

Helping Students Become Global Citizens: Successful Study Abroad Programs in the Iowa State University Department of Horticulture

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Abstract

Higher education is just one aspect of American society affected by globalization. Many colleges and universities, including Iowa State University, understand the need and accept the challenge of helping students become global citizens and thus, require an international perspectives course as part of their undergraduate curriculum. The Iowa State University Department of Horticulture has a long history of successfully offering study abroad opportunities. Since 1998, 326 students have participated in a study abroad experience offered by the department. These international experiences range from 12-day trips to semester long immersions in a service learning project associated with a school garden. In each case, students participate in a pre-trip preparation, the immersive experience in-country and a post-trip reflection. This structured approach has proven to be an effective pedagogy for preparing students, maximizing student and faculty investment and evaluating the effectiveness of study abroad offerings.

Introduction

Throughout the past 20 years, globalization of the curriculum has become increasingly important at colleges and universities across the United States (Acker and Taylor, 2000; Ford Foundation, 1997; National Association of State Universities and Land-Grant Colleges, Strategic Vision Committee, 2000; North Central Region Colleges of Agriculture Curricular Committee, 1989). By 2006, globalization had become such an important part of higher education that the U.S. Senate recognized the importance of study abroad programs and designated that year as the “Year of Study Abroad.” The resolution states “...ensuring that the

citizens of the United States are globally literate is the responsibility of the educational system” (Durbin et al., 2005). To help meet their global literacy mission, many institutions of higher education include some form of an international perspectives requirement as part of the undergraduate curriculum (Crunkilton et al., 2003).

Although many institutions have long had an international perspectives requirement, how students use study abroad experiences to meet that requirement has changed dramatically in the past 60 years. For example, in 2003 only 7% of study abroad experiences were for the full academic year compared with an average of 72% in the 1950s and 1960s (Neppel, 2005). Recent literature suggests short-term study abroad experiences can still be a valuable learning opportunity for undergraduate students (Hovde, 2002). Examples of benefits attained from these short-term programs include: increased global and cultural awareness; opportunity for students to travel internationally who otherwise would be deterred due to cost, lack of self-confidence, or preparedness; and the ability to avoid class scheduling conflicts associated with longer term programs (Neppel, 2005).

Iowa State University encourages study abroad experiences as a means of fulfilling the university wide International Perspectives requirement (Iowa State University, 2013). Students can choose from a number of different programs across the university’s colleges, including programs sponsored by the College of Agriculture and Life Sciences. The College of Agriculture and Life Sciences has a long history of providing an extensive list of study abroad opportunities and historically has a large number of student participants (Woteki and Acker, 2004).

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Helping Students Become

Department of Horticulture Study Abroad Opportunities

Study abroad has been an integral part of the undergraduate curriculum in the Department of Horticulture since the first course was offered in 1998. To date 326 students have participated in a variety of study abroad opportunities. Department of Horticulture study abroad programs are populated predominately by horticulture majors; however, any student on the ISU campus is allowed and encouraged to participate. Some of these study abroad programs are administered solely through the department while others are offered collaboratively with other departments in the College of Agriculture and Life Sciences. As a result of departmental study abroad efforts, new programs have developed which are longer in duration with enhanced opportunities for cultural and social emersion.

Study abroad opportunities offered through our department are in line with the University's strategic plan as they "*Provide a high quality student life that engages and challenges students to collaboratively learn, grow and succeed as resilient global citizens and involved alumni.*" These study abroad courses also help students meet a College of Agriculture and Life Sciences student learning outcome by helping students learn to "*Describe the values and perspectives of cultures other than their own and discuss how they influence individuals' perceptions of global issues and or events.*"

In addition to meeting institution goals, the department strives to provide a variety of learning opportunities to students so they can customize their undergraduate experience. Currently, departmental student study abroad opportunities are linked to five different courses and each is designed to provide a unique type of learning experience.

Hort 495: Horticulture Travel Course Preparation

This required course is intended as a pre-trip preparation for students who intend to register for Hort 496 (Horticulture Study Abroad) the following term. Topics include preparation for safe international travel, an overview of the horticultural/agricultural industries, climate, crops, economics, geography, history, marketing, soils, culture, traditions and horticultural/agricultural development aspects of the country to be visited.

Hort 496: Horticulture Study Abroad

This 3-credit course includes a pre-trip preparatory course (Hort 495) and a 10-14 day in-country experience led by a team of two to three departmental faculty. Since 1998 students have learned about and traveled to, Austria,

Hungary, England, France, Greece, Netherlands, Italy, Ireland, Norway, Sweden and Scotland.

Hort 511: Integrated Management of Tropical Crops

Upper level undergraduate and graduate students completing this cross-listed 3-credit course learn principles and applications of integrated tropical crop management through interdisciplinary content of horticulture, plant pathology and entomology. Students then observe integrated management practices used in tropical crop production by traveling for 10 days in Costa Rica as part of the study abroad experience. They use new knowledge acquired through experiential learning in Costa Rica to further develop a semester-long research project.

Hort 496/An Sci 496: Agricultural Production, Processing and Marketing in Ukraine and Bulgaria

This three-credit course includes a pre-trip preparatory class and a 10-14 day study abroad experience led by a team of horticulture, animal science and agronomy faculty. The course objective is to provide students the opportunity to experience the agriculture and emerging market economies of Ukraine and Bulgaria and to gain an appreciation for the history and culture of these countries.

Globe/Hort 494A: Service Learning School Garden Program in Uganda

This four-credit course to Uganda includes a combination of service and learning. Course learning outcomes are related to evaluating a food and agriculture focused project in Uganda. Students identify the complex issues surrounding hunger, poverty, water and health and how these issues impact the education and lives of elementary school children and their families. ISU students and faculty partner with students and faculty from Makerere University and a nongovernmental organization in Uganda. They live, work and learn together for five weeks in the Kamuli District, which is food insecure and where most children suffer from malnutrition and related disease.

Hort 494: Service Learning in St. John

Since 2010, ISU has partnered with Giff Hill School on St. John in the U.S. Virgin Islands to provide a school gardening/service-learning program known as the EARTH Program (Education And Resiliency Through Horticulture). The program goals include: developing a landscape to serve as an outdoor learning laboratory; producing food used by the school; and integrating

horticulture, environmental science and health and nutrition into the middle school curriculum. This is a semester-long variable credit course with most students earning 2-4 credits.

Evaluation of Hort 495/496

Developing and implementing rich international learning and travel experiences is a resource intensive endeavor. It requires a significant amount of faculty time to design the pre-departure course to ensure students are prepared for the travel experience. Organizing the in-country logistics including transportation, housing, meals and destinations for a group of 20 students also requires a substantial amount of time, even when working with university and country-based travel professionals. To help determine if continuing to offer these resource intensive courses was a wise use of resources, the two longest running (14 years) study abroad courses in the Department of Horticulture were evaluated. In 2007, VanDerZanden et al. completed a comprehensive evaluation of the pre-trip preparatory course (Hort 495) and the in-country experience (Hort 496). The research goal was to evaluate the courses to determine if they were meeting university and college expected learning outcomes and competencies in international and multi-cultural awareness as a means to support the resources being used to offer the courses.

To summarize the VanDerZanden et al. 2007 research, a 23-question survey instrument consisting of 13 open and 10 closed-ended questions was mailed to 116 former Hort 495/496 participants. Survey questions were designed to gather information on student demographics, previous international travel experience, learning outcomes achieved through participation in the pre-trip preparatory class and the in-country experience and how these experiences influenced career development. Forty-three percent of the questionnaires were returned and were usable. Responses indicated that both the pre-trip preparatory course and the in-country experience helped participants achieve the course learning outcomes.

The Pre-trip Preparatory Course

Recent research by Barton et al. (2009) and Andrews and Henz (2009) support the importance of a structured pre-departure course and the positive impact it can have on students' preparation for the study abroad trip and subsequent learning experiences. The pre-trip preparatory course (Hort 495) meets for two hours each week during the 15-week spring semester prior to the end-of-semester trip abroad. Although the content of this course varies from year to year, the course learning outcomes are to: introduce students to the culture, history and horticultural contributions of the country/

region to be visited; emphasize the importance of being safe and responsible travelers; and build a sense of *esprit de corps* among students and faculty leaders. To accomplish this goal class sessions include discussions on the history, music, food, agriculture, horticulture and other topics pertinent to the destination country. Often these discussions are led by individuals native to the destination country or by individuals who have lived there for an extended period of time.

Students also take an active role in their learning through two presentations they deliver as part of the course. The first presentation is a five-minute overview of a site the class will visit. It could be a historical or cultural site, a botanic garden, or a horticulture enterprise. The goal is for students to become familiar with the planned itinerary before leaving the U.S. As a result of this assignment, each student becomes the 'expert' for one of the stops on the trip. Students also complete a research paper and deliver a 5-10 minute companion presentation on a topic of interest related to the country/region to be visited. This provides students an opportunity to learn in depth about a topic that is of particular interest to them. Because we often have students with a mix of majors and backgrounds, these presentations allow students to learn more broadly about the country to be visited and about the interests of their fellow travelers.

One of the most important goals of the pre-trip preparatory course is team building. Because students will be immersed in a fairly intense experience, team building with classmates is essential. Through the years a variety of team building exercises have been implemented including luggage Olympics, a campus scavenger hunt and charades using language/slang of the country to be visited. This last exercise helps with their communication skills while in-country.

A final component of the pre-trip course is to help students prepare for international travel (e.g., obtain a passport, travel safety, deal with a foreign currency, etc.). Expectations for personal and group behavior are also described and reinforced throughout the course.

In the research by VanDerZanden et al., (2007) students were asked to list the "most immersing" elements of the pre-trip course. This information is summarized in Figure 1. Students were also asked self-efficacy questions related to personal growth as a result of the pre-trip course (Table 1). Many students agreed or strongly agreed that the course positively affected their personal growth.

The Study Abroad Experience

Each Hort 496 in-country experience emphasizes the unique horticulture and agriculture aspects of the country being visited, as well as sites of historical and cultural

Helping Students Become

Table 1. Mean Rating Related to Personal Growth for Hort 495 a Pre-Trip Preparatory Course (N=45)

Each statement started with "As a result of the pre-trip preparatory course I..."	Mean rating ^z
increased my knowledge of another country.	4.77
would like to learn more about different cultures.	4.65
am more aware of the diversity of different cultures.	4.54
improved my ability to work as part of a group.	4.00
improved my problem-solving skills.	3.64
improved my oral communication skills.	3.64
improved my written communication skills.	3.16

^zRatings are based on a 5-point scale where 1=strongly disagree and 5=strongly agree.

Figure 1. Percentage of responses for the 'most immersing' experience associated with the pre-trip preparatory course (Hort 495).

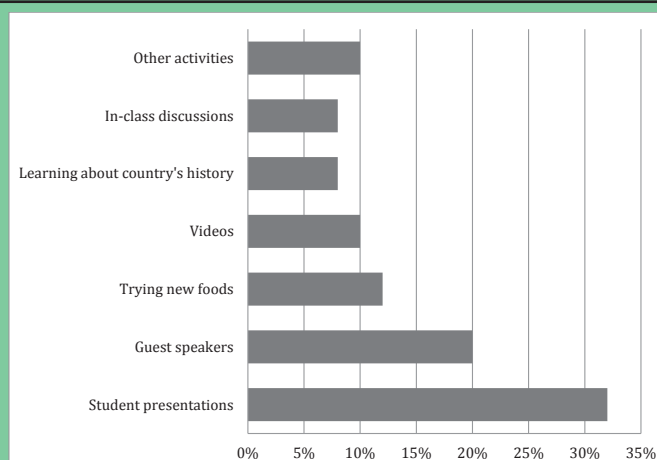
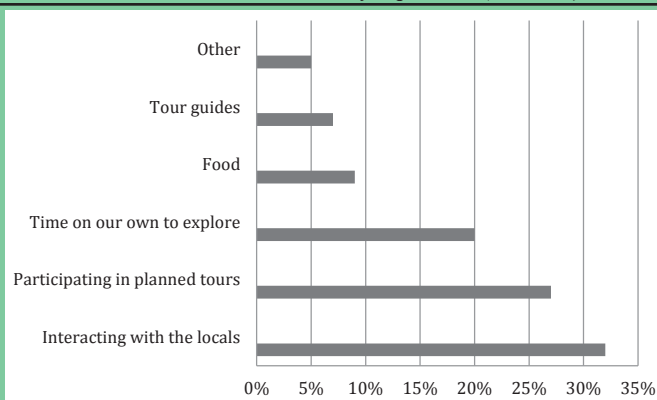


Figure 2. Percentage of responses for the 'most immersing' experience associated with the in-country experience (Hort 496).



significance. A typical trip format includes two to three days in a major city, with day trips to nearby sites such as production greenhouses, farms, botanical gardens, golf courses and historical or cultural sites. Often each of these day trips includes one or more planned tours and students typically have a free afternoon or evening in each city to explore on their own. This format provides a good mix of structured activities while still allowing students some autonomy in personalizing their international experience.

VanDerZanden et al. (2007) reported that students found interacting with the locals (chatting with locals

at a pub, visiting people's homes, talking to university students and everyday interactions that occur as a result of shopping, eating and using public transportation) and participating in planned tours to be the most immersive components of the in-country experience (Figure 2).

Summary

Based on the research completed by VanDerZanden et al. (2007) the current configurations of the pre-trip departure course (Hort 495) and the in-country experience (Hort 496) offered through the Department of Horticulture at Iowa State University are meeting university and college learning outcomes and expected competencies for international and multi-cultural awareness. Equally important is that students reported how much they valued their experiences with the courses including the opportunity to experience a country firsthand and the personal growth that occurred as a result. On-going evaluation is being completed relative to the other study abroad opportunities offered through the Department of Horticulture and results are showing a similar level of effectiveness and student satisfaction. The variety of study abroad opportunities offered through the Department of Horticulture can serve as a model for others interested in providing rich, diverse and life changing international experiences for their students.

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