

MENTORING: POSSIBILITIES FOR ENHANCING  
ECOLOGICAL EDUCATION

by

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## An Abstract of the Thesis of

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## ECOLOGICAL EDUCATION

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Mentoring is emerging as a respected means of reaching out to juveniles at risk, as a method of incorporating minorities into new educational and career fields, and as a process for transmitting valuable skills in the corporate arena. However, very few mentoring programs strive to improve long term environmental conditions. Ecologically-based mentoring facilitates the transfer of intergenerational environmental knowledge, increases the use of traditional skills, expands participant knowledge and involvement in local systems and community projects, and provides a means of better understanding diversity. The impact on the environment can be immense as participants learn alternative environmental solutions, reduce consumerism and increase the pool of locally available skills while also contributing to restoration and mitigation activities. This study uses a literature review and exploration of environmental and educational theory to consider the potential for mentoring as a practical means of furthering environmental knowledge to address the approaching ecological crisis.

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## CHAPTER I

### LITERATURE REVIEW, MENTORING TRENDS AND USES

Mentoring, an intentional, mutually-beneficial relationship between a parental figure and a child, an expert and an apprentice, a teacher and a student, or a spiritual leader and a protégé, is an educational and social tool used to achieve specific, predetermined goals. Those being mentored gain from the wisdom, experience, and skill of their mentors. They glean new perspectives and new opportunities from the partnership. Meanwhile, mentors renew their spirit, learn new professional and problem-solving techniques, and gain status and influence in their community. Participants on both sides of the mentoring relationship benefit from time spent exchanging ideas and interacting through a variety of activities.

Although mentoring as a broad concept is not new or innovative in the United States, it has, over time, taken many forms with different intended effects. The many forms of mentoring can be categorized, generally, into four distinct areas that specifically correspond to expected outcomes. The primary use of mentoring as a method of intervening into the lives and circumstances of at-risk youth and teens already in the juvenile justice system is well established. In this case, mentors strive to dramatically change youth attitudes and behavior so that youth are more successful according to societal norms and are able to avoid violent or addictive behavior. High profile programs like Big Brothers Big Sisters of America exemplify this approach in which an older adult acts as a surrogate parent, guide,

support or friend to an adolescent who qualifies as at-risk according to pre-approved criteria. Programs such as these boast of incredible success in changing young lives for the better.

The other three most common forms of mentoring generally correspond to skill transfer. Teacher education has used mentoring for many years as a means developing professionalism in new teachers. Most university-level education programs require their students to complete an internship with a collaborating teacher in an institutionalized version of mentoring while, increasingly, school districts are initiating their own mentoring programs. In this case, the expected outcome is better classroom management and higher teacher retention rates. Programs designed to involve minorities in education and other career fields in which they are underrepresented are a new and rapidly growing application of mentoring. In this context, the term minority refers not only to ethnic minorities but also to white women and the physically, mentally, and emotionally disabled. Here, increased assistance and professional guidance within the field provides access and information needed to enter a particular specialty. Outside of the education field, corporations integrate mentoring into their training regimes to help newly hired or newly promoted employees adjust to corporate culture.

Mentoring in all of its applications rightfully claims many successes. However, mentoring still holds unrecognized potential especially in the area of ecological education. The purpose of this thesis is to explain why and how we can expand the use of mentoring as a means of establishing a much needed environmental ethic in Western

society. However, we must first explore current mentoring practices including their benefits, strengths and weaknesses.

#### Primary Use of Mentoring: Working with At-Risk Youth

The most widely supported use of mentoring is as an intervention for at-risk youth or juvenile delinquents (Grossman and Tierney 1998; Reno *et al.* 1998). The idea behind the concept is that those youth who are likely to have problems at school and create problems for the community at large are youth with less than ideal home lives and few support structures. Researchers looking at factors relating to youth delinquency write that ideally, caring and productive communities provide all members, regardless of age, with roles and responsibilities that result in the mixing of generations. However, in many of today's communities, youth are isolated from other generations especially the true community elders; youth are not socialized into the larger community structure (Taylor and Bressler 2000; Grossman and Tierney 1998). Researchers assert that opportunities to engage in the community, such as those provided by some mentoring programs, give youth the ability to solve real problems, learn new skills, gain a sense of independence, increase their self-esteem and find hope for the future (Taylor and Bressler 2000). According to these researchers, mentoring youth growing up in less than ideal social environments is one solution to larger community problems.

University researchers are not the only ones investing in mentoring as a means of preventing youth delinquency. The United States Federal Government believes that mentoring is a highly effective tool in lowering and eliminating juvenile crime. The Office

of Juvenile Justice and Delinquency Prevention (OJJDP) initiated the Juvenile Mentoring Program (JUMP) in 1992 through an amended act of Congress (Reno *et al.* 1998). The money set aside through JUMP goes to organizations that provide mentoring as a primary aspect of their service provision to youth at risk of delinquency, involvement in gang activity, or educational failure (Reno *et al.* 1998).

According to OJJDP, the main problems that truly jeopardize the ability of American youth to become productive adult citizens are rising alcohol and drug use as well as increasing school dropout rates (Reno *et al.* 1998). In the 2002 report on the condition of education, the United States Department of Education reports that absenteeism of at least one day due to cutting of classes rather than illness ranges from 11% to 33% nationwide depending on student grade level while the high school dropout rate hovers right at 11% (Wirt *et al.* 2002). The report also shows that 12% of all American students aged 12-18 have experienced some form of victimization at school via gang violence or other forms of abuse (Wirt *et al.* 2002). Besides the prevalence of drug abuse, violence, and school failure, the government cites several other risk factors in its report on the efficacy of juvenile mentoring. The incidence of poverty, family conflict and failed community relationships are risk factors often exacerbated by the fact that families are now isolated, alternative child care is needed as more family members enter the workforce, and divorce rates have increased creating more single parent families (Reno *et al.* 1998). The programs that are awarded JUMP money vary greatly in their approach, structure, and use of mentoring but the overriding goals are to give youth support as a preventative measure to reduce youth delinquency, violence and addiction.

Of all the mentoring programs aimed at preventing youth delinquency nationwide, Big Brothers Big Sisters of America (BBBS) is probably the most well known and well respected program in the United States not only because of its perceived effectiveness as a program but also because it is ubiquitous. Most major cities in the United States support a chapter of BBBS as evidenced by a 2002 article stating that over 500 chapters presently exist in the United States (DuBois *et al.* 2002). In reviewing several dozen sources pertaining to mentoring (eg. Sipe and Roder 1999; Reno *et al.* 1998), BBBS dominates the dialogue and usually commands discussion as an entity separate from all other programs because of its scope. BBBS is held up as the standard to which all other programs are compared.

### Models of Effective Youth Mentoring

Ironically, while BBBS has the best reputation for preventing youth delinquency, programmatically, it is by far the least structured of all mentoring programs in the United States. In most BBBS chapters, unrelated adults are matched with youth from single-parent households with the understanding that time will be the biggest commitment from both sides (Grossman and Tierney 1998). Once mentors are screened, and trained, matches are made according to predetermined guidelines that vary from city to city, and mentors agree to give up to four hours of their time, at least twice per month, to the youth assigned to them (Grossman and Tierney 1998). Participants meet with the youth at their own discretion at locations of their choosing. Because there is no specific meeting place

designated by BBBS, the program is considered a community-based program as opposed to a school or church-based program (Sipe and Roder 1999). There is no set agenda for what participants do during their time together. Activities often include homework or tutoring but it is not required (Grossman and Tierney 1998). More than anything, BBBS expects its adult participants to act as adult friends to youth on a long term basis (Grossman and Tierney 1998). The idea behind the program is that many of today's youth are in trouble mainly because they lack regular adult attention and support. The type of attention and support provided depends on the interests and activities that appeal to the participants themselves.

In contrast to BBBS, a program called Across the Ages, supported by the Center for Intergenerational Learning in Philadelphia, is much more structured in its approach to preventing drug use in middle school children. Across the Ages is a school based program that recruits older adults (preferably age 55 or older) to work with middle school children for at least four hours per week (Taylor and Bressler 2000). Mentors go through intense, continuing training so that they can help students learn problem solving skills and peaceful conflict resolution for both peer and family relationships (Taylor and Bressler 2000). The participants meet primarily during school hours on school premises and work on school related problems (Taylor and Bressler 2000). However, participants also get involved in community projects. Specifically, Across the Ages requires participants to visit the elderly in nursing homes on a regular basis (Taylor and Bressler 2000). At the same time, frequent community events, like picnics and fun nights, bring

mentors together with youth and youth family members (Taylor and Bressler 2000). The Across the Ages structure promotes both school achievement and community participation.

The Across the Ages program maintains very specific goals and objectives for students and mentors alike that are supported by the strict structure of the program. The primary goal of the program is to keep students away from drugs and alcohol (Taylor and Bressler 2000). Program coordinators believe that the key to preventing addiction is to change attitudes about family, community and the elderly. In working with older adults, youth learn to trust the older people in their lives, form new opinions about elders throughout the community and improve specific family and peer relationships because they practice the skills needed for dealing with problems constructively (Taylor and Bressler 2000). At the same time, because the program is school-based, better school attendance and increased academic performance are reported by teachers and students alike (Taylor and Bressler 2000). Finally, the emphasis on community participation and community projects greatly increases youth engagement in the community and establishes a sense of belonging and responsibility within the youth (Taylor and Bressler 2000). With stated emphasis on academics, community engagement, and life skill acquisition, Across the Ages rivals BBBS in its ability to affect youth attitudes and prevent delinquency.

While both BBBS and Across the Ages exemplify mentoring as a complete, self-contained program, many organizations use mentoring as a smaller component of larger service provision. Mentoring is often paired with mental health services or education support services for both at risk youth and the disabled (DuBois *et al.* 2002; Payne 1994).

Other organizations use mentoring as a component of a larger mission to address the declining state of a community at large. The One to One program functioning in seven elementary schools in Newark, New Jersey is one such program that uses mentoring as a key component in a much larger overall picture. The original mission of One to One was to encourage volunteerism and philanthropy throughout the community (Payne 1994). Then, in 1992, One to One incorporated a mentoring program for at-risk elementary children in response to growing incidences of vandalism and delinquency within the city (Payne 1994). Mentors, half of whom are male and 90% of whom are African Americans, come from the professional world and include attorneys, social workers, police officers, physicians and teachers (Payne 1994). The youth come from low income families and live in areas with high crime rates (Payne 1994). The main goal of the program is to give youth positive adult attention and support (Payne 1994). However, unforeseen benefits are appearing as well. Teachers report increased self-esteem in the students and better academic work (Payne 1994). Thus, even as a component piece of a more complex program, mentoring can be effective in the lives of at-risk youth.

BBBS, Across the Ages, and One to One are all effective programs that employ mentoring in very different capacities. With such a wide array of possibilities for mentoring at-risk youth, what is the bigger picture of mentoring youth in the United States? The most comprehensive picture of the types of youth mentoring programs in use comes from a 1999 report prepared by Public/Private Ventures (P/PV) in association with the National Mentoring Partnership. Based on a study of 722 programs serving 115,000

youth across the nation, this report classifies the various mentoring programs based on their age, goals, programs, activities, participants and community base (Sipe and Roder 1999).

### Youth Mentoring, Generalities

According to the P/PV study, the age of a mentoring program is an indicator of the goals pursued by the organization and the scope of the service. BBBS leads the group in longevity with most BBBS chapters (60%) being 15 years old or older (Sipe and Roder 1999). Other programs are much younger and 40% of all programs in the study have been in operation for less than five years (Sipe and Roder 1999). While 23% of all organizations, regardless of age, stated that developing relationships is their primary goal, 60% of the older programs state that youth personal development and relationship formation are the most important goals while, for programs under two years old, academic and career performance are key (Sipe and Roder 1999). These statistics may reflect societal values at the time of an organization's founding. In any case, these statistics are likely based on a somewhat biased sample set caused by the ubiquity of BBBS. BBBS is by far the oldest and largest mentoring organization in the country. It is quite possible that the inclusion of BBBS in this study makes the numbers favor trends within BBBS programs rather than accurately showing trends true of all mentoring programs.

The capacity of a program to provide service is much easier to evaluate in terms of age. The average number of youth involved in any given program is 164; however, only 12% of the programs fewer than two years of age serve 100 youth or more, while

23% of all programs older than 15 years serve 250 youth or more (Sipe and Roder 1999). An increasing capacity to serve youth associated with older organizations is logical considering that most mentoring organizations are not-for profit groups. Older organizations will be more well known within the community, more apt to attract donors and participants and more likely to be efficient in service provision. The statistics suggest that programs are able to expand their capacity to serve as they age, probably because they increase awareness within the community and thus gain further monetary and voluntary support.

While the types of activities supported by mentoring organizations and pursued by participants vary, social or recreational and academic activities stand out as the most common. Social and recreational activities can be referred to as a single entity because they are very similar. Social activities include talking, visiting and other forms of bonding while recreational activities are those that often facilitate the above such as sports, games, art, etc. (Sipe and Roder 1999). When taken together, P/PV reports 72% of all mentoring programs for at-risk youth, an enormous percentage, expect participants to engage in social and recreational activities (Sipe and Roder 1999). In disappointing contrast, community service, such as neighborhood clean ups and mandatory volunteerism, is employed by less than 10% of all mentoring organizations (Sipe and Roder 1999). Considering there is such an overwhelming need for community participation and considering that isolation from community is often touted as a leading reason for delinquency, the lack of emphasis on community service seems inconsistent with the stated goals of many of the groups.

In addition to social and recreational interactions, mentoring organizations advocate other activities to a much lesser degree. Of these, academic activities, especially tutoring are the most likely to be included in an organization's agenda (Sipe and Roder 1999). Field trips to museums and other cultural events, and activities that relate to job training are less common (Sipe and Roder 1999). A very small percentage of organizations emphasize life skill development such as conflict resolution or parenting skills (Sipe and Roder 1999). As illustrated in the preliminary examination of BBBS, Across the Ages, and One to One as well as from the P/PV data, mentoring organizations take on diverse activities in their quest to socialize youth. Often whichever activities are emphasized dictate the location or basis of an organization as well.

Organizations that emphasize social and recreational activities are more likely to be community based rather than sited at a specific location. Using the P/PV study as a basis, only 35% of the organizations that focus on social/recreational activities are site based, meaning they meet at a church, school or community center (Sipe and Roder 1999). In contrast, 89% of those with specific target activities like tutoring, career training or life skill training are site based (Sipe and Roder 1999). This makes practical sense. Organizations that expect their participants to spend time together at lunch, bowling or fishing cannot require participants to meet at a specific location. At the same time, mentoring programs that emphasize skills need to have the tools and resources available for participants to use and are thus, required by necessity to provide a specific location for participants to meet.

In terms of those served, elementary-aged children are most likely to be involved in mentoring relationships through organizations in the United States while their mentors come from all age groups. 78% of all organizations surveyed by P/PV serve elementary children (Sipe and Roder 1999). However, this does not mean that older children are being neglected. 51% of the organizations serve youth throughout their school careers, indeed, 70% of the organizations report that they serve high school students as well (Sipe and Roder 1999). Because of an acknowledged lack of suitable mentors, most organizations recruit from the adult population at large. Only 5% of all organizations limit their mentors to those over age 50 while only 7% of all mentors are under age 22; most of the organizations that incorporate young mentors do it as a peer mentoring situation rather than a more traditional adult/child mentor relationship (Sipe and Roder 1999). As mentoring is considered important in the lives of children of all ages, and considering that volunteers tend to be in very short supply, it is no surprise that most organizations accept adult mentors of all ages and do not restrict themselves to a certain age or even ethnicity or gender for that matter.

The length and frequency of mentor/child contact varies from program to program. In general, organizations recognize the need for long term relationships and for frequent contact between matches. Over 50% of all organizations require a minimum commitment of one year from their mentors (Sipe and Roder 1999). This a good recommendation considering that some research shows that forming trust between participants takes an average of at least six months (Sipe and Roder 1999). Committing to a year of service may not seem intense to most mentors until one realizes that 68% of

all mentoring organizations require weekly meetings of matched pairs (Sipe and Roder 1999). If scheduled meetings are an average of four hours in length, this means that mentors and youth are required to spend almost 200 hours per year together, a formidable commitment at any stage in life. More impressive is that studies suggest that participants often go well beyond program requirements and spend even more time together as their relationship grows (Sipe and Roder 1999).

Considering that so much time, money and energy go into mentoring in this country, it is important to know if mentoring at-risk youth really works. Unfortunately, measuring attitude changes and personal development is rather difficult in any real quantitative way. It is understandably complicated to scientifically measure changes in attitude and tendencies toward violence and other delinquent behaviors and discern the influence of mentoring over other changing environmental factors. Although both mentors and youth claim significant changes resulting from their mentoring experiences, very few true scientific evaluations have been performed. It seems that everyone, program staff, mentors and youth, agrees that mentoring is beneficial, effective, and life-changing, but very rarely has anyone actually tried to prove statistically that this is true. The studies that have been completed have provided mixed results, probably due to the difficulty in quantifying immeasurable outcomes. Regardless, it is important to understand evaluations of youth mentoring programs if for no other reason than to see what is measured and therefore what is considered important by those using mentoring as a method of intervention.

## Evaluating Youth Mentoring Programs

Two significant, general studies of mentoring have been undertaken in the last five years. The most current study is a meta-analysis performed by faculty at the University of Missouri at Columbia. After an extensive search of such sites as ERIC, Medline and even Yahoo!, only 59 published evaluations were found to fulfill the researchers criteria for evaluation (DuBois *et al.* 2002). The criteria for inclusion had to be somewhat general because the programs studied were very diverse in nature and came from many disciplines. Published evaluations used in the meta-analysis had to use programs that primarily relied on one-to-one mentoring rather than small group mentoring, used older adult mentors rather than peer mentors, were not part of a mental health program, were not simply a single portion of a larger program of service prevention, and included comparisons of pre-and post mentoring data (DuBois *et al.* 2002). Weighted d-indexes were used to draw conclusions from the accumulated evaluations (DuBois *et al.* 2002).

Meta-analysis shows mixed outcomes from mentoring. Looking at the overall picture, the average youth in the mentoring programs scored “approximately one eighth of a standard deviation higher in a favorable direction” than youth not enrolled in a mentoring program (DuBois *et al.* 2002, p.168). In more practical language, the meta-analysis shows that positive changes do result from mentoring, however, the positive changes are much smaller in magnitude than most published descriptions and evaluations imply. The researchers suggest that in absolute terms, mentoring is not as effective as other forms of

mental health, educational or behavioral intervention programs (DuBois *et al.* 2002). The researchers also note that mentoring is most likely to work when the criteria for youth inclusion is not based solely on personal characteristics, such as poor attitude toward school, but also on environmental and familial risk factors as well (DuBois *et al.* 2002). In other words, mentoring as prevention of delinquency may not work for a child who lives in a supportive, environment and is acting out purely as part of personal vulnerability. This study concludes not by denouncing mentoring but with a call for innovation and experimentation with program design so as to enhance outcomes to live up to the reputation and expectations associated with mentoring.

As far as expectations are concerned, the United States Federal Government probably holds the highest regard for mentoring. The 1998 Report to Congress evaluates programs working to curb juvenile delinquency that use JUMP money to fund their organizations (Reno *et al.* 1998). As with most other evaluations, the JUMP report acknowledges mixed outcomes from mentoring. The report states that several significant barriers regularly affect mentoring programs. These include unrealistic project goals, inadequate staff and volunteers, inefficient screening procedures, lack of community support, and lack of parental involvement (Reno *et al.* 1998). Nevertheless, perceptions of mentoring efficacy are high.

From the youth perspective, mentoring is very influential. A survey of over 3000 youth being supported through JUMP programs showed that 49.1% report getting better grades since being matched with a mentor, even more youth say they are attending class more regularly (Reno *et al.* 1998). At the same time, approximately 70% report that they

are a lot less likely to use drugs and alcohol and nearly as many report that they are engaging in less gang activity (Reno *et al.* 1998). Youth feel that their mentors help them stay active in school and stay away from risky behavior outside of the school environment. Mentors agree, though not to the same degree, with the youth as to the effects of their involvement in young lives. According to the surveys of over 2600 JUMP mentors, 30% feel that the grades of the youth have improved a lot while 36.5% say their matches are much more likely to attend classes (Reno *et al.* 1998). In terms of drug and alcohol use and violence, just over 40% of the mentors see a large positive change in the youth (Reno *et al.* 1998). If perception could be accurately measured, mentoring would be a raving success. In the government's opinion, it already is. Both of the above studies look at the general picture. It is just as beneficial to look at specific programs to draw conclusions. Studies of both BBBS and Across the Ages have been published in support of the benefits of mentoring.

In one particular study, eight BBBS agencies with 4,221 mentoring pairs were studied over 18 months to show the effectiveness of the BBBS program (Grossman and Tierney 1998). The findings are primarily positive especially when considered in terms of gender and ethnic breakdowns. Compared to a control group of youth who were randomly chosen to remain unmatched to mentors, Little Sisters especially show an increase in grade point average and a decrease in school absenteeism (Grossman and Tierney 1998). Overall, improvement in grade point average for all Little Brothers and Sisters is minimal (Grossman and Tierney 1998). While illegal drug use is lower for all youth engaged in these BBBS programs, minority Little Brothers and Sisters are 70% less

likely than their counterparts to engage in drug use when they are matched with a mentor through BBBS (Grossman and Tierney 1998). Little Brothers and Sisters are also 32% less likely to resort to violence, in this case defined as hitting, when confronted with a stressful situation (Grossman and Tierney 1998).

Besides faring better on measurements of school achievement and violent tendencies, participants in BBBS also score better than their counterparts in community and social outcomes. Advances associated with participation in BBBS include higher scores on tests designed to show trust in family, emotional peer support and cultural enrichment (Grossman and Tierney 1998). All of these factors are significant in that they are factors contributing to community involvement. While these community-related factors are noticeably improved in BBBS participants, self concept is not significantly improved in comparison to unmatched peers (Grossman and Tierney 1998). It seems obvious that BBBS is achieving its goals of supporting at-risk youth so as to increase their academic performance and reduce their use of drugs, alcohol and violence. Relationships and the ability to trust also seem to be positively affected when youth have supportive adults in their lives. While self concept does not seem to be affected as positively as other measurement, this may change as the youth remain in the program.

Closer review of the Across the Ages program yields mixed, mainly positive results. According to a 1996 study of Across the Ages, youth participants in the program scored higher than the control on several counts. Positive significant ( $p= 0.05$  or better) differences are apparent in participants' attitudes toward school, attitudes and knowledge of older people, reactions to situations involving drug use, and levels of community

service (LoSciuto *et al.* 1996). Ironically, although reactions to situations involving drugs improved, actual changes in drug use were not significantly different ( $p = 0.1$ ) (LoSciuto *et al.* 1996). The positive changes are understandable considering that Across the Ages is school based and requires visits to the elderly and participation in community projects. The program raises youth awareness and increases experience with the community and its elders thus facilitating better understanding and positive relationships with both. While Across the Ages is most successful in changing youth attitudes toward the community and youth relationships with others, its success in changing youth involvement with drugs and alcohol, its primary objective, is mixed at best.

Through this review of mentoring at-risk youth, several trends are apparent. First, mentoring programs tend to be focused primarily on developing bonds through social and recreational activities. Most programs, 90% or more, ignore community service as a necessary means of preventing delinquency in American youth. Second, it is obvious that no matter what program is being discussed, the participants themselves, both the mentors and the youth alike, believe that their involvement in the program significantly changes their attitudes and opportunities. Finally, true evaluation of mentoring programs is incredibly difficult. Quantitatively measuring attitude changes and other important outcomes is unreliable. Nevertheless, various indicators from national and organizational studies show extreme promise for mentoring to effect change. An examination of secondary uses of mentoring will solidify the current picture of mentoring and provide the basis for discussion of the potential role of mentoring in ecological education.

### Secondary Uses of Mentoring: Education and Skill Acquisition

Preventing destructive behavior of at-risk youth may be the most widely known and most celebrated use of mentoring. However, mentoring programs are quietly being incorporated into many other domains as well. The guiding principle is that navigating educational and professional organizations can be difficult and overwhelming to those new to the system. By providing an experienced veteran to help the newcomers understand and work within the field, anxieties are lessened, people are more likely to be successful, and better able to produce professional, high quality work. Working from these assumptions, educational facilities are turning to mentoring to encourage minorities to enter math and science fields, public schools are using mentoring to introduce first year teachers into the profession and corporations are initiating mentoring programs to provide better training and facilitate acceptance of company culture.

### Mentoring for Increased Educational and Career Opportunity

When exploring the use of mentoring as a means of recruiting minorities into new career fields, there are many programs available for consideration through universities, nonprofit organizations, and through federally funded programs. However, the Ronald E. McNair Postbaccalaureate Achievement Program, more commonly known as the McNair Scholars Program, is one of the most well known, successful examples of mentoring in academia in the United States. Its success has sparked a nationwide trend in using

mentoring to recruit minorities into science, math and engineering as well as to recruit underrepresented groups into faculty positions in colleges and universities. The McNair Scholars Program, federally funded by the United States Department of Education, is available at 135 different colleges and universities nationwide as part of a larger education program called TRIO (Academic Advising 2002). Aimed at students who are low income or underrepresented minorities or students who are first in their family to earn bachelor degrees, the mission of the McNair Scholars Program is to use intense advising from distinguished faculty, skill enhancement activities, and financial support to provide eligible students with the means and skills to enter graduate school and uphold rigorous academic standards (Thomas 1994).

Students accepted into the McNair Scholars Program participate in a large regime of activities meant to ensure success in academia through the doctoral level. The most important activities associated with the program, even from the participants' perspective, are the mentoring opportunities available (Thomas 1994). These activities vary slightly between universities, but the basic outline is the same. At Rutgers University in New Jersey, eligible students are first assigned advisors from their chosen career fields to ensure not only that appropriate classes and credits are pursued but also that networking and research opportunities are available (Thomas 1994). Especially in large universities, finding appropriate academic advisors who are trusted and focused on the needs of the students can be difficult. In this case, advising acts as an institutionalized aspect of mentoring because the knowledge and guidance of the advisor is essential for student success.

Along with an academic advisor, students at Rutgers also benefit from being assigned a specific faculty mentor. Faculty mentors assist participants in developing, testing, and publishing a specific research interest while also monitoring their academic performance and progress (Thomas 1994). The mentors help guide the students through professional work and professional development and share their skills so that students can more easily succeed in the academic setting (Thomas 1994). The faculty mentors are most influential in initiating students into the academic culture of research and publication. While the mentoring aspect of the McNair Scholars Program is never evaluated in its own right, the fact that the McNair Scholars at Rutgers enjoy a 90% admission rate into graduate school attests to the power of the program (Thomas 1994). With excellent advisement and personal mentoring, as well as financial support, McNair Scholars find their education more manageable and are more likely to succeed and look forward to achieving even higher levels of academic and career success.

#### Mentoring New Educators

Besides programs like the McNair Scholars which encourage minority participation in higher education and challenging career fields, mentoring is also used extensively in teacher education. Teaching is one of the few career fields in the United States in which those newly certified are expected to be fully prepared for total job responsibility (National Education Association 2002b). Most other professions have a learning period in which new employees are closely supervised and guided by managers

and other professionals with more experience. This is especially ironic considering the heavy burden put on most teachers to be both academic leaders as well as moral and psychological counselors for their students. To ameliorate this problem and to address the questions and anxieties of new teachers, colleges, universities and public school systems are using mentoring to enhance teacher education.

Universities and colleges utilize an institutionalized form of mentoring by requiring education students to participate in an internship with a collaborating teacher in order to fulfill certification requirements. Michigan State University's College of Education is consistently ranked as a leading college for teacher education in large part due to its emphasis on time spent collaborating with veteran teachers in the public school system through a year-long internship (Department of Teacher Education 2002). During the year of internship, students in the Michigan State University program benefit from the insights of the collaborative teacher as well as a faculty mentor from the university that helps the interns through instruction and problem-solving sessions (Department of Teacher Education 2002). The interns are expected to co-plan and co-teach with collaborating teachers while gradually taking full responsibility for the class (Department of Teacher Education 2002). This requirement helps the interns develop professional skills and attitudes, and confidence. It also teaches them communication and social skills needed to address diverse issues and navigate difficult situations while they have support from a veteran teacher.

Outside of the institutionalized mentoring associated with college and university training of teacher candidates, increasingly, public schools are initiating mentoring

programs to assist newly certified teachers and teachers new to the district during their first years in the classroom. In this case, new teachers are linked to experienced teachers from the same school or school district to help them navigate the district policies and work through difficult classroom situations (National Education Association 2002b). The use of mentoring in this instance works to alleviate stress and lower attrition in new teachers. This is especially important as statistics from the National Education Association (NEA) suggest that 20% of newly hired teachers nationwide and nearly 50% of those in urban districts leave the profession during the first three to five years of teaching (National Education Association 2002c).

High attrition rates and the “sink or swim” nature of teaching have led both the United States Department of Education and the NEA to endorse formal mentoring programs for teachers. In 2000-2001, the NEA included mentoring programs in its list of resolutions. Resolution D-10 endorsed mentoring as a means of enhancing professionalism and established guidelines for implementation that called for set criteria on responsibilities and confidentiality (National Education Association 2001). A report published in 2001 shows a definite link between a teacher’s perception of their own preparedness and mentoring. In a national survey, 97% of all teachers who received mentoring felt that it improved their teaching ability to some degree, with 37% saying that the program helped a lot (Parsad *et al.* 2001). Furthermore, 90% of the mentors themselves felt that their involvement in a formal mentoring relationship improved their teaching (Parsad *et al.* 2001). In this case, mentoring can be highly beneficial to both parties.

The NEA further supports mentoring through an award system established as a partnership with Saturn/UAW. Winners of the Partnership Award are recognized for implementing innovative mentoring programs that lead to severe reductions in teacher attrition from the district (National Education Association 2002a). In one instance, a recent award recipient, a community in Fort Wayne, Indiana implemented a mentoring program for 700 hundred newly hired teachers. Of those 700, 85% stayed with the district after three years and only 1% left teaching altogether (National Education Association 2002a). Obviously, mentoring has the potential to fill gaps in professional training and relieve the stress associated with starting a demanding profession like teaching.

### Mentoring in the Corporate World

While mentoring is fairly established as a method of inducting new teachers, corporations are just beginning to use mentoring to attract and retain new employees. By providing new employees with an experienced guide who can introduce them to company procedures and company culture, the corporations show that new employees are valuable assets to the company (Zey 1988). Veteran employees represent continuity within the corporation and a sense of dedication (Kerka 1998). They already know what the company expects from employees and understand the best ways to navigate and excel within corporate networks (Kerka 1998; Zey 1988). For new employees, forming a relationship with an

experienced mentor makes entering a new position much less stressful because problem-solving within the fabric of the corporate culture is easier.

Like academic organizations, corporations use mentoring as a means of diversifying the workforce. It is believed that a diverse workforce leads to innovation and creativity. For this reason corporations are interested in mentoring because it helps open doors for underrepresented employees (Kerka 1998; Zey 1988). For example, in the education world, mentoring is used to introduce minorities, especially women, into administrative positions. Various journals and books suggest that mentoring can help women gain managerial and leadership skills as well as credibility (Eng 1986; Gardiner, Enomoto and Grogan 2000). Traditionally, women have not achieved the status of school principal or superintendent primarily because they lack the opportunity to network and share their leadership skills. Similarly, minorities are often not part of the educational or corporate management structure because they lack the networking and leadership opportunities needed to enter into higher career circles. Corporate mentoring of employees on the management track helps employees gain leadership experience and network and therefore increases opportunities for more employees at more levels (Kerka 1998). Both the employees and the corporation benefit from a more democratic approach to hiring; employees gain potential career advancement, the company gains new and innovative perspectives from incoming management.

In addition to using mentoring to retain employees and diversify the workforce, corporations regularly use mentoring in their training programs. Because of the great advancements in technology and the need for highly skilled employees, corporations utilize mentoring as a means of training employees for highly technical positions (Zey 1988). In

many cases, positions within a particular company require very specialized skills that entail more training than is possible through generalized training regimes. Thus, mentoring is a good alternative. Intel, based in New Mexico, currently uses mentoring in just such a capacity. Intel has discovered that formal mentoring of new employees facilitates faster initiation into the high-tech chip manufacturing process (Warner 2002). Specifically, by being instructed by people with specific skills, new employees learn exactly what they need to know as they need it (Warner 2002). New employees become technical and managerial experts faster because of a much more personal training process.

#### Summary and Conclusions about the Current State of Mentoring

As seen throughout this chapter, mentoring is already used in a variety of effective manners. At-risk youth are most likely to encounter mentoring programs through organizations like BBBS and Across the Ages. These programs understand that the isolation of generations and the lack of supportive relationships for children can lead to destructive behavior in young adults. These programs recognize the need for better, more supportive relationships between youth and adults and encourage these types of bonds through a diverse array of mentoring opportunities. At the same time, both educational institutions and corporations are looking to mentoring to provide better opportunities for diverse populations while also increasing retention rates. In this case, the relationships built through mentoring relieve anxiety about entering into new and more demanding fields. Mentoring is also being used for direct skill transfer. Whether in an organization for at-risk youth or whether for

educational or corporate use, mentoring facilitates problem-solving, leadership, relationship building, and managerial and technological skills.

While all of the current uses of mentoring have merit, it is obvious that, at the present, mentoring programs are used mainly as a stop-gap means of mediating societal problems such as juvenile delinquency, lack of opportunity for minorities and lack of retention of both new teachers and new employees. While mentoring has been successful in most of these areas, especially in changing youth attitudes toward drugs and alcohol, mentoring has much greater potential. Mentoring can raise environmental awareness and shift cultural values so as to better address the current and future ecological condition. This can be accomplished by engaging all youth in intergenerational relationships that foster ecological awareness, traditional skills, and participation in community activities. In essence, mentoring can empower youth and adults with ecological knowledge and a sense of place necessary to better the environmental situation in which they live.

In the following chapters, ecologically-based mentoring is explored as a means of addressing such environmental problems as pollution, global climate change, ecosystem destruction, and loss of biodiversity. The program set forth is a learning experience for both the mentor and the youth, moving them from their current level of understanding into more advanced knowledge of ecology and environmentalism. Chapter II examines the theoretical basis for mentoring drawing from environmental and educational theorists as well as research on the basis of morality. Chapter III establishes a framework for ecologically-based mentoring programs giving suggestions not only on program format but also program training and community activities. This framework is based on well established, successful

mentoring practices but also expands the concept with suggestions for education and action made by environmental theorists. This discussion will show that mentoring has unrealized potential for addressing the degraded state of the Earth.

## CHAPTER II

### THEORETICAL SUPPORT FOR ECOLOGICALLY-BASED MENTORING

Experts and lay people alike acknowledge to varying degrees that human activity undermines the normal functioning of the Earth's systems. Ecosystem loss, species extinction, global climate change, pollution, and the effects of globalization are environmental problems that critically threaten the planet. While the list is serious and even overwhelming, the real problem is not entirely the human-induced pollution and destruction; rather, it is also the framework of society and culture that allows people to continually treat the planet with such disregard. According to David Orr, "the crisis of global ecology is first and foremost a crisis of values, ideas, perspectives, and knowledge" (1994, p.126). Similarly, C.A. Bowers writes that the current destruction of the Earth's natural systems shows a lack of ecological knowledge and inclusion of the natural world in cultural identity (1974). Certainly, the problem is both a lack of ecological awareness as well as moral and ethical codes that permit extreme resource consumption and environmental pollution with little consideration for the fate of future generations.

The only real solution to current and future ecological problems is a fundamental shift in cultural and societal attitudes toward the environment. But how does one begin, on a practical level, to change society and create a more ecologically-aware, environmentally-connected culture? This is where ecologically-based mentoring, holds incredible potential especially for Western societies. Studies of mentoring programs in

the United States targeting at-risk youth suggest that mentoring can change attitudes, perceptions and habits (Grossman and Tierney 1998; LoSciuto *et al.* 1996). Similarly, studies of mentoring in the educational and corporate worlds suggest that mentoring increases a person's sense of belonging and facilitates skill acquisition (National Education Association 2002b; Kerka 1998). Building on these proven attributes, ecologically-based mentoring uses personal relationships to create cultural change and reduce human impacts on the environment. Ecologically-based mentoring can change attitudes, raise environmental awareness, increase knowledge of local ecological systems, change recreational patterns, and encourage participants to be engaged with their local surroundings through experiential learning and community service. All of these activities help individuals reconnect with the environment and put it back into their daily perspective, therefore creating a foundation for vital changes in how society views and uses the environment. The following discussion first examines the most critical ecological contributions of mentoring in Western society: building a sense of place and increasing intergenerational transfer of knowledge. It then explores additional prospects for promoting multiple perspectives and reducing consumerism.

#### Mentoring to Build a Sense of Place and Increase Vital Community Engagement

According to environmental theorists and activists throughout the world, creating a sense of place, an intimate connection and knowledge of local systems and ecology, is essential in building an environmental ethic and changing human attitudes and actions

toward the environment. Wendell Berry suggests that people desecrate that with which they are unconnected, that which is not considered home (1987). People are less apt to abuse and wantonly destroy that with which they feel intimately connected. Like Berry, Bowers and Orr implore educators to address the ecological crisis by helping students identify their place within the community and local ecological systems and to encourage responsible interaction with these systems (Bower 2001; Bowers 1974; Orr 1994).

Meanwhile Helena Norberg-Hodge, a theorist and activist, suggests that a renewed sense of local identity will lessen the ecological impacts of both rural and urban centers alike (2001a). Clearly, the literature supports the association between an intimate connection to place and a movement toward better environmental conditions.

#### A Sense of Place Increases Ecological Stewardship

A sense of place is important to those addressing the ecological crisis because connection brings knowledge and awareness, this in turn, encourages stewardship. Responsibility grows from understanding. Most people in the United States do not understand their regional ecological cycles and systems; even worse, they hardly notice the existence of local ecological processes. Western education exacerbates this problem by focusing on generalized knowledge of natural processes that is believed to be relevant to the Earth as a whole (Norberg-Hodge 2001b; Orr 1994; Bowers 1993). Most educational programs are completely devoid of interdisciplinary knowledge that is

applicable directly to local, living contexts; people have world knowledge but they do not understand local patterns and processes ( Norberg-Hodge 2001b; Orr 1994; Bowers 1993).

A simplistic example helps illustrate the problems associated with decreasing knowledge of local systems. In general, people understand the idea that water flows from streams to rivers to oceans. However, they do not understand, in more specific terms, where the water in their own city comes from, where it flows, or what it encounters along the way as it travels to and from the community. Consequently, because people do not understand how the local system works, i.e. how water travels through their region, they do not understand how their daily activities influence that system. They do not see how their daily interactions, and their reliance on consumerism and industrialism, affect the water quality and quantity as it enters and leaves their municipality. Connection to place combats this tendency toward a severe deficiency in knowledge of local systems (Bowers 2001; Orr 1994). People who are connected to their environment are more likely to understand environmental processes and are more likely to be aware when these processes change or when they become threatened by human activities.

Once locally relevant ecological knowledge is available, a sense of place inspires people to direct action. People who are connected to the local environment feel responsible for its condition and act when that condition deteriorates. Support for this idea is extrapolated from the study of morality and moral commitment. Research shows that vital engagement, meaning dedicated, long term, active connection to a social cause, arises from awareness and meaningful involvement with the surrounding world (Michaelson 2001; Nakamura 2001). A study on morally-gifted youth, youth who show

extraordinary dedication to social change, showed that young people who are likely to become involved in social issues are more aware of their social, political and environmental surroundings (Michaelson 2001). Furthermore, these activists tend to understand social issues on a personal level and take personal responsibility for social outcomes (Michaelson 2001). Developing a sense of place, a sense of personal belonging and responsibility, is the first step toward changing the degraded state of the environment because it fosters such moral commitment. Moral commitment motivates people to action. Mentoring provides a practical means of developing this important, intimate connection to the local environment that will promote environmental action and ethics.

#### The Role of Intimate Relationships in Developing a Sense of Place

While interaction with specific places is important in developing a sense of place, equally as important is meaningful interaction between community members. Developing a sense of place comes not only from interaction and experience with the local environment but also through engagement in local social and cultural systems. Moral commitment and community engagement often grow expressly through socialization (Nakamura 2001). Berry writes eloquently on the subject of the interconnection of people, places, and community. He says:

If we were lucky enough as children to be surrounded by grown-ups who loved us, then our sense of wholeness is not just the sense of completeness in ourselves but also is the sense of belonging to others and to our place; it is an unconscious awareness of community, of having in common (Berry 1995, p.87).

Similarly, Orr asserts that the love of nature can only be achieved if, as children, people learn from caring adults about the connections and responsibilities that bond humans to the world and each other (1994).

Traditionally, the family served as the main avenue of continuing culture and building a sense of place, connection and responsibility. Interactions with family members and close family friends of all ages strengthened youth ties to community and helped solidify a sense of identity associated with home (Goldsmith 2001). Young people grew up knowing their place within the family and the family's place within the larger community (Goldsmith 2001). Family and community merged as people lived and worked together. Personal relationships cultivated through mutual aid like neighbors helping replace a roof or family members watching each other's children created networks that connected people to each other and to the local environment (Bowers 2001). People faced hardship together. Under these circumstances, community meant more than just a collection of people living and working in isolated proximity to each other.

In the modern world, where conveniences such as the telephone and the internet allow people to communicate from long distances, people may not live or work closely with family and friends (Bowers 2001). This fact is aggravated by the breakdown of the modern family and community. Divorce, addiction and abandonment separate nuclear and extended families. Meanwhile the indifferent and often violent nature of particular communities forces people to distrust their neighbors and focus on their individual needs instead of what is best for the community (Bowers 2001). Now people face life and hardship alone. Without community networks and trust, there is no basis for building a

sense of place or a sense of responsibility toward the environment. People are less likely to feel any remorse for degrading their surroundings because, in many instances, they have less reason to care about the implications of their actions on their neighbors. Additionally, the loss of community structure means the loss of accountability to the community as a whole. By reconnecting people to each other, mentoring can revitalize community relationships and further work toward re-introducing environmental responsibility.

### Mentoring to Connect People and Places

Mentoring with an ecological focus sets up the networks needed to bond people to each other, their community and the natural world. Mentoring, by its very nature, forges a connection between people. When youth are matched to mentors through shared interests and desires, a powerful bond is created. Ecologically-based mentoring would pair adults and youth together with the specific purpose of experiencing the community and the environment together in order to develop an environmental ethic over time.

A large part of forming an environmental ethic is allowing people to engage in nature at an early age, letting them see that the environment is important, accessible, valuable and fun (Orr 1994). Mentors may introduce youth to bird watching, canoeing, biking or snowshoeing, or they may arrange for youth to visit local parks and ecologically important habitats. They may also conduct field trips to landfills, recycling centers, water treatment plants and other important community and environmental service centers. All of these activities allow youth to experience, directly, in the broadest sense of the word,

the environment, in which they live. At the same time, these activities allow youth to put their educational experiences into local context. It is one thing to read that water pollution is detrimental to fish. It is another thing entirely to see a favorite fishing pond covered in filth. Similarly, seeing trash piled at the local landfill and experiencing the sheer volume of it is far more important than just knowing that trash is picked up at the curb and carted off to some unknown, unseen location.

Besides allowing youth to experience their environment fully, ecologically-based mentoring, with its emphasis on community service, engages youth in community projects and teaches respect for the environment by example. Many educational theorists advocate incorporating community service into school curricula as a way to encourage a sense of local knowledge and responsibility (Bowers 2001; United Nations Environment Programme 1997; Fertman 1994; Orr 1994). Unfortunately, with the emphasis on standardized tests as accountability measures, there is little time for school-based community service projects in modern curricula. Using educational institutions exclusively to develop a sense of place may not be as ideal as other methods. Furthermore, studies show that closer relationships, like those of family and peers, as opposed to teachers, are more influential in inspiring youth to get involved in their community. Youth who volunteer and work closely with older adults are more likely to feel that their participation in service work is valuable and important, and are, therefore, more likely to continue to be involved (Fischman, Schutte and Wu Lam 2001). Ecologically-based mentoring provides the necessary relationships and opportunities for children to get involved in the community without additional burden on educators.

Mentors can introduce youth to community involvement and volunteerism based on their mutual interests. Some participants may get involved in restoration activities such as stream cleanups and habitat monitoring through local environmental groups. This affords them the chance to be outside, get dirty and directly interact with the local environment. Other participants may volunteer at local nature centers and arboretums. These kinds of activities allow participants to mingle with other community members in an educational forum. For more adventuresome participants, environmental advocacy and political campaigning may be attractive. All of these activities, which qualify as vital engagement with the community, allow children to participate in political and social activities that effect environmental change either through direct action or by changing attitudes toward the environment. Some additional benefits are a more active volunteer base for local community groups, and youth who believe that their efforts are important and useful.

The power of ecologically-based mentoring lies in connections forged between people that are specifically created not only to raise awareness and understanding of environmental conditions but also to encourage volunteerism and participation at the local level. Aside from instilling connection to place, the bonds formed through mentoring can lead to additional benefits for the environment as people engage in important environmental projects and youth gain confidence in the importance of their participation in the community. Mentoring also builds bonds necessary for mutual understanding of different ages, ethnicities, and genders. This in turn facilitates

intergenerational and cross-cultural transfer of knowledge and the understanding of diverse perspectives.

### Mentoring to Encourage the Intergenerational Transfer of Knowledge

Various writers suggest that the disconnection between the very old and the very young, especially in Western societies where people are more likely to spend time with their peers rather than intermingling with many generations, greatly contributes to increased consumerism and reliance on the global economy (Bowers 2001; Berry 1995; Orr 1994; Bowers 1993). Environmental writers also suggest that because of this disconnect between generations, the amount of locally available wisdom is disappearing at an extreme rate (Orr 1994). Thus, without the sharing of skills and wisdom between generations, people are forced to buy the information and expertise that they need but have not gained from their elders. This paper has already established that relationships in general contribute to a person's connection to the local community which in turn increases stewardship. However, there is more to be said about the specific relationship between the elderly and the very young.

### Renewing Community Culture and Establishing Connection

Sociologists contend that the mixing of generations adds value and meaning to the lives of all involved (Garrod 1993). Expanding this idea, Berry suggests that in

sustainable communities, there is no need for daycares and nursing homes because the young and the old take care of each other (1995). He says that community identity persists through shared experiences between the very old and the very young (Berry 1995). Without such interaction between generations, vital community information is lost because it dies with the older generation instead of being passed to the young. The young, separated from the elders, lose their sense of identity within the community because they have no way of connecting with established traditions and beliefs.

The elders of a community are the keepers and the collective memory of local beliefs, customs and culture meaning local ideas about food, music, art, proper citizenship, and avenues of public decision-making. It is these broad, shared traditions that promote connection to community by bringing together the old and the young in one place and under one system of governance according to local societal norms. Bowers asserts that ecological renewal begins with the revival of unity within communities; a concept that relies on community elders to educate the youth about local needs, interests and traditions (2001). Participation in the arts and festivals of a community connect people to each other through entertainment and displays of skill. At the same time, understanding traditional beliefs and historical contexts of past decisions within the group helps all those involved understand the needs and wants of the community and how they have changed over time. By participating in celebrations and events and by witnessing community problem-solving by elders, young people connect to their community and learn its systems and functions.

The connections established when people interact with many generations through traditional community activities contributes greatly to a community's ability to be self-sufficient. Bowers asserts that true mutual aid, in which community members help each other through reciprocity, is dependent on the intergenerational sharing of community knowledge and traditional activities like ceremonies and rites of passage (2001). Without the networks established between generations through traditional activities, there is no way for the young to connect to the elders who possess important skills like carpentry, cooking, gardening and sewing. If the young do not acquire skill and knowledge from their elders, they must purchase the products and the talents of others through market interactions. Thus, the knowledge of the elders is vital not only in maintaining community culture and transmitting this culture to the young, but also in facilitating the transfer of knowledge that allows current and future generations to be more self-sufficient in providing for their basic needs.

While the elderly are the source of cultural continuance and expertise, the young are a source of cultural renewal in a community. In every generation, the young build upon the culture they are given and add items based on their own dreams, socialization and critiques (Garrod 1993; Nakamura 2001). The fresh perspective of youth allows the young to build transformative alternatives into community culture (Garrod 1993). For instance, it was largely the work of dedicated young adults, guided by wise community elders like Martin Luther King Jr., who won equal rights for African Americans. These men and women took the basic cultural beliefs inherent in American culture and used them to transform society to better fulfill those beliefs as written in the Constitution.

When cultural transformation takes place under the guidance of community elders, changes occur within the social boundaries and cultural norms of the community. Under these circumstances, changes initiated within a community's belief system should be easier to implement and should gain community support more quickly than if they arise as completely foreign ideas (Bowers 2001).

When generations interact providing the means for both cultural connection provided by elders and cultural renewal advocated by youth, ecological problems can be addressed more completely and concrete, viable options are more likely to be implemented. Connecting generations opens networks of communication. By combining the established traditions of the older generation with the new ideas of the younger generation, environmental solutions can occur within established networks and accepted community standards. Moreover, people are more likely to accept and utilize those solutions that fall within their own belief systems. Social change that eases human impact on the environment should occur more easily when generations are encouraged to once again interact and share their ideas and beliefs. This is especially true when intergenerational transfer of knowledge is specifically focused on addressing environmental issues and furthering ecological understanding.

### Transferring Ecological Knowledge between Generations

Previous sections of this chapter have acknowledged that Western notions of education create a severe lack of local understanding due in part to an emphasis on

universal facts rather than contextualized information. People know too much about abstract planetary processes and not enough about what is happening outside their doors. Intergenerational sharing of ecological knowledge is another method of addressing the problem of decreasing understanding of local ecosystems. Sharing the ecological wisdom of community elders is vitally important in improving environmental conditions because it acknowledges that environmental solutions are not available through the understanding and work of a single generation. It has taken many generations to truly degrade the planet; it will take many more to truly redeem it.

Community elders can enlighten youth about environmental conditions precisely because they have a long history within the ecosystem. Those members of the community who have resided in the area over a period of decades have witnessed the associated long term environmental processes of their region (Bowers 2001). They know how much rain is likely to come before the snow starts and they know when the deer are likely to be eating in the pastures. Community elders have also witnessed the dramatic changes in local ecosystems that have accompanied technological advancement and modernization (Bowers 1993). They recognize that the rivers have not flooded in an unusually long time, perhaps due to water diversion for irrigation or electricity, or when spring is continually warmer and wetter than in their youth. It is these types of observations that help people see how they have changed the landscape. It is these observations that lend credence to ideas like global climate change and ground water depletion. Elders can use their long term knowledge of local ecosystems to comment on

the environmental condition, on how conditions have changed and how society is linked to those changes (Bowers 2001).

Beyond acting as commentators on environment and society, long time residents can also provide valuable information on local ecosystems because they are, in essence, experts on local ecological structure and function. More specifically, people with long connections to local ecology may have valuable memories or written records of systems that can help restoration initiatives. Elders are not only the collective memory of community culture they are also the keepers of local natural history. Elder knowledge can be used to establish guidelines for accurate restoration and mitigation. Their insights can fill gaps in information not available through official reports or media coverage. The knowledge of historical environmental trends can be valuable for implementing restoration projects and for advocating social change by drawing attention to problems that have been ignored. Beyond simply sharing information, community elders can help these environmental initiatives by instilling a conservation ethic in the young. Those elders that have experienced the need to scrupulously conserve are especially important in the fight to save ecological integrity. Many of them practice conservation techniques daily although they would never claim to be environmentalists.

Besides being able to expose environmental change, comment on its root causes in society and work for better environmental conditions, long term environmental knowledge available through intergenerational connections also works to prevent repetition of past mistakes. Elders have witnessed grave errors in judgment that resulted in terrible environmental problems. Community elders have a unique long term

perspective that is largely missing from younger generations (Bowers 2001). Those that have prolonged interactions with a specific location have more of a basis to make rational, long term decisions about the future of that area. This is not to say that community elders are the only ones knowledgeable and qualified enough to comment and act on behalf of the environment. Rather, it suggests that by combining the transformative energy and technological understanding of youth with the available long term knowledge and perspective of elders, environmental change is more likely to succeed. Specifically, humans must admit that the knowledge necessary to make intelligent choices concerning the environment is not available in a single generation. Environmental solutions take time and long term understanding. Future generations need the wisdom of experience to supplement their own accrued knowledge in order to discover environmental solutions that work. By encouraging generations to share their ecological knowledge, communities can make better, more informed decisions.

#### Mentoring to Encourage Knowledge Transfer

Mentoring facilitates the transfer of intergenerational knowledge because it connects youth with older adults, elders of the community, in productive relationships. Although mentoring is at first an artificial link between the two individuals, it can simulate the important connections formerly common between the old and the young in society. While children may not have regular contact with their own grandparents or aunts and uncles, mentors can fill the void by sharing personal knowledge, ideas about

community tradition, and networking opportunities. In an ecologically-based mentoring program, older adults initiate the young into the traditions and beliefs of the community. While this requires careful consideration as not all traditions and beliefs benefit the environment or the community, mentors can introduce the youth to celebrations and problem-solving events that help the youth better understand the community. By actively recruiting elderly adults, ecologically-based mentoring programs reconnect the old and the young in a manner that allows cultural exchange and the sharing of ecological knowledge.

Introducing youth to community heritage is important and is a fairly common practice in many mentoring programs for at-risk youth. Ecologically-based mentoring goes farther by encouraging participants to share their knowledge of local ecology and natural history as well. Elders with valuable understanding of the local environment share their insights with youth and add to the store of knowledge that the younger generation already possesses. For instance, while mentors may not have formal training in biology or chemistry, they may have observed and used a lake in their area for many years. They may also regularly interact with other enthusiasts using the lake. Therefore, the mentors may know how many fish were in the lake historically, and how many and what kind of fish are currently being removed. In addition, mentors may also know what kind of changes in the community seem to have accompanied changes to the lake. Perhaps the mentors have observed that when the lake became a popular tourist area with an over-abundance of motor boats and jet skis, the fish started to disappear. Through fishing trips, the mentor might teach the child why there are size requirements and how the type of catch has changed since the mentor started using the lake. The child may in

turn, share with the mentor information learned in school about fish habitat, fish reproductive requirements and water quality parameters. This type of knowledge sharing and insight gives context to education, increases the overall amount of knowledge on an ecological problem and sets the stage for environmental action based on broader information.

Part of the appeal of an ecologically-based mentoring program is simply in forging relationships between people, relationships that are very much absent in modern life. Connections to people, especially elders (and therefore traditions), public processes and community celebrations are essential in forging a sense of place in the young. Connections to the environment and to local natural history are important as well. By providing youth with a solid basis for understanding local ecological processes and how they change, ecological action occurs and a moral code to protect the natural world can be formed. While all of these are vital in forming an environmental ethic, ecologically-based mentoring accomplishes even more. An ecologically-based mentoring program opens communication between diverse cultures to promote alternative environmental solutions. It also can assist the transfer of traditional skills between generations to lessen consumerism, decrease resource depletion and positively impact other environmental problems that arise from increased dependence on the global economy.

### Mentoring to Promote the Understanding of Multiple Perspectives

In the previous section, intergenerational transfer of knowledge was endorsed, at least in part, to show that environmental change is going to take time and requires more than the knowledge available in a single generation. In a similar manner, understanding multiple perspectives, including the ideas and beliefs of many cultures and other diverse groups of people within communities, is also essential in bettering the environmental condition. There is not a single, universal environmental solution that will work for every environmental problem. Humans, especially those in Western societies must be open to ideas and solutions outside of the mainstream in order to truly create change.

Environmental writers, environmental anthropologists and educators support the need to maintain diverse perspectives of the environment and of the world. In his early work, Bowers writes that Americans must be better educated so that sustainable communities can emerge. Exposure to other, sustainable cultures through education encourages cultural comparison and a more balanced perspective of Western culture (Bowers 1974). His later work further develops this idea and suggests that Western cultures should learn from cultures that have developed a relationship with the Earth over a long period of time because there is no definite recipe for creating a sustainable society. Bowers asserts that people must learn from the examples of other cultures that live in balance with their ecological surroundings by living in cooperation and interdependence (2001;1993; Bowers and Flinders 1990). He implores society to put aside its bias against tradition and its tendency to steal from and destroy traditional cultures through

modernization and globalization (Bowers 2001). Instead, society should respect these cultures and learn, as respectful students, how to be more ecologically balanced.

Bowers is not the only scholar advocating for diverse perspectives and calling for increased input from marginalized people. Orr scoffs at the traditional ideas of multiculturalism (1994). In his mind multiculturalism does not exist. He admonishes that modern education is responsible for destroying cultures worldwide. By homogenizing education to include only universal concepts and by pushing the world economy on cultures worldwide, local knowledge, culture and language is undermined (Orr 1994). Widespread destruction of culture brings with it widespread destruction of the environment due to a lack of connection and intergenerational knowledge and because of the incredible rate of resource depletion and consumption associated with participation in the global economy (Orr 1994). As cultural connection diminishes and traditional, sustainable activities are no longer practiced, potential alternative methods of sustainable interaction with the world are lost as well.

Similar to Orr, Jerry Mander, Edward Goldsmith, and E.N. Anderson lament the loss of cultural diversity and the loss of environmental alternatives that accompany the move toward a homogenous world. In discussing the global economy, Mander and Goldsmith have put together a selection of essays from a variety of activists that encourage a local focus allowing sustainable cultures to persist and promoting respect and cultural exchange to facilitate environmental change and social equality (2001). Like Mander and Goldsmith, Anderson has also devoted his study to the ability of traditional cultures to persist sustainably. Through case studies on subjects throughout North and

South America, Anderson explores the reality of cultural loss contributing to environmental degradation through the increased involvement in the global economy as well as the loss of viable ecological alternatives (1996). In general, cultures are being lost and with them the alternative practices and ecological perspectives that allow more sustainable living.

It should be noted that this discussion of the need to support cultural diversity and alternative perspectives on the environment is not meant to suggest that traditional cultures or underrepresented groups are more capable of living sustainable lives. Rather, it is meant to show that alternative environmental perspectives are largely ignored in favor of Western ideas alone. It is unreasonable to think that Western societies, those cultures that are largely responsible for creating the ecological crisis, can feasibly solve their environmental problems without additional input from cultures that maintain more sound ways of interacting with their surroundings. Combining the capabilities and environmental knowledge of Western societies with the ecological perspectives and understanding of other, more marginalized cultures holds more promise for creating viable ecological solutions than everyone working independently. Ecologically-based mentoring provides such a forum for cultural exchange and alternative solutions by connecting people of different cultures and social groups in mutually respectful relationships.

### Mentoring Facilitates Multicultural Connection

Ecologically-based mentoring provides a new arena for cultural exchange. By recruiting participants from all cultures represented in a community, ecologically-based mentoring facilitates understanding between people with diverse backgrounds. Personal relationships build trust and facilitate the sharing of ideas outside of mainstream understanding. With an emphasis on volunteerism and by incorporating social activities, cultural celebrations and learning workshops for participants, ecologically-based mentoring provides a means of sharing environmental perspectives and ecologically sound ideas. Cultures slowly being absorbed and lost as American society overwhelms traditional methods of interaction can find new respect and a new voice by participating in a mentoring program that encourages intercultural communication and endorses alternative perspectives and solutions to community and environmental problems.

Ecologically-based mentoring works to promote cultural exchange, first, by connecting people from diverse cultures and community groups who might otherwise never interact on an informal, social level. For example, a mentoring program might set up a weekend camping activity or hiking expedition for all participants. Mentors and youth from different social and cultural groups within the community can interact around the campfire or while eating lunch during the hike. Mentoring programs might also arrange for participants to attend cultural celebrations in the community. For instance, participants in the mentoring program might arrange to watch a dance exhibition at an annual festival. This fun, informal interaction between diverse people facilitates

understanding and encourages people to be comfortable with those from different backgrounds and perspectives. It is harder for people to be closed-minded and intolerant when they maintain friendships and acquaintances across different cultural or social groups. These types of informal social connections, acquaintances and true friendships make community stronger and facilitate cohesive ecological action in the future as people are more tolerant and open to new ideas.

Ecologically-based mentoring programs should also facilitate cultural exchange for environmental action through more formal, organized methods. One way of doing this would be to organize training sessions for participants to teach them about different cultural attitudes and actions toward the environment. Cultural sensitivity should be emphasized. Explanations of environmental justice and environmental racism should also be incorporated into these sessions so that participants gain a more realistic picture of current environmental trends. For instance, one training session might provide lessons on the “not in my backyard” philosophy and what that means to underrepresented cultures. Another training session might explore Native American beliefs about the environment. The possibilities and need for training and facilitated cultural interactions are limitless and help provide the cultural sensitivity needed for better discussion of community environmental issues.

Another formal method of cultural exchange that mentoring programs should incorporate is problem-solving workshops as part of their activity schedule. All participants, mentors and youth alike, join for daylong problem-solving sessions in which participants tackle community environmental problems. For instance, a community

might be plagued by excessive empty lots full of trash or widespread lack of interest in recycling and conservation. In this case, participants in an ecologically-based mentoring program can explore ideas about how to fix these problems and set up action plans for implementing agreed upon solutions during workshops. During the workshop, all solutions should be considered and alternative solutions, those that are outside of mainstream societal ideas, should be given equal or extra consideration as viable methods of remediation. By facilitating community-wide problem-solving sessions that involve all social and cultural groups, ecologically-based mentoring programs can give new voice to diverse perspectives while also furthering connection to community and the environment.

#### Mentoring to Reduce Consumerism and Dependence on the Global Economy

Previous discussions in this chapter have illuminated the need for connection between people of all backgrounds and between people and the local environment in order to produce more responsible ecological thinking and action in a general sense. The final discussion revolves around a direct source of environmental destruction and how mentoring can address this problem specifically. Consumerism, the current societal condition in which all aspects of life are commodified (given a price) and purchased is a problem that translates on all levels to environmental degradation through unnecessary resource consumption, excessive waste and increasing pollution (Berthoud 1992). Even the United Nations addresses consumerism as a problem that should be addressed by all members of society. In a recent report by the Environment Programme, United Nations

officials suggest that children should be made aware of the effects of unsustainable consumption especially in the case of environmentally destructive products (United Nations Environment Programme 1997).

Bowers is perhaps the most prolific writer on the social and environmental implications of consumerism. He contends that consumerism and commodification destroy social relationships, increase reliance on the global economy and wreak havoc on environmental systems. He states:

One of the most dynamic and disruptive characteristics of modern culture is its tendency to commodify knowledge, relationships and skills. Of specific concern is the way the relentless expansion of the culture of commodification creates an ever-expanding list of human needs and a dependency on consumerism as a way of meeting them (Bowers 2001, pp.159-160).

Bowers consistently calls for renewed emphasis on non-commodified relationships and activities so as to avoid reliance on the economy which feeds voraciously on the natural resources and processes of the Earth (2001;1993; Bowers and Flinders 1990). By acknowledging and reducing consumerism and commodification, Bowers hopes that people will choose to change their technology-driven, materialistic societies and instead adopt a lifestyle that is more sustainable (1993).

Other writers echo Bowers' sentiments on consumerism. Richard Barnet and John Cavanaugh suggest that all forms of the media including movies, news, the internet and television contribute to hyper-consumerism, especially of American products (2001). What they call "global popular culture" has contributed to the demise of local traditions due to Western society's incredible appetite for global goods and global experiences

(Barnet and Cavanaugh 2001). Furthermore, Barnet and Cavanaugh contend that popular culture fills a void left by dysfunctional families and community relationships as well as the loss of interest in volunteerism and local politics (Barnet and Cavanaugh 2001). People shop and buy unnecessary material items to fill their spare time instead of doing more constructive activities like interacting with family, learning new skills, or volunteering in community service organizations or local politics.

Helena Norberg-Hodge also writes about the detrimental effects of globalization with its emphasis on consumerism and commodification. In studying the Luddites, she has shown that unnecessary consumerism, consumption not related to acquiring basic needs, leads to the breakdown of societal connections and dissatisfaction with traditional community standards of wealth (Norberg-Hodge 2001b). Norberg-Hodge suggests that reducing consumerism would not only decrease the amount of excessive consumption and resource depletion by society members but would also eliminate the need to transport goods worldwide, a phenomenon which contributes to global climate change and problems with invasive species (2001a). At the same time, less consumerism also strengthens local economies so that communities can again be self-sufficient in providing for their basic needs (Norberg-Hodge 2001a).

Experts from the United Nations and from diverse academic fields clearly demonstrate that consumerism and the movement to commodify and sell all aspects of life is hurting both society and the environment. The question, then, is how can consumerism and commodification be reduced while encouraging people to be more self-sufficient? Even more perplexing, how can people be encouraged to provide for

themselves when the skills traditionally used to provide basic necessities, food, clothing, shelter and entertainment are no longer prevalent in younger generations? One method of addressing the problems of consumerism is through ecologically-based mentoring which can emphasize non-commodified activities and encourage the revival of traditional skills necessary for increased self-sufficiency.

### Mentoring to Revitalize Traditional Skills

Reducing commodification and consumerism requires at least two things. First, people must be willing to spend their time performing non-commodified activities, activities that require few or no economic transactions. Second, people need to learn traditional skills like sewing, gardening, food preservation, and carpentry so that they can provide more of their own basic needs. Fortunately, these two requirements are mutually beneficial. Learning traditional skills requires that people connect and engage in learning relationships that take significant amounts of time. The time spent engaging in teaching relationships that foster traditional skills is time that cannot be used to participate in the global economy. Ecologically-based mentoring thus provides one way of engaging people in non-commodified relationships and activities. Furthermore, it provides a means of connecting elders who are well-versed in the use of traditional skills with youth who need to learn how to better supply their own needs.

Most of the activities already described in this chapter reduce consumerism by engaging people in personal relationships and non-commodified activities that benefit

the community and the environment. Mentors and youth in ecologically-based mentoring programs are expected to interact with the local environment through activities like hiking and camping. They are also expected to participate in community organizations by volunteering for a variety of activities like restoration projects or educational outreach. Meanwhile, time and energy must be devoted to the transfer of intergenerational ecological knowledge through natural history lessons and the sharing of hobbies and activities that expose youth to the environment. Finally, learning cultural sensitivity and participating in social events, cultural celebrations and problem-solving workshops takes time and involvement but does not require large economic inputs. Through all of these activities, ecologically-based mentoring encourages connection between people, community and the natural world instead of activities associated with consumerism.

Beyond these important activities, ecologically-based mentoring also connects people who can share their practical skills with the next generation. During their time together, mentors might teach youth how to prepare soil and plant a garden. They might go even farther and teach youth how to prepare and preserve the food that they have grown. Individuals need such skills to provide food for themselves and their families. Participants might also engage in learning basic building and repair skills like carpentry and mechanics. These types of activities provide people with the ability to build their own furniture, perhaps their own homes, and fix their own mechanical devices rather than relying on, and paying for, the services of an expert. Finally, mentors might engage youth in learning artistic skills like singing, painting or pottery. Acquiring these skills

allows youth to entertain themselves and other members of the community without relying on malls and movie theaters.

The environmental benefits of teaching youth traditional skills are endless. By providing youth with practical skills, mentoring loosens the grip of the global economy on the next generation. The time spent in meaningful teaching relationships is time that cannot be spent buying unnecessary material goods that will ultimately end up in a landfill. Teaching youth traditional skills also increases the pool of locally-available practical skills. In the case of at-risk or low-income youth, acquiring traditional skills may immediately improve their life situations by providing basic survival skills including a means of providing for themselves when parents are direly neglectful. Youth who have traditional skills like sewing, gardening, and musical talent are better equipped to participate in community events and reciprocal relationships that support mutual aid. Overall, sharing of traditional skills helps unite community, strengthens local economies and lessens community impact on the environment.

#### Summary and Conclusions about Ecologically-Based Mentoring

Ecologically-based mentoring builds on the already proven methods of mentoring that have been studied through research on at-risk youth and educational and career preparation. Participants engage in relationships specifically to address ecological problems and the overall degraded state of the natural world. Connections to community ideals, traditions, methods of participation, and important natural habitats develop a sense of place

that is largely missing from modern society. This sense of place is further expanded by connecting generations through activities that encourage intergenerational transfer of knowledge, knowledge of natural history and traditional skills. Intergenerational transfer of knowledge gives context to youth academic work and provides the basis for action to benefit the environment. It also provides the networks and skills needed to participate in mutual aid or reciprocal relationships within the community. At the same time, ecologically-based mentoring provides a new and unique method of promoting diverse ideas from multiple perspectives that do not necessarily conform to mainstream methods of addressing community issues and environmental conditions by connecting different cultural and social groups through social activities and community problem-solving sessions.

The environmental and societal impacts of ecologically-based mentoring are as yet unmeasured but the potential is enormous. The emphasis on community participation encourages volunteerism and increases the volunteer-base of organizations working to restore the environment or change attitudes through educational programs and political campaigns. Intergenerational transfer of knowledge increases the amount of available ecological knowledge by mixing the elder's information gathered from longtime interaction with local ecology, and the universal academic and technical knowledge of youth. This interaction helps society see that environmental solutions take time and require the experience and wisdom of multiple generations. Interactions with diverse cultural and social groups opens environmental discussions and problem-solving sessions to otherwise unseen alternative solutions and perspectives. The environment benefits because society begins to realize that there is not a single solution that will work for all environmental issues.

Expanding understanding beyond Western thought is vital to finding solutions that work. Finally the time spent in vital, personal relationships and the time spent learning valuable traditional skills reduces consumerism and fights the commodification that is so instrumental in destroying the environment.

The writings of environmental theorists, educators and activists all support the use of mentoring as a means of addressing the ecological crisis. Now that theoretical support has been provided, consideration of the practical needs and provisions associated with starting an ecologically-based mentoring program must be addressed. The following chapter provides a clear plan that outlines the special requirements associated with creating an ecologically-based mentoring program. Program components will promote increased vital engagement within the community. Program components will also facilitate the transfer of intergenerational knowledge, encourage investment by diverse cultural and social groups, and transmit traditional skills, all of which will allow community members to engage in productive, reciprocal relationships leading to community self-sufficiency and decreased environmental degradation.

## CHAPTER III

### PROGRAM COMPONENTS FOR ECOLOGICALLY-BASED MENTORING

Ecologically-based mentoring is a process for cultural transformation designed to improve environmental conditions. While separate components of ecologically-based mentoring can be useful and successful, at its best, ecologically-based mentoring is a comprehensive program that combines all of the beneficial aspects of mentoring (behavioral change, education, community engagement, networking and skill transfer) in order to promote increased ecological awareness and the development of an environmental ethic. Responsible cultural renewal, community engagement, and the transfer of long term ecological knowledge occur by reconnecting generations and social and cultural groups in a manner that is not common in today's society. This new connection leads to an increased sense of place, revitalized community spirit, the transfer of traditional skills and decreased reliance on consumerism. More importantly, ecologically-based mentoring establishes the idea that environmental recovery requires the knowledge and expertise of many generations and many cultural perspectives. The environment benefits because people throughout the community take a more active role in local political, economic and ecological processes. They begin to see the effects of their own hyperconsumption and spend more time engaging in activities that have few detrimental effects on local ecosystems or may actually improve environmental

conditions. An environmental ethic arises from the strong sense of place, community involvement, and ecological awareness developed through ecologically-based mentoring.

While general components of an ecologically-based mentoring program are similar to any mentoring program for youths, accomplishing the broad social goals associated with ecologically-based mentoring requires additional, innovative administrative and programmatic methods that are both structured and adaptable. Structure is required to provide ecological and social training as well as opportunities for involvement in the community. Structure is also necessary to facilitate community problem-solving workshops which will open discussion of alternative perspectives and solutions. At the same time, adaptability is needed so that programs stay abreast of changing community and ecological needs. Furthermore, flexibility is needed to truly engage participants and allow them to be active in their own learning process.

Programs must allow participants to engage in a diverse array of social, recreational, and volunteer activities that fit with participants' current and evolving level of environmental understanding, community engagement, and familiarity with social processes. Obviously environmental advocacy will not appeal to all participants, nor will environmental outreach or environmental restoration engage everyone. Programs must balance the overall goals of cultural change and environmental recovery with participant-centered activities. Because ecologically-based mentoring is aimed at all youth regardless of their current ecological ideology or social position, a radical, uncompromising approach will not work. At the same time, the program must provide

guidance so that it adheres to the mission of creating change and pushes participants to further their environmental education.

Mentoring programs that strive for ecological change can be implemented in both communities that already have a history of environmental awareness and in communities with little or no environmental consciousness. Establishing a program in a community with well-informed environmental leaders is likely to be easier as less training may be required, more projects may be available, and participants may be more easily recruited. However, the necessity for ecologically-based mentoring is much higher in communities with few environmental leaders and little ecological knowledge. These communities need to develop the foundation for environmental consciousness at the most basic level.

The following discussion explores the key components of an ecologically-based mentoring program as outlined in Table 1. It is comprehensive in order to give the level of detail necessary to start a program in communities with very little environmental awareness, community connection or social responsibility. Some of the steps in this model such as required background screenings, match requirements, orientation and training sessions, are designed and utilized by most mentoring programs regardless of their goals and vision to keep participants safe and make the experience enjoyable and enriching for all involved (Taylor and Bressler 2000; Benard 1999; Reglin 1998; Bey 1992; Weinberger 1992). Ecologically-based mentoring employs these components in order to promote a positive, productive and safe atmosphere for participants. Other program requirements are more unique to ecologically-based mentoring and reflect its mission to increase vital community engagement and social awareness. The ideas

presented here provide the means for even a very small group of interested and knowledgeable people to establish a program in their own community with minimal reliance on professional expertise and guidance.

TABLE 1. Steps to an Ecologically-Based Mentoring Program.

1. Build an administrative foundation	<ul style="list-style-type: none"> <li>• Create program goals</li> <li>• Strengthen community support</li> <li>• Define program scale and scope</li> <li>• Determine location and staffing needs</li> </ul>
2. Recruit participants	<ul style="list-style-type: none"> <li>• Engage adults from across the community</li> <li>• Screen adults extensively</li> <li>• Enlist interested youth community-wide</li> <li>• Match participants based on pre-determined guidelines</li> </ul>
3. Provide training	<ul style="list-style-type: none"> <li>• Provide program orientation prior to introducing matched pairs</li> <li>• Use ecological education curriculums to discuss environmental issues</li> <li>• Create training sessions with alternative cultural perspectives</li> <li>• Create opportunities for passing traditional skills</li> </ul>
4. Encourage community participation	<ul style="list-style-type: none"> <li>• Provide opportunities for the group to perform community service</li> <li>• Get matched pairs involved in environmental projects of their choosing</li> <li>• Facilitate community problem-solving sessions</li> <li>• Arrange for participants to attend important community events as a group or through their matches</li> <li>• Organize family activities to expand the networks and influence of the program</li> </ul>
5. Evaluate the program	<ul style="list-style-type: none"> <li>• Continuously monitor participant relationships</li> <li>• Assess effects of program on youth attitudes toward adults, the environment and the community</li> <li>• Assess adult mentor attitudes toward youth, the environment, and the community.</li> <li>• Gather feedback on training effectiveness and training needs</li> <li>• Analyze effects of community problem-solving sessions</li> </ul>

### Building an Administrative Foundation

Ecologically-based mentoring requires a strong program foundation because of its comprehensive vision and sizeable objectives. It is highly unlikely that a program without a strong administrative base will be successful in recruiting and educating volunteers while engaging them in the community. Program structure provides opportunities for ecological and community involvement. Ironically, most published mentoring guidelines tend to ignore the administrative foundation necessary to create a program. Ideas such as program goal setting, location suggestions, and supervisory personnel are ignored, presumably because they are often very program specific; consequently, discussion usually begins instead with an explanation of volunteer recruitment and training (Grossman and Tierney 1998; Reglin 1998; Sullivan 1992; Weinberger 1992). Only one source surveyed, Taylor and Bressler's Across the Ages program, provides a more thorough discussion of the mentoring system in its entirety. This study will be the major source used in setting the basic components for ecologically-based mentoring, in part because of the study's breadth, but also because the Across the Ages program, despite of its lack of environmental focus, incorporates many components important to ecologically-based mentoring such as better training and community volunteerism.

### Setting Goals and Objectives, Setting the Scope and Scale

As with any public service program, planning is one of the most important steps in developing an ecologically-based mentoring program. Taylor and Bressler explain, “time spent laying the groundwork in one’s own community, gaining thorough knowledge of resources and barriers present there, and carefully choosing program priorities will pay off in better program outcomes” (2000, p.32). Specifically, researching the community and setting up realistic goals, objectives, and scales of focus are essential in creating a program that fits with the needs and expectations of both participants and the community as a whole. Program goals and objectives may change over time as the participants become more aware, community focus evolves, and local ecological conditions change. However, it is advisable to set basic goals based on the community and potential participants before the program is actually implemented.

While the specific missions of ecologically-based mentoring programs will vary according to local needs and levels of environmental awareness, some basic concepts from mentoring and environmental education should be incorporated into the program’s goals and objectives. First, the program should have a goal of empowering participants to initiate direct action to benefit themselves, the environment, and their community (Gardiner, Enomoto and Grogan 2000; Taylor and Bressler 2000). One objective must advocate action and change either through projects that affect the community as a whole or through projects that change the status of the individual. Second, programs must establish a goal to increase participant experience with their environmental surroundings.

Experiential learning, in which participants engage with the environment in some manner, must be a prominent objective of any ecologically-based mentoring program. Studies show mentoring is more effective if participants control their own learning and action, at least to some extent (Gardiner, Enomoto and Grogan 2000; Benard 1999). Furthermore, as established in previous chapters, the foundation for an environmental ethic comes from interacting with the environment on a regular basis and learning about local processes (Bowers 2001; Orr 1994). Finally, ecologically-based mentoring programs should incorporate a goal of increasing social responsibility especially toward the environment. One objective should advocate volunteerism and participation in community decision-making processes. When further defined, such goals and objectives will create the foundation for all future programmatic work.

After goal setting, the next important step in creating a mentoring program is to build support for the organization and mission by approaching community members and community groups with program goals and objectives (Taylor and Bressler 2000). Establishing a network of support and a diverse administrative board is essential in creating a successful program. Ecologically-based mentoring programs need connections to local ecological experts, environmental organizations, social groups and educational groups. People with expertise on local ecological processes can actively participate on the board and in the program but are also sources of information for future training sessions and projects. Environmental groups such as nature centers, recycling groups, and advocacy organizations are sources of potential participants, and provide opportunities for group projects and community engagement. Such groups are potential

collaborators who can increase the capacity of the mentoring program because they have a shared vision. Other social groups such as churches, cultural organizations, civic groups, and organizations for the elderly can contribute board members and are key sources of participants. Finally, school groups are important because they are sources of youth members and provide opportunities for in-class collaboration if curriculums match mentoring objectives. By building support for ecologically-based mentoring throughout the community, the program gains members, diversifies its approach, incorporates a more representative cross-section of the community, and identifies new resources.

Once goals and objectives have been defined and community support is established, the program's capacity for outreach must be defined based on the available resources in the community (Taylor and Bressler 2000). In order to be successful, ecologically-based mentoring programs should work with the resources available in the community and carefully estimate program potential. Several factors are important in setting the scope and scale of an organization. Programs must understand the ecological and social needs of the community. The program's success depends on defining the amount of environmental awareness and expertise already available, as well as the type of service work needed by the community. It is also important to estimate the number of potential participants and incorporate their interests. If the program is too far removed from participant expectations and desires, it is likely to fail regardless of how large it becomes or how vital its work. Yet another consideration is whether other environmental organizations are in or near the community and how much they are willing to collaborate.

Spending time on thorough planning, establishing practical, obtainable goals, identifying community needs and community resources, and fully defining the program capacity is essential in creating a successful ecologically-based mentoring program. The scope of an ecologically-based mentoring program will be larger if there are already support services in place or if project opportunities already exist. These types of resources become available when networks are created throughout the community. Thus, building community support is a significant factor in determining program scale and scope. Community support is easier to obtain if clear goals and objectives are set. The goals, capacity, and community support highly influence program potential. Moreover, they are important in determining logistical considerations such as where the program is housed, the staffing needs, and even the budget.

#### Program Location and Staff Considerations

Presumably, during the planning process, program originators will decide on key aspects of the mentoring agenda that affect the need for space and staff. Educational and training objectives should be clear so that the need for speakers, teachers, classrooms, and material resources such as copy machines, computers, even paper and pencils are known. The founders should identify community participation goals so that everyone involved understands how much time will be spent working in the community, what kinds of work will be done, and what resources will be necessary to accomplish the work. For instance, if mentoring participants are going to focus only on ecological restoration as their

volunteer component, then hard hats, shovels, hoes and other restoration tools may need to be purchased, stored and maintained. Decisions should be made on how often participants will come together as a full group. If the mentoring participants are meeting often for large social gatherings or community-problem solving workshops, more space and more staff may be necessary. Program location is based on these essential decisions.

Suggestions for program location can be made in part from studies of mentoring programs for at-risk youth. Ecologically-based mentoring programs will be most beneficial to the participants and the community by being site-based (having a specific, identifiable meeting place). A study by Benard on at-risk youth shows that youth engaged in mentoring programs are more likely to feel that they are making a difference if the program is situated within a school or a community center (1999). From a practical perspective, being site-based is more conducive to hosting educational seminars, problem-solving workshops and other group activities important to ecologically-based mentoring programs. Indeed, research shows that 78% of all mentoring programs that engage in group activities are site-based as are 89% of all programs that have specific educational, career or skill components (Sipe and Roder 1999). Being site-based allows ecologically-based mentoring programs the ability to work in large groups and gather the resources they need to hold education seminars and perform community service.

While any location accessible to members of the entire community is appropriate for housing ecologically-based mentoring including but not limited to churches, community centers, environmental outreach centers, and youth activity centers, school locations may be the most appropriate choice. Neighborhood schools act as a focal point

of the community so that basing a mentoring program in the school automatically grounds the program in the community culture. Furthermore, research from mentoring programs for at-risk youth shows that school-based programs are more likely to attract youth from diverse backgrounds and engage additional older adults and minorities as mentors (Sipe and Roder 1999). Attracting participants from the entire community, people from many generations and diverse perspectives, is very important to ecologically-based mentoring because it provides participants with exposure to multiple cultural perspectives, is the basis for intergenerational transfer of knowledge, and increases the availability of traditional skills. Another advantage to school-based mentoring is that it tends to cost less and employ less staff (Sipe and Roder 1999). Because the cost of the building is shared and educational equipment and educational space are already available, either through a lending program or shared-cost program, the operational costs of school-based mentoring programs are often considerably lower. Schools are an ideal location for ecologically-based mentoring programs because of their community stature and shared educational goals and operational needs.

Although site-based mentoring is ideal, another, less desirable possibility is for ecologically-based mentoring programs to use a community-based approach in which there is no central meeting place for participants. Research shows that community-based mentoring organizations such as Big Brothers Big Sisters tend to employ social, recreational activities as their main goal (Herrera 2000). These programs require less space because participants rarely meet as a group and their focus is largely on recreational activities that occur throughout the community (Herrera 2000). Ironically,

community-based programs tend to cost more because although less money is spent acquiring space, more staff is needed to monitor participant relationships and activities through surveys, phone calls and visits (Herrera 2000). Considering the ultimate goal of creating a learning atmosphere and connecting people through projects and problem-solving sessions, a community-based approach may not be the most appropriate setting for ecologically-based mentoring. There are more opportunities to build networks and community if the program is site specific. The considerations presented here, scope, scale, location and staff, are special considerations in organizing and budgeting for a successful ecologically-based mentoring program.

#### Participants of Ecologically-Based Mentoring Programs

As soon as the program guidelines are established, the program focus is clear, and the budget has been created, both youth and adult mentors alike, can be recruited to participate in ecologically-based mentoring relationships. Because the adult/child relationship established through mentoring is so influential in facilitating the transfer of knowledge and the connection to community, special attention must be given to recruiting dedicated mentors and committed youth. The broad focus of ecologically-based mentoring dictates the need for participants from all aspects of the community in order to create a rich array of talents, interests, perspectives, and knowledge to share. At the same time, effective matches must be made so that adults are paired with youth who have similar interests and compatible personalities and levels of knowledge. Although

the program incorporates both work and education, the mentoring relationship should be enjoyable and meaningful for all involved.

### Recruiting Adults as Mentors

Adult mentors in ecologically-based mentoring programs should represent the entire community in their interests, cultural and social backgrounds, and their knowledge. They also need to have a high degree of commitment to the program. Ideally, participants will spend at least four hours per week together for a minimum of one year, as this is the best way to build trusting relationships, facilitate the large array of projects incorporated into the program, and make the program truly effective (Taylor and Bressler 2000; Grossman and Tierney 1998). Less enthusiastic mentors will not be able to fulfill the large time commitment required to make ecologically-based mentoring a transformative experience. Because mentors are meant to be role models, guides, teachers, and friends, it is best to establish a complete job description of important mentor characteristics.

While not all mentors will perfectly model the mentoring ideal, some traits are more important than others. First, commitment and dedication to youth, the program, and the environment are essential. Not all mentors, if any, will be experts on ecology or self-proclaimed environmentalists. However, mentors must be enthusiastic about working with youth and learning about the environment and human ecological impacts. Ecologically-based mentoring can and should be a learning process for both mentors and

youth. Second, mentors must be personable meaning they are positive, respectful, willing to listen and share their knowledge, and open to new experiences (Taylor and Bressler 2000; Benard 1999). Committed adults who are genuinely concerned about youth and the environment and who are enthusiastic and open-minded will make the best mentors in an ecologically-based mentoring program.

There are many places to look when recruiting caring adults. One starting point is to approach parents through public and nonpublic schools. There may be parents available who want to learn about the environment with their own children or other children in the community. This is perfectly acceptable and even encouraged. A second source of mentors is local chapters of environmental groups such as the Sierra Club, the Nature Conservancy or the Audubon Society. Members of these groups should already possess valuable knowledge of ecology and should already understand many environmental concepts. Local colleges and universities, including sororities and fraternities, are other excellent sources of adult mentors. While college students may be young, their advantages include flexible schedules and possibly, a prior commitment to youth, the community, and/or the environment. It is also advisable to look to religious groups and civic groups as potential sources of adult mentors. People engaged in such groups often already have a commitment to public service. Furthermore, the ideals of ecologically-based mentoring including building community and working to improve environmental and social conditions may fit well with their personal beliefs. Finally, it is very important for ecologically-based mentoring programs to engage community elders and minorities from within the community. The long term knowledge and alternative

cultural perspectives they bring to the program are invaluable. Thus, senior citizen centers, retirement groups, senior citizen communities, cultural groups, local chapters of the NAACP, and other such organizations should be contacted as potential mentor sources. A thorough list of possible recruiting centers for adults and youth is available in Table 2.

TABLE 2. Potential Community Sources for Recruiting Participants.

SOURCES OF MENTORS	SOURCES OF YOUTH
<ul style="list-style-type: none"> <li>• Schools/educational institutions</li> <li>• Local, regional and national environmental groups such as the Nature Conservancy</li> <li>• Colleges and universities</li> <li>• Religious institutions such as churches, synagogues, mosques and temples</li> <li>• Civic Groups such as the Elks and Rotary*</li> <li>• Cultural organizations like Native American Societies and the Latin American Council</li> <li>• Senior citizen centers and retirement homes</li> <li>• Retiree organizations</li> <li>• Local chapters of professional societies*</li> </ul>	<ul style="list-style-type: none"> <li>• Public schools</li> <li>• Nonpublic schools</li> <li>• After-school programs</li> <li>• Youth activity centers such as the YMCA</li> <li>• Religious youth groups</li> <li>• Cultural organizations</li> <li>• Low-income housing developments</li> <li>• Programs for juvenile delinquents and at-risk youth</li> </ul>

\*Sources compliments of Taylor and Bressler, 2000.

Regardless of their community status, all potential adult mentors must pass a screening process in order to protect youth from potential predators. Taylor and Bressler provide helpful suggestions on how to screen volunteers. They suggest that the process start with an application in which potential participants provide their work, volunteer and educational background, relevant experience, and references (Taylor and Bressler 2000). It is also advisable to have applicants agree to a criminal record check through local and national law enforcement agencies (Taylor and Bressler 2000). If anything from the

application does not match or cannot be verified, staff should be extra cautious throughout the rest of the screening process and try to get verifiable explanations for discrepancies.

Once the application has been verified, an interview should be performed, preferably by at least two staff members, to get a personal feel for the potential mentor (Taylor and Bressler 2000). Interviews afford staff the chance to ask potential mentors additional questions concerning issues raised from the application process. It also gives staff the opportunity to assess whether potential mentors have goals and personal characteristics that fit with the vision and mission of the program. Finally, potential mentors must be willing to complete a pre-match training session to prepare them for working with youth through ecologically-based mentoring (Taylor and Bressler 2000). The pre-match training session introduces potential mentors to the challenges of working with youth and ecological and social issues, and affords the staff another opportunity to assess the personal qualities of potential mentors before they are introduced to youth. Time spent analyzing applications, checking references, investigating criminal records, interviewing candidates, and performing pre-match training sessions helps ensure the safety of youth in the program and a better experience for all involved.

### Recruiting Youth Participants

Recruiting adult mentors into ecologically-based mentoring programs requires that the staff approach diverse groups throughout the community and maintain a vigorous

screening program. Recruiting young people into the program may be a little easier. One of the goals of ecologically-based mentoring is to provide youth with more exposure to other generations, connect them to the community and the local environment, and open their minds to alternative ideas. Thus, the program should be open to all youth who are willing to become involved in environmental issues and who can feasibly give four hours a week to the project. While all children should be included in the program, especially vulnerable youth, those in danger of delinquency, addiction and gang related-violence, should be given extra consideration as they can benefit greatly not only from the adult attention but also from increased connection to the community and increased connection to the environment as evidenced through the literature available on at-risk youth.

Like adults, youth participants in ecologically-based mentoring programs can be recruited throughout the community. Housing mentoring programs in schools may allow more students to become involved because the program can be a natural extension of their school day, the school is an excellent source of participants, and housing the program in schools may solve transportation problems. While public schools are perhaps the most obvious sources of participants, nonpublic schools should not be ignored. Personal experience has shown that the commitment of youth and parents alike is often much higher in nonpublic schools. Church youth groups may also be interested in ecologically-based mentoring. Forming collaborations with church groups is a good way to recruit youth and their parents. Although many participants will be available through such groups, it is advisable to visit low-income housing developments and youth cultural groups directly. These youth may require additional prompting to join an ecologically-

based mentoring program yet their potential contribution through their distinct, cultural perspectives is a vital aspect of successful programs.

### Matching Mentoring Pairs

After a considerable pool of suitable mentors and interested youth are available, matches may be made. Matching mentors with youth is an important process that requires careful consideration. It may be regarded as the most important aspect of the program, as successful matches will likely create long term commitment to the program and more successful outcomes overall (Taylor and Bressler 2000). Participants do not have to be paired immediately. In fact, it is advisable to create matches after mentors and youth have had the chance to interact and become comfortable with each other under the supervision of staff. Taylor and Bressler suggest facilitating a series of workshops over the span of a month so that mentors and youth can meet and work together through activities and become comfortable with each other before the final matches are made (2000). The workshops might include classroom activities like introductory games and sharing of experiences, ideals and hopes for the program, or outside activities such as picnics or hikes. Whichever setting is chosen, workshops allow natural pairs to occur and allow staff to better assess other pairs by observing interactions over time.

Regardless of whether matches are made through workshop interactions or through a simple questionnaire and interview process, certain similarities between the adults and youth will create better matches than random assortment (Taylor and Bressler

2000). Natural connections should definitely be a factor in assigning mentors to youth. When a natural connection is not apparent, matches should be made based on personality and interests. Pairs with similar temperaments and similar interests are likely to connect well (Taylor and Bressler 2000). Another important factor in determining matches is shared life experiences or cultural and social backgrounds (Taylor and Bressler 2000). Shared experiences give a foundation for connection. Other criteria that may help create successful matches include living in close proximity to each other (a factor that is especially important if transportation is a problem), sharing similar levels of energy and commitment, and having similar goals for themselves, the program and the community (Taylor and Bressler 2000). Criteria for matching mentors with youth should always be relevant to specific communities but should be established with the ultimate goal of pairing participants to connect them in meaningful, satisfying, productive relationships.

#### Training/Education of Participants of Ecologically-Based Mentoring Programs

While recruiting participants and successfully matching them in positive relationships may be the single most important activity in starting the mentoring process, training and education is a crucial factor in maintaining the ecological focus and in working toward a more responsible environmental and social attitude. In all likelihood, mentors and youth will not be well versed in environmental problems or human impacts on the environment. Furthermore, participants are not likely to grasp the fundamental aspects of their local ecology or community systems. Ecologically-based mentoring is

meant to be a learning process for all participants and should gradually progress toward an environmental ethic. Stated simply, ecologically-based mentoring assembles the most desirable knowledge, traditions, and talents of people community-wide to create a new, progressively better approach to addressing environmental concerns. Consequently, training is essential for all participants including mentors, youth, and collaborators in the mentoring process. Training and education must be a continuous aspect of an environmentally-based mentoring program, occurring frequently according to a curriculum corresponding to the program agenda and participant needs. An overview of the educational concepts discussed here appears as Table 3.

TABLE 3. Essential Components of Ecologically-Based Training.

TRAINING OPPORTUNITY	FOR MENTORS	FOR YOUTH
Orientation	<ul style="list-style-type: none"> <li>• Train for interactions with youth</li> <li>• Prepare mentors for unexpected interactions and problems with youth</li> <li>• Learn basic concepts of environmentalism</li> <li>• Understand program goals and expectations</li> </ul>	<ul style="list-style-type: none"> <li>• Train for interactions with mentors</li> <li>• Understand stereotyping</li> <li>• Learn the importance of environmental action</li> <li>• Understand program expectations regarding mentor relationships</li> </ul>
Ongoing training	<ul style="list-style-type: none"> <li>• Expand knowledge of local systems</li> <li>• Expand understanding of broad environmental concepts</li> <li>• Provide practical means of guiding youth in more sustainable activities.</li> <li>• Address changing ecological conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Experience local ecosystems and community systems</li> <li>• Understand impacts of consumption on ecological processes</li> <li>• Apply environmental concepts locally</li> <li>• Implement practical solutions for environmental change</li> </ul>

## Orientation Training for Mentors and Youth

Providing mentors and youth with separate introductory orientation sessions allows both groups to better understand the goals of ecologically-based mentoring and provides primary skills to facilitate successful interactions (Taylor and Bressler 2000). Participants need to understand their prospective roles in the program and in their specific relationships. They also need the personal skills to build a relationship with someone from a different generation and background. Providing separate orientation sessions for mentors and youth provides a free atmosphere in which participants can discuss concerns and expectations.

Orientation sessions for mentors should encompass the following concepts. Socially, mentors must have practice interacting with youth. Adults are likely to be nervous about interacting with young people from diverse backgrounds. For more elderly participants, mentoring may be a very new experience and it may be necessary to reintroduce them to the issues faced by today's youth (Taylor and Bressler 2000). Mentors may want to practice relating to shy students or students with serious family problems. Role playing and allowing time for mentors to discuss their fears and their expectations about their upcoming match in the safe setting of orientation may help alleviate some concerns (Taylor and Bressler 2000). Mentors should be prepared for unexpected interactions with youth rather than being surprised in the moment. Additionally, mentors should be made aware that mentoring is a mutually beneficial experience (Taylor and Bressler 2000). Youth have important knowledge and

perspectives to share. While ongoing training and help sessions may be necessary to address social problems encountered throughout the mentoring experience, preparing mentors from the outset empowers them to deal with problems and opportunities as they arise.

Ecologically, mentors are not expected to understand fully all aspects of environmentalism. Therefore, orientation sessions should include an overview of basic environmental concepts. Most importantly, mentors need to understand the need for intact ecosystems and how human consumption impacts natural resources and ecosystem function. It is essential that mentors understand that society's tendency to dispose of everything and to constantly require bigger and better products inhibits us from living sustainably. Some related concepts include the importance of recycling, responsible purchasing, and awareness of local systems dealing with consumption and pollution. Ecologically-based mentoring is striving for reduced consumerism facilitated through ecological awareness, stronger community unity, and a local focus that allows for self-sufficiency. Other important, more specific concepts include the theories behind global climate change, the health and social problems associated with pollution, the idea of water scarcity, and the current environmental policies of local and national governments. The ecological orientation of each mentoring program will be specific to the needs of the individual community and will represent local environmental issues.

Mentors must be willing to embrace at least some environmental concepts in order to be proper role models for youth. While mentors are not expected to be perfect models of sustainability, they must be willing to regularly act in ways that support

program goals, promote environmental awareness, and reduce waste. For instance, while some participants may choose to adopt a vegetarian lifestyle in an effort to reduce animal-related consumption of natural resources, this is not required. Similarly, some participants may choose to forego the use of motorized recreational vehicles because of their detrimental effects on vulnerable ecosystems and their contribution to global climate change. Again, this is not required. Rather than set strict requirements for mentors, ecologically-based mentoring programs should incorporate adults who are willing to learn more about the environment and progressively change their lifestyles even in small ways.

Mentor activities with youth should always revolve around ecologically sound projects and recreation. Moreover, mentors should be informed of specific program expectations concerning their activities. In the beginning, it might be necessary to provide mentors with a list of recreational activities that correspond with program goals. In addition, mentors should also be aware of ongoing ecological projects available in the community and how to become involved. Mentors should understand the program's focus on traditional skills and should be encouraged to share skills such as sewing, cooking, gardening, and carpentry with youth. If the mentors do not possess traditional skills, they may want to learn a new skill with their assigned partner. While mentors are not expected to perfectly adhere to every guideline, they should be aware of the type of behavior and activities that the program endorses in order to create a more responsible environmental attitude and lessen human impact on the environment.

Orientation for the mentors is vital to program success, however, orientation for the youth is nearly as essential. Socially, youth must be prepared to interact with their

mentors, especially if they have little contact with older adults in their everyday experiences (Taylor and Bressler 2000). Youth should be introduced to the ideas of racism, ageism, and general stereotyping (Taylor and Bressler 2000). This prepares them to interact with mentors from diverse backgrounds but also encourages them to work harder at mutual understanding. Like the adults, youth must understand that mentoring entails mutual responsibility (Taylor and Bressler 2000). The youth have as much to give to the mentor as the mentor has to give to the youth. Youth should not expect the relationship to be one sided. Allowing youth to work through such concepts as stereotyping and the requirements of mentoring during orientation reduces future problems with these issues and opens youth to new experiences.

Ecologically, youth are not expected to be highly, environmentally aware initially. The mentoring relationship will educate them on many of the environmental and social issues important in developing an environmental ethic. It will also educate them on how to lessen their impact on surrounding ecosystems. However, it is best to prepare youth for the experience of reconnecting with the environment and the community. Orientation sessions should provide them with a general understanding on why environmental awareness is important and how human use of the environment impacts their own lives. Orientation should excite youth and instill in them the need to learn more about environmental issues.

## Ongoing Ecological and Social Education

Orientation to ecologically-based mentoring provides the basic foundation for environmental work. However, continuing training is necessary not only because environmental issues are complex and require more information than can be provided in initial orientation sessions, but also because ecological and social conditions change over time. Ongoing training allows participants in ecologically-based mentoring programs to stay abreast of current ecological issues, furthers their understanding of specific, locally important issues, and provides another avenue for sharing traditional skills and alternative ideas. Regular educational sessions should incorporate the important concepts put forth by environmental scientists, theorists, and activists.

As Berry, Orr and Bowers assert, the training for participants in ecologically-based mentoring programs should always draw from local resources and issues and should put concepts into local context. Programs should emphasize local ecological processes and local networks of support and neighborly interactions (Berry 1995). Potential training curriculums include explorations of commodification, problems associated with ever-changing technology and the total disregard of traditional knowledge in favor of complete dependence on science (Bowers 2001). Traditional skills should have a prominent place in training regimens. Curricula should also encourage connection to and humble appreciation of ecosystems through experience, careful observation, and practical knowledge of local function (Orr 1994). More specifically, the ongoing training sessions should explore more traditional methods of interacting with the

environment, traditional means of providing life's needs, and alternative perspectives of the environment. They may also examine how environmental racism, pollution, development, and politics affect the environment and the social structure of the local community.

There are many ways of incorporating these broad environmental concepts into an education program for participants. One option is to host monthly guest speakers: local natural history experts, biologists, extension service personnel, government officials from the Department of Environmental Quality or the Department of Fish and Wildlife, environmental educators from local nature centers, or representatives from local indigenous and cultural organizations. Another option is to offer monthly education workshops based on established ecological education curriculums. One particularly useful curriculum is a handbook created for the Enviro-Cops program in Miami. A handbook, *Enviro-Cops Guide Book and Lesson Plans*, available through the ARISE Foundation provides simple lessons that address environmental and social issues and gives practical tips for change (1993). Other resources include Project Wild, a government program aimed at environmental awareness and such books as the *Kids' Guide to Social Action* available through Free Spirit Publishing, *50 Simple Things Kids Can Do to Save the Earth* available through The Earth Works Group and *Projects for a Healthy Planet* available from John Wiley and Sons, Inc. Other, more experiential educational options will be explored in the following section devoted to community participation. Regardless of how training occurs, continuous educational

opportunities should be made available to participants to promote awareness of issues important in the local community.

### Facilitating Community Participation

The final component of an ecologically-based mentoring program is community participation. Matched pairs become vitally engaged in the community through group projects, volunteer efforts, involvement in community events, and social interactions with other participants. Consequently, program specifications should include a service component and provide additional opportunities for matched pairs and their families to interact through social activities and group volunteer efforts. Ecologically-based mentoring programs use a variety of methods to incorporate community participation.

### Community Participation through Volunteerism

All ecologically-based mentoring programs should incorporate a service component as an objective. One way of connecting participants to the community through volunteerism is to require that matched pairs become involved in projects sponsored by other local service organizations. In this case, program staff can give mentors a list of projects being accomplished throughout the community that match program goals and objectives. Together, matched pairs can choose a project and put in

several hours a month pursuing this interest. For example, participants might volunteer to collect data for a watershed assessment. They might also participate in a letter writing campaign for better water quality or join a panel exploring the effects of invasive species on local ecosystems. Participants record their hours and report them to the program so that the administrative staff can monitor their work and perhaps tailor training activities to assist with their interests. Encouraging volunteerism benefits mentoring programs by engaging participants in projects specific to their interests, reducing staff responsibility in finding and organizing projects, and increasing the volunteer base of other community groups. The disadvantages are that appropriate projects may not be available and overseeing the paperwork may become frustrating and overwhelming to staff.

Another option in encouraging volunteerism is to have participants work together as a group on specific projects developed by the administrative board with participant input or through collaboration with other organizations. In this case, community problem-solving workshops identify local problems, explore possibilities for action and establish action plans for addressing the problem. If appropriate, the program may include other organizations to put forth a unified effort and strengthen community networks. The benefits of this approach are that participants have more control over the project and the project can be more specific to the goals and interests of the group as a whole. The disadvantages to this approach are that staff and participants are more responsible for identifying projects and implementing plans that work.

Ideally, both an individualized and group approach should be taken with regard to community involvement and volunteerism. Participants should be

encouraged to become involved in a project or organization of their choice for regular volunteer work. However, two or three times per year, group service projects should be pursued so that participants can practice problem-solving and working together. These group projects encourage the sharing of new, innovative ideas and encourage new networks to form between program participants. In this way, ecologically-based mentoring programs incorporate volunteerism on many levels.

#### Community Participation through Events

Volunteerism is not the only means of involving participants of ecologically-based mentoring programs in the community. Beyond service requirements, programs should encourage their participants to attend community events. Programs should also provide participants with social events that bring mentors, youth, and their families together in a communal atmosphere. Attending social events increases connection to the community by opening further networks of interaction.

Ecologically-based mentoring programs provide a natural means of increasing individual involvement in community events. First, programs should keep a calendar of local events and remind participants of upcoming opportunities to attend. If transportation is a problem for many matched pairs, the program staff may provide a means of carpooling or using mass transit. A second effective method of encouraging involvement is in planning to attend events as a group. For instance, if there is a local music festival coming up, create a plan for having participants attend together: select a meeting place, provide

transportation and enjoy the event as a whole. While free events are appealing, other events requiring fees may be attended especially if group rates are an option. Scholarships must be available for such events so that economic status is not a deterrent.

Besides making participants aware of community events, specific social functions should be planned for participants and their families. Group soccer games, an organized tour of the local wildlife refuge, or a session at a local observatory are examples of easily planned outings. The program should also conduct a yearly recognition event. Mentors and youth alike need to be congratulated for exemplary achievement in volunteering, in becoming involved in the community, and sustaining productive relationships. Social events are beneficial in that they give mentors opportunities to interact with youth family members, the events get families involved in the program itself, and they expand the reach of the organization by increasing public understanding of the programs goals.

Overall, endorsement of community involvement occurs easily and mentoring organizations should incorporate it as a vital aspect of ecological programs. Community involvement comes in many forms. Those most agreeable to participants and aligned with program goals should be pursued. In some cases, mentors and youth explore their own service projects while in others, the program supplies service projects to fulfill the interests and goals of participants. Organized community events also serve as a way of connecting mentors and youth to their community. Combined, such activities facilitate an increased sense of place and create opportunities for exchanging skills, knowledge, and cultural perspectives.

### A Word about Evaluation

The components already discussed in this chapter are important in creating a successful, ecologically-based mentoring program. However, these components become stale and outdated unless they are continually re-evaluated and improved. Furthermore, funding organizations require proof that the program is following set guidelines and producing results. Thus, at every point in the program, from recruitment to training and community volunteerism, staff must employ systems for evaluation.

In analyzing participants, staff must review their recruiting programs and must monitor mentoring relationships (Taylor and Bressler 2000). Surveys and statistical analysis will determine if recruitment presentations and programs are effective in engaging participants from throughout the community, representing a diverse array of social and cultural backgrounds. Meanwhile, periodic reviews of mentoring relationships and formal reflection from mentors and youth will identify failing relationships. Staff can then provide assistance or arrange new partnerships. Monitoring participation is essential in creating a diverse, active mentoring community.

Besides monitoring participants directly, staff must also assess the educational and training components of the program (Taylor and Bressler 2000). Analysis of orientation sessions through questionnaires and testing determines if the training fully prepares participants for their work in the program. Furthermore, review of educational sessions and workshops ensures that sessions provide new and relevant information that

is useful for participants. Without evaluation, training components may become tedious, boring and irrelevant for participants.

Finally, staff and participants must analyze community service projects to decide if they have accomplished their goals and were good experiences. Community projects should be evaluated as to participant turnout and quantifiable outcomes such as pounds of trash removed, miles of stream evaluated, etc. Even social events must be monitored to determine if they are successful. Staff should again record involvement in the event as well as general impressions of event results. Program critique through questionnaires, interviews, testing, and informal observations keeps the program vital and aligned with current events and participant and community needs. It also provides documented evidence of success to those wishing to donate their time, money and energy to ecologically-based mentoring.

#### Final Thoughts on Ecologically-Based Mentoring

Ecologically-based mentoring re-establishes the connection to community and to other generations that is currently absent from society. Matching youth with caring adults who introduce them into local networks strengthens the bond between generations and provides a supportive environment for sharing information and learning about local ecosystems. Experiencing the environment through recreation and volunteerism establishes a sense of place and responsibility. Connecting people with multiple perspectives of the world creates a new avenue for sharing ideas and for

transferring traditional skills and long term ecological knowledge. Community problem-solving becomes easier as people build respect for the viewpoints and values of others. While mentoring may not be able to solve all the Earth's ecological problems, it is a step toward environmental responsibility guided by a strong moral code calling for sustainability. It is a new method of integrating environmental consciousness into everyday life and addressing global problems at a local level.

Implementing an ecologically-based mentoring program is possible regardless of the state of local environmental awareness. The program simply requires a few interested and dedicated people capable of making ecological awareness accessible to all community members. Thorough research and planning ensures that the program fits with the needs and interests of the community. Careful, yet widespread recruiting assures that the entire community is represented and engaged in sustainable activities. Continuous education and training make environmentalism relevant to local contexts and moves the community toward more awareness and responsible attitudes. Community service requirements increase community networks, engage new participants, and allow local ecological projects to be accomplished. Evaluation keeps the information and activities original, modern, and connected with community needs.

Ecologically-based mentoring, with its comprehensive approach, realizes the true potential of mentoring and advances the status of mentoring in society. No longer is mentoring merely a temporary means of addressing social problems of delinquency, lack of opportunity, or career connections. Instead, mentoring takes a new stance as a means of transforming Western culture to reconnect individuals to the community to

live more sustainably with surrounding ecosystems. Mentoring restores a sense of place and facilitates intergenerational and cultural exchanges that produce an environmental ethic suitable for sustaining culture and ecology as a single, mutually-connected entity.

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