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ENVIRONMENTAL EDUCATION AT ITS BEST: HELPING AT-
RISK LATINO YOUTH HELP THEMSELVES AND OUR
ENVIRONMENT

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Education:
Environmental Education

by
Gregg Walter Mitchell

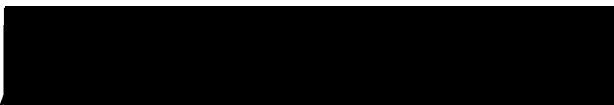
June 2005

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A Project
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California State University,
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by
Gregg Walter Mitchell
June 2005

Approved by:



Darleen Stoner, Ph.D., First Reader



Thom Gehring, Ph.D. Second Reader

June 2, 2005

Date

ABSTRACT

We have witnessed in the last 20 years a huge shift in California's demographics, especially in the southern portion of the state. Latinos are becoming the majority, not only in our schools, but in the general population. Some Latino youth of this segment of society have adopted a lifestyle associated with gangs, drugs, and violence. The label applied by educators to this sub-culture is commonly referred to as "at-risk."

The purpose of this project is to help at-risk Latino youth to understand that it is possible and preferable to become educated and successful in life. To accomplish this, we must attempt to remove the stigma associated with being academically successful.

This project focused on four fundamental teaching strategies to specifically help at-risk Latino youth: providing familiarity with nature; the employment of constructivism; emphasis on English language development; and making learning more relevant to these students' daily lives.

Environmental education may be the conduit by which at-risk Latino youth will adopt as a "fashionable alternative" to acquire the knowledge and skills to be learned and productive citizens.

ACKNOWLEDGMENTS

I hereby acknowledge Dr. Darleen Stoner who unleashed my creative energy to help my students help themselves through environmental education.

I also acknowledge Dr. Thom Gehring who provided me with many of the skills necessary to successfully complete this project and who filled me with a sense of empathy toward the subjects of this project.

DEDICATION

I dedicate this project to my mother, Carol Austin Mitchell, a once-struggling single parent, who through her industriousness and ingenuity became a self-made millionaire. On her own, she raised me to be benevolent and taught me success is attainable through hard work.

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outcasts, while appearing dumb is considered more socially cool" (Natale, as cited in Armstrong, 1998, p. 28).

The purpose of this project is to intersect the world of at-risk Latino youth with environmental education to help combat the social corruption that hinders the full potential of these youth. The tenets of effective environmental education can provide students with meaningful connections to their natural environment, as well as with their communities, families, and peers. Environmental education may be the missing link in the effort to provide meaning to the world of at-risk Latino youth.

The rudimentary objective of this project is to help at-risk Latino youth help themselves find a greater purpose in life.

The bottom-line purpose of environmental education, in the view of a number of its supporters and many of its practitioners, is the promotion of responsible individual and societal environmental behavior. This follows from a stance, taken by many, that the primary purpose of education is to promote changes in behavior. (Disinger, 1997, p. 35)

Moreover, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) conference at Belgrade, Yugoslavia, in 1975 clarified the focus of environmental education with the following objectives:

To foster clear awareness of, and concern about, economic, social, political, and ecological interdependence in urban and rural areas;

To provide every person with the opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment; and

To create new patterns of behavior of individuals, groups, and society as a whole towards the environment. (UNESCO 1978, p. 35)

In this project, principles are proposed to implement the objectives set forth by UNESCO in a way to encourage at-risk Latino youth to resist negative influences and to aspire towards personal excellence in their own lives.

These principles are based on a review of relevant literature and selected environmental education programs that may provide the requisite tools to combat the at-risk/gang ideology. Although sixth-grade students are the targeted population for this project, the principles cited herein can be applied to other grade levels.

Accordingly, this project represents a multifaceted approach to the issues, thoughts, and feelings of at-risk Latino youth. I have been an educator for 22 years. The vast majority of the students I have taught, and continue to teach, are of Latino descent. I found my long immersion within the Latino community to be most helpful in researching the educational dynamics of LA RAZA (The Race/The Mexican People). This immersion process involved the formal teaching of Latino students, as well as my attendance at various family functions of students, such as baptisms, birthdays, graduation ceremonies, athletic events, First Communions, Quincenerras, and weddings (Engelhardt, 1998).

Other research avenues I explored were the "real-lifestyles" of at-risk Latino youth and adults who were not successful in the traditional educational system. At times I found myself in places, and with people, that were potentially dangerous. However, I believed that to search for "the truth" on which this project is premised, I had to assume this risk. Consequently, I found myself in sacred houses of worship and dilapidated houses of the economically disadvantaged. I visited distinguished halls of justice and the barren alleys that mete out vigilante justice. I was the guest in illuminated first-class hotel

ballrooms and darkened rooms in the barrio. I witnessed learning in some of our finest institutions of education and the brutal lessons taught in the streets. Finally, I was a spectator at athletic events held on finely manicured fields of green and on lifeless, brown, trash-strewn vacant lots. These sights, though not often attractive or sanitary, represented to me the best sources of insight gained during the last 22 years while being immersed and teaching in the Latino community.

The significance of this project is clear. Our society has witnessed the crime and violence perpetrated by disenfranchised youth who believe their existences are meaningless and the walls of the proverbial cauldron too high to climb. We must seek and employ viable alternatives that are pedagogically sound. This project does just that. I delineate and propose specific strategies by which environmental education can be employed to enable at-risk Latino youth to climb out of the cauldron of hopelessness and into the seas of self-actualization and productivity.

I am not alone in recognizing the need for addressing the needs of at-risk youth. On February 2, 2005, President George W. Bush, in his State of the Union Address to Congress, stated, "Taking on gang life will be one part of outreach to at-risk youth...and I am proud that the leader

of this nationwide effort will be our First Lady, Laura Bush" (Bush, State of the Union Address, 2005). The "outreach" of which President Bush speaks should begin with environmental education.

CHAPTER TWO
LITERATURE REVIEW

Overview

This project is premised on the values of environmental education for at-risk youth, specifically Latino students attracted to gangs and for whom traditional educational practices have not worked. The literature review defines and addresses characteristics of environmental education, and applies applicable research to at-risk Latino youth. It employs educational "principles" for implementation that are used as organizational headings, with a statement by the author at the end of each subsection to provide additional understanding. These principles are then further illuminated in chapter three as applied to visits to environmental education sites in Central and Southern California.

Principle One: Provide Familiarity
With Natural Settings

For many at-risk, urban Latino youth and gang members, their territory, or neighborhoods (commonly referred to as "hoods"), provide a sense of belonging and identification premised on familiarity. According to

Kinnear, "Territory plays a critical part in the life of many gangs" (1996, p. 18). Also, Knox stated, "Most gangs do arise and have a local network with a specific geographical pattern of activity" (1991, p. 17).

Accordingly, natural settings in which environmental education often takes place may be perceived as foreign and therefore emit a sense of fear or even dislike for such places, and as such present a major obstacle to learning. This is too often true when applied to urban youth, especially at-risk Latino youth. "Individuals who have been exposed directly to natural environments, their interpretations of these complex and dynamic areas must be based on whatever they have learned from indirect sources such as horror movies, amusement parks, television shows, zoos, museums, and 'the classroom'" (Bixler, Carlisle, Hammitt, & Floyd, 1994, p. 26).

Furthermore, unless at-risk youth are provided alternative opportunities to experience new and different environments, they rarely venture outside their own backyard. "A review of research literature on fear suggests that urban children in wild land areas will typically respond negatively to these environments because so much of the area is unknown and highly novel" (Bixler et al., 1994, p. 25).

Thus, a basic method of helping at-risk students to overcome their fear of natural areas is to provide opportunities for them to venture forth in nature. These opportunities provide the climate, setting, and safety for at-risk Latino students to immerse themselves in natural settings and test their own negative perception about rural environments. Several trips are necessary to adequately foster understanding and respect for their environment and dispel the general mystique among at-risk Latino youth about foreign or new settings.

More prolonged and intensified outings may aid in promoting a sense of community and an atmosphere of caring which, in turn, are necessary for diverting at-risk youth from embarking on a socially deviant lifestyle. More precisely, if adolescents discover a sense of belonging through specific outdoor and wilderness experiences, then perhaps their sense of alienation at school and at other important settings will diminish. If adventure education provides an atmosphere in which students experience a sense of belonging, those students may find more balance in their lives, and an enhanced perception of self-reliance and

personal control over their lives. (Cross, 2002, p. 249).

However, wilderness outings, as brief as one day, have been shown to increase participants' sense of belonging (Arnould & Price, 1993; Bannister, 1996). The human need to belong is a natural phenomenon and can assist at-risk Latino youth to reach outside their typical urban environments to meet this need.

Related to the need to belong is the need to be "connected." Connections to people, places, and things is incorporated in the next stated "principle."

Principle Two: Employ Constructivist and
"Environment as Integrated Context"
Strategies To Provide a Sense
of Connectedness

It has become abundantly clear that traditional institutions of education have failed at-risk Latino students. "For Mexican-Americans, schools have historically often been as much a hindrance as help for youth aspiring to productive adulthood" (Vigil, 1988, p. 56). Moreover, the inclination of at-risk Latino youth to join gangs is a natural extension of their perception that education is simply a waste of time. "The gang is an expected outgrowth of social institutional arrangements and grows as a new fabric to community infrastructure when

these social institutions are inadequate to meet human needs" (Knox, 1991, p. 135).

One major tenet of environmental education is "connectedness." "The heart of environmental education is interdependence, whereby everything is connected in some way. This connectedness can be applied to self, peers, school, home, and community, thus providing a natural way to expand the curriculum to meet the needs of at-risk students" (Stoner, 1990, p. 65) Thus, environmental education can be applied to meet the needs of at-risk Latino students who often feel apathetic due to this sense of being disconnected to traditional forms of education.

"Relevant and motivational curriculum is often based on activities which build on the concept of self as unique and at the same time as an integral part of everything" (Stoner, 1990, p. 70). This connectedness is inherent in constructivist learning. Constructivism can be defined as the "...supporting of multiple perspectives or interpretation of reality, knowledge construction, context-rich, experienced-based activities" (Jonassen, 1991, p. 28). In other words, constructivism invites learners to delve inside their value system and associated beliefs in order to "construct" new knowledge from the information being presented. Environmental education,

through its linkage of education to understanding the environment supports the constructivist approach. Accordingly, at-risk Latino youth may be able to link the connection between the knowledge derived from these opportunities and their ancestral heritage which is replete with examples of productive uses of the environment.

The success of 40 schools that used the environment as an integrated context (known as EIC) for teaching and learning provide insight into the possible effectiveness of this constructivist strategy for at-risk Latino youth. EIC's educational premise are based on "...a framework for interdisciplinary, collaborative, student-centered, hands-on, and engaged learning" (Lieberman & Hoody, 1999, p. 11). Thus, EIC's precepts for learning support constructivism in that they allow students to find their own meaning of what is being taught.

EIC also fosters positive peer relations. "As students work together, mentor their peers and younger students, and observe teachers working in teams, they have the opportunity to develop interpersonal skills that will serve them throughout their lives" (Lieberman & Hoody, 1999, p. 9).

The goal of developing interpersonal skills is another need for at-risk Latino youth because of their inability to co-exist peacefully with classmates. "When gang members are at school...the potential for violent crime is far greater than for any other group of people" (Office of the Attorney General of the State of California, 1994, p. 6). Consequently, these violent altercations result in the suspension or expulsion of many at-risk Latino youths. More needs to be done to diffuse the natural inclination of at-risk youth to use violence as a first resort. The continued disillusionment by at-risk Latino youth with traditional educational practices is patently clear. "For a small but considerable portion of the Chicano underclass population, the gangs have taken over where other influences have failed" (Vigil, 1988, p. 35).

Another fundamental premise to teaching and learning within the EIC model is that of collaboration of dyads - teacher with teacher, teacher with student, and student with student. For perhaps the first time, at-risk youth will observe relationships beyond the confrontational patterns they have witnessed during their formative years. "As students work together, they learn to share ideas, discuss their reasoning, and develop new ideas that emerge

from team discussions" (Lieberman & Hoody, 1999, p. 9). Using these interactions allows at-risk students to develop healthy relationships combined with a sense of being "helpful" while learning about their environment, communal awareness, and acquiring teamwork skills.

Related to the positive peer interaction inherent in environmental education settings is the basic need to feel "wanted."

Young people who are considered high risk will naturally seek someone with whom to relate, especially if this person or group meets with their need to be wanted. At-risk youngsters will go to great lengths to become part of a group, even if it means they must harm themselves or others. Peer helping programs take advantage of these forces in a positive way by meeting the critical need to bond. (Quigley, 2004)

Environmental education can begin to meet the human needs of all students, especially at-risk Latino youth. The need to feel connected to people, places, and things are primary forces driving at-risk Latino youth to join gangs. By addressing these needs, environmental education can supplant gang membership in positive ways. The sense of self-efficacy being advanced, another challenge for

environmental education is to enhance academic skills to further the objective of self-actualization of at-risk Latino youth. Infusing specific English language development strategies to increase reading, writing, and speaking skills are addressed under the next "principle."

Principle Three: Incorporate English Language Development To Enhance Acculturation

A major factor associated with the relatively high incidence of academic failure, particularly among Latino at-risk students, appears to be the difficulties associated with acculturation. These issues include, but are not limited to, social economic status, institutional discrimination, and language barriers (Burman, Hough, Karno, Escobar, & Telles, 1987). For the purpose of this project, the author will specifically focus on academic barriers, particularly those barriers associated with English often being a second language for at-risk Latino youth. "Based on past educational research patterns and equivalent ones that are emerging, society most likely can expect lower levels of academic achievement to occur among English Language Learners (ELL) and significantly higher numbers of ELLs to drop out from the educational process" (Fredrickson & Anderson, 1999, p. 26). This type of educational stress can further compound a student's poor

self-efficacy as addressed in chapter two. "Students can become easily discouraged and anxious about academic learning tasks, especially when expectations for their academic success are based on their mastery of conversational English" (Fredrickson & Anderson, 1999, p. 28). This has a negative effect on the student's self image, which may result in a distorted sense of self. The result is a self-fulfilling prophecy of poor academic performance. Consequently, "Failing in school has over and over been shown as a primary risk factor for kids to join gangs and become involved in juvenile delinquent behavior" (Valdez, 1997, p. 5).

Environmental education is designed to provide constructivist learning while promoting English language development. This allows students to integrate their own personal experiences into their learning processes. The internal conceptualization that occurs "personalizes" their learning thus reducing the frustration, boredom, and failure rate among at-risk Latino youth. This is in contrast to methodologies commonly associated with more traditional classroom instruction.

In addition, the constructivist nature of environmental education can assist at-risk Latino youth to increase their English language proficiency.

"Environmental education's constructivist orientation, which is active, hands-on, and student-centered, embodies instructional conditions that are highly compatible with the needs of ELL students" (Fredrickson & Anderson, 1999, p. 30).

Moreover, as delineated in chapter two, the collaborative and interactive components of environmental education foster the English language development of Latino students and promote peer interaction and appropriate interpersonal skills between and among at-risk Latino youth. Accordingly, it is "...important that they (ELL) work in mixed language groups...while constructing knowledge, thus encouraging the use of both languages for the purpose of academic learning and language development" (Fredrickson & Anderson, 1999, p. 34).

Aside from the fact that at-risk Latino students share a common heritage, the positive and appropriate social interactions that occur during environmental-based lessons may strengthen the cohesiveness among these youth. "Part of the bond between environmental education (EE) and English Language Development (ELD) can be found in their shared emphasis on connecting a lesson's content with students' prior knowledge" (Fredrickson & Anderson, 1999, p. 37).

The end result is that students grow both socially and academically within an environment that is familiar, self-efficacious, and fosters English language development. Principle four addresses the relevancy of these feelings and skills in the daily lives of at-risk Latino youth.

Principle Four: The Relevancy of Environmental Education Back in the Hood

A primary source of frustration and boredom among at-risk Latino youth is that they are unable to transfer the current standards-based curriculum into their own lives. "The reason many students do not do better in school is that these students do not see the relevance of such learning to altering and improving their immediate lives in the community" (Evert & McAvoy, 2000, p. 4). The advantage of environmental education is adherence to the California State education standards while maintaining relevance in the everyday lives of at-risk Latino youth, teaching with cultural sensitivity, as well as reinforcing English language proficiency. As Disinger stated,

Educational quality may be enhanced through environmental education in a number of ways, among them taking advantage of its inherent interdisciplinary nature through multifaceted

conceptual schemes, providing mechanisms for promoting higher-order thinking skills, focusing on (interdisciplinary) environmental literacy, and fostering the development of responsible environmental behavior (p. 31).

The relevance of environmental education further extends to the cognitive, verbal, and emotional development of at-risk students.

Filled with academic language and content area from various subject areas, and requiring the use of different cognitive processes, environmental education lessons generally provide a certain amount of comprehensible input and therefore, a comfortable learning experience for students still in the process of acquiring English as a second language. (Fredrickson & Anderson, 1999, p. 30)

How can this type of education improve students' day to day lives? Educational programs that have proved to be most advantageous for at-risk youth are the ones that "combine intensive, individualized training in the basic skills with work-related projects" (Druian & Butler, 1987, p. 4). Moreover, "when the relation between education and work becomes clear, most of these potential drop-outs can

be motivated to stay in school and perform at a higher level" (Druian & Butler, 1987, p. 5).

Another major concern in the daily lives of at-risk Latino youth is the non-recognition of "risk." The risks of incarceration or being killed are assumed daily by these youth. Environmental education helps students to recognize "risk factors" through decision-making activities, as previously discussed. "Understanding one's perception of risk therefore, is paramount to understanding one's risk-taking behaviors and, ultimately, the mediation of choices among alternative actions related to the hazards at hand" (Reichard, 1993, p. 11).

At-risk Latino youth need to understand the gravity of the life or death decisions they make on a daily basis. Within the realm of environmental education lies a possible solution for such behaviors. "Wilson (1990) argued, therefore, that risk instruction should take place within the context of curricular already in place. It is easy to envision such an element in programs that currently have separate environmental science courses or other courses that deal in part with the environment" (Reichard, 1993, p. 11).

Environmental education in general, and EIC in particular, as previously noted, may provide the

transitional help, constructivist activities, and risk-avoidance skills needed by at-risk Latino youth to develop into productive citizens. The ultimate objectives of environmental education are for these students to find learning relevant and worthwhile in their day-to-day existences, and to save their lives.

CHAPTER THREE

IMPLEMENTATION OF RESEARCH-BASED PRINCIPLES

CORRESPONDING WITH SITE VISITS

The integral aspect of this project includes hands-on and interactive experiences at several environmental education sites throughout the State of California. These programs include the following institutions:

- Yosemite Institute, Yosemite: This residential learning program concentrates on endangered plant and animal life is located in Yosemite National Park. In addition, there is a residential teaching program for educators.
- Chapman Ranch, Mt. Baldy: This day program, located in the San Gabriel Mountains, interweaves history and local Native American culture.
- Orange County Outdoor Science School, Forest Falls: This residential facility is located on Mill Creek bordering the San Geronio Wilderness in the San Bernardino National Forest. Conservation of plant and animal life is the focus in conjunction with the interconnectedness of people and the environment. Local history and

the importance of gold mining in Southern California during the mid-1800s is emphasized.

- The University of Southern California (USC) Wrigley Institute for Environmental Studies, Santa Catalina Island: This residential program tailors the curriculum needs of various grade levels in relation to the learning objectives set forth by the California State Standards.
- Catalina Island Camps, (now Environmental Leadership Program) Santa Catalina Island: This camp offers three- or four-day programs that concentrates on local island history and resource conservation.
- Camp Oakes, Big Bear: located in Big Bear in the San Bernardino National Forest, this residential camp caters to individual school districts September through June that contract with the facility in order to foster the district's individual curricular goals in accordance with California State science standards.
- Wildlands Conservancy, Oak Glen: A day program located at approximately 4,000 elevation ft. in the San Bernardino Mountains bordering the San

Gorgonio Wilderness, this program is designed to meet the California science standards at the specific grade level of the students.

- St. James Reserve (owned by University of California, Riverside), Idyllwild: Located in the San Jacinto Mountains above 5,000 elevation ft., this residential site focuses its curriculum on plants, ecology, and conservation.
- Alvarado-Jensen Ranch, Rubidoux: This day program focuses on local history, Native American culture, historical uses of the local environment, western development, and the connectedness of each in a rapidly changing society.

These institutions were chosen because of their varying degrees of residential versus day availability; the depth and focus of each for curricular and grade level content; different geographical location and corresponding differences in ecological strata; and relative ease of access for schools located in Southern California.

The author has referred to the four principles incorporated in the literature review: (a) the providing of familiarity with the natural environment; (b) the employment of constructivist teaching strategies; (c)

incorporation of English language development; and (d) the provision of relevancy to the everyday lives of my target population, at-risk Latino youth. In some way, all of the environmental education programs visited address the principles set forth in the literature review. However, no program was identified that emphasized all of the principles which represent the foundation of this project.

The implementation of these principles fit a wide variety of options for classroom teachers. Specifically, the approach presented is three-pronged:

- 1) Employ relevant classroom lessons and strategies as set forth above,
- 2) Use one of the day programs described above, or
- 3) Plan a trip to a resident outdoor school.

The first of these principles is to familiarize at-risk Latino students to "natural" places in our environment. By virtue of the locations of all of the above-described sites, familiarity with and to the environment occurs "naturally." All of the educational programs are geographically located in areas that would support the inspiration of today's young people to become "nature lovers." Most of the sites are located in mountainous and oceanic environments in Southern California.

Each site provides time during the instructional program to explore the terrain and the locale of the camp. This appears to raise the comfort level of the attendees. At each site, the teacher or leader takes attendees away from the housing facilities where the attendees are given the opportunity to experience hands-on interaction with the environment.

Several sites use these outdoor learning opportunities for the attendees and their leader to become acquainted. For example, Orange County's Outdoor Science School has the students make "tree cookies" with each student's name on them. Accordingly, these opportunities allow students to develop familiarity with natural environments while at the same time providing a realization of a whole new world that previously did not exist in the students' psyches. The Yosemite and Catalina sites provide the most dramatic evidence of the abundant beauty of nature, and are located just hours from the unattractive environments where many at-risk students reside.

Finally, once these explorations take place, fear factors (bears, snakes, etc.) imbedded in the imaginations of students are concurrently dispelled. In short, providing evidence that natural environments are not to be

feared, but cherished and worthy of protection, begins to lead students to realize that there is beauty in the world and that this beauty exists all around them.

Educators have historically struggled to make learning "relevant" which represents the second principle set forth in the literature review. The common inquiry by students is, "Why is what we're learning important and what in the hell does it have to do with my life?!" Students introduced to nature programs vis-a-vis environmental education readily realize that "the stuff" they learn in the classroom has a direct correlation to real life.

Success, historically, fosters positive individual (and group) feelings of self-worth (Stoner, 1990, p. 65). This improved self-image tends to build a sense of empowerment. With empowerment comes hope and faith, the kind that reaffirms the religious tenets believed and practiced by the vast majority of Latino families struggling to raise "good" kids under difficult circumstances. Simply put, any familial connections we can make to what our students are learning at school constitutes the best relevancy of all. Educators are fully cognizant that the most important education begins in the home.

One noteworthy example of providing relevancy to the lives of our target population includes the preparation of a meal at the Alvarado-Jensen Ranch. The students are able to make a meal from scratch which features corn tortillas, a common food staple for the ancestors of Latino students. A similar lesson taught at the Orange County Outdoor Science School is the medicinal use of plants by Native Americans still practiced by the local Cahuilla and Serrano tribes. This connection becomes apparent to many Latino students when they realize their families continue to use the homeopathic herb-based remedies in their homes today as they have for generations.

The third principle incorporated into this project is English language development. The programs visited reflect the above-described research and the inherent advantages of environmental education. Many of the environmental education programs visited have a "no paper and pencil policy." However, many teachers upon returning to the classroom from their environmental education experience ask the students to reflect and record their experiences and what they learned. This assists students to visualize growth, their experiences, and provides important feedback to the teacher. This does not detract from the hands-on

nature, and thus, language-rich advantage of environmental education.

Once again, many of the listed programs incorporate pre- and post- briefings for most activities to reinforce the goals and objectives of a lesson. Invariably, students are given many opportunities to reflect and discuss the value of something they learned. Often, the discussion reinforces cooperation with and between peers and the consequential fostering of critical thinking skills. In the vast majority of lessons, written assignments associated with learning in the wilderness can be taught and learned more effectively after a site visit in the form of a debriefing. More importantly, students are able to associate the written assignments to a more solid frame of reference thanks to first-hand experience. The ability of any student to "access prior knowledge" tends to make any classroom assignment more meaningful, more successful, and more educational. The limited use of on-site writing assignments, which can be particularly difficult for some ELD students, further promote the attractiveness of environmental education to at-risk Latino students.

The final principle to help reach and assist at-risk Latino students immersed in environmental education is the employment of constructivist teaching strategies. This

recommendation represents further environmental education techniques that go above and beyond the aforementioned effective ELD teaching strategies. This diverse strategy helps at-risk Latino students to accept education as a viable means to be successful by the use of "interconnectedness" as previously described. The environmental education sites I observed used "prior knowledge" to promote comprehension.

Many of the ancient traditions previously described continue to be an integral part of the everyday lives of at-risk Latino students. The emphasis of this project is centered on at-risk Latino youth, and as such, the importance of interconnectedness and prior knowledge represents the "ideal fit" of students' pride and interest stimulated by their knowledge base.

In addition, related to connectedness is the teaching strategy of constructivism. Intrinsically rooted in environmental education, the research literature indicates that students are better equipped to "construct" their own interpretations of the curricular material being explored. This strategy is particularly effective with Latino students due to their relative breadth and depth of understanding of their unique heritage. It would seem to follow that if the prior experiences belonging to at-risk

Latino students can be infused into environmental education more effectively, the potential benefits would be immense.

The environmental programs visited appear to contribute to the personal self-image of students who participate in the programs. For example, Chapman Ranch's program incorporates an abundance of Native American folklore that illustrates the lifestyles of the ancestors of many of our target population. Legends associated with the early inhabitants of the San Gabriel Mountains combined with their day-to-day chores give at-risk Latino students an honorable sense of their heritage.

Chapman Ranch combines these lessons with hands-on experiences simulating the making of baskets with native plants found in the area. Through follow-up discussions, students were observed to conclude the resourcefulness of native people in using the environment. Similarly, these students can begin to recognize the day-to-day hardships their own families face in today's society. Clearly, appreciation for and connection with our students' reality is a potent force in forging a more productive and meaningful populace.

The epitome of diverse teaching instruction is also displayed effectively in the U.S.C.-Wrigley program on

Catalina Island. This site offers the opportunity for students to study the early inhabitants' use of the ocean to sustain its people. From food to weapons, the waters surrounding the island provided the resources necessary for its inhabitants to survive. For example, the large population of sharks available provided the fat necessary for food preparation. In addition, sharks' teeth were used to create weapons and tools.

USC Wrigley also provides the most on-site scientific equipment to further enhance the study of Catalina Island's natural resources. Labs complete with computers, microscopes, and other technological resources allow students to further investigate the importance of these resources. This technological component can serve as an extension after the site visit and accentuate further learning back in the classroom.

The other unique educational institution that the author was able to carefully observe was that of the Good Will-Hinckley School for Boys and Girls in Hinckley, Maine. This residential school serves as the educational and personal home for a variety of students for a variety of reasons. Good Will-Hinckley is a faith-based institution that was founded in 1896 to address the needs of students facing homelessness or whose parents

voluntarily relinquished custody. Students live on-site in cottages operated and supervised by married couples to emulate a "family setting" as much as possible. Good Will-Hinckley students are provided with a vast array of extracurricular activities in addition to the standard curriculum.

The most significant educational feature of this impressive school is the involvement of the students in the raising, care, and marketing of a number of animals and crops. Accordingly, many of the tenets of environmental education are applicable to Good Will-Hinckley's program. Students are immersed in an agriculture-based curriculum in which all of the duties they perform are integrated into classroom instruction. The guidelines and suggestions associated with the principles seem to neatly correspond to the teaching strategies used at Good Will-Hinckley.

First, the students are provided with a familiarity of a rural environment in the North Central region of Maine. Second, the curriculum is highly relevant to the students as a result of the connection between their work and academic instruction. Finally, diverse teaching strategies are employed as a natural consequence of the hands-on foundation of the educational program. The only

variation from the principles set forth herein and associated with this program is the lack of specific English language development teaching strategies. The reason for this inapplicability is that the vast majority of Good Will-Hinckley's students come from English-speaking backgrounds.

In conclusion, all of the above-described educational programs incorporate some of the teaching strategies inherent in environmental education. Once again, however, none of the programs integrate all of the principles emanating from the applicable literature. The design of the project allows for further research into an existing environmental education program, or implementation thereof, in which all of the teaching strategies as described above are tailored to the specific and unique needs of at-risk Latino students.

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