
DOI: 10.5191/jiaee.2007.14306

Developing International Research Partnerships

Amy Harder, Assistant Professor
University of Florida
308C Rolfs Hall, P.O. Box 110540
Gainesville, FL 32611-0540
E-mail: amharder@ufl.edu

Gary J. Wingenbach, Associate Professor
Manda Rosser, Assistant Professor
Texas A&M University
E-mail: g-wingenbach@tamu.edu
E-mail: mrosser@tamu.edu

Abstract

Developing international partnerships is increasingly important for university researchers in the 21st century. A qualitative study was conducted to explore factors affecting faculty and student involvement in a collaborative project between Texas A&M University, U.S.A. and the Universidad Autónoma de Nuevo León, Mexico. Factors were found to cluster under the major themes of (a) research and programmatic opportunities, (b) communication, (c) international experience, and (d) student opportunities. Communication can be a significant barrier to participation in international collaborations, but faculty and students should be encouraged to pursue such experiences because of their many benefits.

Keywords: Collaborations, International, Partnerships, Research

Acknowledgment: This research was supported through funding from the Cooperative State Research, Education and Extension/United States Department of Agriculture, Grant No. 2005-51160-02282.

Introduction

Citizens of the 21st century are experiencing a global revolution. The advancement of many technologies now allows researchers in different countries to communicate in ways that are changing how business, education, and research are conducted. Forging international partnerships is particularly critical in areas where community issues transcend borders, such as in the border region between south Texas and northeastern Mexico. The United States Department of Agriculture's International Science and Education (USDA-ISE) project sought to address this need by developing international partnerships between researchers at Texas A&M University and the Universidad Autónoma de Nuevo León. The research partnerships studied issues related to agritourism, plant science, aquatic ecology, and Latino attitudes towards natural resources. In addition to studying agricultural and natural resources issues, a goal of the project was to understand the dynamic nature of international partnerships.

Review of Literature

According to Etling and McGirr (2005), "partnerships between U.S. universities and institutions in other countries have often been problematic" (p. 15). The majority of problems associated with international partnerships were attributed to poor communication (Etling & McGirr). Issues with trust, power, risks, and rewards were all cited as common pitfalls.

Barriers to participation also exist for similar international activities, such as study abroad programs and international projects. Andreasen (2003) listed 20 potential barriers to international involvement. Those barriers were both extrinsic (i.e., time and financial concerns) and intrinsic (i.e., fear and lack of motivation). Wingenbach, Chmielewski, Smith, Piña, and Hamilton (2006) found perceptions of intrinsic barriers diminished for students who participated in an international experience, but concerns about

language barriers and personal safety persisted after their participation. Hand, Ricketts, and Bruening (2007) identified similar barriers. Individuals are less likely to participate internationally when they perceive barriers exist (Irani, Place, & Friedel, 2006). Irani et al. recommended sharing success stories to ease concerns about potential barriers.

There are benefits to international participation. College students who participated in a field trip to Puerto Rico "indicated that the experience was important, valuable and meaningful to them in their professional and personal lives" (Bruening, Lopez, McCormick, & Dominguez, 2002, p. 73). Hand et al. (1997) found faculty members with international experience were strongly supportive of sending undergraduates abroad to broaden their perspectives and increase their employability. Boyd et al. (2001) noted participants in the International 4-H Youth Exchange "perceived that they were more sensitive to other cultures, more aware of global events, and more involved in community activities than prior to their participation" (Conclusions and Recommendations, ¶1). The impact of participants' international experiences even extended to friends and families, who increased their awareness of global events because of their association with the participants (Boyd et al.).

Proper preparation can help minimize the impact of barriers to participation in an international experience while maximizing the benefits. Tritz and Martin (1997) developed a set of criteria considered to be necessary for a successful study abroad experience. In part, Tritz and Martin recommended (a) setting goals and establishing personal expectations, (b) developing an understanding of the host university's expectations, (c) language training, and (d) learning customs. Practicing open communication was described as "essential" (p. 50). Common sense suggests these recommendations may

be extrapolated to similar types of international involvement, such as the USDA-ISE project. Additional research is needed to better understand the factors affecting the success of collaborative international partnerships

Purpose and Objectives

The purpose of this study was to understand the factors affecting student and faculty involvement in the USDA-ISE project. Research objectives were to

1. Describe participants' perceptions of the benefits/advantages of participating in the USDA-ISE project,
2. Describe participants' perceptions of the USDA-ISE project's compatibility with their professional goals,
3. Identify barriers to participating in the USDA-ISE project,
4. Record participants' methods for disseminating information about the USDA-ISE project.

Methods

This study was developed using a qualitative approach. Qualitative research assumes "meaning is embedded in people's experiences and that meaning is mediated through the investigator's own perceptions" (Merriam & Caffarella, 1999, p. 6).

Participants were chosen purposefully. Merriam (1998) stated, "purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and, therefore, must select a sample from which the most can be learned" (p. 61). The target population included four faculty members and four graduate students at Texas A&M University (TAMU) and three faculty members and three graduate students at Universidad Autónoma de Nuevo León (UANL).

Initially, invitations for participation in the USDA-ISE project were extended to all department heads in the College of Agriculture and Life Sciences at TAMU, with the request to extend the invitations to

all faculty members. Six faculty members expressed interest in the project; however two members could not fulfill the project's goals because of other obligations. Each of the four remaining faculty members subsequently invited a graduate student to participate in the project, based on his/her research interests. Similar invitations to participate were extended to all faculty members at the UANL. All the participants were a part of the USDA-ISE project.

The theoretical framework for the study was based upon Rogers' (2003) diffusion of innovations theory. An innovation is defined as "an idea, practice, or object that is perceived as new by an individual or other unit of adoption" (Rogers, 2003, p. 12). For the purpose of this study, the innovation was operationally defined as participation in a collaborative international research project (e.g., the USDA-ISE project). Rogers further stated innovations perceived to have high degrees of relative advantage and compatibility are most likely to be adopted. Relative advantage can be offset by barriers to participation (Schifter, 2000), so an understanding of both is important.

An online questionnaire was created by the researchers to gather data. The instrument was comprised of six open-ended questions (Table 1) and two demographic items. According to Patton (2002), "the purpose of gathering responses to open-ended questions is to enable the researcher to understand and capture the points of view of other people without predetermining those points of view through prior selection of questionnaire categories" (p. 21). Avoiding this pitfall was considered especially critical due to the cultural and linguistic differences between participants. The questionnaire was available in English and Spanish. Expertise from a native Spanish speaker aided in the translation processes for survey administration and interpretation.

Table 1

TAMU and UANL International Research Partnership Online Survey Instrument, April 2006

Questions

1. What are the benefits/advantages of participating in collaborative international research projects?
2. Describe how your participation in a collaborative international research project is compatible with your professional goals.
3. What are the difficulties/disadvantages of participating in collaborative international research projects?
4. Please list other faculty or graduate students in your department who are participating in international research, teaching, or outreach projects.
5. Describe how you have informed other faculty, staff, or students about your participation in this collaborative international research project.
6. Do you have other comments, suggestions, or questions that may be helpful for this project?

Note: Questions 4 and 6 were not analyzed for this study.

In April 2006, an invitation to participate in the study was e-mailed to all project participants for whom valid e-mail addresses could be obtained. The invitation included a hyperlink to an information and consent page. Participants entered their unique passwords to access the online questionnaire from the information and consent page. A reminder e-mail was sent to non-respondents one week later. The initial invitation and follow-up reminder were written in Spanish and English. Twelve responses were received.

Prior to data analysis, Spanish responses were translated into English for ease of comparison. Researcher translations were verified using Google™ Language Tools. The data were then coded to protect the respondents' anonymity (TF = TAMU Faculty, TS = TAMU Student, UF = UANL Faculty, US = UANL Student) and thematically analyzed using content analysis. Content analysis is a "reduction and sense-making effort that takes a volume of qualitative material" and identifies "core consistencies and meanings" (Patton, 2002, p. 453). Data were searched for patterns of recurring words or subjects. Themes were derived from the patterns. In order to ensure the rigor of the study, an external evaluator

reviewed the data. The review resulted in the confirmation of the thematic patterns.

The study is limited in its generalizability because of its qualitative nature. The quality of the open-ended responses is limited by the respondents' writing ability. Participants' status in higher education provided some assurance of sufficient writing ability. In addition, the ability to probe and delve deeper into the respondents' experience was limited by the use of a survey instrument, which may curtail the depth of the findings.

Results

Objective One: Perceived Benefits/Advantages of Participation

Participants were asked to describe what they perceived to be the benefits/relative advantages of participating in collaborative international research projects. Two major themes were identified from the data: programmatic and research opportunities, and student opportunities. In addition, international experience was an underlying theme for this objective. Within these themes, there was some overlap in the identified benefits of project participation.

The programmatic and research opportunities theme consisted of several benefits. Access to new or alternative areas

of research, perspectives, and knowledge was most often mentioned by participants on both sides of the border (TF1, TF2, TF3, TF4, TS1, TS3, UF1, UF2, US1, US2). Other benefits included access to new materials and technology (TF1, UF1), improved programming for existing audiences (UF3, TS1), and increased possibilities for future international research (US1). The value of collaborating on international issues was described well by two researchers.

- *Because social and environmental issues do not necessarily respect man-made boundaries, researchers need to collaborate with our international colleagues to better understand those 'issues without borders' that impact our bi-national regions* (TF4).
- *Many research challenges transcend borders, and working with others to resolve these challenges provides a new perspective* (TS1).

Graduate students were presented with multiple opportunities to benefit from their participation in the international research (TF2, UF3, US1, US2). These benefits were clustered by the researchers under the theme of student opportunities. School credit was an incentive for participation (US2). Students gained experience working on a real-life research project. One student commented *"All projects have benefits, but this is important for me since it is my first project"* (US2). Participation in the USDA-ISE project also provided an opportunity for faculty to meet and recruit prospective students (TF1, TF2).

Objective Two: Compatibility

Participants described how their participation in a collaborative international research project was compatible with their professional goals. Data were again clustered under the programmatic and research opportunities theme. Participants were able to broaden their approach to research (TF2). Their experiences aided in

program development (TF3, UF1, UF2). In addition, promotion was linked to performing international research (UF3).

Personal interests and goals factored into the level of compatibility that collaborative international research projects had with the participants' professional jobs. Students enjoyed the opportunity to gain experience for future careers (TS3, US1). One student said, *"Participation in an international research project will provide me with not just cooperative, but collaborative problem-solving skills that are necessary for a successful professional career"* (TS3). Another commented that his/her involvement in the USDA-ISE had influenced him/her to consider future involvement in international research, although it had not previously been a personal interest (US1). One TAMU faculty member was even considering a teaching sabbatical in Mexico (TF2).

The chance to take a team approach to common problems was highly valued. Working on an international team provided participants with alternative views of the same issues and exposed them to unique ways of addressing those issues (TF4, TS1, UF1, UF3). In addition, teamwork was thought to be very important for refining results and conclusions from investigative research (UF1). Collaborating with Mexican researchers was described as a *"privilege"* (TF4) and it was said that *"working with others who share similar interests is very comforting, re-energizing, and an indispensable learning experience"* (TS1).

Objective Three: Barriers to Participation

Participants cited several barriers associated with the USDA-ISE project, such as difficulty in understanding laws governing research activities in each country (UF2), different resources available at each university (TF4), and differences in research fields (UF3). The distance between universities, and cost of travel to research sites, were marked disadvantages (TF3, TS3, UF2, US1). However, participants most

often encountered difficulties with communication. Researchers documented their struggles to keep in touch with each other (TF1, TF2, TF4, TS1, UF1, UF3). Language was a significant concern for participants lacking bilingual abilities (TF2, TF3). Language was particularly troublesome for one pair of partners, who relied on a graduate student to do most of the translating since neither spoke the other's native language.

Scheduling project-related activities was another communication issue (TF2, TF4). This was best described by one TAMU faculty member, who explained, "*it is difficult to find collaborators with compatible schedules, resources, and workloads*" (TF4). This sentiment was echoed by a second participant, who commented, "*different activity schedules with those who have more teaching responsibilities and different vacation and field schedules make it harder to get together to talk*" (TF2). With the challenge of matching schedules, even finding common time for a phone call was perceived as difficult.

The availability of computers at both universities did little to alleviate the communication issues. E-mail was said to be helpful, "*but not entirely satisfactory*" (TF4). In fact, one partnership was nearly dissolved due to issues with the TAMU university server. When the project started, the TAMU faculty member thought that the UANL faculty member kept ignoring project e-mails because no replies were received. Eventually, it was discovered the TAMU server was continually rejecting messages sent from UANL. The problem was resolved by opening e-mail accounts on a public e-mail server where partners were able to move forward with their research. Similarly, other UANL faculty noted the storage limits on their e-mail accounts made it difficult to save important messages for very long (UF1, UF2).

Objective Four: Dissemination of Project Information

As of this reporting, participants have completed three-fourths of their projects. During this time, participants informed others about their involvement in the USDA-ISE project through formal and informal processes. Formal processes included annual reviews and summary reports (TF1, TF3, UF1), development of new grant proposals (TF2), and research poster competitions (TS1). Future plans include conference papers and potential journal articles (TF2, UF1). Informally, participants disseminated information mostly during casual conversations with colleagues and peers (TF1, TF2, TF4, TS3, UF2, UF3, US1), but also in classes and seminar presentations (TF1, TF2, TS1, UF1), during faculty meetings (TF4), and by recruiting new students to assist with their projects (TF3, TF4).

Educational Importance

Although data from this project evaluation cannot be used to draw conclusions about participants' future success in the USDA-ISE project, analyses revealed specific themes which impact this project's long-term success. Expanded research and programmatic opportunities were important advantages associated with involvement, particularly for graduate students. Those students demonstrated willingness to overcome communication difficulties and they appreciated opportunities to expand their international perspectives. Too, it provided them valuable research experience and shaped their visions for the future. USDA-ISE project directors used the results of this project evaluation to encourage more graduate students (in Texas and Mexico) to become involved in an international research project. Directors of similar projects should consider the potential benefits of taking similar actions.

Many studies (Andreasen, 2003; Boyd et al., 2001; Bruening et al., 2002; Wingenbach et al., 2006) have shown

student participation in international experiences transcends the classroom. Students' international participation illustrates our common equivalency; positive societal benefits can be gained from greater understanding of many cultures. Such experiences must be promoted in our teaching and research efforts. Students must be encouraged to continue demonstrating their willingness to understand other languages and cultures.

Faculty should recruit more graduate students for participation in international research, but they should strive to include undergraduates, as recommended by Hand et al. (2007). Perhaps the graduate students in the USDA-ISE project could serve as examples in their home universities to motivate peers into similar roles. The linkages between graduate and undergraduate groups can help lessen younger students' fears (Irani et al., 2006; Wingenbach et al., 2006) about participating in international projects.

Rogers (2003) stated that innovations, such as participation in international collaborative project, are more readily adopted when individuals perceive the innovation to be consistent with their own values and beliefs. The results of this study indicate involvement in research such as the USDA-ISE project appeals to open-minded faculty and students who enjoy working in a team environment. This information is particularly helpful for project directors looking to recruit faculty and students for international projects. An investment of resources must be made when researchers are invited to join projects, so it is prudent to select individuals who are pre-disposed to becoming adopters of the innovation.

Communication issues were identified as the greatest barrier to participation. These issues must be resolved if the USDA-ISE project is to foster long-term international research collaborative partnerships. As Etling and McGirr (2005) found, many of the problems associated with

international research projects between U.S. institutions and non-U.S. institutions were centered on communication difficulties. Similar findings were confirmed in this research. A conscious effort to practice open communication may alleviate problems (Tritz & Martin, 1997).

Potential communication problems should not dissuade researchers from undertaking international projects. Evidence suggests much can be gained, professionally and personally, from participation in international research projects. USDA-ISE project directors now have specific knowledge for improving a primary aspect found in all international collaborative projects: better communication among all participants.

Additional dissemination methods will be explored to promote the USDA-ISE project. As noted by Irani et al. (2006), sharing success stories may help to decrease perceived barriers to international involvement. Such stories, along with project findings, may be disseminated broadly by featuring them on the USDA-ISE project Web site. Project directors are encouraging all participants to submit their research studies to international research conferences and journals. An especially important element in reporting and presenting these studies is that such dissemination should be accomplished jointly, just as the projects have been conducted to date. If U.S. and Mexican faculty members and graduate students jointly report and present their results, the bonds of international research project collaboration will be strengthened.

References

- Andreasen, R. J. (2003). Barriers to international involvement. *Journal of International Agriculture and Extension Education*, 10(3), 65-69.

- Boyd, B. L., Giebler, C., Hince, M., Liu, Y., Mehta, N., Rash, R., et al. (2001). Does study abroad make a difference? An impact assessment of the International 4-H Youth Exchange program. *Journal of Extension*, 39(5), Article rb8. Retrieved December 7, 2006, from <http://www.joe.org/joe/2001october/rb8.html>
- Bruening, T. H., Lopez, J., McCormick, D. F., & Dominguez, D. R. (2002). Active learning: The impact on students participating in an extended field trip to Puerto Rico. *Journal of Agricultural Education*, 43(4), 67-75.
- Etling, A., & McGirr, M. (2005). Issues and procedures in forging international university partnerships. *Journal of International Agriculture and Extension Education*, 12(2), 15-22.
- Hand, E., Ricketts, K. G., & Bruening, T. H. (2007). Benefits and barriers: Faculty international professional development. *Proceedings of the Association of International Agriculture and Extension Education*, 23, 148-153.
- Irani, T., Place, N. T., & Friedel, C. (2006). Beliefs, attitudes, perceptions, and barriers toward international involvement among College of Agriculture and Life Science students. *Journal of International Agriculture and Extension Education*, 13(2), 27-38.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass, Inc.
- Merriam, S. B., & Caffarella, R. S. (1999). *Learning in adult hood: Comprehensive guide*. San Francisco: Jossey-Bass, Inc.
- Patton, M.Q. (2002). *Qualitative research and evaluation methods*. Thousand Oaks, CA: Sage.
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York: Free Press.
- Schifter, C. C. (2000). Factors influencing faculty participation in distance education: A factor analysis. *Education at a Distance*, 13(1). Retrieved December 8, 2006, from http://www.usdla.org/html/journal/JAN00_Issue/Factors.htm
- Tritz, J. A., & Martin, R. A. (1997). The collegiate international experience: Criteria for successful experience abroad programs. *Journal of International Agriculture and Extension Education*, 4(2), 49-55.
- Wingenbach, G. J., Chmielewski, N., Smith, J., & Piña, M., Jr. (2006). Barriers to international experiential participation. *Journal of International Agriculture and Extension Education*, 13(3), 79-90.