Service Learning Processes and Challenges in Iran: A Case Study

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Abstract

There have been increasing calls for service learning projects in agriculture due to employers' concerns with students' inability to communicate within a professional workplace. The purpose of this case study research was to explore the effective elements and challenges of service learning projects within agriculture education institutions in Iran. A total of 354 agriculture students who were involved in service learning participated. Using exploratory factor analysis, our findings revealed that students generally agreed upon 11 important factors that should be effectively included in any service learning program: The most important factors have been labeled, respectively, Administrative Needs, Financial Needs, Motivational Needs, Educational Needs, Project Assessment Needs, Planning Needs, Legal Needs, Project Time Needs, Teacher Preparation and Bureaucratic Needs. While service learning is more advanced in the United States, it is in its relative infancy in many other states. Therefore, this study has broad implications for any institution interested in beginning a program within their agriculture education institution.

Introduction

Programs of education within the agricultural field have long been and continue to be an important process in higher education across the world. Within the state of Iran, the educational system in agriculture has made remarkable progress in the last 15 years; in part due to the significant shifts in higher education administration there (Acar, 1993). Since 1990, over 100,000 agricultural students have graduated from programs of agricultural education in Iran (Hosseini et al, 2008).

Even outside of the field of agriculture, one of the central aims of higher education has been training students to translate their education to problems outside of the classroom (Boyer, 1987). Educational programs that allow students to explore real issues unconstrained by the walls of the classroom have been shown to not only increase learning, but to boost interpersonal skill and critical thinking (McManus and Gettinger, 1996; Slavin, 1995). Projects that allow students to interact with each other in practical settings to accomplish group goals also increase students' motivation for learning (Burron et al., 1993; Slavin, 1983). Moreover, researchers have found that students often learn material more comprehensively when placed in group projects where they interact with each other (Ndelt et al, 1997; Berle, 2007).

According to McKeachie (1999), many institutions continue to utilize traditional forms of pedagogy such as lecturing, which makes it difficult for students to maximize their learning of both the science and practice within their fields. Research in the specific field of agricultural education reinforces these findings. This can create a vicious circle for students, where they end up possessing less skill and competence in interpersonal projects and treat what group projects that do exist with indifference and even antipathy (Johnson et al., 2006). For these reasons, agricultural educators should explore more options for group participation and practice in real-world contexts, especially in programs that have not traditionally offered them.

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This research study focused on a particular aspect of group learning that has been in existence for many years but is only starting to emerge outside of Western educational systems: group service learning. While service learning has many definitions, we utilize one supported by the U.S. National Service Learning Clearinghouse: "*A teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility and strengthen communities*" (National Service Learning Clearinghouse, 2012). In essence, students engaged in service learning combine social activities through community service with classroom learning and reflection. Used in combination, such activities and classroom learning combine to deepen understanding of course learning outcomes and civic issues (Ehrlich, 1996). Service learning has been used as an effective pedagogy across virtually all aspects of higher education in the United States, including within engineering, liberal arts, the social and hard sciences, agricultural medicine and many others (Webster and Hoover, 2006). In addition, its effective expansion to other countries is beginning to emerge (Motameni, 2009). Few educators would refute the overwhelming empirical evidence of the benefits of service learning on both student learning and their personal and interpersonal growth (Jeandron and Robinson, 2010).

In agricultural education, service learning has been become a strong foundation for student learning and growth, as it provides students a means to experience how service is rooted in the practice of agriculture (O'Neil and Lima, 2003). Berle (2006) has shown how service learning aids students in deepening their understanding of horticulture, while Manthooth and Fritz (2006) suggest that students become more effective in curricular mastery. These gains may be, in part, a result of the availability of different types of learning opportunities aligned with more diverse learning styles. We utilize Kolb's (1984) experiential learning theory (Figure 1) as the theoretical framework underlying our assumptions that a comprehensive service learning program would be beneficial regarding achieving deeper educational outcomes. The model shows that students possess the potential to more comprehensively learn when they are allowed the opportunity to experiment, experience and reflect, in addition to the more traditional conceptualization which often takes place within a lecture.

Given the benefits and relative scarcity of service learning programs in Iran, the aim of this research was to study a sample of Iranian students who have participated in such programs to determine the most effective service learning practices leading to learning and interpersonal skill growth.

Figure 1. Kolb's Experiential Learning Theory
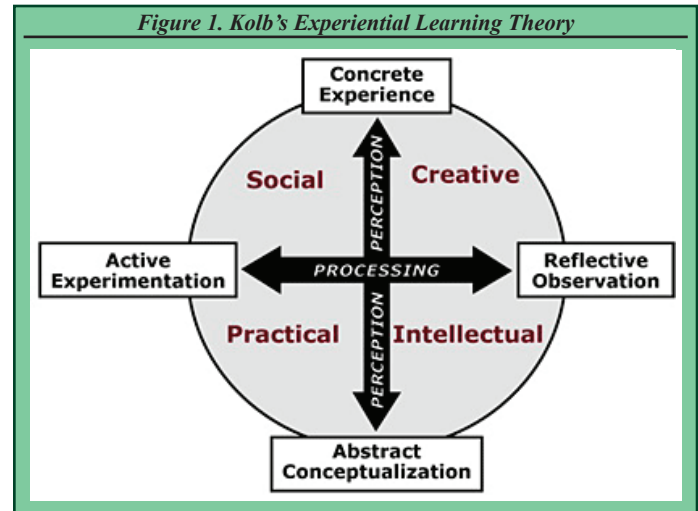
Methods

Our research comprised an exploratory factor analysis on data collected through surveying a population of students experienced in service learning techniques. This effort was grounded in the need to identify the factors that students identified as necessary for their success within a service learning program. The population for the study included students enrolled in agricultural education programs in West Iran (N = 1214). A stratified random sample was used to ensure representation from all institutions (n = 354). From this sample, 171 students were enrolled in Hamadan Agricultural Center and 183 students were enrolled in Kermanshah Agricultural Center. Of the 354 students, 197 students were male and 157 students were female. The majority of students studied within agricultural mechanization programs. Moreover, the majority of students were between the ages of 18-25.

Student participants completed a survey measure asking them in Farsi to identify the specific factors that were necessary for a service learning program to be successful within agricultural education programs in Iran. In addition to demographic items related to gender, age, coursework and experience in service learning opportunities within their agricultural education, the survey included 89 items describing various aspects of a potential service learning experience. For these items, participants were asked to rank the each item's significance to a successful service learning experience. All such items were Likert scored with a range of five; responses ranged from "absolutely necessary" through "no comment" to "never necessary." The 89 items covered diverse topics such as "Guidelines for projects should be set by the Agricultural Ministry of Iran," "Students should cover the cost," "The project should lead to certification," and "The experience should be called "service learning."

Service Learning Processes

Exploratory factor analysis (EFA) was conducted using SPSS software to uncover the underlying factor structure within the relatively large set of variables. Within EFA, the researcher's a priori assumption is that any item may be associated with any factor; no prior theory exists and one uses factor loadings to intuit the factor structure within the data (Mansourfar, 2008). We used Varimax rotation, which is the most commonly used method of orthogonal rotation, in identifying factors within the survey responses, thus maximizing the variance of factors across the variables. See Table 1 for the results of our KMO and Bartlett's Tests. A KMO result of .74 is considered adequate, while a significant Bartlett's test signifies correlations within the dataset appropriate for conducting a valid EFA analysis.

Table1. KMO and Bartlett's Tests		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.740
Bartlett's Test of Sphericity	Approx. Chi-Square	8436.715
	df	1176
	Sig.	.000

Results and Discussion

The 89-item survey yielded 11 usable factors with eigenvalues over 1.00. All factors with eigenvalues below 1.00 were dropped. Each of the 11 remaining factors was examined and individual statements within them analyzed for the purpose of describing the overlying factors.

The 11 factors that emerged were labeled Administrative Needs, Financial Needs, Educational Needs, Motivational Needs, Planning Needs, Cultural Needs, Teacher Preparation Needs, Legal Needs, Project Time Needs and Bureaucratic and Project Assessment Needs. Table 2 describes the factors and the survey items that loaded most highly onto them. These 11 factors and their corresponding items represent what should be present to maximize learning within a service learning initiative in Iran. For example, according to Iranian students who have participated in serving learning initiatives, service learning initiatives "*...should require a set of implementation guidelines on service learning supported by the Ministry of Agriculture.*" This survey item possessed a loading factor of .800. Grouped with similar items, we labeled this factor "Administrative Needs." Another factor we labeled as "Financial Needs" included two important items, including, "Teachers that utilize service learning should be compensated appropriately" (a factor loading of .790). "Motivational Needs" included the necessity to share the cost burden of the initiative with students (e.g. not forcing all costs on them), which possessed a factor loading of .622. In addition, a factor labeled "Educational Needs" included the idea that service learning projects should be

conducted exclusively within the field of agriculture and had a very high factor loading of .867. Other important factors that emerged included Legal Needs, Project Time Needs, Project Assessment Needs, Bureaucratic Needs and Cultural Needs; all of which suggested these are very important to students who participate in the service learning process.

These findings show that there is some commonality among Iranian agricultural education students regarding the best practices for service learning in the region. Teacher training, preparation and responsibility are significant issues for Iranian students who have participated in service learning in the past. These results suggest that students think comprehensively about their service learning experiences and recognize that successful programs should incorporate a complex combination of educational planning, financial resources, bureaucratic administration and cultural cache.

Table 2. Service-learning Factor Loadings		
Factor	**Item**	**Loading**
Administrative Needs	Implementation guidelines on service learning supported by the Ministry of Agriculture	.800
	Teachers should serve as the manager at the service learning project	.638
	The location of the project should be in an agricultural farm	.612
Financial Needs	Teachers should be appropriately compensated for their work	.790
	Tax rates should be reduced to partner organizations	.786
Motivational Needs	Students should share the cost associated with the project	.622
	Students should earn a wage for their work	.500
Educational Needs	Conduct service learning projects exclusive to the field of agriculture	.867
	Service-learning should be a basic course in the curriculum of Agriculture	.705
	The project should be suitable for seniors	.735
Project Assessment Needs	Project report by Students should create a report of their work at the project conclusion	.698
Planning Needs	The project should balance the outside organizational goals and those of the educational institution	.684
	Implement training workshops for educators by the Director of curriculum	.674
Legal Needs	Private firms should be able to partner with the educational institution	.822
	A framework for service learning project rules should be approved by the government	.815
Cultural Needs	Projects should be labeled "service learning"	.472
	Participating in a project should have social prestige	.541
Project Time Needs	Project work should be conducted outside of classroom meeting times	.787
Teacher Preparation Needs	Younger teachers are better than older teachers for service learning projects	.735
	Teachers should take responsibility for project success	.558
	Teachers should possess a spirit of partnership with students	.509
Bureaucratic Needs	Grades should be distributed meritocratically	.522

Recommendations and Conclusion

The complexity required for successful service learning should not represent barriers to the broad introduction of service learning programs in Iranian agricultural education. Motamini, et al (2009), among others have pointed out the educational benefit of service learning to a student's educational experience. Our results suggest broad guidelines in administrative, financial, educational and evaluative areas for educational administrator in cultivating the growth of programs like these. However, such growth can only come from additional resources. Given that educational budgets in emerging programs throughout Iran and the region are limited, we therefore recommend that government allocate a special budget for carrying out projects like these within higher educational centers focused on agricultural education. Given existing evidence on the benefits of service learning programs to educational growth, we feel that such a budget would be justified by increased learning and skill development in participating students.

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