



Chapter 5

Expanding Your Reach: Diverse Audiences

Substantial segments of the population encounter barriers and constraints to participation in boating and fishing, which impact the number of individuals who become stewards of the resource.

Research indicates that, compared to the majority of the population, racial and ethnic minority groups are less likely to participate in many forms of natural resource-

based recreation activities and are especially less likely to participate in water-based recreation. And only 26 percent of anglers are female.

Why should you help these groups overcome barriers and constraints to participation? Consider:

- Racial and ethnic minority populations, particularly Hispanic populations, will dramatically increase their share of the U.S. population over the next several decades. In states like Texas and California, the current population characterized as “minority” will become the “majority” population by 2020. In New Mexico, Hispanics could become the “majority” in a few years. Delaying the process of involving these groups in boating, fishing, and stewardship only compounds the problem as they become a more significant portion of the U.S. population.

- The number of females exceeded the number of males in this country as of July 1, 2001. Women today have more freedom than they did in previous generations to explore recreational choices. African American families tend to be matriarchal, where the women make the decisions for family outings and budget. Hispanic families tend to be patriarchal, but because they do activities more socially and with family, Hispanic women are very important to the decision-making process as well.
- Based on trends of participation, the demand for resource-based activities of interest to fisheries, boating, and stewardship professionals may decrease. As a result, the cost of providing fishing, boating, and stewardship education and opportunities will be increasingly shared by a smaller segment of the population. This impact could be particularly severe in regions or states with substantial racial and ethnic minority populations.
- Working with diverse groups provides opportunities to broaden the base of political support for boating, fishing, and natural resource stewardship.

Table 5 contains currently recognized Best Practices for expanding your reach with diverse audiences. These are based on the best research and experience currently available. Following the table, each is explained. Worksheets throughout the chapter help you apply each practice to your own situation.

Table 5: Best Practices for Expanding Your Reach with Diverse Audiences

Effective Programs:

- Involve the minority population being addressed in all aspects of planning.
- Lessen or remove barriers that constrain access.
- Reflect the culture of those being served.
- Develop a network of social support.
- Reduce boundaries that can occur when members of two or more cultures meet.
- Make members of minority groups feel welcome.
- Provide positive role models.
- Are instructionally sound.
- Use evaluation to determine whether their objectives are being achieved.

Best Practice: Effective programs involve the minority population being addressed in all aspects of the planning process.



One of the best ways to understand what barriers or constraints a group may have and how to most effectively work with that group is to invite representatives to discuss the issue with you. Have representatives or a community group assist when planning and implementing programs.

When you first sit down with representatives, make sure they understand what you are trying to accomplish. It is just as important that you also find out what they would like to accomplish by working with you.

Worksheet 5-A

(Actual worksheet found in *Appendix B*)

- Identify your minority target audience.
- Identify key representatives from this target audience.
- Invite representatives to serve as advisors to help plan and implement programs.
- Define what you want to accomplish. Define what each target group wants to accomplish.
- Establish meeting dates.

Best Practice: Effective programs lessen or remove barriers that constrain access.



Educators must seek to understand and identify barriers that constrain access, design programs to minimize or eliminate them, and then provide continued reinforcement. Barriers and constraints might include: feeling unsafe or uncomfortable; feeling unable to perform a behavior; lack of skills, confidence, opportunity, or place to perform the behavior; having someone who is discouraging them from taking part; not having someone to share the activity with; lack of time or money. You can identify these constraints by involving representatives in your planning. You also can conduct focus groups and surveys to learn more about constraints.

Social-economic barriers

Current data on household income by race and ethnicity show significant gaps (see *Table 5a*). Incomes for African American, Hispanic, and American Indian households are significantly less than for white, Asian, and Pacific Islander populations. African American households earn less than all others. Income may be a significant barrier to consider in planning education programs, especially for less affluent African Americans.

Table 5a: Household Income by Race and Hispanic Origin: 2007 Median Income

Race/Ethnicity	Median Income
White	\$53,714
Black	\$34,001
Hispanic	\$40,766
Asian	\$66,935
American Indian & Alaska Native	\$35,343

Source: U.S. Census Bureau, 2007 American Community Survey

Examples of how you can surmount the economic barriers include offering programs free or at reduced costs, providing necessary equipment and gear, and/or providing transportation. As of 2000, 54 percent of all African Americans in the U.S. lived in the central cities of the largest metropolitan areas, so be sure to look for urban fishing or boating opportunities.

Some agencies provide grants to local communities to introduce youth to boating, fishing, and stewardship through hands-on experiences. Grants to local communities can be used to increase access through construction of fishing piers and educational signs. To encourage long-term participation, consider tackle and/or boat loaner programs for the community, and opportunities (possibly stewardship/ local environmental work) for participants to earn their own tackle and boats.

Worksheet 5-B

(Actual worksheet found in *Appendix B*)

What barriers constrain access for each of your target audiences?

How will you address each barrier?

Does your minority target audience have economic barriers?

If lack of funds is a barrier, how will you address:

Equipment needs at the event.

Long term-use by participants?

Transportation needs to get to the event?

Long term access needs of participants?

Other program costs?

characterized as deficient in their knowledge of outdoor activities.

Worksheet 5-C

(Actual worksheet found in *Appendix B*)

What are the cultural factors you must address to better meet the needs of your target audience?

Norms

Beliefs

Value Systems

Socialization practices

How can you modify your program to make it more meaningful to the culture of your target audience?

Best Practice: Effective programs reflect the culture of those being served.



Cultural factors such as different norms, beliefs, value systems, and socialization practices may be even more significant than socioeconomic constraints. For example, for many people, the joy of going out onto the ocean to wrestle with bluefish comes from the contact with nature. However, for the Hispanic population, that joy may be justifiable only when they can help their community, such as by giving fish to family and neighbors. This may legitimize as well as intensify the natural experience for them. Contrast that with many white anglers, for whom the ultimate destination of the fish is unimportant compared to the contest itself. Another cultural difference is that females favor cooperation rather than competition, and enjoy participating in activities as part of a group.

Educational practices sensitive to cultural influences might include opportunities for family participation and opportunities that support or reinforce cultural identity. Programs designed and/or implemented by staff that include women and members of the racial and ethnic group being served can be very effective.

Planning fishing and boating education activities as part of established ethnic community activities (such as festivals) rather than sponsoring stand alone agency events can send positive messages to minority communities. The stand alone events can be labeled as paternalistic and condescending, especially when it might appear that racial and ethnic minorities are



Best Practice: Effective programs develop a network of social support.



Look for ways to provide social support for boating, fishing, and stewardship activities within the community you are targeting. Even if a person attends your aquatic education program, if friends and family are negative or indifferent toward fishing, the chances of that person participating declines with every negative reaction received. You must help support participants beyond your program.

Start by involving the group most influential to your learners. If they are younger than 11, the most influential group may be their parents, so involve parents in your activity. For teenagers, try to involve other teens. Establish boating, fishing, and stewardship clubs after school or on weekends to provide the social support they need to stay involved. For adult women, set up an Internet list-serve where they can communicate with other women who are anglers, boaters, and stewards. Conduct programs through a group already established within a community (such as a church or boys/girls club) to provide an immediate mechanism for social support.

Worksheet 5-D

(Actual worksheet found in *Appendix B*)

What individuals or groups could provide social support for your target audience beyond our program?
 What will you do to involve that support group in your program?

Best Practice: Effective programs reduce boundaries that can occur when members of two or more cultures meet.



Asia and Latin America account for 84 percent of immigrants to the U.S., so the vast majority of “new Americans” comes from countries where English is not the primary language. Where possible, provide bilingual information, preferably oral communication rather than written. For example, if your instructor can speak both English and Spanish for a group of Hispanic students, this would help break down a major barrier.

Instructors from within the culture of the target audience can help reduce boundaries. They also can help you consider the cultural factors that may impact communication.

Worksheet 5-E

(Actual worksheet found in *Appendix B*)

What boundaries, barriers, or constraints prevent your program from achieving maximum effectiveness with your audience?
 What steps can you take to overcome these?

Best Practice: Effective programs make members of minority groups feel welcome.



Managers and providers of boating, fishing, and stewardship education must be aware of the social climate their settings create. Consider potential issues such as instructor behavior, facility personnel behavior, potential behavior of participants, and potential interaction with other individuals at the location where instruction will take place. Taking it one step further, you might consider the behavior of retailers of fishing and boating products.

Eliminate all interpersonal discrimination, which refers to actions carried out by members of the dominant group that have differential and negative impacts on the minority group. These actions can range from nonverbal cues and verbal harassment, to physical gestures, assaults, and harassment.

Some issues are handled more easily than others. Staff who are racially, ethnically, and gender-diverse are more likely to attract and engage a diverse audience. However, even if your program is a success, if participants have a bad experience with facility personnel, field staff, or enforcement officers after they leave, it can undo all the good work you did. Monitor personnel and correct any negative situations immediately.

The same is true for retailers. Nothing turns women off more than walking into a fishing or boating retail store and being ignored or not taken seriously. Contact retailers in your area and let them know you are having classes for different minority groups, and help them understand how to effectively work with these groups. If you know a particular retailer that does a good job at this, you may want to refer your students to that retailer.

Worksheet 5-F

(Actual worksheet found in *Appendix B*)

Who are the individuals with whom your participants are likely to come in contact as a result of your program?

How will you sensitize these individuals to make sure your participants always feel welcome?

Best Practice: Effective programs provide positive role models.



Recruit people who represent your target audience to assist in delivering your program. These role models are not celebrities, but everyday people from the community who love fishing and/or boating and are good stewards of the resource. If you are working with women, seek the assistance of women who enjoy the activities and who can motivate other women to give it a try. The same is true for African American audiences, Hispanic audiences, or any other target group.

Worksheet 5-G

(Actual worksheet found in *Appendix B*)

List some positive role models for your target audience. When and how will you invite them to participate in your program?

Best Practice: Effective programs are instructionally sound.



Chapter 2 describes how to make your program instructionally sound. Review those recommendations again now, with diverse audiences in mind. Understanding your audience's background and what helps them learn will enhance your program. For example, women tend to learn better in environments that favor cooperation rather than

competition. Explicit directions and guidelines make women more comfortable in the class, and they need the opportunity to ask questions. All groups want to be addressed respectfully and not feel like the instructor is being condescending. Most groups want to know more than how to do something; they also want to know why it should be done a certain way.

Worksheet 5-H

(Actual worksheet found in *Appendix B*)

Who is your target audience?

What instructional strategies work best with your target group? (If information is not available, incorporate suggestions from members of the target group about how they like to learn.)

What instructional strategies can you incorporate into your program?

Best Practice: Effective programs use evaluation to determine whether their objectives are being achieved.



This section briefly covers how the different methods described in *Chapter 4* can be used for programs that target minority populations.

Survey methods

Much of the research on recreation participation of racial and ethnic minority groups is based on survey samples. Surveying minority populations in urban environments can be difficult. Members of minority groups who live in inner-city areas generally are regarded as hard-to-reach populations with characteristically low response rates. On-site interviews with minority participants can provide important information such as extent of fishing and boating activity, social group size and composition, and other participation characteristics.

Focus groups

Focus groups are being used more frequently in outdoor recreation research as an alternative and complement to surveys. The U.S. Army Corp of

Most groups want to know more than how to do something; they also want to know why it should be done a certain way.

Engineers Waterways Experiment Station experienced success in using a series of focus groups to gain insight into African American and Native American water-based recreation preferences. The Texas Parks and Wildlife Department also has used this method to gauge minority participation in outdoor activities.

Ethnographic methods

Ethnographic research places the researcher inside the community being studied. Although this may be beyond the scope of a single agency, it could be the subject of collaborative regional or national research. The advantage of having an insider's view is being able to see how a leisure activity, such as boating and fishing, is connected to the daily patterns and routines of an ethnic community. This approach to evaluation holds potential for understanding how members of ethnic communities define boating, fishing, and stewardship in relation to their own culture. Information gathered in this way can be used to tailor programs to meet needs of a particular ethnic community.

Worksheet 5-1

(Actual worksheet found in *Appendix B*)

How have/will you address any special challenges of assessing components of your program that target different ethnic groups or cultures?



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Chapter 6

Expanding Your Reach: Persons With Disabilities

Including people with disabilities in your program strengthens the community and the individuals.

People with disabilities have long been hindered from participating in outdoor recreation activities like fishing and boating because of structural and social barriers. As a result of changing attitudes, legislation, technological developments, and education

within the past decade, significant progress has been made to include people with disabilities in outdoor recreation programs and improve access to related facilities and lands.

Research on people with disabilities shows they have the same motivations and educational needs as others participating in outdoor recreation activities. With the use of assistive devices, universal design, and some additional planning, you can make your boating, fishing, and stewardship education programs available to everyone.

According to the U.S. Department of Commerce's 1997 report, approximately one out of every five Americans has a serious disability. Persons with disabilities are found in every socioeconomic, age, ethnic, and religious group. They also are found in every geographical area, and are of both genders.

With the general aging of the population and with technological advances, the number of persons with disabilities is expected to increase.

Persons with disabilities represent a wide variety of conditions. The basic categories are:

- 1) Physical disabilities – including sensory (vision, hearing) mobility, and motor impairments;
- 2) Cognitive disabilities – including mental retardation, autism, Alzheimer's disease, and learning disabilities;
- 3) Mental health impairments – including bi-polar, eating disorders, and depression;
- 4) Chronic health impairments – including respiratory disease, cardiac disease, and AIDS;
- 5) Multiple disabilities/impairments – or a combination of any of the above.

Each category includes wide variation. Persons may be considered to have a temporary, episodic, or permanent disability present at birth or due to an accident or illness. By using your imagination and input of participants, you can overcome most obstacles and barriers so everyone has a fun and meaningful experience participating in boating, fishing, and/or stewardship activities.

Table 6 contains currently recognized Best Practices for expanding your reach with persons with disabilities.

Table 6: Best Practices for Expanding Your Reach to Persons With Disabilities

Effective Programs:

- Include persons with disabilities and individuals who work with them in the design and implementation of the program.
- Are inclusive.
- See people with disabilities as people first and use appropriate terminology, which conveys a sense of inclusion.
- Strive to make boating, fishing, and stewardship activities accessible to all individuals.
- Work to eliminate or lessen constraints on involvement.
- Conform to appropriate legislation.
- Provide pre-training and continual training of staff.
- Provide appropriate ratio of instructors to students.
- Include accessibility information in all marketing and informational material.

Best Practice: Effective programs include persons with disabilities and individuals who work with them in the design and implementation of the program.

One of the best ways to assure that your program can accommodate persons with disabilities is to invite individuals with disabilities to assist you in planning all phases. Also include individuals who work with persons with disabilities. Both can help you look at every aspect of the program—from facilities, to instruction, to activities—to ensure that each is welcoming and appropriate for people with disabilities.

There are numerous places you can find individuals to serve on your planning team. Most states have a commission on disabilities or similar entity. Look to federal, state, and local rehabilitation centers, local independent living centers, Paralyzed Veterans of America, human service agencies dedicated to specific disabilities (e.g., Arthritis Foundation, United Cerebral Palsy) therapeutic recreational professionals, universities, and fishing or hunting organizations dedicated to disabilities such as Wheelin' Sportsmen.

Worksheet 6-A

(Actual worksheet found in *Appendix B*)

Do you have persons with disabilities on your planning team?

Do you have individuals who work with persons with disabilities on your planning team?

If not, list people you can recruit to help.

How can you enhance their involvement in the planning process to make people with disabilities feel welcome in all of your programs?

Best Practice: Effective programs are inclusive.



The principles of inclusion are:

- More than integration and accessibility – inclusion does not happen just because persons with disabilities and persons without disabilities are in the same program or at the same place, nor does an accessible environment ensure inclusion. The following points are critical.
- Celebrate diversity – rather than trying to fit everyone into the same mold, recognize and appreciate differences (including unique characteristics) as well as contributions of everyone. Focus on providing support (rather than on eliminating the disability) so individuals can fully engage in activities of their choosing.
- Respect differences – look at a disability as a form of diversity, rather than a negative attribute. Toss out the word normal and avoid labeling people.
- Interdependence – create situations where individuals work cooperatively, interrelate, and function together. Encourage individuals to support one another and to work in teams as equals.
- Participation and cooperation – enable everyone to be an active participant and participate according to desire and abilities. Offer choices and promote a variety of ways to participate, including partnership with others.
- Supportive relationships – develop/facilitate relationships that support the individual's ability to engage in the activity on an equal basis according to the individual's needs and desires.
- Friendships – create a feeling of belonging and an environment that makes no one feel excluded or inferior, so friendships develop among persons with differences.

The recent trend in recreation and education is to provide opportunities for persons with disabilities to participate with everyone else. This means programs that are socially integrated as well as physically integrated.

Many individuals with disabilities still prefer programs designed specifically for them and offered in a segregated format. Consider offering a segregated format if people in your community request it and you have the resources to do so in addition to inclusive programs. Remember the resources of your partners and look to create new partners. Train instructors at the school for the blind, school for the deaf, and other schools, rehabilitation centers, and institutions dealing with persons with severe impairments on how to teach boating, fishing, and stewardship.

Research indicates that students want all students to be treated the same, yet they accept and recognize individual learning differences and styles. Students do not perceive instructional adaptations and accommodations to meet the special needs of selected students as problematic.


Worksheet 6-B
 (Actual worksheet found in *Appendix B*)

How does your program:

- Celebrate diversity?
- Respect differences?
- Promote interdependence?
- Foster participation and cooperation?
- Foster supportive relationships?
- Foster friendships?
- Go beyond integration and accessibility?

How might you better incorporate the principles of inclusion in your program?

Best Practice: Effective programs see people with disabilities as people first and use appropriate terminology, which conveys a sense of inclusion.



Your first priority in any activity should be to demonstrate respect for and maintain the dignity of all participants. Focus on the individual and his ability and functioning. Functioning can include more than just the ability to function physically. It can include the person's ability to function cognitively, socially, and emotionally.

Some people consider themselves as having a disability, whereas others with similar conditions do not consider it a disability. Regardless of a person's self-definition, the key is to focus on the person and her functioning first, and avoid labels.

Talk directly to the person with the disability, not to a third party. Even when an interpreter (such as for an individual with a hearing impairment) is present, be sure to speak to the person, not to the interpreter.

Make sure language used by those involved in your program is humanizing versus dehumanizing. Focus on the person first.

Worksheet 6-C
 (Actual worksheet found in *Appendix B*)

How does your program treat people with disabilities as people first?

How does your instructor training sensitize your instructors to this issue?

Is language in your program materials humanizing?

Do you incorporate a discussion of humanizing language into your training?

What changes are needed?

Humanizing Language

<i>Do not use dehumanizing language</i>	<i>Use humanizing language</i>
<i>The person who is crazy</i>	<i>The person with a mental illness</i>
<i>The person who is wheelchair bound</i>	<i>The person who uses a wheelchair</i>
<i>The person confined to a wheelchair</i>	<i>The person who uses a wheelchair</i>
<i>The deformed person</i>	<i>The person with a physical impairment</i>
<i>The cripple</i>	<i>The person with a physical impairment</i>
<i>The blind</i>	<i>The person who is blind or the person with a visual impairment</i>
<i>The retarded</i>	<i>The person with mental retardation</i>
<i>The person who is a stroke victim</i>	<i>The person who had a stroke</i>
<i>Deaf and dumb/mute</i>	<i>The person who is deaf and does not speak or hear. The person with a hearing impairment</i>



Best Practice: Effective programs work to eliminate or lessen constraints on involvement.



Constraints to involvement in general (and in outdoor recreation in particular) for persons with disabilities tend to involve attitudes and resources.

Attitudinal barriers for persons with disabilities include their own attitudes about leisure participation, as well as attitudes of their significant others, the community or society at large, and activity providers. One way to help overcome attitudinal barriers is with media exposure. Include a person with a disability participating with persons without disabilities. For example, show a grandparent in a wheelchair or with a walker fishing with his grandchild; show someone with a speech communication device talking via her device about the enjoyment of boating or conservation. This helps people with disabilities see themselves participating in the activity. It also helps the family and community realize persons with disabilities can be involved in outdoor recreation.

Resource barriers can include:

- Finances;
- Transportation;
- Assistance or support of another person;
- Leisure partner;
- Knowledge and skills; and/or
- Functioning.

If you get individuals to your programs, overcoming the barriers of knowledge and skills is relatively easy. Providing free programs and providing transportation to programs will help persons with disabilities

participate initially. However, consider how to overcome barriers so they can participate on their own. For example, develop a fishing equipment loaner program (including adaptable equipment) and provide ideas about how individuals can obtain their own equipment (perhaps through local donations). Encourage persons with disabilities to bring others to your program; train all of them in boating, fishing, and/or stewardship so they can participate together in the future.

There are specific constraints inherent with each disability. For people with physical disabilities (neurological, muscular, auditory, or visual) allow extra time and consider transportation from one physical space to another. For people with cognitive disabilities (conditions that affect processing of information and/or perception of the world around them) keep directions basic, break everything into small steps, repeat as needed, and be specific. For people with learning disabilities (have average or above intelligence but difficulty processing information) first remember these people are smart. Secondly, present information in different ways such as visual and auditory cues and physical demonstration.

Time also can be a significant constraint to many people with disabilities. It may be more difficult for them to be spontaneous, their actions may require more planning and effort, and it often takes more time for them to complete activities. This will vary depending on the type and severity of the disability, but always allocate extra time.

Worksheet 6-D

(Actual worksheet found in *Appendix B*)

How does your program address attitudinal barriers for persons with disabilities?

How does your program address resource barriers (finances, transportation, knowledge and skills, etc.)?

What might you include in program materials/training to help persons with disabilities overcome or eliminate barriers?

Best Practice: Effective programs strive to make boating, fishing, and stewardship activities accessible to all individuals.



Standards exist for making physical structures such as bathrooms, education centers, and boat ramps accessible, but few standards apply to the natural environment.

Effective programs work to make all programs and opportunities inclusive and accessible. Facilities and access areas may not be your direct responsibility as an educator, but as you help develop your organization's strategic plan, you will want to have input since it impacts your ability to offer inclusive programs.

For fishing activities:

- Make sure all piers and other structures comply with the recommendations currently being advanced by the Federal Access Board (see sidebar).
- For bank fishing locations, clear away undergrowth at key locations to provide access for people with mobility impairments. Select banks where this will not cause environmental problems (increased erosion, removal of rare or endangered species, or fundamental alteration of the natural environment or recreational experience). For boating activities, assure that all docks and piers comply with recent additions to the Americans with Disabilities Act Accessibility Guidelines.

For people with mobility impairments, review the site. Utilize areas of your facility that are wheelchair accessible first. Try to enable individuals with mobility impairments to participate in all activities. Temporary adaptive devices such as portable ramps are available to extend wheelchair accessibility.

Accessibility also applies to printed and audio/visual materials. For printed materials, consider large print, Braille, and audio tape versions. For video, use captions for persons with hearing impairments, and use narrative descriptions of the scenes, setting, and clothing for persons with significant visual impairments (offer as an option via a headset). For your website, follow the World Wide Web Accessibility Standards (see sidebar). Keep materials simple and concise, and use a combination of words and pictures so individuals with cognitive impairments can comprehend. Anything too busy or crowded will be difficult to decipher. Remember that some people are colorblind; typical color blindness involves the inability to distinguish or see items as red/green. Finally, make materials easy to handle so anyone with a physical impairment such as arthritis may manipulate and read it.

Worksheet 6-E

(Actual worksheet found in *Appendix B*)

Are your boating, fishing, and stewardship activities accessible to people with disabilities?

What changes are you going to make to enhance accessibility?

Best Practice: Effective programs conform to appropriate legislation.



There are federal, state, and local regulations and mandates regarding accessibility. It is important to know and understand these in order to maximize opportunities for all participants. *Chapter 10* of the Defining Best Practices in Boating, Fishing, and Aquatic Resources Stewardship Education report by Jo-Ellen Ross summarizes the federal legislation.

Worksheet 6-F

(Actual worksheet found in *Appendix B*)

Have you reviewed federal, state, and local regulations and mandates regarding accessibility?

List the changes needed in your program to meet these mandates.

Best Practice: Effective programs provide pre-training and continual training of staff.



Continually prepare and train your staff to effectively engage persons with disabilities. Include basic information about disabilities and how to interact effectively. Provide information about assistive devices and resources (agencies, organizations, manuals, websites) they might consult.

Assessability Information

Accessibility guidelines and assistance are available at the following websites:

- www.access-board.gov (Federal Access Board)
- www.adata.org (ADA Technical Assistance Program)
There is one for each region of the country.
- www.ncaonline.org (National Center on Accessibility)
This site provides technical assistance regarding accessibility standards, including those related to boating, fishing, and aquatic environments, as well as information about equipment for fishing.

Adaptive equipment is available for a variety of disabilities. The following websites offer adaptive equipment:

- www.abledata.com
- www.accesstr.com
- www.assistivetech.net

Websites that provide information on developing media-related information include:

- www.lighthouse.org/color_contrast.htm. This site provides information on designing for people with partial sight and color deficiencies.
- <http://ncam.wgbh.org>. This site provides information on media access equality for people with disabilities.
- www.w3.org/WAI. This site provides information on accessibility of the web for people with disabilities.
- www.tracecenter.org. This site provides information regarding products, particularly technology/computer-related products.

Provide sensitivity and awareness training for staff. Following are very general guidelines for working with visitors with disabilities:

- Relax. You are merely meeting a new person.
- Communication is important. Use the same communication skills you use with all visitors, adjusting as necessary for persons with hearing and visual impairments.
- Make initial contact with each participant as they arrive.
- Ask them if they would like assistance and to suggest specific ways for you to assist. Some may need assistance throughout the day, and others may have special (including personal) needs at different times of the day. Allow the person to instruct you on the best way to provide assistance.
- Talk directly to the person with the disability, not to a third party.
- If you feel you need to find out more about a person's disability in order to assist them, say, "Can you explain your disability so I can be of further assistance to you?"
- Do not underestimate a person's abilities.

Individuals make their own decisions about what they can or cannot do. (However, the instructor's responsibility is to maintain a safe environment; so if the instructor believes the activity would be unsafe to the individual or others, he/she must make the

decision and discuss it with the individual with the disability.)

- Speak clearly. Even for participants without hearing impairments, the spoken word may be difficult to hear or understand.
- The decision to participate in your program is left up to each individual. If a participant is uncomfortable doing a certain part of the program, he should be offered an alternative activity for that section of the day. Some people may just want to watch. Let them choose.
- Provide plenty of drinking water and sunscreen.
- Make staff aware of adaptive devices and how to use them.

Worksheet 6-G

(Actual worksheet found in *Appendix B*)

How does your staff and instructor training for working with persons with disabilities include:

Communication techniques:

Information on adaptive devices:

Interaction skills:

Best Practice: Effective programs provide an appropriate ratio of instructors to students.



The number of instructors needed to effectively deliver a program will vary according to the age of the participants and the severity of their disabilities. Additional support staff or volunteers can assist in various ways. Partnering with agencies or institutions that provide service to persons with disabilities is an excellent way to ensure appropriate ratio of instructors/helpers to students as well as to provide knowledgeable support.

Best Practice: Effective programs include accessibility information in all marketing and informational materials.



Accessibility information in your promotional material lets people with disabilities know they are welcome to attend your events and activities. Use the correct terminology and make materials available in accessible formats. Promote that your facility meets accessibility standards and any other assistance you can provide, such as adaptive fishing equipment or a sign language interpreter. Offer a variety of means of registering.

Worksheet 6-H

(Actual worksheet found in *Appendix B*)

Have you provided guidelines to your staff for determining appropriate staff-to-student ratios (i.e., determine participants' ages and type and severity of their disabilities)?
What resources might staff utilize to determine appropriate ratios of instructors/helpers to students?
Who might staff recruit to assist with presentations/activities to ensure appropriate staff-to-student ratios?

Worksheet 6-I

(Actual worksheet found in *Appendix B*)

List the promotional materials you distribute for your programs. For each, list changes you can incorporate to make the materials more welcoming to persons with disabilities.



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Chapter 7

Enhancing Boating Education Programs

Most boater education programs differ from other programs discussed in this *Workbook* because their emphasis is on safety. Certainly, all education programs must consider safety, as was discussed in *Chapter 2*. But regardless of whether a boating course is called boating safety or boating basics (canoe, kayak, sail, or power boat), most boater education programs have safety as their primary focus.

More than 8,000 boaters lost their lives during the 1990s. Nearly 80 percent of all boating fatalities occurred on boats where the operator had no formal boating instruction. Education and enforcement are the two basic approaches to reducing fatalities, injuries, and property damage related to boating. Education is fundamental and lays the foundation for safe boating behavior.

Very little field research has been done to evaluate boater education programs. Therefore, at present, the Best Practices in boater education are defined primarily in terms of consensus of professional judgment or frequency of use.

Recreational boating education in the United States is offered through a longstanding partnership

between the federal government, state and local government agencies, and a vast collection of non-governmental organizations. Just a few of the non-governmental organizations that focus on boating safety and/or education are listed below. Review the websites of each organization for additional information.

Boating Organizations

American Canoe Association - www.acanet.org

National Association of State Boating Law Administrators - www.nasbla.org

National Safe Boating Council - www.safeboatingcouncil.org

United States Power Squadrons - www.usps.org

Table 7 contains currently recognized Best Practices in boating education. Following the table, each is explained. Worksheets throughout the chapter help you apply each practice to your own situation.

Table 7: Best Practices in Boating Education

Effective Programs:

- Utilize partnerships to ensure easy and convenient access to educational opportunities.
- Carefully define the content of boating education experiences.
- Ensure quality by careful selection, preparation and training of instructors.
- Utilize a variety of approaches to increase participation in boater education.
- Provide multiple ways for people to act on what they've learned.

Best Practice: Effective programs utilize partnerships to ensure easy and convenient access to educational opportunities.



Boater safety education is offered in every state, although the agencies responsible for this function and methods of delivering it vary considerably from state to state.

Some states offer their own courses through a designated boating education agency. Others accept courses offered by various organizations or cooperate with these organizations to deliver state-specific versions of a basic boating course. Still others use a combination of approaches.

Partnering with other organizations provides more opportunities to get important messages to a wider range of individuals. *Chapters 1 and 2* of the *Workbook* lead you through the process of setting goals and objectives for your program and involving stakeholders and partners to help you meet your goals and objectives. The boating community offers numerous opportunities for partnerships. The introduction to this chapter lists several organizations that currently offer boating education programs. Both the boating-related industries themselves and their trade associations are active players in boater safety education.

Boating programs should be offered frequently and on a predictable schedule, and promotion is critical. How are people going to find out about your courses?

Depending on the goals and objectives of your program, consider offering various types of courses and instruction in different formats, including classroom and field-based seminars, multi-lesson courses, self study, and on-line courses.

You may have a variety of goals and objectives for your programs. One of your goals may be to introduce youth to the fun (and safety) of paddle sports; another may be to offer a boating safety course to help individuals meet mandatory boating education requirements. These courses will be quite different, but it is important to have the content of each well defined.

Worksheet 7-A

(Actual worksheet found in *Appendix B*)

Where will your program be delivered?

- Classroom
- Field-based
- Self-study
- On-line

Who will deliver the program?

- Staff
- Professional contractors
- Volunteers
- Partners (other organizations, camps, etc)

How will you promote your programs?

Best Practice: Effective programs carefully define the content of boating education experiences.



Standards for boating education for operators of recreational motorized boats and sailboats were developed by the National Association of Boating Law Administrators (NASBLA). The standards are intended to show the minimum content of the course materials to be included in an approved boating safety course. Course developers, boating instructors, boating professionals, and organizations are encouraged to go beyond the standards when, in their judgment and experience, it assists the

boat operator to boat more safely and responsibly. A list of the topics included in NASBLA's National Boating Education Standards is included in *Figure 7*.

Although all boating courses include safety, they do not have to be limited to safety. Do you want boaters to be stewards of the aquatic resource? Do you want to introduce them to how and where to boat? Do you also want to introduce them to how to fish from a boat? Define your goals and then clearly establish the content of your programs to meet those goals.

Effective programs provide more than just the presentation of information; they help learners achieve knowledge in issues involving boating and boating safety.

Figure 7. Summary of Topics Included in NASBLA National Boating Education Standards

Section 1: The Boat

- Standard 1.1 - Boat Capacities
- Standard 1.2 - Boat Registration Requirements

Section 2: Boating Equipment

- Standard 2.1 - Personal Flotation Device Types and Carriage
- Standard 2.2 - Personal Flotation Device Sizing and Availability
- Standard 2.3 - Wearing Personal Flotation Devices
- Standard 2.4 - Personal Flotation Device Serviceability
- Standard 2.5 - Fire Extinguishers
- Standard 2.6 - Back-Fire Flame Control Device
- Standard 2.7 - Ventilation Systems
- Standard 2.8 - Navigation Light Equipment
- Standard 2.9 - Sound Signaling Equipment

Section 3: Trip Planning and Preparation

- Standard 3.1 - Checking Local Weather and Water Conditions
- Standard 3.2 - Checking Local Hazards
- Standard 3.3 - Filing a Float Plan
- Standard 3.4 - Boat Preventative Maintenance
- Standard 3.5 - Transporting and Trailering
- Standard 3.6 - Fueling Procedures
- Standard 3.7 - Pre-Departure Checklist and Passenger Communication

Section 4: Marine Environment

- Standard 4.1 - Environmental Laws and Regulations
- Standard 4.2 - Human Waste Disposal
- Standard 4.3 - Disposal of Toxic Substances

Section 5: Safe Boat Operation

- Standard 5.1 - Operator Responsibilities
- Standard 5.2 - Influence of Drugs and Alcohol on Boat Operation
- Standard 5.3 - Navigation Rules of the Road
- Standard 5.4 - Aids to Navigation
- Standard 5.5 - Docking and Mooring
- Standard 5.6 - Anchoring

Section 6: Emergency Preparedness

- Standard 6.1 - Rendering Assistance
- Standard 6.2 - Communication Procedures
- Standard 6.3 - Capsizing Emergencies
- Standard 6.4 - Falls Overboard Emergencies
- Standard 6.5 - Hypothermia Prevention
- Standard 6.6 - Fire Emergency Preparedness
- Standard 6.7 - Running Aground Prevention and Response
- Standard 6.8 - Accident Reports
- Standard 6.9 - Boating Accident Report Form

Section 7: Other Water Activities

- Standard 7.1 - Personal Watercraft and other Jet Propelled Watercraft
- Standard 7.2 - Water Skiing
- Standard 7.3 - Diving and Snorkeling
- Standard 7.4 - Hunting and Fishing

Section 8: Boating Education Practices

- Standard 8.1 - Continuing Education
- Standard 8.2 - State Specific Boating Information

Worksheet 7-B

(Actual worksheet found in *Appendix B*)

- What are the goals and objectives of each of your boating courses?
- What important information must be included in each course? (Develop a course outline.)
- If you are offering a boater safety course for certification, does it meet the standards for boater safety education?
- If you are offering a general boating course, list the safety information that must be incorporated.

Best Practice: Effective programs ensure quality by careful selection, preparation, and training of instructors.

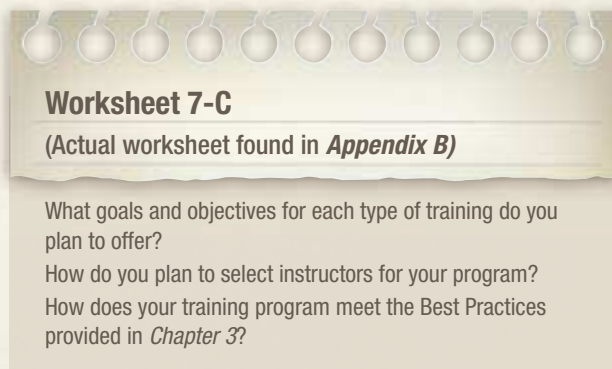


Instructor selection, preparation, and training are critical to ensure accurate, consistent use of boating program materials. With training in the use of curriculum materials and teaching strategies, instructors are more likely to achieve your program goals and objectives.

A prime boating example of training the trainers is the National Safe Boating Council's Boating Safety Instructor Certification Course. The purpose of this training is to educate instructors on both the NASBLA minimum standards for boating education and on effective boating education methods. The course objective is to identify and clarify the knowledge and skills needed to present an effective boating safety curriculum to entry-level students.

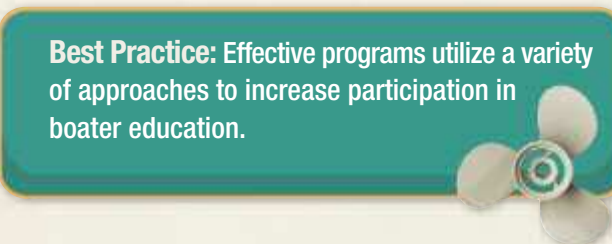
It is important to establish objectives for each training program. In addition to training the trainers for entry-level programs, you may have other trainings for advanced programs. Training will be different for programs that focus on introducing individuals to the fun of boating rather than teaching boating safety alone.

Refer to *Chapter 3* on Well-Trained Instructors for general details on selecting, training, and evaluating instructors.



Worksheet 7-C
(Actual worksheet found in *Appendix B*)

What goals and objectives for each type of training do you plan to offer?
How do you plan to select instructors for your program?
How does your training program meet the Best Practices provided in *Chapter 3*?



Best Practice: Effective programs utilize a variety of approaches to increase participation in boater education.

Many boating accidents would be avoided if boaters followed safe boating practices. Therefore, it is important to look at opportunities that motivate individuals to obtain boater safety education. Following are some approaches to consider.

Make boaters aware of programs

Some boaters look for safety courses when they first get a boat so they can learn to be safe on the water. This group is motivated, but programs must be available and easily accessed at the time the boater is interested. Others may not be aware of the courses, or may not see the need for them. Public awareness campaigns can assist in these cases.

These can include:

- TV, radio, and print advertisements;
- Visible print or video programs at boating retailers;
- Information that goes with the purchase of a boat (point of purchase);
- One-on-one information from retailers to the purchaser of a boat (or from partner organizations that inform new members); and/or
- Public relations efforts through newspaper articles, television appearances, etc.

Make boater safety mandatory

Each year more states enact laws requiring education for boaters. Some of these laws pertain to particular segments of boaters, such as youth or personal watercraft operators. More than half of the states currently have some form of mandatory boating education. Nationally, a general consensus exists among boating safety educators and organizations that a reduction of recreational boating fatalities, injuries, and property damage might best be accomplished by mandating boat operators to participate in a boating safety course.

Offer incentives

Many insurance companies offer discounts on boat insurance to individuals who successfully complete boating safety courses. This is a strong motivation for boaters to seek formal boater education.

Offer other benefits

Many people who don't think they need boater education will come to an event that offers other benefits. Consider offering programs such as "Discover the Fun of Kayaking," or "Learn the most effective ways to fish from your boat," etc. You can include boater safety information in these courses, and you can tell participants the value of getting a certification in boater safety.

Offer a variety of information

Even if individuals receive a certification in boater safety, it is important to keep boater safety information in front of them. Manufacturers or retailers can include boater safety information with each boat purchase. Videos can provide a variety of information (such as rules of the road, judgment on the water, operating a boat, backing a trailer, maintenance, and navigation), which individuals can view at their leisure. The state of Utah mailed a video about personal watercraft safety to every household in

the state with a registered personal watercraft. It has been documented that people learn material by taking tests without prior study. Many boating websites include practice tests that boaters can take at any time to prepare for a certification test or just learn about boating safety.

Worksheet 7-D

(Actual worksheet found in *Appendix B*)

How do you plan to make people aware of:
 The need for boating safety?
 The time and place of local boating safety courses?
 Besides courses, what other ways will you help individuals obtain boater safety information?
 What benefits/incentives can you provide to encourage individuals to participate in boater safety education?

Best Practice: Effective programs provide multiple ways for people to act on what they've learned.



Chapter 2 Building Your Program addresses many of the topics necessary to get people to act on what they learn. Although all of the Best Practices in *Chapter 2* are important, a few will be reviewed here for extra emphasis.

Effective programs are designed to match the developmental stages of the learner. Real learning occurs when the task is useful to the learner and when he or she is psychologically ready. Most people recognize that you cannot offer children the same level of instruction as adults. The majority of courses in boater safety education are designed for adults. However, in recognition of the fact that boating is usually a family activity, effective programs also offer boating education for children of various ages and look for ways to get all participants to practice their new knowledge and skills.

Effective programs are relevant to the everyday life of the learner. Unfortunately, a high proportion of boating deaths occur because anglers do not see themselves as boaters. Personal watercraft operators also may not see themselves as boaters, etc. Help individuals recognize their application of boating and provide specific examples of how to apply safety principles to their situations.

Effective programs empower learners. Effective programs provide more than just the presentation of information; they help learners achieve knowledge in issues involving boating and boating safety. They help them work toward attitude and behavior changes; they empower them to weigh various sides of an issue to make informed and responsible decisions; they seek to empower them to seek out information and be able to safely boat on their own because they have learned “how to think” not what to think.

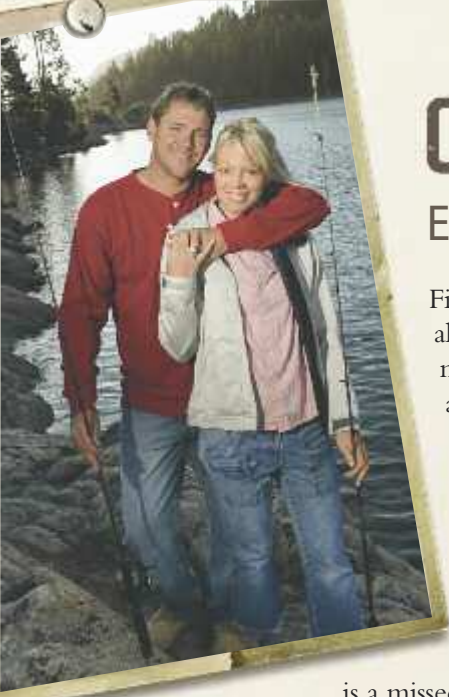
Effective programs consider the social context in which the education takes place and provide avenues to enhance the social support for the learners. The other people surrounding a boating experience can either positively or negatively affect what an individual learns at a boater safety education program. If the participant watches or hears her experienced boating friends say, “Oh, you really don’t need to wear your PFD,” or sees professionals on television not wearing their PFD, what she learned in the class may go out the window.

Working with local groups to talk favorably and strongly about the importance of following safety procedures can work to reinforce and get people to act on what they learned in classes. An example of this is when a fishing club requires its members to wear PFDs (at least when the motor is running) and fines each member caught without their PFD one dollar. The amount of the fine is not a deterrent—it’s the thought that your friends don’t accept your behavior. You also can encourage television personalities that you have contact with to follow boating safety standards and help them understand the impact they have on attitudes toward boating safety.

Worksheet 7-E

(Actual worksheet found in *Appendix B*)

How do you plan to design your course to match the developmental stages of the learner?
 How do you plan to make your programs relevant to the learner?
 How do you plan to empower learners?
 How do you plan to provide a positive social culture for boating and boating safety?
 Complete worksheets in *Chapter 2*, if you haven’t already.



Chapter 8

Enhancing Fishing Education Programs

Fishing is a wonderful, wholesome, almost magical activity that offers so much to individuals, the resource, and society as a whole. Families and friends who fish together develop special bonds and have quality time together. Fishing can provide people with an awareness and appreciation of the need to protect and conserve our natural resources.

The decline in fishing participation is a missed opportunity for people to share these benefits. It also threatens fish and wildlife agency funding and fisheries management, impacts regional economies, and may ultimately diminish public advocacy for the protection of aquatic resources. As a result, more agencies and organizations are focusing efforts on recruitment, training, and retention of anglers.

All chapters in this *Workbook* will help you achieve Best Practices in fishing/angler education, but this chapter covers specific research important to angler recruitment and retention education. It does not cover all elements of Best Practices. Therefore, use it as a reference as you work to incorporate all the Best Practices recommended in *Chapters 1-6*, as well as other chapters that are relevant to your program.

Table 8 contains currently recognized Best Practices for enhancing fishing education efforts. Following the table, each is explained. Worksheets throughout the chapter help you apply each practice to your own situation.

Best Practice: Effective programs clearly define the educational purpose.



It is important to clearly decide what you want to accomplish with your program. *Chapter 1* discusses the planning process in detail. Refer to it as you work through this process.

Your goal may be to increase fishing participation. This can be achieved in a number of ways. If your objective is to increase the number of days a particular angler fishes and/or encourage lapsed anglers to return to fishing, a marketing/promotion approach may suffice. However, if your objective is to recruit new anglers, using marketing approaches only without education will lead to failure.

Also, you need to decide if your goal is to merely increase fishing participation, or to increase fishing participation while developing ethical anglers who

Table 8: Best Practices for Enhancing Fishing Education Programs

Effective Programs:

- Clearly define the educational purpose.
- Use the Recruitment-Training-Retention Intervention Model.
- Assure the safety of all participants and instructors.
- Develop partnerships to strengthen fishing programs.
- Incorporate stewardship of aquatic resources.
- Address components of the recruitment and retention model relevant to each age group and develop programs accordingly.
- Utilize well-trained instructors.

are stewards of aquatic resources. Most programs work for the latter. However, without clearly defining what you want, you may miss important elements and/or opportunities.

One approach to developing Best Practices is to consider what you want the learner to be able to do, or to be like after completing your program. The following list is a good place to start.

After completing this program, learners will have:

- An understanding of how to participate in fishing.
- The physical skill necessary for successful participation in fishing (and boating) activities.
- The ability to use information to build knowledge to become a successful angler.
- An understanding of how to overcome barriers to participation.
- Developed a socially supported environment.
- An understanding of the importance of using knowledge to support and provide a rationale for their attitudes and behaviors.
- Developed the critical thinking, judgment, and decision-making skills to be able to identify, use, and act appropriately on good information.
- Become ethically competent.
- An understanding of the roles of local, state, and federal agencies and organizations that are involved in protecting and managing aquatic habitats and recreation.
- The ability to make their views known to the appropriate people in these organizations and agencies.
- The ability to affect positive changes and the recognition that they can make a difference with their informed participation and actions.

For ideas on more specific learning objectives and outcomes, refer to www.futurefisherman.org.

Worksheet 8-A

(Actual worksheet found in *Appendix B*)

- What is the goal of your fishing education program?
- What are your objectives to achieve that goal?
- What do you want your learners to be able to do after completing your program?

Best Practice: Effective programs use the Recruitment-Training-Retention Intervention Model.



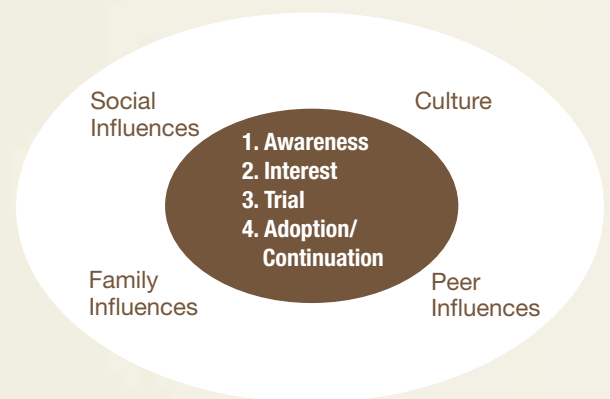
How an individual becomes interested in and ultimately identifies herself as an angler is a complex process, influenced by numerous variables. Using the Recruitment-Training-Retention Intervention Model, you should be able to better develop effective strategies targeted at specific stages in recruitment.

Don't let the fancy name scare you off! This model is simply a way to organize your thinking, and it may enable you to assess the direction and focus of existing programs as well as identify where gaps exist, taking steps to intervene where appropriate.

Research shows that anglers often pass through a four-stage process while continually being affected by social-cultural influences (see *Figure 8*). Keep in mind that in some cases, a person may go through two or more of these stages simultaneously. The stages are:

- Awareness;
- Interest;
- Trial;
- Adoption/continuation.

Figure 8. Four-phase process of fishing adoption



Failure to understand which strategies are most likely to have the desired outcomes may result in a mismatched, ineffective program, and ultimately

failure. Failure to target strategies at each of these stages also may weaken the entire recruitment and retention process.

It is important to understand that the entire recruitment and retention process is couched in a supportive, socio-cultural environment. Though not always mentioned, this socio-cultural context is the glue that holds the entire process together, continuously reinforcing participant attitudes and choices. A supportive environment is the most critical element in retaining anglers.

The thicker the glue, the more likely the desired outcome will be achieved. In fact, in those traditional communities and families where fishing is an honored tradition—where youngsters are encouraged and expected to become anglers—very little outside intervention is necessary. However, in communities that do not have shared values, attitudes, and stories revolving around fishing, a significant barrier exists in the development of anglers.

A socially supportive environment must exist or be created for both entry into and progression through the four-part model.

Awareness phase

Individuals must be aware of the opportunity to participate in fishing activities. Typically this phase involves promotional campaigns and activities that will help individuals understand:

- The benefits of participating (fishing is fun and provides quality time with friends and family, etc.).
- Fishing is available to them (it is something they can do).

Opportunities include National Fishing and Boating Week, National Hunting and Fishing Day, free fishing days, conservation field days, mass media strategies, bumper stickers, magazine ads, mall displays, etc. This stage also is likely assisted through exposure to television programs.

Interest phase

Initial interest is developed through exposure to a threshold experience or series of experiences where the individual directly participates. These occasions do not necessarily require catching fish. They can involve elements of the fishing experience such as casting or simply sitting around the dinner table sharing stories and experiences. This also can be a family member or friend taking a person fishing for the first time.

Interventions at this phase are focused on media and events—efforts to get participants involved in threshold experiences. Program examples include fishing clinics, casting instructions or contests, Passport to Fishing and Boating, and Take a Kid Fishing events. They also include introduction to fishing programs through conservation camps, 4-H, and scouts. A media example would include the encouragement of anglers to introduce a newcomer to fishing. With proper social support, these threshold experiences may lead to the trial phase.

Don't fall into a "Field Days - Feel Good" trap. Great effort often is expended and large numbers of participants are reached in these single-day events. Short-term evaluations generally reflect positive outcomes, and event organizers are proud of their accomplishments. But a glance at the model shows that without efforts focused on moving participants further along the continuum toward trial and adoption, simply generating interest does little more than make event organizers feel good.

Trial phase

The trial phase occurs as a person participates in the activity to see how well it fits. The person invests time, energy, and resources in efforts to learn the ropes. Intervention strategies involve educational programs with opportunities for repeated participation, and with a focus on eliminating or minimizing barriers that include a lack of:

- Skills – lack of basic skills such as casting, handling fish, and rigging lines can be a barrier for entry. Participants need opportunities to learn, time to practice, feedback and reinforcement from an instructor/mentor, and instruction on how to build on that skill.
- Knowledge – newcomers need knowledge such as fishing regulations, how to fish for different species of fish, how to handle fish, and how to be a good steward. They also need to be taught how to access information on their own so they can continually learn more.
- Equipment – newcomers need equipment to participate on their own. Setting up loaner programs for fishing equipment is one strategy

Without efforts focused on moving participants toward trial and adoption, simply generating interest does little more than make event organizers feel good.

to address this barrier. Another is to hold a class in a retail outlet and help participants understand how to shop and what type of equipment to shop for.

- Fishing access – newcomers need to know what waters are available to them, how to get there, how to find accessible fishing spots, and how to obtain permission to use non-public waters.
- Social support – social support is important at the trial stage. You can assist by encouraging participants to bring their families or friends to the program.

The more programs that assist in each of these areas, the greater chance the individual will become an active angler.

An understanding of behavioral expectations also must occur at this stage. Ideally, interventions include multiple opportunities to engage in a series of in-depth experiences involving the points mentioned above.

The development of apprentice-mentor programs, school curriculums, and other longer-term efforts clearly indicate opportunities for other partners in the process. This may include cooperative programs with schools (e.g., Hooked On Fishing - Not On Drugs, fishing as a lifetime activity for PE), summer camps, scouts, 4-H, other youth organizations, community service groups, churches, libraries, conservation and fishing organizations, women's groups, and others.

Opportunities also can include a call to action to anglers in your area to introduce and mentor at least one person (someone they know) annually to fishing. Research shows that an invitation from a friend or request from a child is the highest motivator for individuals to fish more often.

Adoption/continuation phase

Adoption/continuation choices are made based on participant satisfactions and benefits as well as the elimination of barriers. Participants begin to identify themselves as anglers. Intervention strategies focus on retention.

This is the phase in which social factors clearly play the most important role. Program strategies designed to build and reinforce this social support take time and are difficult to evaluate. However, if adoption of fishing is a desirable outcome and the requisite social support is not forthcoming from families, schools, or communities, then intervention strategies offering this social support must come from somewhere else.

Effective programs emphasize building a long-term apprentice-mentor relationship. Although one-on-

ones provide individual attention, apprentice-mentor relationships also can be achieved through group settings with leaders and/or teachers focusing on fishing (e.g., teachers with after-school programs, 4-H leaders, scout leaders, etc.).

Social support also includes peers. When someone has a friend or relative to participate with, the potential for continuation is much greater. Encourage participants to invite friends to attend the program with them. Having friends attend together provides the first phase of social support for the activity and someone to go fishing with.

Peer social support also can be accomplished through a club setting. An after-school fishing club not only provides opportunities to learn more and improve skills, it provides a tremendous amount of social support. Adults can join a local fishing club or groups such as B.A.S.S., Trout Unlimited, or an outdoor women's group.

If a participant's immediate family and/or social peer group does not support fishing, it creates a much more complex set of circumstances to address, and may be outside the scope of your efforts. However, the more social support you can provide a participant, the greater chance that individual has of seeing him/herself as an angler. As you review the partner benefits section of this chapter, consider the opportunity to bring in partners such as schools, community groups, churches, and other organizations that can provide social support.

Another part of retention is providing advanced training. Once someone has learned the basics, they

Social support is critical. When someone has a friend or relative to participate with, the potential for continuation is much greater.



may want to try their hand at fly fishing, bass fishing, float fishing, saltwater fishing, etc. Programs that either offer an array of activities and/or help lead anglers to new activities can go a long way in keeping their interest year after year and motivating them to participate.

Looking at all four phases

The lines drawn between the four phases frequently are quite blurred. For example, an angler education course may bring a person to the interest stage as well as play a role in the trial stage. The *Becoming An Outdoors Woman* and *Women In the Outdoors* programs may provide an initial experience, provide a trial, or both. Connections built by participants may contribute to the adoption/continuation process. Mentoring is likely an extremely important factor during both the trial and adoption phases.

Using this model enables you to better understand the recruitment and retention process, and thereby enables you to develop strategies that target gaps or weaknesses in your programs. If recruitment and retention of anglers are important, individuals must have full access to each stage.

Different audiences require different combinations of recruitment and retention strategies. Effective programs that target women are not based on assumptions that hold true for traditional, white, male constituent groups. Women have different motivations and are constrained differently from participating in outdoor activities. African, Asian, and Hispanic Americans may each require different strategies to move through the four-stage process. Just getting these audiences to try fishing may require a look at why they have not participated in the past and addressing the personal barriers or constraints they face.

Individuals with disabilities face different sets of constraints. Refer to *Chapters 5 and 6* for more

information on working with diverse audiences and persons with disabilities.

All groups should feel welcome at any program. However, there are times when it is necessary to customize your programs to fit a particular audience. Seeking input from diverse audiences at all phases of program planning and service delivery can troubleshoot problems before programs are implemented.

Worksheet 8-B

(Actual worksheet found in *Appendix B*)

- For each target audience addressed by your program, is there social support for participating in fishing and stewardship? If your audience has little or no social support, what steps will you take to help create this support?
- What are you doing currently to create awareness of fishing with the target group?
- What are some additional ways you can create awareness with the target group?
- What are you doing currently to create interest in fishing with the target group?
- What are some additional ways you can create interest with the target group?
- What are you doing currently to create trial opportunities with the target group?
- What are some additional ways you can create trial opportunities for the target group?
- What are you doing currently to assist the target group with the adoption/continuation phase?
- What are some additional ways you can assist in the adoption/continuation phase?
- What are you doing currently to break down barriers to participation for the target group?
- What do you plan to do in the future to break down barriers?

Best Practice: Effective programs ensure the safety of all participants and instructors.



Fishing can and should be a very safe activity. However, those who believe fishing is risk-free are likely to find out the hard way that serious injuries can occur. Just a few safety concerns include water depth and current, bank conditions (can the bank give way, or are there rocks or holes), hooks, use of lead products, weather, dehydration, hypothermia, handling fish, and cleaning fish.

Boating is a potential element of fishing that brings with it additional safety concerns. Although you may not teach boating in every program, help participants in every course understand that when they use boats they become boaters and must understand all aspects of boating safety. A high proportion of boating deaths occur because anglers do not see themselves as boaters. If you teach individuals to fish from a boat, refer to *Chapter 7, Enhancing Boating Education Programs*, which includes standards for boating safety.

Issues concerning hooks are usually the first thing that come to mind when you think about fishing safety. It is important to have a procedure for instructors and program administrators to know and follow should a hook become embedded in a person during an activity. The procedure should include when and how a hook can be removed, and when and where a person should be taken to receive professional medical attention. Avoid any incidents to begin with by providing instructors, participants, and observers with specific instruction such as:

- All participants, instructors, and observers must wear glasses. You might also require everyone to wear a brimmed hat with the brim worn over the glasses to provide added protection for the eyes and head. If participants do not have prescription glasses or sunglasses, have safety glasses available.
- Make sure all anglers hear and understand how to handle and operate the rod and reel. Do not use hooks when teaching casting.
- Make sure there is adequate supervision (a reasonable instructor-student ratio) so dangerous situations and behaviors can be avoided. Instructors/supervisors should constantly reinforce safety.

Instructors should provide students with the following instruction:

- Hooks are sharp. Be careful when handling, casting, and retrieving hooks and removing them from fish.
- Always look behind, above, and around you to make sure people, animals, or obstructions such as trees or power lines are not in the way of your back or side cast. (Remember, your line can extend far behind you.)
- If your bait or casting plug gets stuck, do not jerk it. It can fly back at you like a bullet and hurt you or someone else.
- Form a safety circle around you by holding your rod straight out in front of you and then turn in a circle. If your rod touches another person, move further away.

Chapter 2 provides additional information on safety concerns in general. There are too many safety concerns regarding fishing to be covered adequately in this *Workbook*. The level of fishing instruction will determine the type of water you are fishing, which will determine the safety concerns regarding the water. The types of weather you encounter (extreme heat, freezing cold, thunderstorms) will present different safety concerns. Other outdoor safety concerns will vary according to your part of the country, such as fire ants and cottonmouth snakes in the South.

Instructors should have first-aid kits and water for all participants. At a minimum, give your instructors these instructions:

- Tell participants what to wear to stay safe (glasses, type of shoes, clothes).
- Review instruction areas for potential safety hazards prior to event/instruction.
- Know how to contact emergency medical assistance and where the nearest phone is located.
- Know procedures for handling situations (hooks, insect/snake bites, scrapes, injuries, etc.).
- Keep control of the group (e.g., when teaching casting, have a line that all participants must stay behind; when fishing, tell participants the areas that are in and out of bounds).
- Review any other safety procedures that should be followed for the specific activity.

Worksheet 8-C

(Actual worksheet found in *Appendix B*)

How is safety addressed in your teaching materials?
 How are emergency procedures addressed in your teaching materials?
 How is safety addressed in instructor training?
 How are emergency procedures addressed in training?
 What additional information and/or training might you provide to instructors?

Best Practice: Effective programs develop partnerships to strengthen fishing programs.



The recruitment and retention of anglers requires more than a single agency/organization response. Partnerships with other agencies, organizations, businesses, universities, and communities are essential to success. Avoid the temptation to go it alone. There is absolutely no room for turf battles, departmental infighting, or agency provinciality.

To develop effective partnerships, the fishing education program must be relevant to the partner. Some people make the mistake of thinking their partners must have an interest in fishing, but that is not necessary. Fishing offers much more than catching fish. Multiple benefits can attract diverse partners (see sidebar).

Benefits of Fishing

Fishing:

- *Is an equalizer—an activity that anyone can participate in equally, regardless of size, age, strength, gender, or social status.*
- *Is fun.*
- *Is a lifetime activity.*
- *Is an activity people can do with friends and family.*
- *Is an activity that people can do alone without feeling lonely.*
- *Is an activity that provides quality time with families and friends.*
- *Is an activity that bonds families and provides memories that last a lifetime.*
- *Helps youth develop life skills/assets such as decision-making skills and high self-esteem.*
- *Helps youth develop respect and responsibility.*
- *Provides youth a positive alternative to drugs, alcohol, and violence.*
- *Helps individuals become more connected to the natural resources.*
- *Helps people become better stewards of aquatic resources.*
- *Can turn students on to learning about biology, ecology, conservation, and other subjects.*
- *Can raise attendance at school (when used as part of a school curriculum).*
- *Can provide appropriate physical therapy exercises for certain types of surgeries (through casting).*

Churches, schools, family counseling groups, youth groups, city parks, community groups, and numerous others could benefit as a partner in your fishing education program.

Worksheet 8-D

(Actual worksheet found in *Appendix B*)

Make a list of your potential partners and how your fishing education program is relevant to their missions.

List how the partnership can benefit your program

List the costs of maintaining the partnership

Best Practice: Effective programs incorporate stewardship of aquatic resources.



People who fish are more likely to increase their awareness of and appreciation for the need to protect and conserve natural resources. However, they may not feel they have the knowledge and skills necessary to play a part in protecting those resources. Therefore, effective programs incorporate ethics-based stewardship education into angling classes and activities.

In-depth stewardship education often is overlooked at the awareness and trial stages, but seeds of thought can be integrated even into short, introductory angling courses. All angling courses should make participants aware that good anglers have a responsibility to do more than simply obey fishing regulations. Help them understand that all good anglers share in the responsibility of respecting our country's water resources and the future of the sport.

For example, anglers must:

- Act responsibly and govern their own behavior to sustain and nurture the environment.
- Always obey fishing regulations.
- Never litter.
- Dispose of fishing line properly.
- Never waste fish.
- Appropriately handle and release fish or clean and prepare for eating.
- Be advocates for responsible use of our waterways and do what they can to stop projects, practices, and proposals that destroy them.

- Act with consideration for others.
- Respect the rights of other anglers.
- Respect the landowner.
- Respect the rights of non-anglers.

Angling courses that are longer in length, and/or intermediate and advanced classes can provide more in-depth knowledge and skills on how to be an ethical angler who is a good steward of the resource. These courses can get participants involved in protecting areas around the water or enhancing the resource. They can help anglers understand that as they learn more about the resource to become better anglers, they also learn to monitor the health of a stream, lake, coastal area, or entire watershed. Courses also can provide anglers the knowledge and skills of action strategies to help them get more actively involved in issues that affect the aquatic resource.

Chapter 9 covers aquatic stewardship in detail and should be referred to in addition to the information presented here.

Worksheet 8-E
 (Actual worksheet found in *Appendix B*)

How do your courses incorporate ethics-based stewardship? List the ethics-based stewardship characteristics that you want covered in an:

- Introductory angling course
 - 1-Day
 - Multiple Days:
- Intermediate angling course.
- Advanced angling course.

Best Practice: Address components of the recruitment and retention model relevant to each age group and develop programs accordingly.



As you select your target audience(s), consider how age (youth through adults) impacts the process of becoming an angler. Available research can help you determine where your programs should be focused.

Importance of youth

Research indicates that nearly two-thirds of all anglers started fishing before their ninth birthday, and only six percent learned after they turned 21. So clearly,

reaching youth is a critical element in recruitment. However, programs that target only youth under 10 years of age are missing an important ingredient in retention, because participation during the teen years significantly influences whether or not youth continue participating and/or how avid they are as adults.

Some programs assume that youth from single parent families should be addressed specifically. However, research shows that there is little significant difference in participation rates of youth from single parent families as compared to two-parent families.

When working with youth, it is important to consider the various stages of youth development. Please see *Chapter 2* for details.

Importance of adults

While youth audiences make the most sense for recruitment efforts, adults cannot be forgotten for recruitment or retention opportunities.

- The fact that there will be a higher percentage of older Americans in the future would indicate some attention (particularly for retention) should be directed in this area.
- Programs that teach youth and parents provide social support for the youth and provide more opportunities for them to participate. They also provide parents with the confidence and knowledge to facilitate future trips.
- Opportunities exist to break through barriers and constraints that affect women and ethnic groups (including the increasing number of immigrants). These groups may not have had the opportunity to learn as youth, but would now like to learn to fish.
- Since adults are required to purchase licenses, introducing adults to fishing and retention of adults through various outreach or educational programs can mean immediate revenue to an agency.

Importance of families

Educators who focus exclusively on youth or adults or any single audience may be missing an opportunity to increase their effectiveness at recruiting and retaining anglers. Expanding audiences to include families is a strategy that is well supported in Best Practices.

Worksheet 8-F(Actual worksheet found in *Appendix B*)

What age groups do your fishing education programs currently target? Why?

What other age groups would your agency or organization benefit from targeting?

How would targeting these various age groups benefit your program (help better reach your stated goals)?

Best Practice: Effective programs utilize well-trained instructors (paid or volunteers).

Refer to *Chapter 2* for information on how to make your program instructionally sound, and refer to *Chapter 3* for selecting, training, and working with volunteers. Those chapters provide the foundation for this Best Practice. However, elements important in teaching a skill-based activity such as fishing are not covered in those chapters. Some important elements for success:

- Keep it fun – participants will relax and enjoy the experience if you're having fun. No need to turn people into pros overnight. It's far more important for them to have a good experience.
- Instill basic safety – it is important that participants do not endanger themselves or others. Always review basic safety procedures.
- Instill basic etiquette – it is important that others view participants positively. Help participants understand the etiquette and ethics fundamental to fishing.
- Be positive – if you build the participant's self-esteem and confidence as you progress, it is more likely that he will enjoy the activity and want to go again. Instructors can provide constructive comments without being critical. A well-timed compliment can go a long way.
- Start with the basics – if your instructors started fishing when they were young, everything may come instinctively to them now. Provide an outline for them to follow when teaching. Make a conscious effort to explain and demonstrate step-by-step.
- Create immediate success – have instructors start with something simple where participants can

achieve success easily. Having someone operate a fishing reel or make a simple cast allows for immediate success. Add increasingly challenging opportunities for success by setting large targets at five, ten, and twenty yards.

- Provide hands-on-activities – participants want to handle equipment and put new skills into practice. Provide hands-on opportunities throughout the entire learning process.
- Involve participants – the more an instructor involves participants in decision-making and helps them understand how to participate in the activity on their own, the greater the chance they will do it again. Provide them with information on how a decision was reached. For example, instead of saying, "This would be a good place to fish," explain how you came to that decision such as, "A largemouth bass likes cover and that log provides perfect cover." Have participants begin to look for good habitat. This involves them more deeply in the activity and later helps them make the decisions on their own.
- Teach problem solving – help participants learn to solve problems they may encounter along the way. For example, if someone's worm keeps coming off the hook, show her how to better put the worm on the hook. If someone gets a tangle in his line, untangle it together, showing him how to get the tangle out and how to avoid getting tangles in the future.

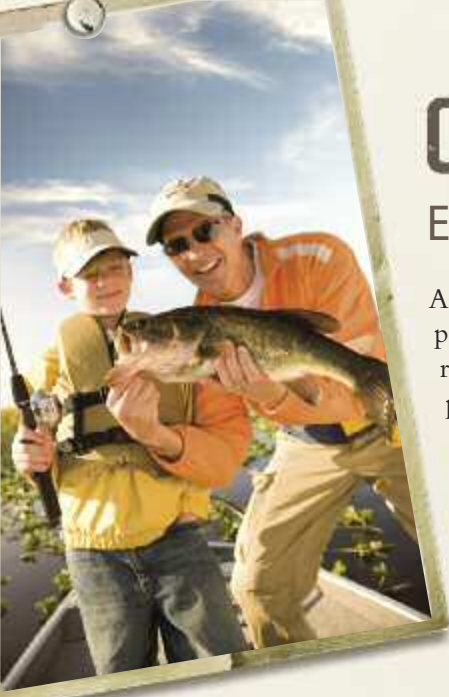
Create instructors/volunteers who are mentors, not fishing guides. Fishing guides do everything for their customers except reel in the fish. They put bait on the hook, find the fish, sometimes even make the cast, unhook the fish, and clean and/or release the fish. Some volunteers want to help so much that they become guides and ultimately make their students dependent on someone else to fish. Mentors teach their protégés how to do these activities for themselves.

Worksheet 8-G(Actual worksheet found in *Appendix B*)

Review your current instructor training. Does it cover the topics in *Chapter 3* and the skill-based elements presented here?

Chapter 9

Enhancing Aquatic Stewardship Education



As expansion of human development puts more pressure on aquatic resources, it is critical that people practice, on an increasing basis, stewardship of our natural resources.

For the purposes of this *Workbook*, environmental stewardship is defined as:

Informed, responsible action/behavior on behalf of the environment and future generations.

Aquatic stewardship education is a process to help individuals acquire and learn to apply stewardship skills and capacities needed to enable them to make informed choices and take environmentally responsible actions.

The terms ethics, morals, and character are used interchangeably here to refer to the same concept—an internal system that determines socially acceptable behavior. A stewardship ethic is at work when a person feels an obligation to consider, not only his own personal well-being, but also that of his surroundings and human society as a whole.

Researchers have come to three important conclusions about environmental education:

1. Ecological awareness and knowledge are not enough to cause long-lasting behavior changes,

but they can provide a basis or readiness for subsequent learning and participation.

2. Ownership (a personal connection with one or more natural areas, and knowledge of and/or investment in problems/issues) is critical to responsible environmental behaviors.
3. Instruction and experiences intended to foster ownership and empowerment (a sense of being able to make changes and resolve important problems, and use critical issues investigation skills to do so) often permit individuals and groups to change their behavior.

The Best Practices discussed in *Chapters 1-6* apply to stewardship education. Following are additional Best Practices that relate specifically to stewardship. Some overlap from initial chapters is necessary to discuss specific stewardship points.

Best Practice: Effective programs have mission, education program goals, and instructional objectives aligned with one another to reflect stewardship education.



This subject is covered in detail in *Chapter 1*. Effective programs clearly state the organization's mission, program goals, and instructional objectives.

Table 9: Best Practices for Stewardship Education

Effective Programs:

- Have organizational mission, education program goals, and instructional objectives aligned with one another to reflect stewardship education.
- Address a progression of entry-level variables, ownership variables, and empowerment variables.
- Consider the role that ethical principles and reasoning can play in supporting stewardship.
- Provide opportunities for individuals to have positive contact with the outdoors over a long period of time.
- Provide avenues to enhance social support for learners.
- Help learners consider all aspects of the aquatic resource issue of interest (including historical, social, scientific, political, and economic).
- Encourage long-term stewardship behavior.
- Develop curricula for stewardship education that are structured to give learners a well thought-out and data-supported sequence of stewardship opportunities.

Further, these are aligned with one another to clearly reflect the nature and purpose of stewardship education.

Who is the good steward you are striving to develop? What characteristics do good stewards have? As part of your program outcomes and impacts, develop a list of characteristics a good steward would have. Some examples are listed below, although your list may be different.

A good steward:

- Understands that humankind is a part of and not apart from the natural world and that stewardship entails, not preservation, but informed and ethical choices regarding the size and scope of human activity in the natural world.
- Has knowledge of ecological, aquatic resource, and fisheries management concepts.
- Has knowledge of pertinent problems and issues.
- Feels a personal connection to natural resources.
- Can identify, analyze, investigate, and evaluate problems and solutions.
- Understands beliefs and values (beliefs are what individuals hold to be true, and values are what they hold to be important regarding problems/ issues and alternative solutions/action strategies).
- Seeks to understand all aspects of an issue (e.g., environmental, scientific, social, political, historical, and economic).
- Participates actively through outdoor activities such as boating or fishing.
- Has acquired a knowledge of and demonstrated skill in using action strategies essential to sound stewardship.
- Reflects a sense of obligation to future generations and the earth.
- Accepts responsibility because a steward knows he/ she impacts the environment through every action.
- Understands the difference between intention and consequence (does the action truly have the desired effect?).
- Has an internal locus of control (the belief and/ or feeling that working alone or with others, an individual can influence or bring about desired outcomes through his/her actions) and takes personal responsibility.
- Acts in an informed and responsible manner.
- Is willing and able to pass stewardship concepts to peers and others.

Goals and objectives of effective programs are covered in the Best Practices that follow.

Worksheet 9-A

(Actual worksheet found in *Appendix B*)

How does your program define the characteristics of an environmental (or aquatic resource) steward? List the characteristics.

List the mission, goals, and objectives of your program related to stewardship.

Stewardship Mission.

Stewardship Goal 1.

Stewardship Objectives.

Stewardship Goal 2.

Stewardship Objectives.

Best Practice: Effective programs address a progression of entry-level variables, ownership variables, and empowerment variables.



These three sets of variables—entry-level, ownership, and empowerment—contribute to environmentally responsible behavior.

Entry level

Entry-level variables include a person’s environmental sensitivity and knowledge about ecology. When individuals have little knowledge of or sensitivity toward the environment, programs must provide information and teach basic ecological concepts. Without some understanding about the environment, individuals most likely will not progress to the ownership stage. People who enter a program with a lot of knowledge have less to gain from this level, but they will have the foundation upon which to guide new learning.



Ownership level

Ownership variables are those that permit individuals and groups to personalize environmental problems and issues, so they take ownership of them. These variables include a personal connection with one or more natural areas, an in-depth understanding of the issues, and personal investment in and identification with an issue.

Research indicates that when people directly experience the destruction of natural areas with which they are intimately familiar, they develop a sense of ownership for those areas. Perhaps more importantly, when individuals and groups are able to expand and apply knowledge/skills by investing their own time, energy, and resources in addressing a particular problem/issue, they often develop a sense of ownership for that problem/issue.

Empowerment level

Empowerment variables give people a sense that they can make changes and help resolve important environmental issues. Empowerment variables include perceived skill in using environmental action strategies and skills, knowledge of action strategies, an internal locus of control, the intention to act, and assumption of personal responsibility. To promote/foster empowerment, programs should:

- Help participants develop guidelines and foster internal motivations for responsible behavior toward other people and the natural world while fishing and/or boating.
- Help participants develop guidelines and foster internal motivations that will serve as a foundation for responsible behavior toward the natural world beyond the specific context of fishing or boating.

Stewardship is a long-term process. It calls for a series of complementary education efforts and may work best when learning takes place in a combination of formal and non-formal learning environments.

Worksheet 9-B

(Actual worksheet found in *Appendix B*)

How does your program address and how can you enhance:
 Entry level stewardship variables?
 Ownership variables?
 Empowerment variables?
 How does your program dovetail with other programs that may contribute to a sequential stewardship education experience?

Best Practice: Effective programs consider the role ethical principles and reasoning can play in supporting stewardship.



In addition to developing critical thinking and decision-making skills and giving learners the tools they need to take action, stewardship education should consider how ethics support environmental stewardship. Ethics-based stewardship is a process of developing ethical competence. Ethical competence involves certain skills, including the:

- Sensitivity to recognize when a situation poses one or more ethical considerations.
- Knowledge of what behaviors are legal versus what behaviors might be ethical in a situation.
- Willingness to contribute, participate, and act.
- Judgment to weigh various considerations where there are no laws or guidelines.
- Humility to seek advice and additional knowledge to guide one's action.

Worksheet 9-C

(Actual worksheet found in *Appendix B*)

What is your program doing currently to help participants gain the skills of ethical competence?
 How might your program be enhanced to help participants become more ethically competent?

Best Practice: Effective programs provide opportunities for individuals to have positive contact with the outdoors over a long period of time.



Environmental sensitivity refers to an increased level of empathy toward the natural environment. Research shows that environmental sensitivity is developed through significant, positive contact with the outdoors over a long period of time. For example, adults who are leaders in conservation or involved in environmental careers usually share a common set of experiences involving the outdoors that include fishing and boating when they were youngsters.

To have a meaningful environmental ethic, a person must have a fundamental sense of affection for and identification with nature, and see himself as an integral, obligate member of the ecological community. Unethical behavior often is associated with feelings of alienation from nature, which allows an individual to abuse and exploit the resource without feelings of personal guilt or long-term responsibility. Fishing and boating are outdoor activities that may help individuals develop a deeply personal connection with nature.

Activities such as fishing and boating motivate individuals to continually return to the outdoors.

Worksheet 9-D

(Actual worksheet found in *Appendix B*)

List ways your program can provide positive contact with the outdoors.

What might you include in your program so participants are comfortable returning to the outdoors?

What might you include in your program to encourage participants to return to the outdoors?

Best Practice: Effective programs provide avenues to enhance the social support for learners.



The social context in which the education takes place is at least as important as the methods by which stewardship concepts are taught. If not grounded within the particular community and cultural context of the learner, stewardship education will remain abstract, outside the scope of experience of the learner, inconsistent with cultural norms, and ultimately irrelevant.

Family, peers, and others in the community transmit their attitudes, beliefs, and values to participants in

stewardship programs. Group members can encourage or discourage stewardship behaviors.

Aquatic stewardship programs are most effective in reaching behavioral goals if designed to incorporate parents, family, and neighborhoods as part of the learning community. Also, participants can be given guidance on how to involve family and other peers in stewardship behavior.

The influence of the social context also may explain why the most effective service learning projects for schools are those that share information from the class curriculum with the community (a science class doing storm drain stenciling, or a social studies class making flyers about control of exotic species).

Worksheet 9-E

(Actual worksheet found in *Appendix B*)

List ways your program can help create social support for participants' actions.

Best Practice: Effective programs help learners consider all aspects of the aquatic resource issue of interest (including historical, social, scientific, political, and economic).



Effective programs help participants look at and review all sides of an environmental issue. It is just as important that individuals understand and weigh the historical, social, political, and economic aspects of an issue as it is for them to understand the scientific and environmental issue itself.



Worksheet 9-F

(Actual worksheet found in *Appendix B*)

How does your program currently incorporate the influence of social, scientific, historical, political, and economic implications on environmental issue decisions?

How might you better address social, scientific, historical, political, and economic implications on environmental issue decisions?

Best Practice: Effective programs encourage long-term stewardship behavior.



Effective programs utilize strategies that result in long-term stewardship behavior. Many contemporary stewardship education efforts seem to take the form of short-term program modules or individual lessons. These piecemeal approaches need to be replaced with in-depth and sustained programs. Program developers need to be aware that some strategies provide for only short-term behavior changes.

Research indicates that goal-setting, commitment, and demonstration strategies are most effective in encouraging environmentally responsible behavior. Feedback, rewards, and penalties can produce short-term behavior change. However, when these consequence conditions are removed, people immediately return to their original behavior patterns. These may have some promise for stewardship education, but by themselves, are not likely to produce lasting behavior change or development of environmental citizenship.

Also, there is very little evidence that mass media campaigns promoting conservation—even intensive mass media campaigns—have appreciable effects. Information alone is not enough to change behavior.

Some effective strategies include:

- Getting the learner to commit to doing one or more target behaviors,
- Getting the learner to select a personal or team goal related to target behaviors, and
- Engaging the learner in group competition related to these target behaviors.

Also, to obtain long-term results, educators must seek to understand and identify constraints and then design programs to minimize or eliminate them.

Sample constraints include:

- Not feeling able to engage in or perform the activity or behavior due to lack of knowledge, skill, and/or confidence.
- Not having others with whom to engage in or carry out the activity or behavior, or having others who are discouraging them from taking part.
- Lack of time, money, or access.

To create long-lasting outcomes, stewardship programs must be sustained over time. There must be follow-up support to help maintain change. Even when strong, short-term behavioral change occurs, long-term change still is highly doubtful without continued reinforcement. Programs should include ongoing evaluation to determine if long-term behavior change is occurring.

Worksheet 9-G

(Actual worksheet found in *Appendix B*)

How does your program:

Get the learner to commit to doing one or more target behaviors?

Get the learner to select a personal goal related to target behaviors?

Engage the learner in group competition related to target behaviors?

What changes need to be made in your program (if any) to:

Get the learner to commit to doing one or more target behaviors?

Get the learner to select a personal goal related to target behaviors?

Engage the learner in group competition related to target behaviors?

How does your program help participants overcome constraints?

How might your program better address constraints?

Best Practice: Effective programs develop curricula for stewardship education that are structured to give learners a well thought-out and data-supported sequence of opportunities.



It is important to provide learners a well thought-out sequence of opportunities to help them develop, build upon or practice, and eventually apply their awareness, knowledge, skills, and participation strategies. Develop curricula that will:

- Result in an in-depth knowledge of issues.
- Teach learners the skills of issue analysis and investigation as well as provide the time needed to learn to apply these skills.
- Teach learners the citizenship skills needed for issue remediation and provide the time needed to learn to apply these skills.
- Provide an instructional setting that helps learners develop an internal locus of control.
- Include other Best Practices mentioned above.

Stewardship-oriented curricula that are project-driven can be set up so learners are adequately prepared to take each step. They also can be set up so teachers can prepare learners and guide them through the entire process. These strategies take into consideration the learners' developmental level(s), prior knowledge and experience, and aptitude. These opportunities should be challenging, but within the participants' reach.

Effective programs periodically review and revise curricula to reflect recent feedback from teachers and learners, results of evaluation and research, and other sources. Refer to *Chapter 4* for details on program evaluation.

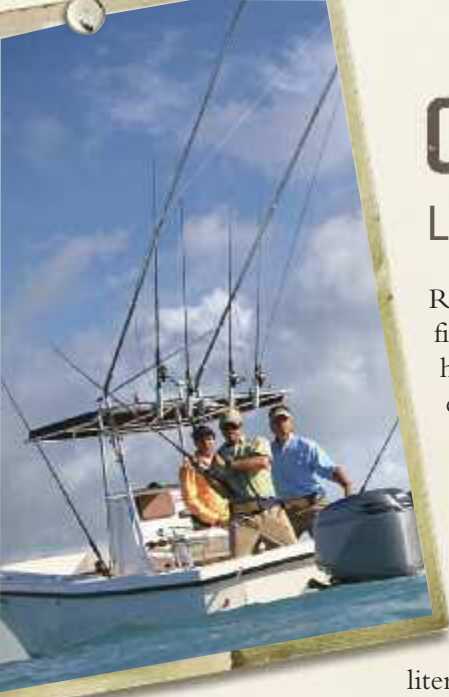
Worksheet 9-H

(Actual worksheet found in *Appendix B*)

How does your curricula give learners appropriate sequences of activities that build on one another?



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Chapter 10

Let Research Help

Research can tell us a lot about boating, fishing, and stewardship education and how to improve it. Unfortunately, existing research goes largely unused by the aquatic education community, and there are many research needs that have yet to be addressed. For example, the question, “Are we having an impact with our programs?” largely is unanswered. The broader environmental education

literature has provided the guidance to develop the Best Practices in this *Workbook*.

As for the research that hasn’t been done, one of the major reasons for its absence has been a lack of capacity by sponsoring agencies and organizations to conduct educational research. Few state agencies or conservation organizations know how to identify research needs and design and complete appropriate studies. As a result, the Best Practice recommendations for educational research (*Table 10*) focus on capacity building within organizations.

This does not necessarily mean aquatic education researchers need to be hired. It does mean that program staff should be able to recognize and communicate the value of and need for research that is relevant to their programs. Awareness of existing research, and research experience will allow program staff to incorporate research findings into their programs. It also will help them identify gaps in existing research and additional research needs.

The authors of *Defining Best Practices in Boating, Fishing, and Aquatic Resources Stewardship Education* have identified a variety of specific research needs.

Best Practice: Effective programs allow staff to recognize and explore the value of and need for research that is relevant to their programs.



Best practices are recommendations based on what has been observed or documented to be effective to date, but which may change given additional experience, evaluation, and research. It is critical that staff (or anyone associated with delivery of educational programs) understand the importance of research regarding education in general and their program specifically.

Worksheet 10-A

(Actual worksheet found in *Appendix B*)

How do you emphasize the importance of research to your staff?

Table 10: Best Practices for Research Effective Programs:

Effective Programs:

- Allow staff to recognize and explore the value of and need for research that is relevant to their programs.
- Provide opportunities for staff to become aware of and familiar with collections, reviews, and summaries of research relevant to their programs.
- Encourage staff to incorporate research findings into the design, development, implementation, and evaluation of their programs.
- Allow staff to take advantage of professional development opportunities that enhance their research skills and strengthen their capacity to become meaningfully involved in the research process.

Best Practice: Effective programs provide opportunities for staff to become aware of and familiar with collections, reviews, and summaries of research relevant to their programs.



Effective programs encourage and provide mechanisms for staff to remain up to date with current research. You can find opportunities through publications, newsletters, websites, training, etc.

Worksheet 10-B

(Actual worksheet found in *Appendix B*)

List the ways that you make your staff aware of research relevant to their programs.

List the ways that you enable your staff to become familiar with research relevant to their programs.

Best Practice: Effective programs encourage staff to incorporate research findings into the design, development, implementation, and evaluation of their programs.



It is not enough for staff to merely be aware of or know where to find research information regarding their education programs. The best research in the world will remain useless unless it is incorporated into programs to make them more effective at achieving their objectives. At all levels, the program should encourage staff to continually upgrade their efforts based on pertinent research findings.

Worksheet 10-C

(Actual worksheet found in *Appendix B*)

How do you encourage your staff to incorporate research findings into:

- Program design?
- Program development?
- Program implementation?
- Program evaluation (before, during, and after implementation)?

Best Practice: Effective programs allow staff to take advantage of professional development opportunities that enhance their research skills and strengthen their capacity to become meaningfully involved in the research process.



With continuing professional development/training regarding research, staff can become a powerful force for the improvement of the program and of boating, fishing, and stewardship education in general. With training, they are able to recognize, explore, and share gaps in existing research and additional research needs. This is very valuable to researchers who look to practitioners for insight into the areas in greatest need of exploration. Over time, this feedback loop between practitioners and researchers works to tremendous advantage to both.



Professional development regarding research also can enhance staff abilities to understand the implications of research for their program and strategies for making use of it. Even if you encourage staff to seek out research results, if they cannot apply the information, your program has little to show for their efforts. A basic understanding of research methods and terminology can make a big difference in their ability to effectively use the information. For more information on other aspects of professional development, see *Chapter 3*.

Worksheet 10-D

(Actual worksheet found in *Appendix B*)

What opportunities do you provide for staff to gain greater knowledge and understanding of research processes?

