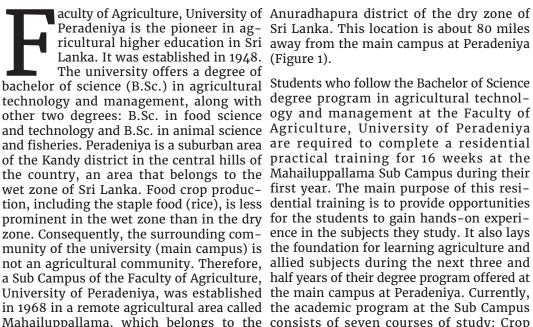
Regular Farm Family Visits as an Approach to Community Engagement and Learning in Agricultural Higher Education: A Sri Lankan Experience

Madhavi Wijerathna and Kumudu P. P. Kopiyawattage

Abstract

This study employed a mixed-methods approach to evaluate the regular farm family visits by undergraduate students of the Faculty of Agriculture, University of Peradeniya in Sri Lanka as a community engagement and learning approach. Data was collected using a questionnaire survey with the students (N = 145) and structured interviews with the host farm families (N = 40). The journals submitted by students on their learning experience were also examined as a qualitative measure. According to the results of the study, farm families have served as a "social laboratory" for the students, and both students and the community have benefited. Elements of community-based learning, experiential learning, servicelearning, and problem-based learning were identified as the embedded characteristics of this learning approach. Identifying strengths and limitations would be important to improve this pedagogical method of community engagement and learning in agricultural higher education.

Keywords: community-based learning, community engagement, agricultural higher education, host community, university-community partnership



aculty of Agriculture, University of Anuradhapura district of the dry zone of Peradeniya is the pioneer in ag- Sri Lanka. This location is about 80 miles ricultural higher education in Sri away from the main campus at Peradeniya

Mahailuppallama, which belongs to the consists of seven courses of study: Crop

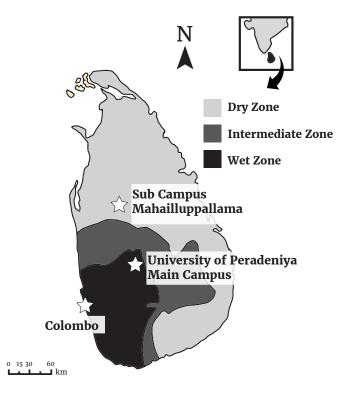


Figure 1. Geographical Locations of the Main Campus at Peradeniya and Sub Campus at Mahailuppallama

The practical crop production program is observations. designed to give the students hands-on experience in all agronomic practices for a Having real-world experience beyond the variety of crops, from land preparation to harvesting.

ecological zones: the wet zone, the inter- (Andreasen, 2004), service-learning (Astin mediate zone, and the dry zone (Figure 1). et al., 2000), and problem-based learning However, two thirds of the land extent of Sri (Hung et al., 2008) are some examples of Lanka belongs to the dry zone, having agro- pedagogical leaning techniques that are climatic conditions suitable for food crop being used in a wide variety of education production. Therefore, the Sub Campus is contexts. Kolb (1984) defined experiential located in an ideal place to provide the un- learning as "the process whereby knowldergraduates with essential practical skills edge is created through the transformation for dry zone agriculture. More important, of experience" (p. 41). Experiential learning opportunities are available for students to approaches have been identified as a sucbuild close connections with the nearby cessful strategy to teach agriculture across farming community and agriculture-related the literature (Baker et al., 2012; Edziwa et government institutions such as the Field al., 2012). Even though teaching and re-Crop Research and Development Centre, search are considered traditional roles of Farm Mechanization Centre, In-service higher education institutions, higher edu-Training Institute, Block Management cation institutions around the globe have

Production Technologies, Soil Resources Office of the Mahaweli irrigation system, and Ecosystems, Applied Agribusiness, Field Government Seed Farm, and the Institute Engineering, Developmental Extension, of Post-Harvest Technology. The students Principles and Practices of Animal are expected to have a good rapport with Production, and Botany of Field Crops. the farm families and study the farm family These courses are offered by the respective and their farming throughout the season, seven academic departments of the faculty. paying frequent visits and making close

classroom settings is an important component of the higher educational learning process. Community-based learning Sri Lanka is divided into three main agro- (Melaville et al., 2006), experiential learning embedded a third component called out- Sub Campus. Forty host farm families parreach into their curricula. Outreach engage- ticipate in the program each year. The host ment is mandatory for agricultural higher families are contacted through the three education institutions (Hansen, 1989) that community-based farmer organizations in could enhance their curricula through the area, and they voluntarily participate in the application of learning concepts and the activity. Host families have the freetheories like community-based learning, dom to continue or discontinue at any time. service-learning, problem-based learning, However, most of the families show their and experiential learning while provid- willingness to continue the participation ing opportunities for students to achieve each year. The host families are selected on their expected levels of competencies. The the basis of farming involvement and their University Grant Commission of Sri Lanka willingness to participate voluntarily. The has also identified outreach as a mandate students are expected to study the assigned for Sri Lankan state universities. Moreover, farm families and build a good rapport with community engagement, consultancy, and them by paying frequent visits throughout outreach activities have been included as the semester. Although making this close part of the evaluation criteria in reviewing connection with the farm families is one of for quality of higher education institutions the practical components of Developmental in Sri Lanka (Warnasuriya et al., 2015). Extension, this opportunity is used for com-The Faculty of Agriculture, University of munity-based learning components of other Peradeniya has attempted to design its cur- subjects offered at the Mahailuppallama riculum in a way that provides maximum Sub Campus. This partnership provides the learning opportunities for students in various ways throughout the degree program, including giving opportunities for community and outreach engagement to improve their knowledge, skills, and attitudes as determined by the expected graduate profiles. The Mahailuppallama Sub Campus of the faculty provides ample opportunities for first-year undergraduate students for community engagement, especially with the rural farming community.

Beyond the technical knowledge of agriculture as a science and an industry, an aspiring agricultural professional must be competent and understanding about community interactions, social dynamics, social stratifications, social class, norms, values, beliefs, social change, and culture. Therefore, the Faculty of Agriculture has the farm family, (6) be aware of the farm identified the need to expose students to real-world experiences and community engagements throughout the degree program at different levels. The farm family visits program is one of the mandatory components of the practical residential training for first-year undergraduate students at the Mahailuppallama Sub Campus.

Understanding and liaising with the rural pate in at least one farming activity, such community is one of the expected outcomes as land preparation, seeding, planting, ferof the course Developmental Extension. tilization, weeding, harvesting, or sorting/ Therefore, as one of the practical compo- grading. As the final outcome of this practinents of this subject, students are formed cal component, the students are required to into groups of four or five, and each group maintain a journal regarding their learning is sent out to a farming family in the sur- experiences. At the end of the semester, rounding area during the 16 weeks of the students organize a farmer day within residential training at Mahailuppallama the Sub Campus for the mutual benefit of

opportunity for not only students but also academic staff members to interact with the community.

Objectives of this community-based learning component of Developmental Extension are clearly defined. At the end of the practical component, students should be able to (1) identify the structure of the farm family and the types of income-earning activities they are involved in, (2) recognize the major requirements for successful farming, (3) identify the types of opportunities and facilities made available for the farmers by governmental, nongovernmental, and private sector organizations, (4) understand the time budget of the farm family (to look at the farm family from gender perspectives), (5) understand social obligations of family's changing needs and aspirations, and (7) appreciate the culture, diversity of work, and types of decisions that farmers have to make. Students are encouraged to build close connections with their assigned farm family and the community by making frequent visits and engaging with their agricultural and community activities where possible. Students are expected to particiIndividual host families are invited by the of a reflective journal throughout the farm students, and the community at large is in – family visits in which students reflect on vited through a poster campaign and public the new experiences constitutes this stage. announcements. Invitation letters are also The summary of the reflections helps the sent to local schools to invite schoolchil- students conceptualize their reflections and dren who are studying agriculture. Resource progress to the third experiential learning persons from the nearby government ag- stage, abstract conceptualization. The final ricultural organizations also participate in stage of experiential learning, active exthe event.

Various opportunities for student interactions with the nearby farming community have been available from the inception of the Mahailuppallama Sub Campus. However, this university-community partnership has not vet been analyzed, evaluated, reported, or documented in detail.

Objectives

The general objective of this study was learning experience. Figure 2 summarizes to describe and document the university – the university – community interactions and community partnership of the Faculty of the benefits to both students (university) Agriculture, University of Peradeniya, Sri and the community through the reciprocal Lanka. The specific objectives were (1) to relationship (partnership). determine the students' level of interest toward the farm family visits, (2) to determine the level of satisfaction of students and their assigned families, (3) to identify the problems and limitations faced by the students and host farm families, and (4) to make recommendations for improvements and sustainability.

Theoretical Framework

David Kolb's (1984) theory of experiential learning was used as the theoretical urban, or rural area of living; occupation framework for this study. Kolb's experi- of parents); (2) past experience (subjects ential learning cycle works on two levels: followed for the university entrance exam, a four-stage cycle of learning and four past experience in agriculture and commulearning styles. The learner's internal cog- nity work); (3) farm family visits (number nition process is the main concern of this of home/farm visits, activities, importance theory. According to Kolb, abstract concepts of the visits, satisfaction about the activity, can be flexibly applied to different situa- support extended by host families, limitations. New experiences are transformed to tions/problems faced, and suggestions for create knowledge. The experiential learning improvements). Meantime, face-to-face cycle has four stages: concrete experience, interviews were performed with all farm reflective observation, abstract conceptual – families (N = 40) who participated in this ization, and active experimentation. When activity as the host community. Perceived the learner experiences something new or importance/benefit of this activity for the reinterprets an existing experience, it is a two parties (students and host families) concrete experience. Visiting farm families was measured by taking responses from and meeting with farmers was a new expe- the host families for four statements as (1) rience for undergraduate students and thus important for students only, (2) important can be interpreted as a concrete experience. for both the host families and students, The next stage of the experiential learning (3) not important for both students and cycle is the process of reflecting on the host families, and (4) neutral. A five-point

the community members and the students. experience in the first stage. Maintenance perimentation, was also put into practice. Through their experience of close engagement with the farm families and the community, the students are able to identify training and information that will benefit the farmers. To address these needs, the students organize and conduct a farmer day for the community. This is a kind of service provided by the student (university) to the community. Therefore, this activity has some service-learning characteristics—that is, it connects service to a

Methodology

A mixed-methods design was used to meet the purpose of this study. Both qualitative and quantitative data were collected. Both the host farm families and the students were considered for the study. A questionnaire survey was conducted to collect data from the students (N = 145). The questionnaire had three main sections: (1) background information (gender; urban, semi

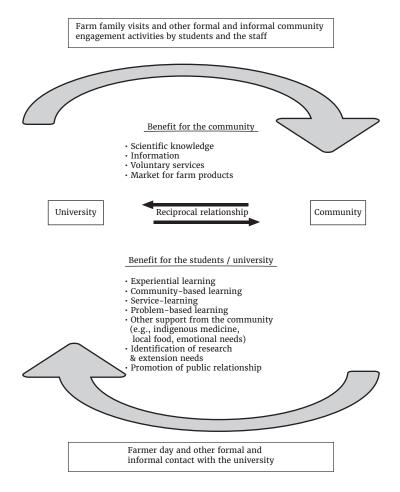


Figure 2. University–Community Interactions and the Benefits to Students, University, and Community

open-ended question asking for suggestions data were summarized and reported. to improve this activity. As qualitative data, the students' journals were analyzed for the experience of the students. Students had expressed their views on the activity using preface, conclusion, and recommendation sections. Farm families were introduced to the students during the first week of the semester. Guidelines for the study were given at the beginning. However, instructions were provided continuously throughout the semester about general conduct, and theoretical concepts (social class, caste, social structure, kingship, norms, beliefs, social mobility, social change, etc.) were explained during the classroom lectures. Teaching and learning was connected to

Likert scale (like very much, like moderately, taking examples from the community and like a little, neutral, not like at all) was used to by brainstorming. Data were analyzed using measure the response (liking) of the host Statistical Package for the Social Sciences farm families toward the activity. The ques- (SPSS). Basically, the results were explained tionnaire or interview concluded with an using descriptive statistics, and qualitative

> Students' learning was assessed in three different ways. Mainly, students were asked to prepare a journal on their learning, which was assigned 10% of the final practical grade. Second, an oral examination was held to assess the learning from all seven practical assignments in the Developmental Extension class, including the farm family visits. Students were asked to bring their journal for the oral examination. A panel of judges evaluated their learning during farm family visits. Third, questions were included in the written exam. The journals were also used to examine the experience and learning of the students.

the farm families and the community by Students were asked to concentrate on

visits and address these in their journals to semiurban areas of the country, whereas Twelve topics were required: (1) history of the students were from rural areas of the the village; (2) farm family: structure, age, country (Figure 3). Since agriculture is not gender, education level, occupations, living very prominent in urban and semiurban status, and so on; (3) farm enterprise: types areas of the country, it was assumed that a of economic activities undertaken, land use majority of the respondents considered for pattern, land ownership, labor management this study did not have a background and for different farming activities, availability experience in agriculture. and use of farm inputs, production, income, expenses, and savings; (4) farmer's social background: norms, values, customs and traditions, and related cultural background; (5) types of social organizations that the family associates with; (6) time budget of the farm family (gender budgeting); (7) public and private agricultural service organizations the family has contacts with; (8) social obligations; (9) challenges and opportunities faced by the farm family Background of the Farming Community when managing the farm; (10) problems and the Farmers and limitations that the family experiences; (11) attitudes and aspirations of the family members; and (12) changing lifestyles of farmers.

Results and Discussion

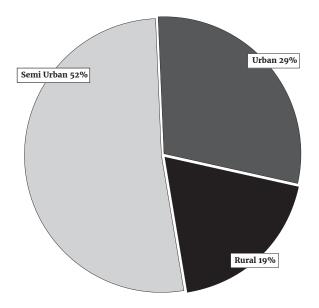
Background of the Students

Among the respondents, the majority were selected to connect with host farm families female (60%) and the rest (40%) were male. were irrigation settlements. Presently, third Students represented 24 administrative and fourth generations of the settlers are districts out of 25 districts in Sri Lanka. A living in the area.

multiple topics during their farm family majority of the students (52%) were from be submitted at the end of the semester. 29% were from urban areas. Only 19% of

> Students were asked whether they had any kind of experience in farming before joining the university. A majority of the students (70%) did not have any farming experience, highlighting the importance of the residential crop production program at Mahailuppallama Sub Campus as well as the farm family visits.

Mahailuppallama is located in Anuradhapura district of the North Central Province of Sri Lanka, which belongs to the dry zone (Figure 1). However, Mahailuppallama is a block of the Mahaweli System H; it receives irrigation water for cultivation from the largest irrigation development project in Sri Lanka, which is based on the Mahaweli River. Therefore, the two nearby villages



the Sub Campus. Among the total of 40 host families. However, 19% of the students had farm families, 30 famers were full-time not joined the farming activities with the farmers, and 10 farmers were part-time farm families. Students attributed their lack farmers who were also engaged in income- of involvement to difficulties in coordinatgenerating activities other than farming. A ing the time of the families' farming activimajority of the household heads were males ties with the students' available free time. (33), and there were seven female-headed farm families. Figure 4 shows the age distribution of the farmers, indicating that the majority of the farmers were in the age category 51-60 years.

Time Spent on Farm Family Visits and Involvement with the Farm Family

According to the theory of involvement government institutes related to agricultural (Astin, 1984), the extent to which students development of the region/country: the Incan achieve particular developmental goals service Training Institute (IsTI), Agrarian is a direct function of the time and effort Service Centre (ASC), and the Institute they devote to activities designed to achieve of Post-Harvest Technology (IPHT) to the goals. In the present study, time and study the organizational structure, service effort taken in farm family visits were en- provided, and other important aspects. countered as the involvement. Number of Students also need to study a communityfarm family visits and types of activities based organization (CbO) in the area and accomplished were explored as the mea- the Participatory Irrigation Management surement of involvement. The students System (PIMS) for irrigation water managewere encouraged and motivated by the ment. As their final practical assignment for respective academic staff to visit the farm the Developmental Extension course, stufamilies throughout the semester, especially dents are supposed to conduct a farmer day covering the different crop growth stages on the Sub Campus premises; this activity of the farmers' fields. About 81% of the is aimed at the nearby farming community students were engaged in farming-related and schoolchildren. Students were asked to activities, such as land preparation, plant- rank the seven practical assignments acing, weeding, fertilizer and agrochemical cording to their preference. Figure 5 shows application, and harvesting and grading the ranked preferences of the students.

Farm families were located 2–3 miles from of farm products with their assigned farm

Preference of the Students for Farm **Family Visits Relative to Other** Assignments

Seven practical assignments have been allocated for the course Developmental Extension (EX1101) offered at the Sub Campus. Students need to visit three nearby

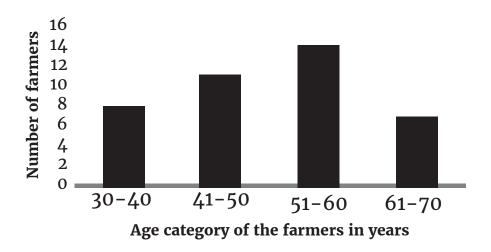


Figure 4. Age Category of the Farm Family Heads in Years

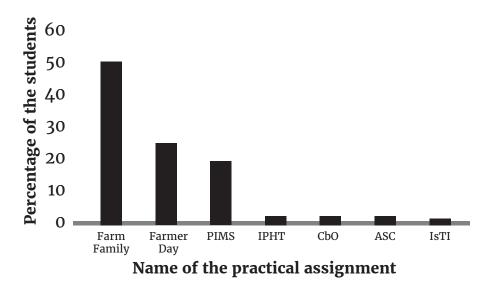


Figure 5. Students' Ranked Preferences for the Practical Assignments

Out of the seven practical assignments al- their support to the students in this activlocated for EX1101, farm family visits were ity, which was an important factor in its ranked as the first preference by 50% of the success. students. Only 1% of the students ranked them as the least preferred assignment. Accordingly, farm family visit was the mostly preferred practical by a majority of the students. Farmer day was the second most preferred practical among the students. These results also revealed that students mostly preferred community-based engagements and activities over the organizational visits (IsTI, IPHT, ASC, and CbO). It is possible to assume that students are more interested in engaging with the community and that they learn more when the learning is interesting.

Level of Satisfaction With Farm **Family Visits**

level of satisfaction regarding this commu- relationship, mutual support, and trust nity-based learning activity, about 59% of developed during the farm family visits. students gave the ranking highly satisfied, Therefore, it can be stated that this unifollowed by 39% and 2% with the rankings versity-community interaction opened up satisfied and neutral, respectively. None of opportunities for both community members the respondents gave a response of dissatis- and students for networking and thereby fied with this learning activity.

Level of Support From Host Families

About 59% of the students stated that their host family was "highly supportive," and The majority of the respondents perceived about 31% rated their host family "support- this community-based learning experiive" (Figure 6). These responses indicate ence as very important (67%) or important that most selected host families extended (32%). The rest (1%) rated the experience

When the students were asked about their intention to continue the relationship with their host families after they left the Sub Campus, about 92% of students stated that they would continue the relationship with their host families. It has been observed that the students visit their host farm families even after they have graduated. Also, according to the discussions with the farm families, they have benefited in different ways through the long-term relationship with the students. Specifically, they stay in contact with the students via telephone and seek assistance sometimes. For instance, they ask for assistance and information regarding their children's education and farming problems they face. Such ongoing When the students were asked to rank the interactions can be attributed to the close improved participants' social capital.

Level of Importance Associated With **Farm Family Visits**

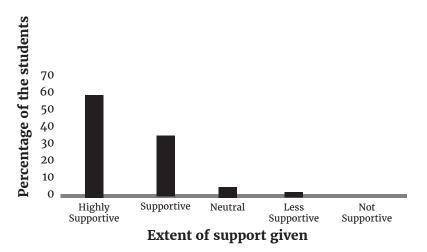


Figure 6. Level of Support From Host Families

neutral. A move from teaching in the class- Benefit for the Community room to a community-based learning style has profound implications. Table 1 shows some of the comments in the reflective journals submitted by students that reflect the importance of academic, social, and emotional learning aspects of this community-based learning activity.

tion regarding the study family visits in from the experience of the farmers. Also, their journal, referring to the farm family students seek the assistance of the unias a "home away from home." The intimate versity staff to assist farmers with some and informal connections to the farm family problems. For instance, sometimes students accommodated social and emotional needs bring live plant specimens to the univerof the students, which provided a favorable sity to identify pest and disease problems of psychological condition when they were the crops. Farmers get another opportunity learning residentially in a remote area away to sell their farm products to the univerfrom their own families. This is especially sity students through the relationship they important for the first-year students since build through the farm family visits. In staying in a remote area away from their each year, students form food groups to get families was a first-time experience for a their food. Usually they visit an economic majority of the students.

Clearly, students get an important opportunity to have close interactions with the rural farming community and learn through that experience. However, the community also benefited from this activity both directly and indirectly. Students usually share the scientific knowledge they gain from the Several students expressed their satisfac- university with farmers while they learn center established near the Sub Campus to

Table 1. Selected Comments in Students' Reflective Journals

"Our farm family was a home away from home"

- "Really enjoyed while learning through experience"
- "I learned to respect culture and traditions of the farmers"
- "A great opportunity to study the life of a rural farmer"
- "An unforgettable and worthwhile experience in my life"
- "Our farm family considered us as the members of their family"
- "An opportunity for me to smell the essence of the dry zone farmer and the farming"
- "Helpful to understand the application of theories learned in the classroom settings"

buy vegetables, fruits, and more to meet community engagement contributes to rural their food requirements. However, they also agricultural development as well. buy some vegetables, fruits, rice, coconut, and other products from the community. Specifically, they buy some underutilized uncommon vegetables (leafy vegetables, jackfruit) and tank (inland) fish from the community. However, such purchases are not always possible due to limited quantity being available and also due to inability to provide a continuous supply. Students also have participated in *shramadana* campaigns (volunteer work) in the village to clean the irrigation channels. This is a service to the community that also helps students grow as responsible citizens. Students also provided free teaching assistance to the children of the farm families. In addition, some students voluntarily worked in the Sunday school of the village temple. Moreover, the farmer day conducted on the university premises is another benefit to the farmers and the community in general.

Farmer Day

Students organize a "farmer day" as one of the assignments of the practical component of Developmental Extension. It is conducted cal application of theories they learned in at the end of the semester on the university classroom settings. premises aiming to benefit the host farm families and other farmers in the area and students of schools who are studying agriculture. The crop grown by students and different agronomic practices were used as demonstration plots. Research officers of the nearby Field Crop Research and Development Institute and agriculture officers of the Department of Agriculture were invited to support the farmer day as technical experts. Students invite the host farm families for the farmer day. According to the results of the present study, 77% of the host farm families had participated in the farmer day. Host families' farming problems and their training needs were considered during the training need assessment and planning for the farmer day; the event provided an opportunity for problem-based learning and experience sharing for both students and the staff. It also is an opportunity for students to practice agricultural extension while providing a service to the community, aligning with the concept of service – Examples were taken from the community learning. The outreach or extension tasks of and related to classroom learning whenever an agricultural university refer to the more possible. Students mentioned in their redirect contribution of higher agricultural flective journals that the continuous support education to agricultural and rural devel- and regular monitoring of the staff were opment (Bor et al., 1989). Accordingly, this helpful.

Factors That Influence Effectiveness and Success of the Farm Family Visits

Time of day and distance to farm families were identified as the most influential factors when the respondents were asked to mention the factors that influence the effectiveness of farm family visits. Students were supposed to visit their farm families during evenings, weekends, and public holidays. Push bicycles were the means of transport. Students have mentioned that it was not possible for them to visit the farms and engage in farming activities in the evenings. Moreover, some students do not stay at the hostel during weekends and public holidays since they go back to their residential homes. Although the host families were selected from nearby villages, the frequency of students' visits to the farm families in the very close vicinity was comparatively high. In the reflective journals that the respondents were supposed to maintain, they have mentioned these hands-on activities as helpful for understanding the practi-

The rural community in Sri Lanka places a high value and respect toward the university students. Their cultural generosity and hospitality are some other reasons behind the success of this initiative. In its World Giving Index, Charities Aid Foundation (CAF) ranked Sri Lanka in eighth place in 2015 (CAF, 2015) and ninth place in 2019 (CAF, 2019), which gives an indication of the generosity of the country. All students received refreshments and even lunch and dinner from their host family while gradually building a close relationship. Furthermore, all student groups had given some gifts to their farm family at their own cost when visiting and at the end of the course. In general, rural people are reluctant to disclose their lives, including farming and related practices. Therefore, the close relationship and trust built with the host family help students to explore the real farmer and farming.

Suggestions of the Students for **Improving Farm Family Visits**

Students were asked for suggestions as an open-ended question on the questionnaire. Seventy percent (70%) of the respondents offered suggestions for improvements. Presently, the course timetable allocates time (4 hours) only for student groups' first visit to the farm families. No other Conclusions and Recommendations specific time has been allocated in the The farming community near the campus course schedule for students to visit farm has served as a "social laboratory" for the families. Students visited their farm families and farms during evenings, weekends, that both the students and the host famiand public holidays. When asked about lies were interested and valued this activity. their suggestions for improving farm This community engagement activity profamily visits, about 23% of the students vides a valuable opportunity for students highlighted the importance of allocating a to experience community-based learning, specific time in the course schedule to make experiential learning, and problem-based the visits more interactive and experiential. learning, as well as having service-learning Unfortunately, there are limitations on al- characteristics. locating more time within the available timetable. However, it may be possible to allocate some independent learning hours in the timetable to this activity.

In addition to the agriculture-related ac- recommended for other agricultural higher tivities, students provided other, indirect educational institutions with similar services to their host families. For instance, backgrounds. Possible improvements and students have shared their knowledge and changes should be performed depending experiences with the children of farm on the context. It is important to integrate families, supporting them in their school the appropriate components of other subeducation. Some children received learning jects taught in the degree program with resources like books and writing materi- the farm family visits in order to provide a als from university students. On the other holistic learning opportunity for students. hand, the farm families visited the uni- Reasonable time should be allocated from versity for the cultural show and religious the course schedule to visit the farm famievents conducted by the students, strength- lies. To sustain the activity in the long run, ening mutual understanding, coexistence, there should be an adequate mechanism to and their relationship. Therefore, it was cover the host farm families' opportunity revealed that this learning initiative opened cost and to show appreciation for their seravenues for students to perform some civic vice provided. Students should be encourresponsibilities while learning. Also, the aged to engage with more farming practices students had engaged with cultural and religious events of their farm families and the service to them. Peer learning and sharing village, which helped them in sociocultural understanding.

system (e.g., the agricultural environment support long-term existence of this kind of as a whole) should be studied (Blum, 1996). community-based learning initiative. Based The idea is that parts cannot be fully un- on the findings, this community-based derstood without looking at the whole or learning approach can be recommended viewing the system holistically. Although for similar kinds of teaching and learning this community engagement was initiated contexts and environments in this region for the course Developmental Extension, and throughout the world.

this linkage with farming families created an opportunity for students to utilize the knowledge they gained in other courses, such as Field Engineering, Crop Production Technologies, and Applied Agribusiness, to gain a holistic understanding of the "farmer" and "farming."

students. Results of this study indicated

Based on the interest, perceived benefits, and positive effects to both students and the host families and the community, the regular farm family visit approach can be of the host family to learn by doing and as a the experience among the students is also recommended. Further strategies should be developed to mutually benefit the students, In agriculture education, "wholeness" of a host farm families, and their community to



Note

Institutional approval was not required to conduct the study and publish the results.

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