

**Preparing Internationally Engaged Graduate Students in Agricultural and Extension Education**

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## **Introduction/Need for Research**

Experts have called for agricultural disciplines in higher education (e.g., agricultural education) to better ensure curricula and learning experiences account for contemporary agri-food system shifts toward global interconnectedness and multiculturalism (Bedenlier et al., 2018; Johnson et al., 1995; Navarro & Edwards, 2008). Graduate students may increase their interest and knowledge in international agriculture through formal coursework and curricula. However, more practical and career-translatable capacities are often derived from extracurricular activities and high-impact experiences, including professional and academic associations (Akkerman & Torenvlied, 2013; Coulter et al., 2004). The existence of such associations and networks for graduate students to gain international agricultural education capacities and career preparation appears limited (only three located by the authors) while the need for such collectives is great. Therefore, this study examined graduate students' perceptions about how an international agricultural education (IAE) association could best address their needs.

## **Theoretical Framework**

Socialization was the guiding theory for this study. At its foundation, the theory proposes that the process by which people engage with (and become socialized to) a collective or association has influences on both those people and the respective group (Austin & McDaniels, 2006; Staton & Darling, 1989). Contemporary perspectives of the theory describe this as dynamic and culturally driven co-construction (Antony, 2002). Four key principles of socialization theory most closely guided this needs assessment with an international lens: a) socialization is both a formal and informal process; b) homogenization and assimilation of members are problematic and should be avoided; c) socialization is often mediated by communication methods and systems; and d) participants' involvement, investments, and knowledge acquisition drive the bidirectional dynamics of socialization (Austin & McDaniels, 2006; Staton & Darling, 1989; Tierney & Rhoads, 1993). In the present study, socialization was applied within a three-phased needs assessment centered on the premise that graduate students' engagement with an association embodies a process of socialization to international agriculture.

## **Methodology**

We followed a convergent mixed-methods research design aligned with the Witkin and Altschuld (1995) three-phased needs assessment approach. Phase one (pre-assessment exploration) involved the review of secondary data and relationship-building with stakeholders and phase two (assessment) was dedicated towards data collection and analysis, using a survey and a focus group. Phase three (utilizing the assessment findings) activities are not described in this study. The convergent design allowed for the simultaneous collection of quantitative and qualitative data, followed by an integration/comparison analysis (Creswell & Plano Clark, 2018).

We used purposive and snowball sampling to achieve a representative sample from the broader population of graduate students with an association membership (Plowright, 2011). The survey instrument design included two indexes measuring students' satisfaction with their engagement in networking, collaboration, and student diversity, capacity building and learning, funding and value, the annual conference, and scholarship. For this, a five-point Likert satisfaction scale was

used: *Extremely dissatisfied* (1), *Somewhat dissatisfied* (2), *Neither satisfied nor dissatisfied* (3), *Somewhat satisfied* (4), and *Extremely satisfied* (5). Closed-ended questions also explored students' types of involvement and additional input related to the quantitative inquiry. We also conducted a virtual focus group facilitated around the causal analysis fishbone technique to further explore and triangulate students' perceptions on optimal association engagement (Harder, 2020). We analyzed the quantitative data using descriptive and central tendency statistics and the qualitative data were analyzed using thematic analysis (Creswell & Plano Clark, 2018).

### **Results/Findings**

Of the 26 graduate student survey respondents, the majority (18) were from the United States, while the sample represented a total of six nationalities including Afghanistan (2), Ecuador (1), India (1), Nigeria (3), and Rwanda (1). Most respondents reported their level of involvement in the association as somewhat involved or very involved (combined = 69.2%). Based on the lowest means ( $M$ ) of satisfaction, the greatest needs were, in order: Networking with nonprofit and private sector practitioners and leaders ( $M = 2.65$ ); Communication with students via social media ( $M = 2.92$ ); and Networking that leads to professional opportunities ( $M = 3.27$ ); In contrast, respondents were most satisfied with learning about relevant international research, relevant professional development/skill building, and participation in the annual conference. The qualitative analysis found the greatest needs were mentoring and professional development; information and communication; participation and cost; and diversifying the organization.

### **Conclusions and Implications**

Findings underscore a need for IAE associations to better provide graduate students networking experiences with nonprofit and private sector professionals. This need could be addressed by engaging with global practice and research networks such as the CGIAR research and development consortium, funded with nearly one billion U.S. dollars and employing more than 9,000 staff globally (CGIAR, n.d.). Respondents seek IAE to facilitate mentoring and networking, especially focused on linking to international career opportunities. Mentoring systems to pair students with senior mentors (e.g., experts in international development practice or research) could help fill this gap leveraging in-person and online connectivity to ensure an equitable and inclusive global linking infrastructure. The qualitative data revealed that some respondents feel there is a potential lack of diversity from their association experience pointing to the importance of diverse collectives that reflect the multicultural food system stakeholders (Tierney & Rhoads, 1993). While this study offers emergent understanding, a longer-term or longitudinal evaluation on students' (including alumni) involvement in IAE associations is recommended to better determine how the associations may lead to globally relevant careers.

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