Best Practices Workbook

For Boating, Fishing, and Aquatic Resources Stewardship Education
Chapter 3
Well-Trained Instructors

Programs can expand their capabilities by reaching out to partners and training teachers and other instructors. High quality professional development of instructors goes hand in hand with high quality curriculum materials. One without the other will more than likely lead to failure. The content, scope, and level of instruction may be (and probably should be) different for formal educators (school teachers) than for non-formal educators (agency, staff, volunteers, etc.), but the Best Practices identified in this chapter are concerned with the process of professional development/training, which should be similar for both.

Teacher or instructor preparation and training is critical to assure the accurate and consistent use of curriculum materials. Program evaluations document that curriculum materials go unused unless supported with detailed in-service training and implementation support for users. Simply distributing free materials will not result in their use.

Without training in the use of curriculum materials or recommended teaching strategies, educators may not be able to achieve many of the goals or objectives you have set for your program. Effective training also reduces the possibility of teachers unintentionally misleading learners. Wherever possible, evaluate trainers in the field to ensure they are presenting the material as you intended.

Unfortunately, opportunities for educator preparation in boating, fishing, and stewardship education are limited. Most teachers have no formal training in fishing, boating, and stewardship education, and non-formal educators may have no training in teaching at all. All educators need professional development programs that focus on education processes and teaching methods, in addition to content. There are many ways you might prepare educators, including workshops, in-service training, mentoring, and other forms of professional development.

Lack of educator training is a common cause of program failure. Researchers urge the boating, fishing, and stewardship community to adopt extensive instructor training as a cornerstone of

Table 3: Best Practices for Professional Development

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<td>- Inform potential teachers, instructors and volunteers of what will be expected of them prior to training.</td>
<td>- Include formative, summative, and long-term evaluation of the trainer, the program, and the trainee.</td>
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The importance of the people who deliver your programs cannot be overestimated. Table 3 contains currently recognized Best Practices for professional development. Following the table, each is explained, and worksheets throughout the chapter help you apply each practice to your own situation.

### Planning

**Best Practice: Effective programs establish goals and objectives for training.**

What training do you currently provide? What do you want to accomplish with it? Effective programs establish clear goals and objectives for training just like they do for the program in general. Without goals and objectives you won’t be able to evaluate whether or not your training activities have any impact on instructors and their ability to deliver your program.

**Worksheet 3-A**

(Actual worksheet found in Appendix B)

- List goal(s) for your instructor training.
- List specific objectives for your instructor training.
- For each objective, list how you assess whether it is achieved or not.

**Best Practice: Effective programs involve partners in educating/reaching a broader audience.**

Agencies and organizations that rely solely on their staff for instruction limit the scope and potential of their educational programs. Involve staff in the development of partnerships with schools, communities, youth organizations and others, and then train teachers or volunteers to work with these groups to expand the number and diversity of individuals you can eventually reach. The cornerstone of successful partnership programs is professional development of teachers/volunteers (addressed below) and the cornerstone of professional development is recruitment of qualified and motivated staff. It all works together.

Partnerships are good, but recognize that too much of a good thing can be detrimental. That is, evaluate each potential partnership for how it can benefit your program and the partner. Don’t feel obligated to enter into partnerships just because someone makes an offer. Use the worksheet to help determine if the partnership is worthwhile.

**Worksheet 3-B**

(Actual worksheet found in Appendix B)

- List partner organizations you work with to increase your instruction capabilities.
- For each, how does the partnership benefit your program?
- What must you do to maintain the partnership? (What will it cost to keep the partner happy?)
- How might the partnership be improved?
- List other organizations that might be willing to partner with you. How might you pursue these new organizations?

**Best Practice: Effective programs provide several layers of training.**

Training includes basic orientation and exposure to program materials, processes, and mechanics, as well as additional training where instructors can receive in-depth exposure to specific program elements or new curriculum areas.

Effective programs encourage, facilitate, and support opportunities for continuing education. This includes opportunities to review and help update program materials and training procedures.

Consider when thinking about layers of training:

- Include basic and in-depth training modules and avoid brief, one-shot training sessions.
- Offer tiers of training to provide continuing education, gradually increasing learner knowledge and competency over time.
- Provide opportunities for learning to continue over an extended period (e.g., through innovative use of the Internet, list-serves, newsletters, and networking).
- Provide ways to update existing information and
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disseminate it to educators and administrators.
• Inspire active, ongoing, lifelong learning by educators/instructors.
• Use experienced instructors and staff as mentors.

Worksheet 3-C
(Actual worksheet found in Appendix B)

List the kinds of training you currently provide your instructors (include workshops, newsletters, social events, updates, etc.). Do these provide different layers of training (basic, in-depth, new areas, etc.)? List additional levels of training that would help increase instructor effectiveness.

Instructor Selection

The following Best Practices refer to instructors who help deliver your programs, but who are not part of your staff.

Best Practice: Effective programs recruit instructors with experience and knowledge in appropriate subject areas.

You can train an instructor to deliver a simple introductory program to others. However, when you get beyond introductory programs, it's difficult to provide novice individuals the level of training they need to be effective. Recruit instructors with base experience and knowledge, then build on that. This results in more effective instructors and better implementation of your program, with less training time.

Worksheet 3-D
(Actual worksheet found in Appendix B)

Identify potential instructors, teachers, volunteers, or others who have experience in:
- Stewardship
- Boating
- Fishing
- Natural Resource Management (fish management, aquatic ecology, etc.)
- Teaching

Instructors who conduct your programs reflect on you, your program, and your organization. A teacher’s knowledge, demeanor, ethics, and background can affect the credibility and even the existence of your program. You are not obligated to use an individual just because he volunteers to be an instructor. Develop guidelines for your program that address the types of instructors you want conducting your programs.

Actively recruit from trusted pools of people to improve your success at finding good instructors. For example, you might recruit from natural resources agencies/organizations (e.g., naturalists, biologists), reputable youth organizations (scouts, 4-H), teachers, etc.

After you identify potential instructors, criminal background checks are recommended where legal. This is particularly important when a volunteer will be working one-on-one with youth. Background checks are handled differently within each jurisdiction. Be sure to determine the laws, policies, and procedures used to conduct background checks on volunteers in your jurisdiction.

Whether or not you can do a criminal background check, it is important to interview instructors for potential motivations, commitment, ethical behavior, knowledge, and the ability to work with diverse groups. See Figure 2 for a sample volunteer screening form.

Best Practice: Effective programs inform potential teachers, instructors, and volunteers of what will be expected of them prior to training.

You don’t want to spend a lot of money training individuals who never use the training, and you don’t want people leaving your training feeling they wasted their time. Avoid this by letting them know in pre-training advertisements, mailings, and/or conversations, what you expect from participants, and what outcomes you want to accomplish. For example, you may expect them to:
• Conduct programs after the training to... (this list might include such things as enhance stewardship

(continued on 3-5)
Figure 2. Sample Volunteer Application

Name/Contact information: __________________________________________ Date of birth: _____________________

Optional information: Female Male Asian Amer. African Amer. Caucasian Hispanic Native Amer. Other

Volunteer Level (Mark one)
- Sponsor (no training)
- Helper (1-2 hr training)
- Instructor (6-12 hr training):

Affiliation/Organization:

Position within affil/org.: Staff Volunteer Other

I would like to work with groups (mark all that apply):
- through my affiliation
- general audiences
- on specific programs

Availability: Check all that apply
- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov
- Dec
- Weekdays
- Weekends
- Morning
- Afternoon
- Evening
- Other

Skills/Interests: Check all that apply
- Art/Display construction
- Writing
- Equipment/Material development
- Donation coordinator/Solicitation
- Aquatic ecology
- Photography
- Environmental issues
- Marketing/Advertising
- Fish recipes
- Fishing(type):
- Plant/Animal identification
- Water quality
- Fish management
- Education
- Other:

Work Preference: Check all that apply
- Ages 7-14
- Ages 15-19
- Adults
- All

Experience working with: Check all that apply, list position and year
- Youth
- Persons with disabilities ( ___Hearing ___Physical ___Visual ___Mental)

Volunteer instructor applicants only:
Mark appropriate boxes:
- Yes
- No
Have you ever been convicted of a criminal offense?
If yes, include mo/day/yr and explanation: ________________________________

- Yes
- No
Have you ever been arrested for the use or sale of drugs?

- Yes
- No
Have you ever been arrested or convicted of child neglect or abuse?

- Yes
- No
Has your driver’s license been suspended or revoked within the past 3 years?

References: List two persons, not related to you, who have definite knowledge of your qualifications.
Include complete addresses.

Name: __________________________ Email: __________________________
Address: __________________________________________________________________________________

Name: __________________________ Email: __________________________
Address: __________________________________________________________________________________

I, the undersigned, understand that:

a. The information that I have provided may be verified by contacting persons or organizations named in this
   application and I hereby release and agree to hold harmless from liability any person or organization that provides
   information concerning me to the Department of Natural Resources.

b. In signing this application, I swear or affirm that the information that I have given herein is true and correct, and
   understand any purposeful misrepresentation of facts shall be cause for non-acceptance as a program volunteer.

Applicant Signature: __________________________ Date __________________________

Information asked for in this application will be used solely to determine the appropriate placement of you as a volunteer. It is understood that no discrimination is implied and the
application will be handled in a confidential manner.

(Sample Screening Form provided courtesy of the Minnesota DNR MinnAqua Program)
Name and full contact information:
Place an “x” on the line next to each statement below to indicate your agreement.
___I will attend the Fish Iowa! Mentor Training Workshop on (date).
___Upon completion of the training session I will assist another mentor with a session or workshop and
conduct at least one session or workshop on my own prior to (date).
___I have enclosed a $25 check payable to “DNR” as a deposit to reserve my space. (Note: This check will
be returned at the workshop.)

I understand that I (or my agency) will be paid a stipend of $150 to complete the mentor training and will
be reimbursed for mileage to the workshop up to $75.00. The Department of Natural Resources will
provide meals during the workshop and free lodging will be available at the Conservation Education Center
on (date).

Signature of Applicant: ________________________________

(Sample Instructor Commitment Form courtesy of Iowa Department of Natural Resources)

Professional Development Sessions/Workshops

Many non-formal educators have no formal training in teaching and many formal educators have no
training in environmental or outdoor education. It is critical to design training programs to reflect
participant needs.

Effective programs are built on sound instructional models that recognize the diversity in any group of
learners. They utilize multiple methods of presenting information and incorporate active learning
opportunities.

Educational theory and sound instructional practices include making information relevant to the learner,
empowering learners, learner-centered approaches, accommodating diverse learning styles, using a variety
of teaching methods, understanding developmental stages, and more. These subjects are covered in
Chapter 2.

For formal and non-formal educators alike, professional development programs should focus on education
processes and teaching methods, in addition to content.
Trainers at professional development workshops must model effective teaching methods throughout the training session. High quality training must:

- Immerse participants in inquiry, questioning, and experimentation.
- Focus on process instead of content. An inordinate focus on science content only reinforces the inadequacy many instructors feel about their own science knowledge. When the focus is on process, instructors’ hesitation to teach science is greatly diminished.
- Engage instructors in concrete teaching tasks based on experiences with students.
- Show instructors how boating, fishing, and stewardship education can be connected to specific standards for student performance or organizational goals (e.g., when working with school, 4-H, or drug prevention instructors, show how boating, fishing, and stewardship education can be used to enhance development skills).
- Be connected to other aspects of school/organizational change.
- Use attractive and appropriate training materials. Good training starts with good materials. Instructors are more likely to use materials if they are attractive, engaging, and easy to use.
- Provide hands-on exposure to materials to be used in the classroom. Give teachers opportunities to engage in boating, fishing, and stewardship projects, even if on a simplified basis. When teachers engage in projects themselves, they become more fully aware of project requirements, components, procedures, difficulties, and associated evaluation and grading procedures.

Three levels of social support need to be addressed. Two apply to instructors/teachers. If they feel isolated, it is harder for them to stay motivated. The first is the need for social support by the training organization. This could be in the form of site visits to end users after training sessions, and communication through emails, phone conversations, and newsletters—all of which are designed to maintain contact and provide support during their initial trial and improvement efforts.
The second level is for social support among instructors after the training. This type of social support can be advanced by:
- Incorporating peer teaching experiences.
- Providing ice breakers to encourage relationship development.
- Putting participants into teams during training exercises, providing opportunities for peer discussion, and then review during implementation planning.
- Providing opportunities to socialize.
- Requesting that participants come to training in teams, so they leave with “built-in” partners.
- Sharing names and emails of those attending the training and/or those who are conducting similar programs.

Social support among instructors also can be advanced through instructor recognition efforts. Most volunteers are motivated by a need to contribute. Certificates, award banquets, or other recognition may help keep them motivated and involved. Consider what motivations will best meet the needs of your volunteers.

These first two dimensions of social support can overlap, such as when a training organization invites teachers and instructors to follow-up sessions intending to provide both work-related and interpersonal interaction and support opportunities.

The third level of social support is for end users. Social support is an extremely important process to help individuals develop to the point where they see themselves as anglers, boaters, or stewards of aquatic resources. Give your instructors examples of how they can incorporate social support into their programs/classes, such as involving family members in the program, developing an after-school club for youth, making adult participants aware of clubs or organizations they can join, or incorporating positive role models.

**Social support is an extremely important process to help individuals see themselves as anglers, boaters, or stewards of aquatic resources.**

Effective teaching programs identify, create, and use diverse settings appropriate to different subject matter and available resources (e.g., schoolyard, laboratory, swimming pool, stream/lake/pond, community, museums/aquariums, demonstration sites). Hold your training sessions in appropriate, engaging locations to make the instruction more effective and to model this behavior for your participants.

Environmental sensitivity is developed through positive contact with the outdoors over a long time. Direct experience with nature makes the learning process faster, what is learned is retained longer, and there is a greater appreciation for those things that are learned firsthand. Effective programs get instructors/teachers outdoors during training sessions whenever possible. Demonstrate a concern for learner safety in designing, planning, and implementing instruction, especially hands-on experiences that take place outside the classroom. Review safety guidelines for a variety of activities. Discuss liability issues instructors may encounter and how to minimize risks (See Chapter 2 for more about safety).
**Worksheet 3-H**  
(Actual worksheet found in *Appendix B*)

List learning settings where you conduct instructor training.  
List other settings that would be appropriate.  
What are the barriers to using these settings?  
What steps are necessary to make use of these settings?  
List areas of your teacher instruction where you stress the importance of providing hands-on teaching methods in a variety of settings, particularly outdoors.  
How do you address safety/liability issues? Do you model use of appropriate safety measures? Do instructors understand their liability?

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**Evaluation**

**Best Practice:** Effective programs provide appropriate models of and approaches to program evaluation.

Instructors and educators in effective training programs possess the knowledge, abilities, and commitment to assess and evaluate their programs. Provide them tools for assessing learner progress and evaluating the effectiveness of their instruction and other features of the program.

*All instructors that you train, whether on your staff or not, reflect on your program and organization, so it is necessary to evaluate and supervise your instructors.*

- Describe and use means for engaging learners in setting their own expectations for achievement. Discuss the importance of these abilities on learner-centered education and lifelong learning.

Familiarize instructors with ways to incorporate assessment into their programs:
- Make objectives and other expectations clear to students at the outset of instruction.
- Provide examples of and implement specific performance-based assessment such as open-ended questions, oral reports, group and independent research, other types of actual performance-oriented tasks, appropriate projects, and portfolios (collections of a variety of work products).
- Identify and use techniques that assess learners’ baseline understandings and skills at the beginning of lessons, units, and other segments of instruction.
- Develop formative and summative assessment tools appropriate to specific instructional segments or projects.
- Discuss the importance of and identify techniques for encouraging learners to assess their own and others’ work. Use these assessments to improve their learning experiences.
- Discuss how to organize, interpret, and use the results of differing kinds of assessment to help modify and improve future instruction.

*Worksheet 3-I*  
(Actual worksheet found in *Appendix B*)

How do you ensure that instructors understand the importance of tying assessment to learning?  
How do your instructors incorporate assessment into their programs?

**Best Practice:** Effective programs include formative, summative, and long-term evaluation of the trainer, the program, and the trainee.

One of the most neglected components of education programs is evaluation. Many evaluation efforts rarely report more than program outputs such as the number of participants, participant satisfaction, or information exposure. Conversely, effective programs engage in evaluation of all aspects of the program. Evaluation is seen as a permanent, ongoing part of the education process.
Evaluation of the trainer

It is important that quality be reflected from the start. If your agency/organization trainers are not effective, it will trickle down and decrease the quality of the overall program. Have all training instructors be evaluated by their peers and by teachers/instructors attending the workshops.

Evaluation of the trainee

All instructors that you train, whether on your staff or not, reflect on your program and organization. An instructor’s knowledge, demeanor, ethics, and background can affect the credibility of any project, and it is necessary to evaluate and supervise your instructors after they are enlisted and trained.

Even if you have effective training, you may occasionally have an educator or instructor who wanders astray. He or she may utilize other materials or examples that are incorrect or mislead an audience.

During a course given by one of the teacher/instructors, an agency instructor should observe the training and do a subjective evaluation of the instructor’s ability to teach effectively. Some points to consider are:

• Did she understand the material well enough to teach it?
• Did he deviate unnecessarily from the lesson plan?
• Was she able to handle questions or communicate effectively?
• Did he stay on time?
• Were there credibility issues, egocentric behaviors, or other characteristics that would detract from the class, the program, the individuals involved, or the agency?

Ask students to fill out a course evaluation at the end of the course. If the student evaluations indicate problems, the agency trainer should discuss these with the instructor.

Evaluation of the program

You’ll receive some evaluation from your instructors using the previous Best Practice, but an in-depth evaluation is important. Please refer to Chapter 4 for details on how to evaluate your program.