Authentic Higher Education International Learning Opportunities

Thomas H. Bruening
335 Agricultural Administration Building
Penn State University
University Park, PA 16802
Telephone: (814) 863-7420
E-mail: TBrueening@PSU.EDU

Harry Carey
437 Agricultural Administration Building
Penn State University
University Park, PA 16802
Telephone: (814) 863-7421
E-mail: HCarey@PSU.EDU

Abstract

Authentic learning provides a means for students to develop problem-solving activities that incorporate genuine, real-life questions and issues. This format encourages collaborative effort, dialogue with experts, and generalization to broader ideas and applications that can be used in later life. Increasingly, it is important for students to make the connection between theory and application and transfer.

This case study involved examining the authentic learning gained by four graduate students who were involved in a participatory rural appraisal (PRA) activity in South Africa. Students indicated through interviews that they gained cultural knowledge, information on South African agriculture, and an ability to communicate with people they met and with whom they interacted. Students also mentioned that this experience was rewarding and that they viewed it as a real learning experience. Students gained enough confidence that some reported that they could effectively contribute to future PRA’s.

People in higher education in the U.S. can use examples such as this to develop teaching models that can help develop courses and evaluation strategies that go beyond traditional examples. While PRA’s are not new, using a modified in-country teaching approach can help provide students with authentic learning opportunities that go far beyond what is available in typical classroom U.S. settings.
Introduction

Constructionists believe that knowledge needs to be developed by the learners themselves. This happens when students are presented with new information in a way that they can see, hear, and interpret and begin to place meaning within themselves regarding new information. Authentic learning occurs when students are able to use real-life questions in a collaborative effort with informed experts to solve broad-based questions (North Central Regional Educational Laboratory, 2002). Increasingly, higher education learning activities need to emphasize more constructivism and authentic learning activities so that students are better prepared to meet the challenges of the global community.

With the recent recognition of the benefits of participatory processes, there is a renewed interest in participatory educational techniques because of the obvious direct benefits to the community. Historically, participatory techniques have had a large impact on local educational programs. For instance, in the United States, farm organizations and/or grassroots extension planning groups have assisted with local extension programming for nearly a century. Lionberger and Gwin (1982, p 163) first used the term "participatory planning" to describe how local extension councils were appointed to assist with the local planning of educational programs in extension. They stated, "In addition to educating leaders on community problems and solutions, the [participatory] planning provided two-way communication among farmers, agricultural researchers and educators, agricultural agencies, and agribusiness. It got them pulling together on projects for the good of their communities. It also coordinated research with people's needs."

Historically, much of Africa's traditional systems of chiefs, headmen, and indunas utilized community meetings to seek input from constituents. Headmen, or their designees, would call "town hall" meetings to discuss problems and concerns at the grassroots level and would then take their constituents' opinions or suggestions to a sub-chief's or chief's meeting. Their philosophy of participatory governance may be represented by their own sayings, such as: "A good headman or induna never dominates a meeting," and "Chieftainship is by invitation from others." Unfortunately, many of their "modern" government ministries are failing to solicit and utilize feedback and, in so doing, are losing the support and participation of their targeted beneficiaries.

Farmer participation leads to local leadership development whether in the United States (Lionberger and Gwin, 1982) or sub-Saharan Africa. Such grassroots leadership development is key to sustainable growth and economic success in many areas. This approach relates to continued, viable educational programs as well as improved agricultural productivity. Cleaver (1993) writes, "Where farmer management, autonomous from government, was allowed to develop, and where the farmer organization or cooperative had a business reason to exist (i.e. made money for its members), there was success."

Participatory Rural Appraisal (PRA) is a process used to collect grassroots needs assessment information from local farmers. The purpose is to identify the most pressing needs that farmers have in the local community. Data collection is a multifaceted approach
whereby teams of local people and outside experts gather physical, social, and historical data. The strength of a PRA is its ability to help local people prioritize local needs.

Authentic learning is defined as means by which students are offered problem-solving activities that incorporate genuine, real-life questions and issues in a format that encourages collaborative effort, dialogue with experts, and generalization to broader ideas and function (North Central Regional Educational Laboratory, 2002). Teachers are increasingly aware of the need to develop opportunities for students to participate in experience-based learning. Much has been written that explores the design, implementation, and benefits of experience-based learning in education (Boud, Cohen, & Walter, 1993; Dewey, 1938; Kraft & Kielsmeier, 1995; Svinicki & Dixon, 1994). Experiential learning activities that include hands-on learning labs, student-centered in-class and outdoor activities, and field trips can be examples of authentic experience-based learning strategies that are used from elementary school through higher education. These experience-based activities in the curricula not only provide potentially engaging methods of learning, but they provide real opportunities for putting that knowledge into practice. Field trips and tours focus on providing: concrete observation of phenomena in their natural environment, exposure to people and ideas in their own domain, and the concept that education and application take place beyond the confines of the "four walls" of the school, (Kahler, Morgan, Homes, & Bundy, 1985). The critical challenge for higher education is to provide authentic learning opportunities for students within the context of necessary subject matter content.

**Purpose and Objectives**

The purpose of this paper is to explain the authentic learning that students gained while participating in an international field-based course. The objectives were to: 1) Explain the processes used to provide educational opportunities for students while learning how to conduct a modified Participatory Rural Appraisal (PRA) in South Africa; and 2) Identify the authentic student learning that took place while conducting the modified PRA.

**Methods**

Graduate students in the College of Agricultural Sciences at Penn State University were notified of the opportunity to conduct a modified PRA in South Africa. A number of students applied and four students were selected to participate in this six-week course. Prior to travel, the students spent three weeks learning and gathering background information about the Limpopo Province in South Africa. The students also learned the steps of how to conduct PRA’s as part of the instructional process.

The modified PRA was conducted with graduate students from Penn State and the University of the North in South Africa (UNIN). Prior to conducting the PRA in the field, seven UNIN students were taught the basic principles of conducting PRA’s. PRA learning and support materials were sent to UNIN prior to the PRA workshop and a professor delivered an intensive one-day workshop to orient the students and prepare the students for conducting the PRA. Students from both universities collaborated on the development of the farmer survey instrument.
Local South African extension officers and UNIN extension experts identified five sites for data collection. The two groups of students were paired together and the specific data collection assignments were given to the four teams. In addition to collecting survey data, some students focused on completing a history of the local farming operations, while others completed a land analysis, one group completed a transect, and the fourth group conducted a survey of local extension agents. These steps were all part of the modified PRA that was conducted in South Africa. All students interviewed farmers. More than forty farmers were interviewed. Nearly all of the farmers interviewed were women with small plots of land. After the field data was collected, the two groups of students and university personnel conducted a nominal group exercise to determine the priority of the problems in the villages contacted in the Limpopo Province.

Data Collection

An opened-ended survey instrument consisting of nine questions was developed at Penn State University. Three professors that were a part of the field-based PRA course reviewed and provided face validity of the instrument. Nine months after the students returned to the U.S., they were interviewed and captured on videotape and by audio cassette. Students signed a waiver form allowing the video interview and their comments to be distributed at a later time. The interviews lasted about 40 minutes. Each student was asked a question and then they were allowed several minutes to formulate a response and then each student would signal their willingness to be recorded. The students were not at any risk of jeopardizing their grades by reporting this information. The qualitative data was then sorted using the bins approach (Miles and Huberman, 1994). Each student represented a small case study elaborating on their own ideas and reactions to the learning experience in South Africa.

Results

A compilation of the data collected from the students can be found in Table 1 beginning on the next page.
Table 1. Students’ description of the field-based PRA elements

| Motivation to participate in this course | Students reported that interest in travel, learning about South Africa, learning about how to conduct the PRA, and for professional development career enhancement caused the students to participate in this course. One student had previously studied about PRA in a classroom environment and another had studied about South Africa previously. |
| Key events recalled | Students recalled that they were prepared to participate in the program through classroom learning activities at Penn State and through the direct connections that they made when they met students at UNIN. They commented that learning activities such as developing the questionnaire prepared them for interaction and collecting data in South Africa. They also reported that UNIN students help to connect them with the rural women farmers. One student commented that she was, “astounded at the life of a UNIN student” that she met. “The student was about my age and her life is so different than mine has been. This gave me a unique insight to the culture and the people.” |
| PRA Learned | Students learned that the PRA could be an effective practical bottom-up tool to collect data from local people in an international setting. The students reported that the process is challenging and it requires a lot of work. They learned that the process used to collect the data needs to be completed over a longer period of time and it was clear that the process that was used in South Africa for this course was a modified process. The PRA was effective in getting to the key data that is useful. One student said that the PRA is, “Very practical tool for almost all international organizations, and I have also learned the best way for the PRA process to be taught is to apply this in different countries.” |
| Sequence of learning that supported learning | Students easily reported the key steps that contributed to learning in this class: background information about South Africa (economics, culture and agriculture), the PRA steps, adjusting the survey with the UNIN students, conducting the PRA, and the nominal group process. Two of the students remembered a native South African that taught them some language and culture before going to South Africa. One student mentioned the wrap-up at the end of the program with the UNIN students as an effective learning strategy. One student mentioned how the subsequent AIAEE conference helped deepen the understanding about PRA. One of the students commented, “A few weeks before we left, the intensive sessions we had in terms of preparing some and doing the background information about South Africa helped us to learn somewhat the agriculture and the people. During this time we learned some about the different ways of identifying characteristics of the villages and areas… this greatly helped us.” |
Table 1. Students’ description of the field-based PRA elements – (Continued)

| Strength or weakness of learning sequence | Most of the students saw the key strength of the course was working with people in the field. Both the UNIN graduate students and the local farmwomen were mentioned as a strength of the course. One of the students mentioned that, “Working with real people made it easier to understand the real problems at the local level.” A couple of the students indicated that more time was needed to effectively complete the PRA. |
| Impact of conducting field-based interviews | Three of the students indicated that they were really able to understand the plight of local people by talking to them directly. Two of the students indicated that they were troubled by not being able to provide more assistance to the farmers. Students indicated that they got great information from the women farmers. One of the students commented, “Realizing some of the individuals were struggling for existing on a small piece of land, they were looking for (in some cases) a small bit of information to help them.” |
| Indices that this course was a real learning experience | All of the students indicated that they realized that this was a real learning experience because they were able to transfer the classroom PRA theory to the field. Students mentioned the names of people that had touched their lives and they made a connection to while interviewing or socializing. One student mentioned that she made a real connection with one of the women farmers and one of the UNIN students. “I realized that we are about the same age and that our lives are so different. I made a personal link with her. It was priceless and I will never forget it.” |
| Indicators that this was better than classroom learning | Student’s responses ranged from the benefits of applying the theory in the field to working with farmers and UNIN students collecting data. One student mentioned that, “In the classroom you can become confused. In the field it becomes more real and you have to adjust to make it work. [In the classroom] You are not motivated to learn because you don’t have a real picture of the situation. You have a good opportunity to understand -- you have much more resources to learn with.” |
| Improvement needed | Overall the students were very positive about the value of the course. Students indicated that more time, resources, and more follow-ups to determine if there was impact would have been helpful. A couple of students mentioned the importance of follow-up activities. One of the students mentioned that he wanted, “To see if anything changed because we were there.” |

Note: Students were asked these open-ended questions.

Students experienced multiple authentic learning situations in South Africa. Students were able to take the knowledge gained before, during, and after the data collection process and integrate the real interactions with people in South Africa to construct new understandings. For example, students mentioned certain stereotypes about South Africa that were changed. One student commented on the need to adapt and modify the theoretic PRA from the textbook to the practical approach needed when they conducted the PRA in the field. Another student commented, “After a while we learned how to adjust the survey and we were able to cut to the chase and get to the important questions very quickly.” All of
these examples help to build the case that students were able to learn information in a classroom setting, adapt it in the field, and then students reported that they would be able be an effective member of a PRA team in the future.

One student commented that it was “…by far the best learning experience that I have ever had.” The structure of the course caused the students to have access to graduate student peers from an international university and limited resource farmers in a transitioning and developing country. At the conclusion of the activity the students understood the richness of the direct learning experience. For example, students mentioned names of the students and of farmers that they met. Students consistently commented on the wealth of cultural learning that they experienced and how much they learned from the local people.

One student commented on the culture, “I don’t understand how the people can be so positive when they have so little in terms of material wealth. But I now have a better understanding that material wealth is not as important as I once thought.”

Several students commented on the necessity “…to live within the culture you are studying for a time in order to assign appropriate and correct meaning to the information collected.” It is an understanding of the culture within the context of the country that has the potential to make learning authentic.

One student had some prior education about PRA’s during graduate study in England; she commented, “Now I understand how PRA’s work. My previous education was all in the classroom and I did not understand how it was possible for this data collection to be effective.”

**Educational Implications**

Students that are active in the learning environment in real settings where authentic learning is possible will likely learn more and they will appreciate the learning experience to a greater extent. The assessment of authentic learning typically bases student progress on performance outcomes (Brown & Craig, 2003). Students that reported that they feel that they can contribute to a PRA is a point of evidence that these students gained an ability to perform. Moreover, the faculty that accompanied this group of students observed students effectively executing the modified PRA. Direct observation of student performance is perhaps a more effective measurement criterion than evaluating a paper or measuring the results on a multiple-choice exam. Assessment through direct observation of student performance in contextual setting can help higher education reform the teaching/learning process. As more professors become comfortable with observed assessment, then faculty will more likely change the direction of the curriculum (Brown & Craig, 2003).

Higher education needs to find ways to provide more authentic learning opportunities for students. In this course, the learning processes for these students were more important than the actual data collected from farmers. The purpose of the course and the in-country PRA was to facilitate the comprehensive learning of a grassroots needs process. Given the high cost of travel, instructor time and efforts, and the importance of designing effective
needs assessment strategies, it is very important to find measurement tools that can determine the impact of field-based learning on students.

One of the key elements of authentic learning is students’ ability to transfer learning from a passive classroom context to a dynamic active learning that students can replicate once the course is completed. It appears that these students can achieve this standard. Long after the students forget the names of the professors who taught this course, they will most likely remember the rich learning experience, the culture, and the people they met and the data that they gathered first-hand from the limited resource farmers in the Limpopo Province of South Africa.

References


North Central Regional Educational Laboratory. (NCREL) http://www.ncrel.org/sdrs/areas/issues/content/entareas/math/ma300.htm