will be when they are involved in internationally-based courses.

**Implications**

This course stimulated most of the students to effectively learn a problem solving process using a hands-on approach in an international setting. Developing courses that have an international focus can contain a range of content, experiences, and levels of activities. Students in this case study self-reported that they benefited by expanding their knowledge regarding tropical agricultural production and how farmers adapted to the local topography. The concrete experiences gained by the students walking up the intense slopes of Puerto Rico helped to reinforce the need for erosion control and the realization of the needs for labor in a developing region. In addition, students reported that they were motivated to learn more language and their interest in culture was peaked as a result of this experience. This finding is consistent with the literature that indicates that direct contact with different cultures needs to be experienced and not learned in a sterile classroom environment (Cooper, Beare, & Thorman, 1990). All university students should be given the opportunity to experience other cultures in a positive setting so they can learn to appreciate others and to reduce the stereotypical views often expressed when the lack of knowledge exists. This does not suggest that all courses need to have an international travel component associated with the content. Many university communities have a variety of diverse cultural opportunities within a few hours drive and thus, students could learn much about culture as a result of integrating an active learning experience locally. Also, international...
graduate students could have a greater role in teaching U.S. students a variety of topics.

Similar rapid appraisal methods, like the one described in this study, are commonly used by international agencies such as Peace Corps, Food and Agriculture Organization of the United Nations, United States Agency for International Development, and Non-Government Organizations. Rapid appraisal techniques offered in a course such as this provide unique opportunities for U.S.-based students to interact directly with culture and with agriculture and apply this method in a valid context. Many of the U.S. short-term student travel programs offer opportunities for students to passively observe international agriculture. While this can be useful, rapid appraisal techniques cause students to ask questions and directly interact in small groups with farmers and others in agriculture in a systematic way. It is through experiences such as this that students are able to gain unique perspectives and insights that are often not otherwise available. Educators could also use elements of rapid appraisal techniques in a variety of courses to improve active student participation. Educators interested internationalizing courses could benefit from incorporating techniques and strategies used in this course. Many of the enriched learning experiences mentioned by students in this study were a direct result of the understanding gained in conducting the PCA.

Many of the students reported that they could replicate the knowledge gained in this course in their home communities. Ultimately, transferability of knowledge and concepts is the objective that most educators seek. Perhaps more university programs should consider culminating experiences presented in this case to stimulate and integrate active learning activities. Courses like this could be used as models to develop more internationally focused courses across the university agricultural curriculum. Students need to be conditioned to understand the agriculture, culture, and learning situation prior to participation. At the same time, more international courses need to be evaluated to determine the educational benefit to students. These students may forget course names, professors, and some of the content, but it is unlikely they will soon forget the multitude of direct purposeful experiences gained during the enriched field-based activities in Puerto Rico.

References


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