

**Solving Community Problems Through Bi-national Global Service-learning Projects**

**Samuel Ikendi**

Ph.D. Candidate

Department of Agricultural Education and Studies

Iowa State University

513 Farm House Lane

206 Curtiss Hall, Ames, IA 50011

515-294-4810

[sikendi@iastate.edu](mailto:sikendi@iastate.edu)

**Michael Retallick**

Professor and Chair

Department of Agricultural Education and Studies

Iowa State University

513 Farm House Lane

206 Curtiss Hall, Ames, IA 50011

515-294-4810

[msr@iastate.edu](mailto:msr@iastate.edu)

**Gail Nonnecke**

University Professor

Morrill Professor

Department of Horticulture

Global Professor in Global Resource Systems

Iowa State University

105 Horticulture Hall, Ames, IA 50011

515-294-0037

[nonnecke@iastate.edu](mailto:nonnecke@iastate.edu)

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### Introduction/Need for Innovation or Idea

Service-learning (SL) pedagogy has been a larger part of the history of American higher education institutions (HEIs) than in any other region of the world (Bringle & Hatcher, 2011; Ma et al., 2019). A summary of SL in the U.S. as a relevant pedagogy in advancing the knowledge of students was published by Eyer and Giles (1999). Internationalization of SL was conceptualized as an interconnection between SL pedagogy, study abroad programs, and international education (Bringle & Hatcher, 2011). The U.S. HEIs requiring SL component as part of students' course and graduation requirements has grown over time (Moely & Ilustre, 2011). This pedagogy emphasizes "the centrality of working *with* not just *in* or *for* the community" (Bringle & Clayton, 2020, p. 48) as students get immersed in the community where they provide a service as they learn. Many institutions and colleges of agriculture offer study abroad courses. Some of these programs may include an SL component, but hardly any have an SL component that consists of U.S. students partnered with host-country students to create bi-national SL projects.

### How It Works/Methodology/Program Phases/Steps

In Uganda, the SL program was conceptualized in 2005 out of a participatory needs assessment between Iowa State University (ISU), Makerere University (MAK) colleges of agriculture, and stakeholders in the rural Kamuli district of Uganda (Nonnecke et al., 2015). The agreement was reached with school gardening as the most feasible activity that could fulfill the learning objectives of the students, their curricula, and the host organization's – the Center for Sustainable Rural Livelihoods (CSRL) goal of ending the hunger in Kamuli, Uganda (Ikendi, 2019; 2022; Kugonza et al., 2015; Nonnecke et al., 2015). The summer SL was operationalized in 2006 under the name "*Creating a school garden: Service-learning in Uganda*" derived from its main activity. Nonnecke et al. (2015) further shared that in the early years, the program was four weeks, and it gradually grew to six weeks for ISU students. In 2007, it was expanded to 10 weeks for MAK students to meet their curricular requirements.

Bi-national team projects are a component of the school gardens that help to address community issues. Students from both ISU and MAK work in groups under the guidance of outreach staff of the Iowa State University Uganda Program (ISU-UP) – [who implements the livelihood programs of the CSRL in Kamuli] and faculty from both institutions. To get started, students are oriented on the previous year's project accomplishments through the pre-departure orientations in the spring semesters at both universities. Eight main projects, in addition to major activities of a school garden program, included agroforestry, livestock, soil, irrigation, beekeeping, sanitation, school feeding, and postharvest of crops. Students choose and rank three projects in order of preference, from which two projects are assigned. Students who are assigned the same projects are then encouraged to link up with peers both in-person while at their respective universities and through electronic communication with their peers in the other university.

Each of the team projects is assigned an ISU-UP staff in charge of their area of specialization. Because of the limited time while in Kamuli, the program staff writes a concept note, develops a project budget, and helps to procure the materials before students arrive in the summer. The staff decides aspects students will work on in the field commensurate with the program work plan and goals. Students add creativity as they apply their knowledge toward solving the problem through implementing the project's concepts within schools and communities. Because of other SL activities completed during the same period, students work on bi-national projects for a half-day

every Tuesday and Thursday of the week. They also work a half-day on a Saturday to catch up if delays happened in the week, from weather or scheduling conflicts.

### **Results to Date/Implications**

Since 2006, a total of 294 summer service-learners have benefited from the program of whom 169 are from MAK and 125 from ISU. In 2019, the program published students' project posters on the website (CSRL, 2019). In the analyses, we identified a total of 30 Bi-national team projects accomplished. The majority of specific bi-national projects were accomplished in agroforestry, sanitation, livestock, and postharvest. More than half of the projects had at least two students from each university who participated. The minimum was one and the maximum was six students per project. For most projects, 90% were completed within the schools partnering with the CSRL/ISU-UP including four elementary schools of Namasagali Primary School (P/S), Nakanyonyi (P/S), Naluwoli (P/S), and Namasagali College Staffs' Children (P/S), and a high school called Namasagali College. The other 10% of the projects were completed in the community, and these were related to gender-based violence, access to health services, and the use of irrigation systems along the Nile watershed to improve food production.

Students working in bi-national teams helped them to recognize development programs taking place in low-income countries, like Uganda, which were steered by HEIs in partnership with local and international organizations. Developing and executing a development project takes a rigor of work and guidance from both staffs of local host institutions and faculty with regards to how projects can help end hunger and poverty in communities and schools. For instance, in the postharvest project, a MAK junior in agricultural and biosystems engineering cleaned maize at Naluwoli Primary School for a school lunch project using a grain sieve. He found the process tedious and time-consuming .... with support from ISU-UP and MAK, "he created his first pedal-operated maize cleaner" which has since been adopted by the CSRL/ISU-UP for use in communities and schools (CSRL, 2020, p. 14). In these projects, students develop research skills through conceptualizing and implementing ideas and leadership skills while working as a team.

Students also develop communication and intercultural competence while working with members of different cultures, races, and ethnicities (Nonnecke et al., 2018). For instance, an ISU Junior in Global Resource Systems had the following experience in the agroforestry project:

"I went to fill watering cans to irrigate the fence we had planted. ...., a man approached who was obviously gathering water for his family. He insisted I go first. Not with words, but with gestures. ...., so he pumped the water for me. Then I pumped the water for him. ...., We didn't speak at all but much more was said in that moment. He renewed my faith in humanity." (CSRL, 2014, p. 9).

### **Future Plans/Advice to Others**

To solve community problems and promote deep learning, educators should involve learners in bi-national projects to harness knowledge from a variety of perspectives in a team of peers. In planning these learning projects, collaboration among students, faculty, and staff of bi-national organizations helps to meet their goals reciprocally.

### **Costs/Resources Needed**

Cost is dependent on the project and program design. If incorporated into a current study abroad, there may be no additional cost. Currently, the program provides about \$1,000 for each project. Success requires an interest by the host country and organization, partners, and leadership.

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