

D. KEY CHARACTERISTICS: COMMUNITY-BASED EDUCATION MODELS

D. 1. FROM RESEARCH AND SUMMARY ARTICLES

Summarized from articles, listed and annotated in Appendix A. 3.

Community-based environmental education should:

1. Enable a relevant and fulfilling education within a community-specific environment. (Weintraub, 1995)
 - a. Environmental education should emerge from and thrive on a broad community introspection into the scope of its natural resource needs and the values that it desires to instill in future generations.
 - b. Citizens must be enabled to actively pursue and promote the constant evaluation and reassessment of the relationship between the community and the Earth.
 - c. The environmental education outreach design should allow the definition of environment and relevant educational techniques to be modified to meet the changing needs of the community.
2. Heighten citizens' consciousness of place and community. Help instill a sense of place and a responsibility for stewardship
3. Use community values, problems, resources and potential as a foundation. "Define" the community to be addressed. Look to ecological, bio-regional, cultural, and economic communities.
4. Support community volunteer leadership programs, such as peer leaders.
5. Empower citizens to rely on their own capabilities to achieve valued environmental outcomes.
6. Give individuals the opportunity to develop a sense of "ownership" and "empowerment." Individuals who act have "expressed an intention to take action" and "possess a desire to act."
7. Make the connection between environmental information and individual actions and solutions to environmental problems.
8. Be able to answer the question, "learning for what?" Introduce actions which meet personal interests (such as raising funds, reducing work, involve children in a family chore, etc.). Use a lifestyle-centered approach.
9. Focus on how to turn intentions into actions, rather than a focus on changing attitudes.
10. Develop education which uses demonstrated behavior change strategies: relating to current conditions, commitment, modeling, and goal-setting strategies.
11. Emphasize positive motivation techniques that build intrinsic motivation among participants. Commitment strategies provide this opportunity reliably producing both quick and durable behavior change.

- a. Commitments work better than monetary incentives for their ability to produce short term involvement and enduring behavior change.
 - b. Commitments must be explicit for a specific action.
 - c. Commitments are enhanced if they are individual, public, written, and voluntary. Commitments to a specific act may lead to a more generalized commitment.
12. Provide a participatory process for selecting target behaviors which includes: define the ideal behavior, conduct research with “doers” and “non-doers,” select and negotiate target behaviors, and develop strategies which reflect findings.
13. Identify and apply factors which influence the adoption of ideal behaviors were applied to specific case studies to learn through example. Factors include:
- a. Availability of appropriate technologies to support the practice
 - b. Policies and laws that support the behavior change
 - c. Events (antecedents) to set the stage for or trigger behavior (knowledge, skills)
 - d. Consequences that strengthen the behavior
 - e. Perceived consequences
 - f. Perceived social norms
 - g. Perceived skills
14. Assure that education programs
- a. Have stated goals
 - b. Are connected to community environmental concerns
 - c. Use program design and activities to further program goals and address community needs
 - d. Meet youth or adult educational and personal needs including fun and recreation
 - e. Involve youth and adults as full partners and acknowledge their contributions
 - f. Involve community partners
 - g. Use the support of an organization to provide continuity and stability and to insure quality
 - h. Deliver information and skills effectively
 - i. Are evaluated and resulting insights are incorporated into new programs.
15. Involve disadvantaged groups in environmental policy decisions. This can be accomplished through:
- a. Working with community organizations or creating new organizations
 - b. Insisting that environmental decisions affecting communities be made in partnership with community residents
 - c. Demanding equity in clean-up and enforcement
 - d. Collaborating with local businesses to find acceptable alternatives to environmental risks
 - e. Encouraging development of sustainable communities that do not require excess risk for economic well-being.

D. 2. FROM U.S. COMMUNITY DEVELOPMENT STUDIES

Summarized from a detailed discussion of community development provided with a list of resources in Appendix A. 1.

1. Participation comes from a broad cross section of the community.
2. Deliberations are made on the basis of well-informed participation.
3. Decisions are the result of consensus or democratic majority rule decision-making.
4. The process purposefully fosters group building, leadership development and capacity building (process objective) as an essential element, while striving to successfully address a substantive issue as well (product objective).
5. Processes are largely focused on a purposeful and systematic to addressing a local concern.
6. Community issues or problems are investigated holistically, linking issues and appreciating the complexities of the community in assessing and resolving the issue.
7. Processes are flexible and not rigidly structured to only deal with an initial concern.
8. U.S. community development processes have a strong reliance on professional staff facilitation and coordination.
9. Successful U.S. efforts are characterized as being locally initiated and entrepreneurial, although broad models may be championed by community colleges, state extension programs, or state or regional agencies furthering programmatic agendas.
10. The genesis of efforts is often a locally perceived crisis or potential crisis, although some initiatives arise from subtle mandates from broader units of government, opportunities to gain additional resources, or simply the pride of a key champion.
11. Greater competition for diminishing resources (and the general "devolution" of government-sponsored programs from broader to more local governments) has thrust communities into situations of coordination and collaboration in order to address important issues.
12. The community development process is increasingly being used as the mechanism for integration in these opportunities.

D. 3. FROM U.S. COMMUNITY-BASED ENVIRONMENTAL EDUCATION MODELS

Summarized from sample program models, described in Appendix F. 2.

1. Keys to a successful community program
 - a. Form and use a coalition
 - b. Define your audience
 - c. Develop an education plan, ensure that events fit the plan
 - d. Make the program locally relevant
 - e. Start small
 - f. Tie the message into locally pressing issues
 - g. Provide credible information tailored to the locality
 - h. Use a number of media for sharing information and work closely with media representatives
 - i. Take officials on a tour of the area
 - j. Go to citizens or provide a service that brings citizens to you,
 - k. Train educators
 - l. Assess and evaluate project impacts.
2. Support local groups. Find groups who work with citizens already on locally identified topics on any subject. Find an opportunity to relate a key environmental topic to their ongoing work, or respond to requests from these groups.
3. Organize a group or form a coalition and work towards a goal with a positive solution.
4. A program instigator and a good leader is vital to group and program success.
5. Formalize (i.e. provide a link to local government) a community group designed to provide guidance on local policy, education strategies, and coordination of specific activities.
6. Link communities with like interests and needs together to enable them to take advantage of education strategies successfully applied by others.
7. Support local communications or newsletter about progress on an environmental issue. Maintain communication among community groups.
8. Give youth the opportunity to engage in long-term, realistic environmental issues.
9. Link school education programs to specific community environmental topics.
10. Improve knowledge at the community level through training.
11. Encourage/facilitate community activities which identify community sustainability needs and assets, relate to a local vision, and which provide action steps for quality of life and the environment.
12. Relate education about the environment to local planning and sustainability efforts. Features of the process include:
 - a. Community controlled development of its own resources
 - b. Discovery of public goals by survey and public discussion

- c. Natural resource inventories prepared with by a team representing all aspects of the community
 - d. Development of a plan of action that relates to environmental, political and financial constraints
 - e. Action plan includes steps to protect the environment, diversify economic opportunity, and preserve cultural values.
13. Find ways to link citizens with technical experts and public agencies.
 14. Support community interests and efforts to monitor local environmental conditions. Use the data to make planning decisions.
 15. Involve the community in assessing the environmental situation, including scope, cause, and seriousness of the problem. Identify technical solutions.
 16. Enable citizens to participate in public procedures in an effective way. Provide worksheets, developed by experts, that enable citizens to gather information and analyze results for their community environmental management needs on specific natural resource or environmental topics, businesses, or industries.
 17. Enable groups to choose and accomplish specific service projects.
 18. Provide a technical assistance team to work on-site with community members on natural resource management projects.
 19. Provide funding for local natural resource management projects to be disbursed by a local steering committee which has assessed natural resource and community needs.
 20. Provide community coalitions with grant resources to encourage a sustained local education effort by the coalition.
 21. Support a positive relationship and “agreements” between citizens and managers of business/industry facilities.
 22. Reward or recognize communities that create a results oriented action plan and achieve their goals.

D. 4. FROM INTERNATIONAL COMMUNITY DEVELOPMENT AND ENVIRONMENTAL EDUCATION

Canadian Community-Based Environmental Education Models

Summarized from a report prepared for this project and provided in Appendix H, "Community-Based Environmental Education," by EcoLogic & Associates, 1997.

1. Base community decision-making models on partnerships and networks, rather than on the traditional hierarchical approaches and models.
2. Support and use community consensus decision-making processes.
3. Enable communities to develop a vision of a healthy, dynamic future - environmentally, socially, and economically. Develop a set of indicators by which to measure the goals identified in the vision.
4. Support community long-term goals.
5. Support locally representative committees formed to assess, plan, and take action about the community environment.
6. Employ social marketing principles when designing education strategies - community change will only be effective if new models of behavior meet specific citizen needs; education about values and attitudes cannot be shown to lead to change in behavior.
 - a. Provide convenient access to information relevant to a specific environmental problem.
 - b. Present new concepts as an opportunity rather than a moral imperative.
7. Support local Teams who can combine knowledge about the environment with knowledge about how to educate adults to design locally appropriate environmental education opportunities.
8. Train community volunteers to work directly with individual citizens to help build knowledge and identify consensus
 - a. Trained volunteers visit local homes to discuss environmental and economic issues.
 - b. Trained volunteers recognize barriers and violations in local habitat use and share responsibility for identifying management solutions.
9. Establish partnerships with educational organizations and support youth consensus-building conferences and discussions.
10. Establish partnerships with professional groups to ensure they have opportunities to stay current with sustainable development trends and issues.
11. Fund non-profit community groups who have projects that promote action about the environment, projects that improve human and environmental health. Foster awareness of their accomplishments.

Key Characteristics of Other International Models

Summarized from sample program models, described in Appendix F. 3.

1. Recognize the strengths and barriers of the organizations ability to deliver the program.
2. Define the community you will address. Consider how the political and social aspects of community will influence the program.
3. Assess the environmental situation, involving the community in the assessment.
4. Assess resources available to solve the problem. Choose an action which best reflects available resources.
5. Identify the target audience and understand their interest in the topic. Understand what the audience can contribute. Keep in mind that education may not be the best method to reach this audience.
6. Answer the question, "learning for what?" What will individuals gain? How is the individual connected to the problem? Why do people need this program? Use a life-style centered approach.
7. Program facilitators should be in direct and continuing contact with local citizens.
Why is the education program needed?
 - a. Are citizens aware of the problem?
 - b. Do citizens understand how they are connected?
 - c. Do citizens know what to do?
 - d. Are citizens motivated to take action?
8. Make sure the learner knows what knowledge, skills, or behaviors they are missing and what they will achieve from the learning experience.
9. Select a strategy which will best convey information to the target audience. What does the target audience prefer? Who is a reliable conveyer of the information?
10. Choose teaching strategies which are focused on problems, provide an experience for the learner, and provides an opportunity for the learner to practice the new knowledge, skills, or behavior.
11. Involve learners at all stages of design and delivery of program. Community-based education stems **from** the community rather than being directed **at** the community.
12. Provide all the materials that local educators will need to deliver an accurate and successful program.

D. 5. FROM PROJECT INTERVIEWS AND GROUP DISCUSSIONS

Representatives from the Region EPA office, community groups and Cooperative Extension offices provided "Advice on Good Models to Follow."

EPA REGION 3 INTERVIEWS

"Take your stuff and go there." JoAnn Denworth

1. Develop programs to meet specific needs - rural living issues, how to do
2. Monroe County Coalition for a Cleaner Environment formed to address water quality education issues - included: PA Dept. Of Env. Protection, Co. Conservation District, County Extension, well testers and drillers, septic tank businesses, etc.
3. Get to municipal officials through questionnaire about their needs
 - a. Go to their meetings, get on agenda
 - b. Keep topic concrete
 - c. Topic coincides with local water issues and new influx of people
4. Environmental Directory - to help residents and other officials figure out who to talk with about specific environmental questions
5. Use local resources for local programs - important for individuals and officials to get answers to future questions
6. PA Urban Forestry program provides community forestry expertise, uses community forestry to involve locals in environmental management, provides opportunities for community involvement at a lot of levels
 - a. Individual tree management
 - b. Greenways/land use planning
 - c. Riparian forest buffer issue
 - d. Multi-municipal planning
 - e. Shade-tree associations - develop and support
7. Identifying issues through:
 - a. Community surveys
 - b. Grantees surveys - what happened
 - c. Driving around and looking
 - d. Calling offices and commissions to get information
8. Forest Service program emphasis on ecosystem management
 - a. Community and home activities help people understand what's happening locally in order to understand bigger issues
 - b. Emphasizes building programs instead of building projects
9. Conservation District coupled with nature center
 - a. Developed due to school requests for help
 - b. Worked with teachers to rewrite curricula, teacher training
 - c. Buys good will for the Conservation District

10. Emphasize **enabling** rather than an advisory committee - focus on ability to take actions, create the environment for wanting education help
 - a. Used wetlands regulation (404) to enforce removal of wetland fill by developers, in partnership with Fish and wildlife, Army Corps of Engineers
 - b. Communities, banks and realtors became interested in institutionalizing wetland regulations to avoid the cost of having to remove fill
 - c. Studied economic impacts/fiscal impacts of development
 - d. Monroe County 2020 program starting with visioning, creating the climate for further activity
11. Sea Change moto - “We can’t change the wind, but we can change the sail.” Focus on making small changes
12. Community garden model, included:
 - a. Sustainability model - self support
 - b. Use of organic gardening techniques
 - c. Summer youth program to manage garden
 - d. Cooking programs to demonstrate uses of variety of vegetables
 - e. Meets local needs for growing things, beauty and peace
 - f. Want to be able to provide leadership for development of other community gardens
13. Youth program models
 - a. Provide salaries using Private Industry Council (PIC) funds - recommend small salaries during the program and a lump sum at the end for youth that finish
 - b. Take youth to environmental sites, environmental hot spots
 - c. Work with environmental professionals
 - d. GREEN Map - youth identify sites, site tour with electric trolley
14. Create urban Environmental Center - offer information and assistance on health issues such as lead and asthma
15. Look for micro enterprise and economic opportunities related to the environment
 - a. Lead abatement
 - b. Wood waste conversion
 - c. Promotion of fuel cell use
 - d. Fish farms
 - e. Ethanol
 - f. Repair and conversion of alternative fuel vehicles - training
16. Regional Infrastructure for Sustainable Agriculture (RISA) and PA Association for Sustainable Agriculture (PASA) - coalition of Cooperative Extension, agribusiness, farmers, community organizations
17. Extension involvement in community organization to provide local workshops and education resources about gardening and micro enterprise opportunities such as tree farming and mushroom farming.
18. Philadelphia Clean Water had already worked with Sea Change on another project. They asked Sea Change to help them set up workshops with community groups to find out more about local environmental interests and to discuss ideas about what can be done.

19. Education most effective when delivered in partnership with an organization that is interested in that topic:
 - a. Black Women’s Health project - relates to people through health issues
 - b. Sea Change relates to people through community gardening
 - c. Local hospital nurses - provide the “lead bucket” program
 - d. Don’t bring ideas **to** the community. Good ideas are already in the community.

20. “Earth Yes.” Youth environmental program delivered through community-based clubs for middle school age youth
 - a. Project oriented approach
 - b. Youth choose service projects
 - c. All have gardens
 - d. Club style is important - trips and things to do together
 - e. Use a theme, such as reuse, recycle, renew - base activities, such as city art, etc on theme

21. Horticulture Society
 - a. Tree tenders and garden tenders based on the urban gardening program
 - b. 4-H tree tenders and adopt a school program
 - c. Tree tenders program has created constituencies

22. Community greening projects works for all scales
 - a. Personal
 - b. Block captain network, “Friends of ___(a special spot)___”
 - c. Park revitalization
 - d. Commercial
 - e. Schools
 - f. Community/park visioning programs

23. Urban Resource Partnership mission: to work together in urban areas - USDA agencies - NRCS, CSREES, Forest Service
 - a. Provides seed money from USDA to community groups to provide education or physical improvement for the any of the “four natural cycles.”

24. Pennsylvania Environment Council focuses on adult voters and decision-makers. They support Pennsylvania Environmental Action Councils - municipal advisory councils appointed by municipal officials. Provides an opportunity to determine and deliver strategies and tools.
 - a. EACs survey and identify natural resources - an inventory, this is a template against which land use decisions could be made
 - b. Recommend protection of natural resources
 - c. PA Env Council - assists municipalities by providing match to develop GIS natural resource data base

25. EPA Chester, PA example.
 - a. A Chester, PA risk study led to the identification of private well abandonment and risk from lead exposure as a major problem
 - b. Residents did not agree with this assessment. They identified neighborhood cleanup and urban gardening as major needs.

- c. EPA found that coming in from outside was difficult, that working collectively towards common goals is difficult, and that it was easy to lose focus because there were so many problems and the issues were so broad.
 - d. There was a need for door-to-door contact.
26. EPA project on wellhead protection.
- a. Retired seniors got involved in doing a local survey to find abandoned gas stations and other potential sources of wellhead harm.

EPA REGION 10 SYMPOSIUM AND INTERVIEWS

1. Steps in community-based education: (courtesy of Al Anderson)
 - a. Form a network
 - b. Develop a relationship with network participants
 - c. Identify partner opportunities among interested network members
 - d. Work with partners to collaborate to meet a goal.
2. Regional issues are hard for people to deal with - local people want to focus on local issues. They want to know, "how does this affect me."
3. Agencies/citizens will "buy-in" if they have something to gain.
4. Communications are critical to a collaborative effort.
5. Listen carefully to local people; people protect what they love
6. Information/research can help define what can happen
7. Allow enough time to enable the relationship to develop into a problem-solving collaboration.
8. Utilize communities who are advanced with those wanting to go forward in a "sister city" program
9. What do you need to know about a community to deliver community-based environmental education?
 - a. the common interest they share/bring
 - b. what does not make the community act?
 - c. who would be a credible "mentor" about the community
 - d. community leaders/influentials (communication flow) ... not elected officials necessarily
 - e. where does it sit relative to the surrounding eco-system?
 - f. what resources are present (physical, economic, natural, people)?
 - g. socio-economic/demographic data
 - h. the economics of the community
 - i. who do others think are part of the community?
 - j. what sustains the community as a community?
 - k. community culture and history
 - l. by what means is the community delineated ... geographically, culturally?

- m. what barriers need to be overcome?
 - n. the knowledge and skill level already present
 - o. community values ... what is important to the community
 - p. community self perception or vision?
 - q. mix/dynamics of new & old timers .. How transient is the population? ... Do they live & work in the same places?
 - r. what needs (perceived or real) and issues or concerns are present?
 - s. how tightly do they view themselves as a community?
 - t. what is the physical landscape?
 - u. what is the morale?
 - v. what is the learning style of the community?
 - w. who do community members trust/not trust?
 - x. is there a change occurring that they are struggling with?
10. Components to successful community-based EE programs
- a. relates to a local issue
 - b. timely
 - c. instigates broad community involvement
 - d. involves partnerships; cooperates with other community groups including business
 - e. uses localized information; focuses on reality/ not theory
 - f. features collaboration
 - g. instills ownership/local investment; builds trust; listens to others
 - h. matches learning personality of community
 - i. personal impact (important to the individual-needs to matter)
 - j. celebrates the virtues that everyone brings; respects diversity of view points; values peer education
 - k. flexible
 - l. has a long-term perspective
 - m. seeks local solutions
 - n. conveys a simple message, easy, convenient - but individuals can learn complex information if it is important to them
 - o. is fun and positive
 - p. revolutionary - has to make change, but understand the motivation to act or not to act
11. Detail recommendations
- a. assess what community would like in a program
 - b. assure program predictability
 - c. provide coordinator/facilitator
 - d. identify common needs and responsibilities among partners and make them primary
 - e. train volunteers/facilitate volunteers
 - f. provide variety for volunteers to disseminate information and help homeowners with water quality assessment
 - g. create a positive attitude about assessing individual environmental quality concerns (such as drinking water)
 - h. focused program - things homeowners can do
 - i. build on successful models
 - j. link with existing programs
12. Resources and information needed
- a. respond to requests

- b. information from focus groups, surveys, needs assessment
 - c. trend analysis
 - d. issue analysis
 - e. annual report to identify trends (baseline indicators)
 - f. survey locations
 - g. evaluation and follow up training
13. Think in terms of an Opportunity Model that stimulates community involvement. Imposing on a community is often purposeful and not collective. Need to listen to those not in power or influential. Focus on capacity-building.
 14. Go to communities and listen. It may be helpful to begin focus on a group (such as Indo-Chinese farmers) rather than an issue.
 15. The technology transfer arrow has never existed - it doesn't happen that way in the field. Most effective approaches are more one-on-one, technical assistance ones.
 16. Including each part of a community is integral to holistic approach
 17. Goal is to create a functioning learning community - one which is based on mutual respect, seeking a more complete vision, honoring diverse perspectives, safe learning environment. It may be helpful to discourage participation by verbal intellectuals for 2/3 of the meeting to allow others to participate more effectively.
 18. Use local authorities as entry to community.
 19. Watershed management areas - good way to bring education locally
 20. Fit into local activities, have a good network, value everyone's contribution, create a working relationship
 21. To reach certain groups, like farmers, go through accepted groups
 22. Collaboration is exhausting but necessary.
 23. Community organization can conduct needs surveys in collaboration with government departments such as a health department.
 24. Community-based participants must be available - go to a lot of meetings, build relationships
 25. If issue leader in community is not easy to identify, then find other leaders who can help make a connection.
 26. How to define community? Scale, interests, and professional development needs are an issue.
 27. Community environmental organizations are good at education when involved in local environmental health, local habitat, local water quality, and local land conservation issues.

28. Involve community in developing response to state priority - e.g. the need for watershed planning was met by developing a council of representative neighbors. Neighbors taught each other and learned together while developing a plan.
29. Go to regulated or potentially regulated group, such as industry or developers or farmers, and ask what do you want us to know about you, what do you want to know about us. Design education programs to meet stated needs.
30. Design education programs around specific interests: such as, boat owners need information about maintenance and would be willing to discuss environmental topics while at a boat maintenance meeting; property owners have specific site management needs, but would be willing to discuss septic systems, etc. while meeting.
31. Community-based programs can help lead to “non-engineered” solutions to environmental management.
32. Educational Technical Advisory Council - can help ensure community-based delivery and can build expertise among participants
33. Bring in community people through the needs assessment process.