Cultivating Student Internal Locus of Control Using Participatory Rural Appraisal in
Villa Santa, Honduras

By

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B.A., Colorado College, 1999

Presented in partial fulfillment of the requirements for the degree of

Master of Science

The University of Montana

2004

Approved by

Chairperson

Dean, Graduate School

Date
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Within the time period of one school year I created and taught an agroforestry curriculum at the Instituto Agro-forestal de Villa Santa, Honduras using a Participatory Rural Appraisal (PRA) approach within an environmental education (EE) framework. The purpose of this curriculum was to determine if student internal locus of control could be increased by incorporating local agricultural and forestry issues in student work. The courses Watershed Management and History of the Culture were combined in this curriculum.

Pretests/posttests, student projects, and observations of students comprised the techniques used to determine if a shift in internal locus of control had occurred. Data collected using these three techniques suggest that student internal locus of control had increased as well as overall student enthusiasm for subject material.

I make recommendations on the possible use of PRA within an EE framework and encourage the Institute to explore incorporating local agricultural and forestry issues into the agroforestry curriculum. Inclusion of locally relevant agricultural and forestry topics may encourage students to take more active roles civilly and environmentally within their community and will provide them with a deeper understanding of their community and natural environment.
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Acknowledgements

So, a while ago I drove over the pass from Bozeman here to Missoula in a brand new used truck that I had recently bought with one of those credit card checks you get in the mail. I met with a Professor Siebert for an hour and talked about watershed management and Cadillac Desert and gardening and tried not to think too much about whether or not that truck would start for the ride back over the pass that afternoon. It was parked over on that section of Mansfield Street where the residential parking restrictions end and you can park for free just three blocks from campus. When I left Steve’s office the truck started right up and I had no ticket and I thought about how nice and welcoming Steve had been and how this program I might be starting soon sure sounded like an adventure. And it’s to Steve that I must give a big thanks for the last four years. Honduras, Spanish, hyporheic zones, those kids across the street from my house in Villa Santa who were always so nice to me, forestry, seven-to-a-seat bus rides, resource management—I know more about some of these topics than others, but I am grateful for the opportunity to have been exposed to each of them. Thanks so much for slipping my file into the ‘accepted’ bin, Steve. Sorry there’s so much unforestry in this paper.

And then I met this great story teller and great teacher who was also a great Tigers fan and I knew I had to respect him from then on out. Professor Burchfield sent me an email when the dust and the heat had about gotten the better of me in Honduras which read, “keep it simple, keep it simple, keep it simple” and I think this may have been a turning point for me down there. Thanks, Jim, for this and for playing catch with your son. Remember, if you’re not backing him off the plate when you’re throwing him BP, then you’re doing him a disservice.
This semester I met Professor Brown and somehow he modestly mentioned playing Badger hockey and I knew I had to respect him too. When he told me he had left college hockey on his own accord because of disagreements with coaching ethics I not only grew more respectful of him but also knew he was really smart. Few have the shrewd common sense and highly skilled decision making machinery to enable such elevated cognitive function such as this when sports are involved. Thanks, Fletcher, for bringing the same type of clear-headed, priorities-in-the-right-order, logical thinking and logical action to the classroom. The class has been great, and you’ve made me want to be a teacher even more.

Hal, sorry Madagascar didn’t work out, and China got cut short, but if it hadn’t we wouldn’t have been able to hang out again this semester like we did a couple of years ago. That one time we went to the Rhino for that one beer was real fun. Thanks for telling me about all those places you been around the world. Make sure you keep that van for a while and make sure you keep telling those Georgian-childhood stories. I’d simmer down on that Ultimate Fighting fetish of yours though.

Mark, Al, did I ever tell you what I was doing over here on campus? Maybe not, but you guys distracted me enough from it for me to get it done. Thanks for the long-toss and the battles and the childlike nonsense that makes everything seem doable.

Benny, Cayman, I can’t think of any real pertinent reason for including you both in these acknowledgements, but for some reason both of you keep popping up in my mind. Thanks for all those talks of sociology and math and fantasy sports and politics and economics and doing the right thing that you guys let me in on. There’s a bit of those conversations buried somewhere in this paper.
Josh, that Blue Crush screen saver you put on your computer before you gave it to me saved me BIG TIME this semester. Thanks for letting me use your lab mates’ computers at Berkeley, too. Well, actually, you kind of gave me a talk about not using them eventually, but before you could I found this combo program deal through The University of Montana that would send me to some country for two years with the Peace Corps while at the same time teaching me a bit about forestry and other things. Thanks for sharing the passion that is hidden within you like our dad shared the confidence that was hidden within him. You know, like he knew, when it is important to show it, to use it, and when to give others in need a little of it.

Jason, sometimes I wonder how I could have ever built up the courage to go to some country I knew nothing about that had a language I knew nothing of and that had nobody I knew waiting to greet me, when in actuality you had already shown me how to do it three or four times. You were the first to translate mom and dad’s lust for travel into the deepness they always wanted to take it. Thanks for getting to where you needed to be, so I could get to where I needed to be.

Lastly, I want to give a big thanks and a hug to you, mom. I found myself in Honduras unable to take myself away from the kids down there, unable to stop being excited about getting in the classroom with them. And through all the frustrations and the successes, I knew you were responsible for the energy that I carried to the kids and the excitement of feeling theirs carried to me. Thanks for teaching me to teach. We both lost our best friend when Dad died last year, and in thanking you I know that I’m also thanking him, as you two neared perfection as a pair of lovers and a pair of parents, and I know that thanking you right now only for the support you gave me through Peace Corps
and through the writing of this paper would be pretty ridiculous seeing that your support has been so much more and for so much longer than these short few years. Thanks for all the time and support. Thanks for all the time and support. I love you. I love you.
Dedication

this is not so much a dedication as it is a remembrance

of my poet father
dad

and my poet brother from a different mother
nate

these last two years away from you were my last two years with you

i miss you so much
i miss you so much

some say that time may heal and that pain may lessen

but i’ll never stop wanting you right here right now
but i’ll never stop wanting you right here right now
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Preface

This story is about a small period of time that I spent with some exceptional students, helping them bring the agricultural theory they were learning in their high school classrooms to bear greater relevance on their everyday lives. I gave them assignments and projects to complete, I set out a few goals that I wanted them to keep in mind, and in turn they produced something of which they should be very proud. In the course of one school year they turned the little direction and theory with which I presented them into something practical and beautiful and original, and thus have done what all good students should—they have asked their teacher to follow the same high standards to which they held themselves.

I arrived in Villa Santa, Honduras having a lot of great theories running in my head, some gathered from a few months’ creative training outside Tegucigalpa, others from a few years’ education at colleges back home, and a few from the car rides with those smooth level-headed radio voices on NPR talking so confidently and knowledgeably about all those problems overseas. But after a month I was pretty sure none of those books or readers or people had encountered a place like Villa Santa. This was a place where theories came to die; where ideas, once perfected and polished, suddenly broke and fell apart. And for a few weeks, I think I fell apart too.

I struggled for a long time with what the students also had to struggle with, this idea of transforming forestry theory into something practical yet original. Living in Villa Santa, I felt as though I had been thrown into a cage, a mental and physical one. I had no idea how to relate the knowledge I had acquired over the years to this place, and I had no idea how to live and interact with the students around whom I spent my days. The way in
which I dealt with these cages differed from day to day. Some days bridges were built, other days walls. But with time I was able to get out of these cages long enough to attempt turning some theory into action.

In the end it’s difficult to look back and see what a small acorn so much knowledge and work produced. But it’s also encouraging to look back on this acorn and realize the excitement and pride it generates in me. There were times during my two years when I didn’t think looking back on any of my experiences would yield such feelings. I felt most of what I was doing was not leading anywhere, was not connecting to anything greater. Knowing this now, it is overwhelming and humbling to think back on my time in Villa Santa and to realize the community I once thought was such a cage is really the center of most things I respect and want to be.

Senior Peace Corps volunteers had told me before my arrival in Villa Santa that it was one of the best sites they’d visited in Honduras. It’s in the mountains, they said, It’s surrounded by pine forest, It’s a bit cooler up there, not as hot as down here in the City. And there’s a waterfall, I heard someone mention. Contrary to the oath I had made to myself to bring no expectations with me to Villa Santa, I began to picture the small town where I grew up—perhaps Villa Santa would be a bit smaller—but definitely there must be a nice creek rolling through town in which the kids cooled off during times when the temperature did manage to become a bit high. I settled into the images of the creek, with me in it, cooling off under the waterfall, probably relaxing after a day of helping numerous impoverished children. Aaah, what a great guy I was.

The bus ride to the top of the mountain was a bit rough. The town’s streets a bit rougher, a bit dustier. And those dogs, chickens, and those pigs, ya, maybe I had even
expected them, but showing so much bravado? A couple of weeks went by and I found a mini-creek that ran outside of town, but definitely no waterfall. What were those volunteers talking about? Over the next few weeks I just kept remembering stepping off that bus for the first time and feeling as though I had been gypped. Dust and exhaust taking people further up the road. My bags down from the bus, dirtier and a bit heavier than when lifted on. What was I going to do here?

Having two semesters of forestry-related subjects under my belt when I arrived in Honduras, I was given the title of Forest Technician. I did not know quite what would be expected of me, but after three-months of volunteer training, I slowly learned what I would be doing. When my placement was given to me, I was lucky enough to be matched up with the Instituto Agro-forestal de Villa Santa. Principal José Obdulio Figeroa, the creative and energetic motor of the campus, directed the school and had requested a Peace Corps Volunteer with some of my qualifications come fill a professorial position. When I arrived, the school had a curriculum containing a wide range of agro-forestry subject matter, but only one forester to teach it. I was the school’s second. There were a few subjects I thought I could handle and I went about putting together lesson plans. There was also a course called History of the Culture that was a requirement and taught outside the main agro-forestry curriculum. The teacher in charge of this history class was not showing up, and I thought I could do some creative things with it in connection with watershed management, so I asked Obdulio if I could teach a portion of it. This combination of watershed management techniques and culture of Honduras became one of my primary concentrations during my two-year Peace Corps service. It also became the subject about which I will write this paper. To help
familiarize the reader with the context within which I was working, the introduction will include a brief summary of my project’s aim and key questions. This is followed with a description of the social, economic, and environmental characteristics of Honduras and Villa Santa.
Chapter 1—Introduction

Description of Case Study

This case study involved the development and assessment of an educational program implemented at the Instituto Agro-forestal de Villa Santa. I taught two courses entitled Watershed Management and the History of the Culture and conducted a case study with the course students as my subjects. The aim of the study was to determine if the internal locus of control among students could be increased through incorporating Participatory Rural Appraisal and Environmental Education tools into the curriculum. Internal locus of control is defined as a person’s belief (Hwang et al., 2000) whether or not they have the ability to bring about change through their own behavior. An increase in internal locus of control would be exhibited through a student’s improved belief in their ability to affect their immediate surroundings in Villa Santa. To help interpret the results of my study, I hoped to answer the following three questions:

1) How is student internal locus of control affected when PRA and EE are used concurrently in curriculum design?

2) Is including PRA techniques into an EE curriculum useful and advantageous to student growth and participation within their community?

3) How could the curriculum of the Institute be improved based on the data produced from the student projects?

Background of Honduras and Villa Santa

Honduras has 6 million people, is the size of Ohio, and, since 1982, has had a representative government similar to that of the United States (CIA, 2003). Its terrain includes ports on both the Atlantic and Pacific sides of Central America and is 80%
rigorous mountain landscape (Grolier Incorporated, 2000). Its borders are shared with Nicaragua to the south and Guatemala and El Salvador to the north and west, respectively. The border with El Salvador is disputed near the Bay of Fonseca.

The people of Honduras are recuperating from a natural disaster that hit in October of 1998. For seven days Hurricane Mitch hovered over the country, dumping the equivalent of 5 years’ rain. Upon my arrival in July of 2001, the country was still recovering from the psychological and environmental degradation that the hurricane exacerbated (elders of Villa Santa, pers. com.). Today, 53% of the population lives at or below the poverty line, a million people are unemployed, and the value of the country’s currency, the lempira, continues to drop at a rate of 7.7% annually (CIA, 2003). Three million people make less than $22 a month (“Gorgojo,” 2002).

Honduras’s economy is agriculturally based and thus directly tied to the health of the natural environment, and was severely impacted by Hurricane Mitch. Agriculture accounts for 34% of all employment and services make up another 45% (CIA, 2003). Many of the service jobs are connected to the tourism industry, much of which is also environmentally based.

Due to the intensive logging and agricultural practices common in Honduras, Hurricane Mitch sparked severe erosion and aggravated already severe environmental problems throughout the country. Although much of the logging and agricultural practices remain unchanged, there has been noted progress in reforestation and agriculture programs, both public and private. One important change has been a forestry law passed in 2003 designed to encourage reforestation of private land. The law states that any tree planted on private land is the property of the landowner, rather than of the
state (AFE-COHDEFOR, 2003). Other efforts to reforest include private ventures collaborating with communities and schools to provide seeds, bags, and regional flora information so that local reforestation projects can be attempted (pers. ob., 2003). Although these efforts have reforested many areas in Honduras, opportunities for paid employment from such work are rare since most projects are completed by individual communities on a volunteer basis (pers. ob., 2003).

Coffee, timber, and bananas play a major role in Honduras’ export economy (CIA, 2003), but coffee and timber have had significant difficulties in recent years. International coffee prices have dropped to record lows (ICO, 2002) and vast timber resources have been ravaged by the bark beetle (*Dendroctonus* spp.) resulting in millions of lost dollars (“Después de Mitch,” 2002; “Gorgojo,” 2002) and increased unemployment (López, 2002).

Villa Santa, the town where this study takes place, is located in the department of El Paraíso and sits 850 meters above sea level on a small mountain range in the eastern part of Honduras. It is four hours east of the capital, Tegucigalpa, and 47 km north east of the municipality of Danli. The population of Villa Santa is 1700.

The economy of Villa Santa and the many smaller surrounding communities is resource-based. The main cash crops grown for export are timber, pine resin, and coffee. There are various types of bananas and a few specialty crops such as cardamom, but these reach only a few destinations outside of Villa Santa, primarily inside Honduras. Most families have bean and corn plots for household consumption. Any surpluses produced may be sold in Danli and other cities (Roberto Godoy, Commodities Exporter, pers. com.).
The Cooperativa Agro-forestal Villa Santa-Los Trozos manages 30,000 hectares of pine forests that surround Villa Santa and runs the timber industry. Lumber and pine resin are the cooperative’s principal export commodities. Raw pine resin is exported to Tegucigalpa where it is prepared for the international market.

The general consensus among members is that the cooperative is failing due to recent cases of embezzlement in which elected representatives stole the cooperative’s savings. There is now a movement among some members to gain private ownership of parcels of land the cooperative had leased to them (Nolang Guevara, Cooperative Forest Technician, pers. com.). The questionable management of funds and environmental challenges facing the forest around Villa Santa have stressed the cooperative.

The bark beetle has become a significant problem over the past four years. By August of 2003, the beetle had killed 30% of the cooperative’s forests (Nolang Guevara, Cooperative Forest Technician, pers. com.). Although still able to harvest the infected trees for timber, resin tappers have been very adversely affected. A resin tapper, once able to make 3200 lempiras a month, now only earns 1600 lempiras a month, or about US $90 (Nolang Guevara, Cooperative Forest Technician, pers. com.). In an effort to compensate for tree loss to beetles, the cooperative applied for a large-scale reforestation grant in August of 2003.

Coffee was once a lucrative cash crop. A person hired to pick coffee could make upwards of 250 lempira a day four years ago. Recent earnings have dropped to barely L35 to L45 a day (Jairo, Coffee Picker, pers. com.) due to the collapse of international coffee prices (ICO, 2002).
Villa Santa is home to a school that houses a *cyclo comun* and two separate career-centered high school degrees. Honduras’s *cyclo comun* is analogous to some junior high schools found in the United States, covering grades seven through nine. The curriculum covers a wide range of general topics. In grades 10 through 12 Honduran students must choose a career path. The two career choices available at the Villa Santa high school are business and agroforestry.

The agroforestry portion of the high school is called the Instituto Agro-forestal de Villa Santa. The institute’s director is José Obdulio Figueroa, an educational administrator from the city of Danli. Figueroa constructed the curriculum of the agroforestry institute using broad agroforestry disciplines. A part of the Institute’s mission is for the students to “integrate their knowledge in practical and productive work”.
Chapter 2—Curriculum Analysis and Development

Relevant Literature Pertaining to Environmental Education and Participatory Rural Appraisal

The fields of Environmental Education (EE) and participatory agricultural research and development share a common goal—that of increasing empowerment among their target groups (Culen & Volk, 2000; Russell & Harshbarger, 2003). Students in environmental education and farmers and households in participatory agricultural research are central actors in problem identification, implementation, and management. Environmental education defines an increase in student empowerment as improving a student’s “internal locus of control (Hwang et al., 2000).” Inherent in this is placing students at the center of their educational choices. Participatory Rural Appraisal (PRA), an agriculturist’s tool to study farming systems, displays similar values when it makes the rural farmer the expert, placing them in control of the activities of analysis and subsequent management (Chambers, 1994; Seepersad, 1994). Both groups benefit from being valued as the core entity of concern.

PRA endeavors to “enable local people to share, enhance and analyze their knowledge of life and conditions, to plan and to act (Chambers, 1994).” Environmental education follows similar methodology, first encouraging students to learn of the environment through interactions with it, and teaching the skills to produce citizens who demonstrate responsible environmental behavior through action (Culen & Volk, 2000). The term “environmentally responsible behavior” implies a competence to understand and act towards environmental issues in a socially responsible manner (Hungerford et al., 1980).
Over the last 70 years interdisciplinary education and the development of interdisciplinary curricula have helped bridge gaps between various subjects and fields. Learning based on interdisciplinary beliefs uses relevant topics, themes, and concepts to engage students in their educational experience (Erickson, 1998; Means, 1992; Pate et al., 1997).

In the 1930’s educators such as John Dewey and William Kilpatrick, in an effort to bring the students’ surrounding world into their learning, began a progressive movement calling for education to become more learner-centered with an emphasis on real-world outcomes, naturalistic learning, creativity, and shared experience (Ellis & Stuen, 1998). Since then many education organizations have included interdisciplinary curricula as an important part of their educational standards (Drake, 1998). This movement towards interdisciplinary education has helped students transform their learning into meaningful work and active participation in their world (Drake, 1998; Ellis & Stuen, 1998). The idea of bringing meaning to a topic in order to encourage a student to connect emotionally to it refers to teaching to the affective domain.

Encouraging students to develop the affective domain of learning is important when creating environmentally responsible behavior is a curricular goal (Lindholdt, 1998; Sanger, 1997). The affective domain includes areas of learning connected to attitudes, feelings, and emotions (lozzi, 1989), which Dewey (1938) considered to be inseparable from knowledge—the cognitive part of learning. Cognitive and affective factors are bound together, thus they should be considered more holistically during the teaching-learning process (lozzi, 1989) and a basic component of any environmental or agricultural curriculum.
According to Sia et al. (1985), there are eight variables involved in the prediction of environmentally responsible behavior, five of which concern affective domain in one way or another. These five variables include: beliefs concerning issues, individual values, individual attitudes, locus of control, and environmental sensitivity. All these variables are included within what Sanger (1997) and Lindholdt (1999) term “sense of place.” Sanger (1997) states that an education containing a sense of place component “refers to an experientially based intimacy with the natural processes, community, and history of one’s place.”

Lindholdt (1999) believes that getting students to derive a part of their identification from a particular place through sense of place education can instill passion. A community, he states, should be looked at as a resource for passion and relevancy. From this passion the beliefs, values, attitudes, locus of control, and sensitivity of each student can be found and allowed to play a role in the overall education. Knowledge gleaned from experiences, emotions, memory, and personal history can also help to cultivate increased interdisciplinary depth (Lindholdt, 1999).

Of the five variables related to sense of place, internal locus of control is highly correlated with increased environmentally responsible behavior (Culen & Volk, 2000; Hwang et al., 2000; Smith-Sebasto, 1995; Smith-Sebasto & Fortner, 1994). Defined by Hwang et al. (2000), locus of control is an individual’s belief in whether or not he or she has the ability to bring about change through his or her own behavior. Bringing a student’s community and culture into the classroom through active appraisal and analysis of it gives the students a place in the immediate concrete surroundings as well as a place in the town’s timeline (Sanger, 1997), and thus puts him or her in a place of
empowerment to shape the future through action (Lindholdt, 1999). An interdisciplinary curriculum, enriched with sense of place education, can increase the internal locus of control of an institute’s students and thus improve the student body’s environmentally responsible behavior.

Analysis of the Curriculum of Villa Santa’s Institute

There were four noticeable components of environmental education that were missing in the Institute’s agroforestry curriculum: an interdisciplinary approach, attention to the affective domain of learning, the use of local input in the form of specific agricultural crops and associated practices into the Institute’s curriculum, and a planning and action component.

An interdisciplinary curriculum tries to use case studies and locally based subject material as a means to address key discipline areas and thereby increase the relevance of the material to students. The curriculum of the Institute was organized in a strictly disciplinary manner. Each discipline was taught as an individual entity without significant effort to make connections from one discipline to another. For example, Economics was taught separately from Forest Management, both using generic text books and no effort was made to relate the two subjects. An interdisciplinary approach would instead integrate the two subjects using real-life situations in and around Villa Santa and thereby increase its relevance. The text books of each discipline could still be used, but only to provide the necessary academic foundations. The familiar Villa Santa pine forest could become the center of economics, forest management, and various other disciplines, but they would be incorporated so as to better understand the overall forest and community.
Inclusion of locally based subject matter such as the forest surrounding Villa Santa can help to access the affective domain of learning, another component of environmental education that was absent from the Institute. A curriculum that makes students confront issues relevant to their lives improves learning and information retention because it gives students a concrete basis on which to utilize the text book skills they develop (Drake, 1998; Ellis and Stuen, 1998; Erickson, 1998). Students may also begin to care about the material because it is relevant to them. This caring is known as the affective domain and is integral in reaching the more cognitive, or factual, domain of learning (Dewey, 1938).

Local participation in the design of the curriculum of the Instituto Agro-forestal de Villa Santa was not used or considered. A lack of concern for local input into the Institute’s curriculum was apparent in the dissimilarities between the agroforestry techniques taught in the Institute and those used in the fields around Villa Santa. For example, the corn, bean, and coffee-filled hills surrounding Villa Santa were neither studied in the Institute’s classrooms or in its garden plots. This lack of inclusion of local agroforestry techniques in the Institute’s curriculum contributed to an absence of any sense of place component. The school’s curriculum was not providing students with knowledge of the surrounding community’s agricultural systems and therefore deprived them of a more holistic and relevant education that could help accomplish the Institute’s mission of producing students who do “practical and productive work.”

The fourth environmental education component missing from the Institute’s curriculum was planning and action. The mission of EE curriculum is to promote environmentally responsible behavior. In order to be successful at this, instruction must
address how to plan environmentally based action and how to implement it (Kim, 2003). In an academic setting planning and action often comes in the form of a community project set into action by students. The Institute organized a small tree planting project around the community center once during my two years there, but it was designed and planned by the school’s director. The students planted the trees hurriedly one afternoon—during the wrong season and without time to make the proper preparations of soil and terrain. Three months later all 100 trees planted were dead—some parched by the dry season and the others eaten by free ranging cattle and chickens. In an EE approach, a student-driven community project would be incorporated in the curriculum and ample time and effort given to the students to successfully plan and act on a project of their choice—something that would be locally based, that they cared about and that might include one or more of various locally based subject materials they had been reviewing in classes during the school year. A student-lead plan, such as this, was entirely absent from the Institute’s curriculum.

For the Institute to accomplish its mission, the curriculum needs to be relevant to local community agroforestry practices. Student-directed projects identified and developed using Participatory Rural Appraisal (PRA) methods provide a means to develop a more relevant curriculum. The inclusion of relevant issues as a foundation in all disciplines would allow for affective domain learning to occur in an interdisciplinary manner.

**Curriculum Restructuring using EE and PRA**

Based on an analysis of the literature, I used PRA tools (Russell and Harshbarger, 2003) and an EE framework to create and then teach a new course. The course was based
on local agricultural practices. Integral to the approach was placing students and local
culture at the center of the Institute’s educational philosophy. During a few months’ time
the students used these PRA tools in a series of projects, explained in Chapter 3—Project
Design, to study their surrounding environment and culture.

By making students the directors of their education, and putting the local culture
at the center of the students’ education through use of PRA, an Institute-wide curriculum
that dealt with local environmental concerns and agroforestry systems and issues could be
produced. Such a curriculum, built from the ground up using local input, could increase
empowerment among students and agriculturists alike and help bridge the gap between
the Institute and local important agricultural and forestry issues.

The planning and action component missing from the Institute’s curriculum was
the most difficult to enact. Due to a multitude of constraints, explained in depth in the
Conclusion section of Chapter 5, the closest to a true action component that I was able to
pursue with students was a mural painted on the side of the town’s community center.
The Institute needs to confront these various constraints to planning and action to insure a
more complete environmental education. I make suggestions for this in the
Recommendations section of Chapter 5.

Previous success with this type of interdisciplinary curriculum, in which dynamic
connections between students and their local environment and culture are strengthened,
affirmed, and used as the foundation for increased student learning, is supported in the
EE literature (Drake, 1998; Lindholdt, 1999; Ramsey and Hungerford, 1989; Sanger,
1997; Smith-Sebasto, 1995; Unger, 1988; Vickers and Matthews, 2002). In a study
conducted by Ramsey and Hungerford (1989) student learning was positively affected
when issue investigation and active training was used in an interdisciplinary model with locally based material. Vickers and Matthews (2002), in a similar study, had students formulate original research questions based on local environmental issues and found that student interest in cognitive areas of learning showed signs of increasing. My study builds on these approaches by including PRA tools in an attempt to further strengthen connections between students and their surrounding environment.

Data collected from analyzing pretests and posttests, student documents, and participant observations of students were used to suggest revisions to the Institute’s curriculum so that a more relevant and interdisciplinary education could be presented to students in subsequent years.
Chapter 3—Project Design

Assessment

The assessment of the education curriculum I developed and implemented was based on data collected from 26 students of Villa Santa’s Institute. I was able to assess the changes I made in the curriculum through an analysis of the products created by students and through pre and post tests given to them. Anecdotal evidence was used when analyzing data accrued through direct observation and when analyzing selected posttest questions.

Methodology

This assessment project followed a case-study design. The design was focused on a small group of students within a restricted time frame. The goal of the assessment was to obtain an in-depth analysis of what occurred throughout the course of the study. A multi-modal approach was used that combined data from pretests and posttests, student documents, and direct observations. Students used the PRA tools of key probes, timeline and change analysis, and shared presentations and analysis (Russell & Harshbarger, 2003) in producing the student documents mentioned above. Specifics on participant selection and data collection are described below. The data collected were used to address three research questions.

1) How is student internal locus of control affected when PRA and EE are used concurrently in curriculum design?

2) Is including PRA techniques into an EE curriculum useful and advantageous to student growth and participation within their community?
3) How could the curriculum of the Institute be improved based on the data produced from the student projects?

The results from the data collection are presented in Chapter 4. Data evaluation based on the results is also presented in Chapter 4 and discussed within the context of the three research questions.

Participant Selection

All 26 students in the 10th, 11th, and 12th grades of the Institute were used as information sources. The majority of students came from agricultural backgrounds whose main household income came from crops the family produced. A small number had family members who were salaried and worked for the Agroforestry Cooperative or in small businesses in town.

Data Collection

Pretest/Posttest

A group of six open-ended questions were presented twice to the 20 students of the 11th and 12th grade classes (see Appendix A). Questions were presented once as a pretest at the initiation of the school year and again as a posttest at the year’s end. Such pre and post testing conforms to similar methodologies used in EE studies (Bradley et al., 1999; Bright & Tarrant, 2002; Moseley, Reinke, & Bookout, 2002; Sutherland & Ham, 1992; Tomsen & Disinger, 1998; Vaughan et al., 2003). The questions were derived from topics covered in the History of the Culture class that I taught throughout the school year. The questions dealt with the culture of Honduras and Villa Santa, and whether students felt they were a part of that culture and whether they could change it. Five additional questions were included at the end of the posttest (see Appendix B) to elicit
other important information such as the effect students felt student projects would have on the people of the town.

Questions 1 and 2 aimed to elicit general student knowledge about the meaning of culture. Question 1 asked for a definition of culture; question 2 asked for a description of the culture of Honduras.

Question 3 asked students about the culture of Villa Santa. For this question and questions 4 through 6, I modified the “General individual and group locus of control scales” methods described by Wilke (1997). Instead of using an explicit Likert-type scale, I followed Tomsen and Disinger’s (1998) example of allowing student responses to be open-ended. To analyze the data I either grouped the responses by content or ordered them (“No” to “Yes”). For Question 3, responses were divided into two groups, those that contained “Passive” responses and those that had “Active” responses. For example, two students responding to the question “What is the culture of Villa Santa?” gave distinct responses. The first answered: “What ancestors gave us.” The second student answered: “It’s what we have to develop everyday.” The first response was categorized as “Passive”. The second response was categorized as “Active”. The first response, “What ancestors gave us”, implies the student is being acted upon. In the second response the student implicitly states that “we”, as people of Villa Santa, can put our own effort into developing culture everyday. The second response shows action.

Question 4 responses were ranked “No” or “Yes”. Students were asked whether it was possible to change culture.
Question 5 asked whether students thought culture was located in the past, present, or future. Responses were grouped according to the following responses: “Past”, “Present”, “Future”, or “All”.

Question 6 asked students if they thought they were a part of the culture. Responses were “No” or “Yes”.

Data from the pretest/posttest questionnaire were analyzed to determine whether or not a shift in internal locus of control and interest level in course material could be determined. Analysis was accomplished by grouping student responses together and ordering them in various ways to elicit thematic changes among the students as a group. Responses were not analyzed statistically (e.g. word frequency) because the number of responses (20) was insufficient for statistical analysis. Pretest/Posttest questions and student responses are found in Appendix A and B.

Student Documents

A mural and a poster project comprised the student documents collected for analysis. Students painted the mural on the outside of the community center. Content of the mural was taken in part from the poster projects eleven of the 12th grade students completed during the school year. Both projects were analyzed by searching for evidence that students believed they were a part of their community and that they could affect change in its environment. Content of the posters was also analyzed to determine possible subjects around which future curricula could be built.

The poster project was student-directed and used PRA tools. The poster project consisted of three parts: 1) seven photographs of one cultural or economic activity that occurred around Villa Santa; 2) four photographs of things students thought were
beautiful (whether these things were to be of human or natural construction was not specified); and 3) one photograph of a senior citizen whom they were to interview about the history of Villa Santa. Each section was accompanied by written discussions of what was occurring in each photograph.

The 26 students in the 10th, 11th, and 12th grade classes designed and constructed the mural. The only initial direction given by me was that the mural needed to be about Villa Santa. I wanted my input into the design of the Villa Santa mural to be minimal, so to generate mural ideas I had the eleven students that had completed the poster project present and explain their posters to the remainder of the students. After the posters were presented there was a discussion among the students led by one of the 12th graders. The information within the posters helped students determine the content of the mural.

Participant Observation

Participant observation was accomplished through analysis of student interactions. Interactions among students were observed and analyzed to determine if group dynamics had changed. Interactions between the students and me were analyzed similarly.

I observed the actions and dialogues of the students and recorded them, whether in the classroom, on a field trip, or simply hanging out in the neighborhood or at my house. I taught thirteen 12th grade students three times a week in two-hour sessions. An additional two hours a week was usually spent with these same students on field trips. I spent two hours a week with seven 11th grade students in the classroom. Time outside of the classroom spent with these same students averaged approximately two hours a week in the Institute’s tree nursery. Time with the Institute’s six 10th grade students was
limited except for during mural preparation and completion. Informal observations of approximately five students occurred daily as they either lived in my neighborhood and were seen frequently or played in the nightly pick-up soccer games at the local field.
Chapter 4—Results and Data Evaluation

Results

Pretest and Posttest

Responses to questions 1 and 2 were very general (for complete compilation of responses to all questions see Appendix A, B). Most responses mentioned “Traditions and customs” or “Ancestors” as being very important to the definition of culture as well as to Honduran culture. Differences between the pretest and the posttest were slight. Responses to question 1 tended to be more general in the posttest than in the pretest, focusing more on the specific words “traditions” and “customs” rather than stating examples of traditions. In the pretest, students chose more specific wording, replying “What we make with our hands, not machines, what people think”, and “The particular things that each community creates.” A similar trend could be seen in question two, where the students were asked to talk about Honduran culture.

Question 3 differed noticeably from pretest to posttest (see Table 1). In the posttest there were a greater number of “Active” responses.

Question 4 responses (see Table 1) for the pretest and posttest were similar to each other. The noted difference between the “Yes” responses in each test was the modifying phrases attached to the statements. The pretest “Yes” responses were characterized by these two recorded statements: “Yes, [it is possible to change culture] because it’s possible to imitate other countries”, and “Yes, we could modernize.” These types of responses suggest either that Honduran culture will change by imitating other cultures or that there is an understood inferiority of Honduran culture to other cultures. There are seven such “Yes” responses in the pretest group. The posttest “Yes”
Table 1. Student responses to pre and post tests questions 3-6.

Question 3) What is the culture of Villa Santa?

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
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</thead>
<tbody>
<tr>
<td>Passive</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Active</td>
<td>5</td>
<td>11</td>
</tr>
</tbody>
</table>

Question 4) Is it possible to change culture?

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Maybe</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Yes</td>
<td>12</td>
<td>15</td>
</tr>
</tbody>
</table>

Question 5) Is culture located in the past, present, or in the future?

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<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Present</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Future</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>All</td>
<td>11</td>
<td>16</td>
</tr>
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</table>

Question 6) Are you a part of the culture?

<table>
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<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Maybe</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Yes</td>
<td>18</td>
<td>20</td>
</tr>
</tbody>
</table>

responses exhibit no such modifiers. Four simply respond “Yes” to the question and there is only one mention of imitating other countries and no use of language that might imply Honduran cultural inferiority.

Question 5 responses (see Table 1) are grouped by those including the word “Past” to those including “All”. A shift in student responses can be seen between pre and post tests that suggests students believe culture is located in the future as well as in the past.
Question 6 pretest and posttest responses (see Table 1) differ only slightly. Two students in the pretest group felt they were not part of the culture. One student in the posttest replied that he/she was “Not too sure, but I think so because I am Honduran.” The remaining 20 were very positive in their opinion that they were a part of the culture.

The results of questions one through six suggest a trend from pretest to posttest that students believe culture is an active component in their lives that is changeable. They no longer believe culture is simply passed down to them by ancestors and is static. The realization that culture is malleable has made more students believe that it is also an entity that exists in the future, as well as the past and present, which can be worked towards in positive ways. They believe they are a part of the culture and that individual actions they take will create the culture around them. These trends are supported by the additional questions asked in the posttest. Responses to these questions suggest that students want their actions to affect their community by encouraging people to change undesirable aspects and increase what they feel is good.

The five additional questions added to the posttest drew out the most descriptive responses. Responses were not ordered for analysis in any specific manner, but instead used as anecdotal data.

Question 7 asked students what they thought about the History of the Culture class in which their poster presentation and mural project was assigned. Student responses were very positive regarding the class and indicated an appreciation of how the class taught them to look at their culture. A typical response was: “[History of the Culture was] excellent because it made us think about what we have in our community as far as culture and what we need to cultivate to change for the better.”
Question 8 asked students what effect they thought the mural would have on the people of Villa Santa. Responses were very positive in character, talking about how the mural will remind people of the beauty found in their community. One response read: “The people will see how it was, how it is, and will be, and will want to contribute to this good change.”

Question 9 asked what effect students wanted the mural to have on the people of Villa Santa. These responses voiced a strong will to instill change in the actions of Villa Santa citizens. One recorded response stated: “I want them to know that only when we don’t do anything is when we realize nothing. When you do something you know all so I want the mural to give an impression that caring is an important part of our culture.”

Question 10 asked to rank the importance of pride in a healthy town. Responses were ranked from “Not important = -3” to “Very important = 3.” All respondents chose 3 as their response.

Question 11 asked students what the word “leader” meant. Most responses talked of a leader being someone who does good for a group. A typical response was: “Someone important in your family, organization, town, who always searches for the best for that group.”

Poster Projects

Eleven poster projects were collected. The first part of the project consisted of a series of photographs depicting a process occurring in Villa Santa that each student studied in depth. Projects included: banana cultivation (2), pig raising, timber production, calf birthing, cow milking, corn production, rosquilla production (corn donuts), adobe block fabrication, and the educational system of Villa Santa.
Part two presented what students thought was beautiful. Photographs varied from lush, tree-lined creek bottoms to nicely planted tomato fields. All pictures were of the natural environment. Twenty-two of the 30 photos had a human construction of nature at its center—e.g. a well kept cornfield or a sugarcane field interspersed with banana trees.

Part three recorded the natural history of Villa Santa through the stories told by some of the community’s eldest citizens (see Figure 1). Seven men and three women were interviewed.

Elder residents talked of the flora and fauna of the Villa Santa area 40 years ago when there were only a few houses and no roads or trails. Many participants talked of tigers, lions, deer, monkeys, snakes, and wild pigs as being very common. The mentioning of “tigers” most likely referred to mountain lions, as words “tiger”, “lion”, and “panther” were often used interchangeably. The Villa Santa area 40 years ago was covered with
virgin forests and people acquired land without any necessary legalization. Some talked of how Villa Santa is not what it used to be because of increased hunting and habitat destruction. The comments recorded by the students pertained largely to the natural environment, although one woman remembered the lack of basic communication technology. She had had the first radio in Villa Santa and everyone around came to her house to listen to news from the outside.

Mural

The students decided to produce a mural divided into three sections, one depicting Villa Santa in the past, one depicting Villa Santa presently, and the third expressing how students wanted their community to be in the future. The 26 students involved in the mural project divided themselves into three groups. Each group produced one section of the mural (see Figure 2).

The section depicting the past showed no human presence. Mountains were forest covered, there was a waterfall, and the mural included various animals: panther, deer, toucan, and rabbit.

The section containing the present contained all existing community organizations but did not depict them in their actual geographic positions. At the center of this mural was the timber cooperative. Roads were painted reddish brown and houses were one story high. Students showed some forest covered mountaintops producing water, while other mountaintops were shown to be adversely affected by the pine bark beetle (see Figure 3) and desertification was becoming apparent. One mountaintop had been deforested and used for agricultural production. While human presence was clear in the mural, no actual people were depicted in the mural, nor was there any wildlife.
The future of Villa Santa showed a much changed environment with paved streets and increased vehicular traffic as well as a helicopter (see Figure 4 and Figure 5). Houses with two or three floors were common and there was a city park with tree-lined paths. There was a soccer stadium; across the street from the stadium was a hill of crops planted on the contour (see Figure 6). Across the street from the hillside farm was a cluster of chicken coups. The most prominent structure was a municipal building three times the size of any other building in the mural. Mountains were forest covered and many of the town’s streets were lined with trees. Human presence was clear, but few actual people were depicted in the mural. There was one person on a motorcycle and a small group of people could be seen in a church. No wildlife were present.

Common themes in the three mural sections were few but interesting. In all three, trees, primarily pines, were prominent. Also present in some form in all three murals was water. In the past and present, naturally running water (waterfall and river, respectively) and El Boquerón, the mountain outside the community that provides drinking water for Villa Santa and three surrounding towns, were clearly depicted. In the future, running water was not apparent but El Boquerón was again depicted. Although wild animals were absent in both the present and future, students indicate through their inclusion of water and trees in all three murals that clean drinking water produced from productive forests will be maintained into the future. If the study of fauna and its value and importance to ecological health could be studied in schools, perhaps it might be included as well.

A peculiar absence in two of the three murals was humans. Both the past and present were without people. A human presence was suggested in the mural of the
Figure 2. Community Center mural.
Figure 3. Bark beetle infestation depicted in mural of the present.

Figure 4. City park and helicopter in the mural of the future.
Figure 5. Paved streets in the mural of the future.

Figure 6. Hillside farming and chicken coup in the mural of the future.
present by the inclusion of farming, houses, and streets. It is interesting to note that people in the past were excluded as well since what was depicted came from stories told to students by senior citizens. The future mural had one person on a motorcycle and a group of people in a church, the only people in any of the murals. But in a culture that has people connecting themselves so closely with the land through intense agricultural work, the absence of people in the fields and forests is important. Perhaps this exclusion was simply a matter of artistic skill, since painting people may be more difficult than painting a house or a road or a line of crops. But the detail included in the animals of the past mural and the trees and crops of the present mural, as well as the helicopter and motorcycle of the future, would seem to negate this assumption. If there were indeed people in the fields and the forest, it may have supported the idea that students understood the human effects and change that our presence creates on landscapes. Since people are not present in the murals it cannot automatically be assumed that students do not comprehend the connections between people and landscapes, but perhaps students lack a complete understanding of how vast the human influence is on the land. There is much change in the landscapes of the present and future mural compared to that of the past, but this change is not directly accredited to humans due to the lack of their presence in the fields and forests. By including people in their landscapes, students could have made an important concrete connection between human activities and their environmental surroundings.

Participant Observation

Observations of students in informal situations provided anecdotal data. As part of the History of the Culture class students were asked to say certain phrases or answer
certain questions upon entering the classroom. Students were asked to say where they were from on one day, asked to state what they were proud of on another, and on another day, they were simply expected to say they were going to be a leader in class that day. From this particular day forward students would frequently tell me that they were leaders. Although sometimes said in jest when things on a field trip or on the soccer field had gotten a bit out of control, students continued to tell me they were leaders well after they had graduated from the Institute.

Students would come over to my house often to play chess or to listen to music. During this time various topics would arise in conversations. Towards the end of my time in Villa Santa students talked avidly about changes they would like to see take place around the town’s central park. I remember thinking that such a conversation was a departure from the subjects normally touched upon: popular music, the next dance planned for the town, and current Honduran soccer league standings. It is difficult to determine whether an increase in students believing that their actions could affect change had occurred. My gradual increase in Spanish language proficiency and student trust and familiarity with me could account for the change as well.

Data Evaluation

1) How is locus of control affected when PRA and EE are used concurrently in curriculum design?

The most important result of the mural painted on the community center wall is the form that it took—a three-part mural that included a depiction of Villa Santa’s past, present, and future. Unprompted by anyone the students chose to exert control over what will happen in Villa Santa’s future. This indicated that they believed their actions could
affect their environment and culture. The initiation of original action as depicted in the mural suggests increased internal locus of control. However the mural still suggests a profound disconnect between the landscapes and the people who live there and shaped the environment as evidenced by the absence of people.

A majority of responses to interview questions suggest that student internal locus of control had increased. Responses to questions 3 and 4 exhibit primary examples of such a shift. The increase in students stating that culture is part of a continuous “development” and an entity that they can “cultivate”, rather than something “learned” only from previous generations, suggested student belief that culture is not something simply dictated to them. The absence of allusions to cultural change only coming from other countries in the posttest responses to question 4 also suggests an increase in locus of control. Through these responses it can be inferred that most students believe they control what may happen in their culture.

By writing “All” in response to the question 5 posttest, five more students showed that culture can also be located in the future than did in the pretest. This result, coupled with the majority student belief that culture can be changed, suggests that student locus of control has been positively affected.

Additional questions 7, 8, and 9 of the posttest resulted in 31 of the 59 responses mentioning the future of Villa Santa in some way. These responses indicated student control over what could happen and many exhibited a desire that others in the community feel as though they could also affect change. All of these responses suggest that student locus of control had increased.
The extent to which internal locus of control in students had increased was difficult to assess based on observations of student behavior and conversations. Observations of student behavior and conversations suggest that some small change in student behavior had taken place, but the quantity and depth of observations was not sufficient to comment on the significance of any change.

2) *Is including PRA techniques into an EE curriculum useful and advantageous to student growth and participation within their community?*

I used PRA approach in a very general way within the EE curriculum. Chambers (1994) states that PRA “has been called ‘an approach and methods for learning about rural life and conditions from, with and by rural people.’” He goes on to say that PRA is more than just learning, it is also “a process which extends into analysis, planning and action.” My implementation of PRA techniques stopped before any true planning or action for the future took place. I instead only used the techniques that I thought would allow students to learn more about their local culture. The inclusion of PRA tools into an EE curriculum appeared to be useful. The lack of a planning and action component within the curriculum of the Institute is a serious downfall. A discussion of the constraints that lead to this absence and ideas about how these constraints might be overcome are presented in Conclusions and Recommendations.

The empowerment that PRA endeavors to cultivate among people was apparent in the student responses given in the posttest, the form that the mural took, and the few participant observations I made throughout the two years of living in Villa Santa. The PRA tools used by the students to produce their locally-based projects created a feeling of accomplishment as well as a feeling of a shared ability to affect the future of their
Students also ended the year with a greater understanding of their community. Comments that support these statements were given by students in Question 7 (see Appendix B) of the posttest. Some specific examples include: “It [History of the Culture] taught me to value my culture and place where I live more. And it gave us a chance to realize what we have in our town and the people in it.” “The class [History of the Culture] was very participatory. In no other class have we done a project that came out so ‘sensational.’” “[History of the Culture was] excellent because it made us think about what we have in our community as far as culture and what we need to cultivate to change for the better.” “We put into practice looking at our own culture to learn to drop the bad so that we can improve the good things and evolve positively.” “It [History of the Culture] is something that made me think about the important things and made me conscious of the other people here in Villa Santa.”

Such an exhibition of knowledge of their community and impetus to change the future supports the use of PRA in a classroom setting and is also a great foundation on which to incorporate other PRA approaches, including those of planning and action, within the Institute’s curriculum.

The student’s responses to Questions 8 and 9 (see Appendix B), pertaining to the effect the mural might have on the community, suggest that the students would like their production of the mural to affect the community in positive ways. More so, student attitudes observed during their interactions with each other suggest that they may be more inclined to become civily active. Due to the history of Central America and thus Honduras and Villa Santa, such civil action may be difficult to enact. At the very least, action should be gone about carefully and with understanding of the greater historical
context from which the culture of Villa Santa has been created. A discussion of this context is presented more in-depth in Chapter 5.

3) How could the curriculum of the Institute be improved based on the data produced from the student projects?

Since it appears that student internal locus of control increased and that students enjoyed learning about the culture of Villa Santa, improving the Institute’s curriculum should utilize the surrounding community and environment as the educational foundations upon which broader disciplinary topics are explored and discovered. Bringing students ever closer to their community will likely increase the relevance of their education and perhaps further increase their locus of control.

Improved internal locus of control among students must have an outlet within the Institute’s curriculum, and this outlet must come in the form of a planning and action component. Encouraging students to believe they can change their culture must be rewarded by cultivating the skills of planning and action. When desired change becomes actual change, students will be encouraged to believe in their abilities to affect change even more. Such allowance for action among students would be an important improvement to the Institute’s curriculum.
Chapter 5—Conclusions and Recommendations

Conclusions

It is widely accepted that interdisciplinary curricula based on local real-life contexts can improve students’ understanding of material as well as encourage them to be active participants in the development of their communities (Drake, 1998; Ellis & Stuen, 1998; Erickson, 1998; Pate et al., 1997; Unger, 1988). This study suggests that similar results can be expected in rural Honduras. An interdisciplinary curriculum that encourages students of the Instituto Agro-forestal de Villa Santa to study local issues may increase the chance that students become active participants in community development—both civilly as well as environmentally. This study found evidence of this through the increase in internal locus of control exhibited among students after completing the place-based projects using PRA tools. Internal locus of control is known to be a major determinant in environmentally responsible behavior (Culen & Volk, 2000; Hwang et al., 2000; Sia et al., 1985; Smith-Sebasto, 1995; Smith-Sebasto & Fortner, 1994).

At present, the curriculum of the Instituto Agro-forestal de Villa Santa reflects outside ideas and perceptions with little inclusion of local community and environmental content. For example, local agricultural and forestry activities are completely absent in the Institute’s agroforestry curriculum. Education that is detached from the “natural processes” of a community inhibits student’s ability to develop a sense of place (Sanger, 1997) and thus omits an important component of locus of control and consequently environmental education (Sia et al., 1985).
Conversely, allowing students to study local agricultural systems via the poster project increased student enthusiasm as seen by analysis of responses given to question 7 of the posttest (see Appendix B) and observations made during informal conversations with students.

Increasing the number of student-directed activities dealing with local agriculture and forestry has great potential. The next steps that need to be explored in the curriculum are the planning and action components of EE and PRA. While students may have been encouraged through locus of control cultivation to become more active civic members, it is the mission of EE and PRA to specifically train students and people in forms of action (Russel and Harshbarger, 2003; Wilke, 1997). Students are taught how to confront the environmental issues they have identified in their community through social and civil action; people are taught how to solve the problems and issues they have identified within their community through similar actions. The curriculum of the Institute had no planning and action component when I arrived, and my curriculum did not create one.

There are several reasons why a planning and action component could be difficult to incorporate into the curriculum of Villa Santa’s Institute. The most obvious constraints arise from the nature and structure of the Institute. Student attendance in class is typically very low, part of the reason for this being distance from home to school and the need for students to provide labor on their family’s farms. Perhaps more importantly, students have never been encouraged to take an active role in the classroom, so leading action-based projects is foreign to them. Absenteeism among teachers is perhaps even more widespread than among students. Most teachers at the Institute live in Danli, a town 1.5 hours from Villa Santa. It is common for teachers to take Mondays and Fridays
as travel days and forfeit classes. Since only one teacher at the Institute had a car, most teachers traveled by bus, which left Villa Santa early in the morning and returned late in the afternoon. The loss of school days to travel constrains the opportunity for action components to be incorporated into classroom time. Teachers’ unfamiliarity with action approaches within the classroom, let alone action originating from the student, is also likely to be problematic. Teacher-student relationships at the Institute are one-way in form, with the teacher maintaining control of all classroom activities and information presented.

Government policies will also likely constrain developing an action component in the Institute’s curriculum. Irregular and unreliable payment to teachers contributes to teacher absenteeism. Teachers are often not paid due to disputes, contract negotiations, and nation-wide strikes. Furthermore, when teachers are paid, their checks are distributed in Danli on a weekday and they are allowed to skip school to pick them up. This results in around 10 days of missed school annually by the teachers. High teacher absence creates a sense of apathy among students and parents and apathy is not a great building block upon which to build a planning and action component.

External forces may also constrain the pursuit of planning and action component in the Institute’s curriculum. The history of Central America over the past 500 years has led to what Heckadon-Moreno (1997) describes as the current damaged state of the individual and group psyche of the people in the region. This began in 1502 when Columbus first landed on Guanaja, a small island off the coast of Honduras, and continued throughout the Spanish colonial times of the 16th and 17th centuries and well into the 20th century as the United States and the Soviet Union vied for power in the
region (Berryman, 1984; Chamberlain, 1953; Cooke, 1997; Heckadon-Moreno, 1997; Lernoux, 1989). These outside influences have created distrust among the public towards the ingrained, exclusive hierarchy that has been created within government institutions and among community leaders. This distrust was manifested in Villa Santa by a general suspicion and malaise demonstrated by people when talking of government foresters and coffee administrators. This suspicion was also evident when education became the topic of discussion. Teachers, although perhaps respected on the surface, frequently were the scapegoats when talk of government unaccountability arose. The opinions of families who had sent their kids to the Institute were a bit more positive in regards to the Institute and its teachers, but they were the minority of the town. The hope, therefore, of community supported action lead by the students of a not-so-well respected Institute is not great.

Religion and politics may also make it difficult to pursue a planning and action component in the Institute. Organized religion in Central America, excluding the brief period of Liberation Theology that occurred during the 60’s and 70’s, has taken two general forms over the last 500 years (Berryman, 1984; Lernoux, 1989). One form is lead by the Catholic Church and its centralized power dictated by the Vatican. The second is the more decentralized form of Christianity led by the many sects of Evangelicals (Lernoux, 1989). The Catholic Church’s centralized religion leaves few possibilities for local necessities to be addressed since action is not a component of the Vatican’s mission (Lernoux, 1989). Although once tied very closely to the government during Spanish Colonization, the Catholic Church now veers away from any actions that may concern politics and therefore controversy (Berryman, 1984; Lernoux, 1989).
The Evangelicals are a-political due to a fatalistic view of life (Lernoux, 1989). The human condition that one finds themselves in is the cross they must bear and their only hope for something better is to be saved by Christ and delivered to an afterlife (Lernoux, 1989). Whether it is the powerlessness felt by a Catholic parishioner due to the restrictions dictated by the Vatican or the fatalistic what-we-have-is-what-we-must-live-with views of the Evangelicals, an extreme passivity has been bread into the people of Central America (Lernoux, 1989). This attitude was extremely prevalent in the culture of Villa Santa. A typical response given by a Villa Santan when asked whether the crop of corn would be good this year or whether their child would get the job in the city was, “Si Dios quiere.” Translated this response means, “If God may want it,” or “God willing.” This attitude is the exact opposite of individual control and action. Action to change your surroundings implies confidence that you can change something that you do not feel is right. Passivity, as exemplified by teachers and students of the Institute, is a difficult foundation upon which to build action.

Competition between interest groups, including religion, may constrain community action as well. For example, a library project, started by the Evangelicals, has yet to be completed due to lack of support from key Catholic community members. Such religious separation may have also held the community from being more involved in the Institute. The director, Obdulio Figueroa, was a Catholic, and greater than half the people in Villa Santa were Evangelical. Differences such as these play big roles in Villa Santa.

Local politics likely played a role in obstructing a planning and action component in the Institute’s curriculum. As with religious lines, political lines are often stark in
Honduras. In the U.S., everyday personal interactions among people and even among community leadership positions such as principals, police chiefs, as well as mayors, do not necessarily come under tight politically scrutiny based on political affiliation. This is not so in Honduras where workers can be fired and replaced according to political affiliation. An example of how party affiliation can constrain community action was evident in the attempt to develop a tree nursery in the grade school of Villa Santa. The director of the Institute was a member of Honduras’ Liberal Party. The director of the grade school was a member of Honduras’ National Party. When the grade school director approached me to help begin a tree nursery at the grade school I was excited to collaborate. I also knew that Villa Santa had an agroforestry high school two blocks away from the grade school that contained all the information and tools that the grade school would need to construct a nursery. In an effort to keep my hands out of the project as much as possible and instead have the residents of Villa Santa help themselves, I told the grade school director that I would contact the Institute to see if they would be willing to help with the project since they had all the expertise we would need. I organized the necessary powers at both the Institute and the grade school to facilitate the projects, all that was left was for the directors to talk to each other and the project could move along smoothly. The directors never talked and the nursery was never pursued.

The people living in and around Villa Santa were predominantly affiliated with the National Party. Since political partisanship operates at such relatively low levels of society as directors of high schools and grade schools there is little doubt that this could affect the director of the Institute’s chances of promoting some kind of action within the community due to his allegiance to the Liberal Party.
While contributions by this study to the field of PRA may be slight, it is important to note the value of using PRA tools within Villa Santa’s educational system. The possibility of social empowerment through PRA was exhibited through this case study. However, PRA goals of plan implementation, execution, and monitoring will require a much longer time commitment to explore.

**Recommendations**

Based on this study, the curriculum of the Instituto Agro-forestal de Villa Santa should change to include local agricultural and forestry issues so that students can become more personally invested in their education and in their communities. Presentation of this subject matter should be approached in an interdisciplinary manner through the use of Participatory Rural Appraisal tools that elicit locally relevant topics and knowledge. Studying local systems and issues from different disciplinary perspectives would encourage students to see connections between disciplines. A locally based interdisciplinary approach could produce students ready to address the environment around them and to affect change in their community and environment.

Inclusion of PRA approaches into Villa Santa’s educational system could provide the extended time required to incorporate ongoing monitoring and adaptive learning in the Institute and its curriculum. This could help the Institute realize its mission of creating professionals ready to perform practical work in the agroforestry field.

There is much to do if the Institute wants to employ a planning and action component into its curriculum. Internal aspects of student and teacher absenteeism and apathy, along with a government that fails to provide financial and structural stability, do not give the Institute a great basis on which to start such activities. External forces,
particularly religion and politics, compound these challenges by contributing to general public apathy, passivity, and distrust. These are huge barriers to overcome if planning and action are to become part of the curriculum of the Institute. But there are positive things occurring within the Institute that may provide positive changes in the near future.

Institute Director Obdulio Figueroa deserves praise for his role in getting the Institute established. He almost single handedly built the school and has dedicated himself to using every bit of funding he could find to the betterment of student education. The apathy of the general public towards the Institute is not for the lack of Figueroa’s efforts to enroll as many students as possible from all socioeconomic backgrounds. But if religious and political barriers still alienate the Institute from some of the public and constrain an action-based curriculum, there are a few things that Director Figueroa could do.

Many students from the grade school continue their education at the Institute. Many also conclude their formal education at the sixth grade level. Termination of schooling is usually due to family economics, the US $7.35 matriculation fee of the Institute being too expensive. In addition, some parents do not like the secular approach of the Institute and are worried about their daughters being prayed upon by older boys (pers. com.). The financial problem is difficult. Its roots lie in the chronic under funding of education by government and the poverty that is wide spread in Villa Santa. The majority of Villa Santa citizens survive on less than $1 a day. Any fee for education, let alone an education that some people do not respect, is too much. Although money is scarce, opportunities to provide scholarships through fund raisers are available. The Institute sells t-shirts to provide a small matriculation fund for students, and there is a
possibility to sell agricultural produce grown by the Institute to increase this fund.

Raffles are popular among church groups and could be used by the Institute as well.

Non-governmental organizations such as the Food and Agricultural Organization (FAO) have provided the Institute with funds to build buildings. Perhaps scholarships could be provided from similar organizations.

With regards to community distrust of the Institute, Figueroa needs to reach out toward people he knows do not necessarily like him. If he put politics aside and began to work with the director of the grade school in an effort to expose those students to some of the activities the Institute is involved in, perhaps understanding and student recruitment at the Institute could be enhanced. The religious concern that some parents have may, with familiarity, be found to be less warranted than thought. The realization that teachers closely supervise students might make parents more comfortable and confident about registering their daughters. Most importantly, if the Institute began including grade school students in action-based activities, the school children may want to continue in school and parents could be positively affected by their children’s interest in education. Because of this registration rates might increase.

Reaching out to both religious factions in Villa Santa may be difficult. If Figueroa can make a point of inviting all key religious leaders from both the Catholic Churches and various Evangelical sects to non-sectarian Institute functions and activities, the effect could be two fold. Firstly, the Evangelicals may see that, although Figueroa is a Catholic, he does not run the Institute as a Catholic organization. Secondly, when parents hear that their religious leaders participated in an Institute activity, and if these
leasers came away without concern, perhaps the entire community might think differently about what the Institute stands for and what it teaches.

If the Institute began doing projects around the community that exhibited non-partisan, non-sectarian action that dealt with community needs people would eventually come to support the Institute and make a bigger effort to discover what is going on within its fences. If something seems useful, then people usually may gravitate toward it. Perhaps more people would even send their kids to study.

The sustainability of the project that I implemented in the Institute is uncertain. I attempted to combine my teaching methods and goals in a co-teaching environment with the teacher that was responsible for directing the History of the Culture course. However, this teacher attended class only once the entire first year. After it was clear that this teacher had no intention of attending, Figueroa placed a new teacher in the role. The new teacher showed up twice during the second year. Perhaps I exerted my ideas and plans too much. Perhaps I was an intimidating gringo that teachers did not want to deal with. Perhaps the teachers simply did not show up for the class because they knew I would be in there and teach the kids anyway. Perhaps it was simply something connected to the apathy of the teachers I discussed earlier. Whatever the reason, the co-teaching environment I had hoped to cultivate did not occur and most of the ideas and methods I used ceased with my departure.

If a new activity or approach is to be sustained, its value must be embraced by the school’s director and teachers. The sustainability of my approach also requires that the director and teachers are comfortable empowering students to take control of their education. This represents a major challenge. The hierarchical structures of both the
government and churches that I discussed earlier have led to similar power structures in
the educational systems. Empowering students to learn does not simply mean allowing
them to study what they want and to act on it, it means, as a director and a teacher, letting
go of some of the control they exert. This is a difficult but necessary change that must
come about if an EE and PRA-based project is to take hold in the curriculum.

I intend to share the successes and the failures of my efforts as discussed in this
paper with the director of the Institute in Villa Santa. I will include my conclusions and
recommendations as well. Most importantly I will include the student responses to the
pretest and posttest, in particular those found in Appendix B that note why students liked
the different form that History of the Culture took that year. Important also will be the
responses that outline the effect the students want the mural to have on the community.
From these responses the director may see the incredible student energy that he can
access. Students want to affect their town and their people. They want to be part of the
future. Realizing the potential that is inside these students might cultivate the director’s
confidence to trust the students a bit, to allow them to change things that surround them,
to allow them to begin to act, and to become valuable citizens of Villa Santa and of
Honduras.

This case study cannot be generalized to other high schools in Honduras or in
other countries. The results do suggest, however, that place-based education that
incorporates local issues of cultural and environmental importance can enhance students’
enthusiasm for their community and environment. These results should encourage the
faculty of the Villa Santa Institute to further work with the community to identify and
develop local cultural and environmental issues and activities for incorporation into the
curriculum. The possible topics and activities that might be pursued are numerous, engaging, and very beneficial to student development and community change.
Literature Cited


Appendix A

1) What is culture?

Pretest
- Things in the past, Independence Day.
- A myth, beliefs in our ancestors, things in the past that we remember.
- All traditions.
- All the customs, traditions, that a town has.
- Customs, beliefs, sayings, origens in our ancestors’ accomplishments.
- Combination of traditions.
- Combinations of traditions that a community does, usually related to our ancestors.
- Combination of actions given by ancestors that becomes custom.
- Events and traditions of a people.
- What’s passed from generation to generation.
- The traits that all generations pass on.
- What makes us different from different communities.
- The difference between one group and another, some are more civilized, some more related to ancestors.
- What each person acquires from the time they have use of reason. What we acquire from the environment around us.
- Everything one does in a regular day.
- What we make with our hands, not machines, what people think.
- The particular things that each community creates.
- What we were taught and history from our ancestors so that we can continue in our future.
- It’s what a people is becoming.
- Should be based in our actions, with origins in our ancestors’ accomplishments.

Posttest
- Traditions and customs.
- Traditions and customs.
- Traditions that ancestor gave us.
- Traditions, historic movements.
- All traditions or customs that occur in a country. How we talk, dress, act, foods.
- Combination of traditions and customs.
- The study of customs.
- Customs, traditions.
- Beliefs, myths, customs.
- The customs we remember. Traditions and customs that make us different from others.
- Traditions and customs that come from the past and that we transmit to the future.
- Customs from our ancestors that we practice.
- The paintings, stories, poems, histories.
- The combination of actions that have occurred in a country.
- The works of ancestors that affect all humanity.
• The way we act. Customs we remember from the past.
• All that we are used to doing. Customs we practice and don’t forget.
• History, customs based in the past, present, future.
• All the good and how it is expressed.
• Everything a people does to feel proud.

2) What is the culture of Honduras?

Pretest
• A bad culture that only tries to imitate cultures that aren’t ours.
• Mayas.
• Mayas, the art from them.
• Includes the Mayas till today, history, resources, traditions.
• What the ancestors had, like the indigenous peoples.
• What our ancestors gave us.
• Ancestral traditions.
• Dances, foods, holidays that make us think about the past.
• All traditions, customs we have.
• To celebrate holidays and festivals.
• Customs, histories, traditions.
• Each people’s cultures plus national holidays.
• All things made in Honduras, the way we talk. The Misquitos, Garifunas are different cultures.
• All traditions passed from person to person. Folklore.
• Independence Day.
• Singers, artists, paintings, statues.
• Beliefs that we identify with.
• It’s what we identify ourselves with.

Posttest
• Not bad, not good, but we should improve it a lot.
• Ancestors have brought to us
• Ancestors.
• What we learn from ancestors.
• Traditions and customs.
• Traditions, sayings.
• Traditions and customs.
• Honduras’ traditions and customs.
• Traditions and customs. Typical dress, paintings, foods.
• Customs that we remember and should give to the future.
• Copying what more developed countries do.
• Christmas, nacatomales, Holy Week, dances.
• Customs, products. Fairs, food, pottery.
• Writers from Honduras.
• All we see in our country: Parades.
• All of what our populations says, believes, thinks. A feeling in general.
• That which we put in practice.
• To have pride of our country, because if not, it would be ruined.
• Very important because we can decide what to do in the future by letting it guide us.
• Very beautiful and something we should improve.
• Very important that makes us proud.

3) What is the culture of Villa Santa?

**Pretest**

**Passive**
• What each person here has.
• What ancestors gave us.
• Very traditional. What the ancestors have taught us is what we are doing.
• Coffee, since it produces everything well and has always produced since ages long ago.
• Coffee, basic grains.
• Dances, everything in a “cultural night,” theater group.
• Not too bad like in some other places, but we don’t try to better ourselves.
• We’ve lost a lot of our culture.
• Stories, legends, history.
• The Fair.
• History, stories, legends, ways of life.
• Religion, history.
• Celebrate Day of the Virgen Gualelupe, of Harvests
• Part positive, but mostly negative, little education.
• Everyone that lives here. Semi-civilized because we still are mestisos dependent to God.

**Active**
• What people teach each other about our town.
• It’s what we have to develop everyday.
• Everything that is made here. The way we talk and look different.
• Customs that we have learned and passed on, like saying hello to people.
• How we treat people.

**Posttest**

**Passive**
• Celebrate the culture week with food and folklore dance.
• What we learn from ancestors.
• All the people who have some profession. They’re part of the culture.
• Some things good, some bad.
• What happens year after year.
• Having education. If there’s no education there’s no culture.
• One part is the cultivation of corn, beans. Other is how we dress like outsiders.
• It’s remembering the customs from older people that live here.
• Celebrate religious holidays.
• Very ignorant and includes the emigrants who hurt and don’t follow the normal track of the culture.
Active
• It’s the customs every individual has and how they express them.
• How you’re different from all other communities.
• The process of development that it has had since people got here.
• Something very special. We can continue changing it for the better.
• It’s how we are as community.
• It’s what we should try to cultivate from the past so we have our own culture.
• All the actions that happen here in Villa Santa.
• Traditions and customs that make us different from other communities.
• A reconstruction of past traditions.
• It’s made by people each day.
• Study of the past, present, and future of Villa Santa. There are some customs that haven’t changed for a long time.

4) Is it possible to change culture?

Pretest
No
• We could change it with great effort, but it’s almost impossible because of the type of bad education and traditions that have been taught for generations.
• No because you can’t change culture. Maybe some, but not all.
• It’s not possible to change since it has always been, but we could add more.
• We can’t change it, but we can better it in certain aspects.
• Maybe. We could change certain aspects. It would be difficult to change work style and enthusiasm to complete projects.
• Yes, it’s possible because in this community we almost don’t practice culture.
• Yes, because if we forgot all the customs, it would change.
• Yes, because of the obstacles that are here in Villa Santa and because if new technology would come we might stop doing some things so primitively.
• Yes, we could modernize.
• Yes. It’s changing right now due to TV, music. We can’t change legends though.
• Yes because it’s possible to imitate other countries.
• We could change it at the same time as time is continuing and we are becoming more civilized.
• I think so, by combining ours with others.
• With the passing of time, culture changes for the better or for worse depending on the message that is received.
• Some things yes, others no. Some traditions are well set, others no.
• Maybe we can change part of it.
• We could change it in so much that we believed we could.
• Clearly, we could change it, better to say “better” it with the support of the community.
• Yes it’s possible to change it to be better each day.
• Yes, we can be better, have better ideas, and it seems like the union has more force so if we joined together we could change the bad.

Yes
Posttest

No
• No.
• No, but we can improve certain aspects.
• No, because it’s customs we can’t forget.
• Maybe.
• No, can’t change it, but we can add things.
• Possible but difficult.
• Yes it’s possible we could do certain projects to make the people change certain things.
• For part of education we can change it but changing culture isn’t always good since we might change folklore.
• Yes, maybe not everything though.
• Yes, with education.
• Yes.
• Yes.
• Yes.
• Yes.
• Clearly, Yes.
• Yes, many things already have changed.
• We are already changing by imitating other countries more developed. But we need to be original to have positive change.
• Yes, because we live in a world that constantly changes and humans have open minds.
• Yes, but we should know beforehand if what we want to change would be beneficial or no.
• Yes. We should continue with the good we have, and change the bad.
• Yes, we can change if we all come together.
Yes

5) Is culture located in the past, present, or in the future?

Pretest

Past
• Past
• Past
• Past
• Past
• Past and in the present because there’s tribes.
• Past, Present
• Past, Present
• Present
• All
• All
• All
• All
• All

60
• All
• All
• All, because we come from the past, and we go to the future, and the culture doesn’t lose everything.
• All, because each day we’re going to want to change.
• All. We can imagine the future.

Future

Posttest
Past
• Past
• Past
• Present
• Present, based in the past.
• All
• All
• All
• All
• All
• All
• All
• All
• All
• All
• All
• All
• All
• All
• All
• All—we have it when we’re born, we’ll have it when we die.
• All—it’s something we live.
• All—we can conserve it and better it at the same time.

Future

6) Are you a part of the culture? How or how not?

Pretest
No
• I am not part of the culture because I am not grown up, but I take part in past traditions.
• Not directly, but I give ideas that can realize themselves in the culture.
• Yes, because I celebrate certain festivals.
• I am part of the culture because I am Honduran and I know the cultural themes.
• Yes I am part of the culture because we are mixed since the ancestors and they have mixed with other cultures.
• Yes, we all form part of the culture either consciously or unconsciously.
• Yes, because our culture forms us.
• Yes, because I’m in high school to educate myself to form our own culture.
• Yes, since I’m a bit of our ancestors.
• Yes, because we are part of a people very rich in culture.
• Yes, because I have been brought up with culture.
• Yes, I am because I can paint a picture and make ceramics.
• Yes, because I can do different things.
• Yes.
• Yes, by helping others to do better in the future.
• Yes.
• Yes, because my life has culture.
• Yes, because I like to give suggestions to children who act badly.
• Yes, because I have my own life story, own way of living, and this is a culture, a custom.
• Yes, because I have love for the community, for work, and for the cultural acts in my country.
Yes

Posttest
No
• Not too sure, but I think so because I am Honduran.
• Yes.
• Yes.
• Yes.
• Yes.
• Yes.
• Yes.
• Yes.
• Yes.
• Yes.
• Yes.
• Yes.
• Yes, because I support certain activities.
• Yes, because I express all that is good.
• Yes, because I live here and can help to make it better.
• Yes because I share a lot of things with everyone else. And I like to paint.
• Yes because I’m a person whom has traditions and customs, and I am different than others.
• Yes because I’m part of society.
• Yes, because I talk with the youths who aren’t doing good things in order to change their actions because of this, I am important to the culture.
• Yes, contributing to our community, helping others do well.
• Or course I am because I practice customs and try to help the majority of Villa Santa and doing works such as the mural on the community center.
• Clearly, Yes!
• We all are.
Yes
Appendix B

7) What do you think about what you did in the History of the Culture class?

• It taught me how to value my culture and place where I live more. And it gave us a chance to realize what we have in our town and the people in it.
• Excellent because it made us think about what we have in our community as far as culture and what we need to cultivate to change for the better.
• Beautiful because we learned things of our culture through various projects.
• Very important, in that we learned that there is both good and bad in the culture.
• Good idea. We put into practice looking at our own culture to learn to drop the bad so that we can improve the good things and evolve positively.
• The class was very participatory. In no other class have we done a project that came out so “sensational.”
• Was great because it let us show how we care for our community.
• All was good because we learned new things and learned how to paint and draw.
• I learned that the culture is important, that getting people to respect it is important.
• Very important. Learned how to take photographs.
• Excellent. We made a mural that will let people imagine how Villa Santa was and how we want it to be in the future, to teach them how to improve our community and have pride for it.
• Beautiful. We learned how to do what we think by painting and drawing.
• It was a good work that let us contribute to the development of the community.
• We saw things that we had never before been able to know.
• Very practical and important.
• Learned things I never knew.
• Was excellent.
• Very excellent. It served to teach us how to be better humans.
• Very good because it makes us put our culture in an important place.
• It’s something that made me think about the important things and made me conscious of the other people here in Villa Santa.
• Learned a little bit more of our culture.
• We did a neat project and learned how to work to demonstrate and know the culture. Learned that I was equal to all others.

8) What effect will the mural have on the people of Villa Santa?

• Will teach people what was here, what is here, and what will be.
• Truthfully, in some it won’t have any effect. But in the smart ones, who look more into the future, I think that they will feel proud of their town and will want a better future.
• The people say we should take care of the mural forever.
• I think it will have an effect between positive and negative since many people say that it is very beautiful and well done, and others say that we just didn’t have anything else to do.
• Will make the people do better for Villa Santa.
• People I have talked to say it is good because it reminds them how Villa Santa used to be.
• Will show how Villa Santa was, is, and will be.
• It will make the people realize that it is up to them whether or not our future will be good.
• It will serve to motivate the population to put villa Santa in a position to shine and think of itself as a community that is important for us as well as the country.
• It will be attractive for people from here as well as for people who come to visit.
• It will have a big effect on those who have never thought of the past, present, or future of the town.
• The people will learn to change the way that they act and will desire to have a better culture.
• The people will see how it was, how it is, and will be, and will want to contribute to this good change.
• People will look at it and take care to demonstrate our culture.
• It will remind people how our loved Villa Santa used to be.
• It will entertain and show people the past, present, future of Villa Santa.
• An emotional effect when they see the beautiful paintings.
• Positive effect to get people to take care of the town and support activities.
• Think in the changes that Villa Santa had. To remember our culture.
• It will impress the people so that they realize we can change the culture through cultural project.

9) What effect do you want the mural to have on the people of Villa Santa?

• Positive.
• I hope the people of Villa Santa take care of it.
• I hope they take care of it.
• A prosperous effect that gives people hope to move forward and improve our thought on nature.
• Emotional when they see it. That they look and admire the past and want to help improve the future.
• A conscientious effect where we may take care of what we have, and that the people feel motivated to protect nature.
• That they see the changes that Villa Santa has had and suffered and that they too can help.
• I want them to know that only when we don’t do anything is when we realize nothing. When you do something you know all so I want the mural to give an impression that caring is an important part of our culture.
• That it shows people how important Villa Santa is and how we can move together if we all move together in one direction.
• I would like it to motivate people to move ahead.
• That it shows people that our community is worth it.
• That they know how we care for our community.
• I hope the changes are in the form of being, caring more, working toward a better cleanliness.
• That it shows that our culture is important, that we must improve the quality and bring our beautiful culture higher.
• I hope the people care for the mural, and for the natural resources.
• Gives people the idea to improve the town and feel proud of it.
• That the people work to have a better future.
• I hope it has a very positive effect.
• I hope everyone begins to realize the treasures we have in our community.
• That the people begin to realize what we have and start caring for our community and improving it, especially its natural beauty.
• That we learn to care and value the little that we have so that we may have a community beautiful in culture.

10a) How important is pride in having a healthy town?

Choose a number
Not important -3 -2 -1 0 1 2 3 Very important

All responses chose number 3.

10b) Why or why not is pride important?

• It’s important because to have a safe town is marvelous, and it would be a great thing for all those who live here to live in a place that is safe, strong, and, more than anything, respected.
• It’s important because with it we can contribute to the development of our country.
• We have to feel proud of the place where we live because we are the only ones responsible for how it is.
• It’s important when it is positive. It’s good to feel proud of how our town is, but it would be something even better to use the pride to improve and contribute to the town.
• It’s important because it’s great to have a good town.
• It’s important when it can make us want to move ahead.
• Because if we don’t have pride we don’t have motivation to move ahead or feel like leaders. So we must look not to have a low self-esteem.
• Because Villa Santa is a beautiful community and we should be proud of it.
• To feel agreeable to visit a town that is safe.
• It’s important because it helps us to be leaders of our society and maintain our culture.
• We should feel proud of what is around us because it is important. But to feel that we are better than the rest isn’t important because in front of God we are all equal.
• Being cocky is the worst thing in life.
• Sometimes pride is important, other times it makes people break.
• It’s important because it is where we learn the importance of good actions.
• It’s important because it helps to grow into a professional.
• It’s important because with it we can do good things for the community.
• It’s important because when one is proud, they do good things for their country.
• It’s important because we can know what we are and realize we have the right to have opinions. It’s good to be proud to be from Villa Santa and part of the culture.
11) What does the word “leader” mean to you?

• Someone who leads and is accepted.
• Can do what others can’t.
• Do things well, be a star, be intelligent.
• Be integrated in what my community needs. Be capable of moving forward. Work for my community.
• The person in charge of leading a group.
• A person with good qualities and represents the rest in the group.
• It’s he who leads a group in a determined project.
• Someone in charge, distinct, one who wants actions.
• To help, share, talk, discuss, confront, organize so that the rest of the people are organized.
• It means that I’m important and that I live to progress and to make the rest of the people progress.
• To be a good person towards all others, whether it be little kids, young people, adolescents, adults, or senior citizens.
• To be first in all.
• Means that what they propose, they finish, and they are very pensive.
• It means that all can be attained with work and effort.
• Somebody very important in a society that helps us to be respected.
• Someone important in your family, organization, town, that always searches for the best for that group.
• Someone who has accomplished much in life and makes other people feel good.
• Someone excellent in everything they try.
• Someone that can lead a group to do great things when volunteerism is present.
• Someone what sets goals and accomplishes them.
• Someone who can speak for all the needs of the group.