Going Global: Developing Research Partnerships between Texas A&M University and the Universidad Autónoma de Nuevo León

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Abstract
Developing international partnerships is increasingly important for university researchers in the 21st century. A qualitative study was conducted to explore the 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 due to their many benefits.

Keywords: International, collaborations, research, partnerships

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**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 northern Mexico. The United States Department of Agriculture’s International Science and Education project (USDA-ISE) sought to address this need by developing international partnerships between researchers at Texas A&M University and the Universidad Autónoma de Nuevo León. In addition to studying local issues in agriculture and natural resources, the project attempted to develop a better understanding of the dynamic nature of international partnerships.

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 can be attributed to poor communication (Etling & McGirr, 2005). 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. The 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 continued. 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). Boyd et al. (2001) evaluated the impact of participating in the International 4-H Youth Exchange. Participants “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, par. 1). The impact of participants’ international experience even extended to friends and families, who increased their awareness of global events because of their association with the participants. It is possible the same effect occurs when faculty members participate in international partnerships too.

**Purpose and Objectives**

The purpose of this study was to develop an understanding of the factors affecting the involvement of students and faculty in the USDA-ISE project. Specific research objectives were to

1. Determine participants’ perceptions of the benefits/advantages of participating in the USDA-ISE project,
2. Determine the 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, 1998).

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 project participation 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 Enhancing Research and Teaching 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, so an understanding of both is important.

An online questionnaire was created by the researchers to gather data. The instrument was comprised of six researcher-developed, open-ended questions (Table 1) and two demographic items.

Table 1

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

Note: Questions 4 and 6 were not analyzed for this study.
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). The questionnaire was available in English and Spanish. Expertise from a native Spanish speaker aided in the translation processes for survey administration and interpretation.

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, the 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 meaning (Patton, 2002). 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 outside professional reviewed all data and found similar thematic patterns.

The study is limited in its generalizability due to its qualitative nature. The quality of the open-ended responses is limited by the respondents’ writing ability. The participants’ status in higher education provides some assurance of a sufficient level of writing ability. In addition, the ability to probe and delve deeper into the respondents’ experience is 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).
The opportunity to participate in the international research was considered to be beneficial for graduate students (TF2, UF3, US1, US2). Earning school credit was advantageous (US2). 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). These benefits were clustered by the researchers under the theme of student opportunities.

Objective three: 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 strongly 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 although international research had not been a personal interest before joining the USDA-ISE project, it was now being considered as a possibility for the future (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, as well as unique ways of addressing those issues (TF4, TS3, 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 four: barriers to participation
Participants cited several barriers associated with working on the USDA-ISE project, such as the difficulty in understanding the 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 the cost of travel to research sites, were marked disadvantages (TF3, TS3, UF2, US1). However, participants most often encountered difficulties with communication. Language was definitely a concern for some participants, as not everyone was bilingual (TF2, TF3). This was particularly troublesome for one pair of partners, who were relying upon a graduate student to do most of the translating since neither spoke the other’s native language. Another issue was the challenge of working around each researcher’s schedule (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.
Perhaps the biggest communication difficulties were technical. Researchers documented their struggles to keep in touch with each other (TF1, TF2, TF4, TS1, UF1, UF3). E-mail was said to be helpful, “but not entirely satisfactory” (TF4). The same pair of partners most challenged by the language barrier also had to overcome e-mail difficulties. 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; communication improved dramatically. Although only one set of partners had e-mail difficulties, other UANL participants noted that small storage limits on their university e-mail accounts made it difficult to save important messages for very long (UF1, UF2).

**Objective five: dissemination of project information**

As of this reporting, participants had completed their first quarter of the project. 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 included 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, Implications, and Application**

Although data from this mid-project evaluation cannot be used to make conclusions about participants’ future success in the USDA-ISE project, early analyses revealed specific themes which impact this project’s long-term success. Namely, communication issues have been identified and must be resolved if this project is to foster long-term international research collaborative projects. 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. Although similar communication problems may occur in future international research projects, they should not discourage U.S. partners from participating in such 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 of international collaboration: better communication among all participants.

USDA-ISE Enhancing Teaching and Research project directors will use the results of this mid-project evaluation to encourage more graduate students (in Texas and Mexico) to become involved with an international research project. Expanded research and programmatic opportunities were important advantages associated with student involvement. While graduate students may have experienced similar language barriers as did faculty members, students in this project appeared to be more flexible in their tolerances for communication difficulties and they appreciated the opportunity to expand their international perspectives. Perhaps the graduate students in this project can use their experiences to motivate peers into similar roles. Students must be encouraged to continue demonstrating their willingness to understand other languages...
and cultures even though their examples of flexibility in addressing communication barriers between international groups may not transfer readily to faculty members.

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—and the necessity to promote such experiences in our teaching and research efforts. USDA-ISE project directors should encourage faculty members in this project to not only recruit more graduate students for participation, but also undergraduates. 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.

Additional dissemination methods will be explored to further promote the USDA-ISE Enhancing Teaching and Research project. 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**


