

**Evaluation Report for
NOAA Designing Education Projects
Hawaii Training**

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I. Key Findings

- 1) Overall the DEP training is very successful at developing participants' project development, implementation and evaluation capabilities in the current (new) format.
- 2) Both experienced and novice participants gained knowledge, skills, and confidence in their ability to use these newly acquired skills and knowledge.
- 3) Several recommendations for improvements to the online and in-person training components were offered by the participants in the first training session. The majority of these have been implemented by the writing of this report and prior to the beginning of the second section of the training.
- 4) Although many of the participants already knew each other and worked together, the training fostered exchange of expertise and new collaborations that are being pursued after the end of the in-person workshop.
- 5) All of the participants would recommend the training to co-workers and colleagues.

II. Introduction

The NOAA Designing Education Projects (DEP) training was designed to provide needs assessment, project planning and implementation, and evaluation professional development to NOAA employees and employees of NOAA partner programs (i.e. Sea Grant, National Estuarine Research Reserves) who conduct education and outreach activities as part of their jobs. This training has undergone several iterations since it was first offered to NOAA's National Weather Service (NWS) employees in 2003. The current training comprises a revised manual, an online course, and an in-person workshop. Revisions to the manual included explanations of the Rockwell-Bennett Targeting Outcomes of Programs (TOP) model (recently adopted by NOAA's Education Council as a model for program planning and evaluation) and case studies developed from projects conducted by NOAA employees and partners. The online course focuses on project needs assessment, planning, and implementation. It is designed to take each participant approximately 15 hours to complete at their own pace over a four week period. During the 2.5 day in-person workshop, the focus is on developing an evaluation plan and drafting at least one assessment tool for each participant's project. It is anticipated that a total of six sections of the training will be conducted over the next 18 month. The recently completed training in Honolulu, HI from March 2-4, 2010 was the inaugural training in the new format. Eleven participants completed this cohort or section of the training. Most of the participants were NOAA employees (8) who represented the Pacific Services Center (5), the Marine Debris Program (1), Coastwatch/Oceanwatch (1), and the National Weather Service (1). The remaining three participants represented HI Sea Grant (1), the Western Pacific Fisheries Management Council (1), and the University of Hawaii's Center for Microbial Oceanography, Research and Education (1). On the following pages an evaluation of this training is provided.

III. Analyses of Pre- and Post-Training Tests

Prior to starting the online course, participants were asked to take a pretest as part of the online course. A post test was administered at the end of the in-person workshop (See Appendix 1 for test), one month later. The pre and post tests consisted of 20 content knowledge questions and one scale item with eight statements rating participants’ level of confidence in project development processes. There were 11 participants in the training; response rates for each administration are reported below. All t-tests were calculated using SPSS.

A. Pre- and Post- Training Content Test Analyses

Pretest scores for the 20 knowledge items ranged from 8 to 15 correct out of a possible score of 20. Ten participants took the pretest (one did not take the pretest) yielding an average pretest score of 12. All 11 participants took the post test; the scores ranged from 13 to 18 with a mean of 16. For participants with a matching pre and post test, a paired samples t-test indicated a significant gain from pre to post of 3.7 points (18.5%), $t = 5.29$, $p=0.001$.

B. Pre- and Post-Training Confidence Test Analyses

Participants were asked to rate their confidence level in their ability to perform specific tasks in the project development process. Participants selected among 4 scale options with end points from 1 to 4 with 1 being ‘not confident’ to 4 being ‘very confident’. In each case, participants were more confident in their abilities after participating in the training (both the online course and the in-person workshop).

Paired sample t-test for pre- and post-training confidence levels for the 9 participants who completed both administrations of the test showed a significant gain in confidence for all aspects of the project development process except one (Table 1.). No gains were made in the participants’ ability to analyze data from a needs assessment or evaluation. This is not surprising given a participant population composed primarily of scientists. Participants exhibited confidence prior to the training (2.33) which only increased 0.25 points to 2.58 by the end of the training. In addition, the workshop offered only a brief overview of qualitative and quantitative data analysis.

Table 1. Paired sample t-test for pre- and post-training confidence levels.

Rate your level of confidence in the following aspects of the project development process.	Pre	Post	Paired t-test
a. How confident are you with your knowledge of project evaluation?	1.67	2.67	4.40*
b. How confident are you in your ability to develop an evaluation plan for evaluating a specific educational project?	1.56	2.75	4.40*
c. How confident are you in your ability to differentiate among different evaluation phases?	1.78	2.75	3.78*
d. How confident are you in your ability to write specific, measurable objectives to guide project planning and evaluation?	1.89	3.00	3.78*

e. How confident are you in your ability to create a logic model for your program?	1.89	3.08	4.62*
f. How confident are you in your ability to develop a plan for conducting a needs assessment?	1.67	2.67	4.62*
g. How confident are you in your ability to select appropriate evaluation tools (questionnaires, observations, concept mapping) to answer specific evaluation questions?	2.33	3.00	2.82*
h. How confident are you in your ability to analyze data from a needs assessment or evaluation?	2.33	2.58	1.83

* Significant at p= 0.05.

IV. Analyses of Post-Training Evaluation Surveys

A post-training evaluation survey titled “NOAA Designing Education Projects Online Course and In-person Workshop (DEP Training) Evaluation” was sent by email to the 11 participants who completed the training one week after the training concluded. The survey contained 13 items (including 4 scale items and 7 items requesting qualitative responses). Responses to each item are provided below. The number of respondents to each item, any statistical analysis (mean), and a discussion of the results is provided for each item. All 11 participants provided responses to at least some of the items.

A. Online Course

Item 1. The communication prior to the online course was sufficient to help me know how to get started? N=11

9	Yes
1	No
1	NA (no answer)

If no, what suggestions do you have for improving communications? N=3

Although only one participant answered “No” to this question, three participants provided suggestions for improving communication prior to the start of the online course. These responses included:

- Explaining what each icon means (2)
- Making icons more relevant to the course (1)
- Using more bullet points to break up the text (1)
- Making links more visible (1)
- Creating a page with a simple course timeline (1)
- Creating a list of course tasks (1)

Overall, participants indicated that communication prior to the online course was sufficient for participants to get started. The above suggestions have been addressed in the next section of the course.

Item 2. Rate your ability to apply content and skills you learned in the online course.

<i>As a result of participating in the <u>online course</u>, can you ...</i>	Not at All	With <u>a lot of</u> Support from Another Professional	With <u>some</u> Support from Another Professional	On My Own With Confidence
	1	2	3	4
a. use the TOP model to guide a needs assessment? N=10; Mean = 2.9	0	2	7	1

b. identify factors that are necessary to consider when planning and implementing education projects? N=10; Mean = 3.1	0	2	5	3
c. determine a project's fit with agency needs, capacity, priorities, and mission? N=10; Mean = 3.5	0	0	5	5
d. write measurable program objectives that link program development and evaluation? N=10; Mean = 3.2	0	1	6	3
e. develop a logic model for an education or outreach project? N=10; Mean = 3.1	0	2	5	3

Overall, participants rated their ability to apply the content and skills learned during the online course fairly high. The majority of participants indicated that they can apply what they learned with some support from another professional or with confidence on their own. No participants selected the “Not at All” option for any of the items.

B. In-person Workshop

Item 3. The communication prior to the in-person workshop was sufficient for me to know what to expect? N=11

- 9 Yes
- 1 No
- 1 NA (no answer)

If no, what suggestions do you have for improving communications?

Although only one participant answered “No” to this question, two participants provided suggestions for improving communication prior to the start of the in-person workshop. These responses included:

- There should be fewer presentations/lectures (2)
- There should be more hands-on activities or group discussions designed to help participants develop effective evaluation measures (2)

Overall, participants indicated that communication prior to the in-person workshop was sufficient for participants to know what to expect. Ways to address the above suggestions are being discussed by the instructors and will be addressed in the next section of the course.

Item 4. Rate your ability to apply content and skills you learned in the in-person workshop.

<i>As a result of participating in the <u>in-person workshop</u>, can you ...</i>	Not at All	With A Lot of Support from Another Professional	With Some Support from Another Professional	On My Own with Confidence
	1	2	3	4
a. explain the purpose for evaluating education and outreach projects? N=11; Mean = 3.5	0	0	5	6
b. explain the benefits of evaluating education and outreach projects? N=11; Mean = 3.8	0	0	2	9
c. identify indicators of project achievement at each level of the TOP hierarchy? N=11; Mean = 2.9	0	3	6	2
d. develop evaluation questions for process and outcome evaluations. N=11; Mean = 3.2	0	0	9	2
e. develop an evaluation plan for an education or outreach project. N=11; Mean = 3.3	0	0	8	3
f. select appropriate evaluation tools or instruments to use when answering specific evaluation questions. N=11; Mean = 3.5	0	0	6	5
g. design evaluation tools, including an observation form, interview guide and survey that can be used to collect data. N=11; Mean = 3.1	0	2	6	3
h. pilot test data collection tools N=10; Mean = 3.0	0	3	5	3

Participants rated their ability to apply the content and skills learned during the in-person workshop very high (>3.0) with the exception of identifying indicators of achievement at each level of the TOP model. The majority of participants indicated that they can apply what they learned with some support from another professional or with confidence on their own. No participants selected the “Not at All” option for any of the items.

C. DEP Training (online course AND in-person workshop)

Item 5. On the following scales from 1 to 5, what best represents what you think about the DEP training (online course AND in-person workshop)?

a. The DEP training was a: N=10; Mean = 4.6	Poor use of my time 1	2	3	4	Good use of my time 5
	0	0	1	2	7
b. The length of the training in relationship to the material presented was: N=11; Mean = 3.4	Too long 1	2	3	4	Too short 5
	0	0	8	2	1
c. For my experience level the training was: N=11; Mean = 3.1	Too basic 1	2	3	4	Too advanced 5
	0	0	10	1	0
d. To what extent can you apply the information presented in the training to your work? N=11; Mean = 4.3	Not at all 1	2	3	4	A great deal 5
	0	1	0	5	5
e. To what extent do you intend to continue using the resources on the online course website to apply what you learned during the training? N=11; Mean = 3.5	Not at all 1	2	3	4	A great deal 5
	0	3	2	4	2

In rating what participants thought about the DEP training on scales of 1-5, the training was a good use of their time, appropriate for their experience level, but a little short on time relative to the material presented. Participants think they can apply the information presented a great deal and most will continue using resources from the online course as they apply what they learned during the training. No participant selected the lowest (1) option for any of the items.

Item 6. Rate your level of satisfaction with DEP training content and the extent to which you will use the information in the future.

<i>The educational materials and content...</i>	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
	1	2	3	4	5
a. engaged me in active learning related to their goals. N=10; Mean = 4.3	0	0	0	7	3
b. were organized in a way that followed a logical order. N=11; Mean = 3.9	0	1	3	3	4
c. included sufficient examples. N=11; Mean = 3.7	0	2	1	6	2
d. helped me understand project design, planning, implementation, and evaluation. N=11; Mean = 4.5	0	0	0	6	5
e. were applicable for my educational and outreach projects. N=11; Mean = 4.4	0	1	1	2	7
f. provided information I can use in my work. N=11; Mean = 4.5	0	0	2	1	8
g. were well facilitated. N=11; Mean = 4.3	0	1	0	5	5

Participants rated their level of satisfaction with the training content and materials and their usefulness in the future on scales of 1-5 (Strongly Disagree-Strongly Agree). On all items the majority of participants rated the item as agree or strongly agree (mean=3.7 or greater). No participants selected the “Strongly Disagree” option for any of the items.

Item 7. Do you intend to apply the skills learned from the DEP training to your current education and outreach projects? N=11

10 Yes
1 No

If yes, describe how you intend to apply these skills:

Even though 10 participants indicated that they intend to apply the skills learned from the training, only eight participants described how they intend to apply what they learned and one stated that they would not apply the skills learned in the training right away. Following are the ways participants **intend** to apply their new skills:

- While developing current and future education and outreach initiatives/projects (6)
- By going back and evaluating or tweaking current projects (4)
- By implementing a more thoughtful planning and evaluation process to all projects (1)
- By helping others (grant recipients) craft good outreach/education projects with measurable results (1)

Below are three quotes from participants that exemplify how they intend to apply their new skills:

“I have gotten a great start on the project that I used for my example during the course. I will build on the planning that I did during the workshop as I continue to work on this project.”

“I have already have used the training to design and redesign evaluation tools such and pre/post tests for students, updating current evaluation tools and producing an online evaluation. In addition, I am using the project development tools to help with the design of an upcoming project.”

“The information on the paper reduction act and OMB requirements for questions was also very useful.”

Participants intend to apply their new skills in a variety of ways that will improve their current and future projects and/or the projects of others.

Item 8. Did the DEP training facilitate exchange of expertise among participants? N=11

11 Yes
0 No

Item 9. Did the DEP training foster networking and forge future collaborations? N=11

10 Yes
1 No

If yes, how do you intend to work with your DEP colleagues in the future?

All 10 of the participants who indicated that the training fostered networking and collaboration offered feedback on how they will work with these colleagues in the future. Their responses included:

- I hope/plan to work/collaborate with people on projects new to me in the future (6)
- I already have a meeting scheduled or have met with someone(s) I had not worked with before to plan new projects together (3)
- I already work with most of the other participants (2)

- I will work on specific projects with others in the future (2)

Below is a quote from one of the participants that illustrates how the training fostered collaboration:

“During the course of the training we were able to see what types of education projects are currently out there. This exposure allowed our team to see places where our projects might align with other participants as well as open up opportunities for future collaboration.”

Although many participants already knew each other and work together, they stated that the training facilitated exchange of expertise and fostered networking and collaboration among participants.

Item 10. Would you recommend the DEP training to a co-worker or colleague? N=11

11 Yes

0 No

All of the participants would recommend the training to others.

Item 11. We would like to follow up with you as to how you used or applied the information from the DEP training. What timeframe would make the most sense for your plans? N=11

4 I plan to apply the information from the DEP training in the next 3 months.

3 I plan to apply the information from the DEP training in the next 6 months.

4 I plan to apply the information from the DEP training in the next 12 months.

All of the participants plan to apply information from the training within the next 12 months.

Item 12. What were the strengths of the course and workshop? N=11

All 11 participants provided their perspective of the strengths of the course and workshop. Their responses are summarized as follows. The numbers in parentheses after each comment indicate the number of participants who provided this response:

- Instructors were engaging/did a very good job (3)
- Each participant having their own project to describe and develop from the beginning of the online course through the in-person workshop (3)
- The most helpful part was during the workshop, when we had 1 on 1 help with our project components, and received individual feedback from instructors (3)
- Great examples for applying the concepts to developing our own projects (2)
- Information was presented in a well organized and easy to follow manner, building up to the big picture plan (2)
- I learned several very useful techniques and tools to help planning projects (2)
- Very knowledgeable “trainers” that have first worked in the field, so have the background knowledge of the limitations of what we can do vs. what we’d like to do (1)
- Very interactive (1)
- Receiving feed-back from other participants (1)
- Hearing about the project each participant is involved in creating or executing (1)

- Designing tools in class was a useful exercise. This gave participants the opportunity to ask questions and get clarification on the process (1)
- The course provided great information regarding the restrictions of evaluation that are present within NOAA (1)
- It was good to learn a model of project planning and evaluation that has been utilized and tested (TOP) (1)
- I found the course very useful (1)
- I will continue to use the training frequently in future projects (1)
- The face-to-face gave us a deadline for completing the online and facilitated dedicating our time on the class (1)
- The participation amongst students was some of the most active I've seen in other workshops (1)
- Online portion allowed us to work at our own pace (1)
- I liked the online preparation (1)

Information was presented in a well organized and easy to follow manner, building up to the big picture plan. I learned several very useful techniques and tools to help when planning projects, especially with set objectives, as many of our projects have sprung from good ideas, but ill defined objectives which has made updating and evaluating more difficult as now we are trying to define objectives after the fact. I found the course very useful and will continue to use the training frequently in future projects.

A long and varied list of the strengths of the training was provided by participants (Total=28). Many responses were provided by only one participant. Overall, the training seemed to fit the needs of the participants and everyone got something individual from it.

Item 13. What changes would you recommend to make this a more useful training for future participants? N=11

All 11 participants provided recommendations for improvements to the training. Their responses are summarized as follows. The numbers in parentheses after each comment indicate the number of participants who provided this response:

- Hard deadlines for online portion (3)
- Fewer PowerPoint presentations (3)
- More examples in the beginning or during the online course of: KASA, SEE, writing goals, and writing objectives (2)
- More interactive activities (2)
- Make the web site more user friendly (1)
- In the online portion, provide a short video clip of the instructors introducing the online class as a whole, and then one to introduce each unit of the online course (1)
- Schedule interactive online sessions as a part of the online course (1)
- More information needed on Bloom's Taxonomy (1)

- Place some of the pages found in the Appendices within the body of the book i.e. Bloom's Taxonomy (1)
- ALL information (including examples) should be in the book (1)
- The hard copy of the book could have arrived a little earlier (1)
- Keep the participants more focused during the exercise portions of the workshop (1)
- Simplify presentation on types of tools. Make it based on function not name (1)
- Use a more focused topic (hurricanes, marine debris, red tide etc...) for the exercise on question writing (1)
- Make this evaluation a fillable PDF form so that it is easier to get back to you or use survey monkey! (1)
- This evaluation form is too long and offers what seem to be some redundant options to choose from within the rated questions above (1)

Participants provided several recommended improvements (Total=22) to the training. Many responses were provided by only one participant. Some of the recommended changes are in direct opposition to strengths of the workshop as provided above. Ways to address the above recommended changes are being discussed by the instructors and will be addressed in the next section of the course.

V. On-line Course Focus Group Results

A focus group discussion of the challenges participants faced in the on-line course was conducted with all of the participants during the in-person workshop. This discussion was initiated for two reasons: 1) this is the inaugural offering of the training in its current form with a large party of the content being provided through the on-line course; and 2) the instructors became concerned that the participants were slow to log on to the on-line course (less than two weeks prior to the in-person workshop) significantly limiting the time they had to complete the course activities and assignments. Following is a synthesis of participant comments with solutions and completion status indicated.

A. Navigating the Online Course

1. Some participants had trouble bookmarking the course URL and therefore had trouble re-entering the course.

2. A few participants had trouble finding the course URL on the COMET/MetEd system.

Solutions:

a) After discussing the issue with the course technical coordinator (Steve Stork) we surmised that the confusion may have stemmed from multiple and differing course links being received by participants before starting the course. Participants first register in the COMET/MetEd system and then are directed to another link where they will enter the course each time. Steve suggested that the instructors contact participants by email with login information prior to each participant's first login attempt. In addition, he suggested that the instructors follow-up with a phone call to each participant to ensure participants are not having problems.

b) The pdf file, *Navigating the Online Platform* will be sent to participants via email (upon confirmation that they are participating in the training) with login URL information.

c) Add a conference call through Go-To Meeting or Illuminate after participants have completed the first unit to ensure that everyone is on track and progressing as intended. Topics for discussion during the call may include: navigating the course and the suitability of each participants' selected education or outreach project for application to training activities and assignments.

3. After reading the Getting Started page, participants were not sure what to do next.

Solutions:

a) Instructions to proceed to Module 1: Project Development Cycle were added to the end of the Getting Started page (Next Step).

b) The course syllabus now includes due dates for assignments. Due dates will help participants manage their time and will indicate what module, topic, and assignment they should focus on during a specific time frame.

c) Instructors will send email reminders when they notice participants lagging behind the due dates.

B. Visual Appeal and Formatting

4. Adding more visual components (e.g., text boxes, frames, color, indentation) to break up long sections of text.

5. Visual cues should also be used to draw more attention to case studies.

Solution:

Subtle changes were made to the course appearance. For example Course Goals/Objectives and case studies are now in text boxes. The assignments are indented under each topic heading and some text subheadings are in a colored font.

6. Add video clips to break up, exemplify, or supplement text.

Solution:

The technical coordinator is looking into this option. However, without resources for filming, editing, and compressing/rendering video clips this request may not be possible. The technical coordinator is determining whether The COMET/MetEd administrators would support the use of video, therefore, an alternative media venue such as You Tube may be required. This request will be readdressed once additional information is gathered and after the May 2010 workshop.

C. Course Content

7. Add more examples of logic model components and instruments. *Note:* Participants were not aware that case studies were embedded in the course.

Solutions:

a) Case studies are now in text boxes to make them stand out from the text.

b) Instructors will send reminders to participants to review the case studies.

c) More examples will be shared with participants through the *File and URL Sharing* page. Examples and pdfs related to each module will be uploaded immediately prior to everyone beginning that module.

8. Link the *DEP* manual directly to the text in the online course.

Solution:

The technical coordinator is determining if it is possible to link the DEP manual pages referenced in the course directly to those places in the course. This request will be readdressed once additional information is gathered and after the May 2010 workshop.

D. Pretest

9. Participants were able to reselect responses to items on the pretest if they initially selected a wrong answer.

Solution:

Online pretest parameters have been changed to limit the number of times a participant can select a response from the options to 1. *Note:* This situation did not present a problem in determining the pretest scores for the first section of the course because the grading program tracked the responses selected by the participants. Therefore, each participant's initial response could be determined.

10. Some participants were concerned by the online determination of grades i.e. the affective items (self-efficacy scale) were averaged into the overall pretest grade.

Solution:

Online pretest parameters have been changed so only the cognitive items are aggregated to determine a total pretest score (maximum possible score = 20). *Note:* Affective items are no longer averaged into the overall pretest score.

E. Communication

11. Two participants joined the course late and did not complete the online course.

Solutions:

a) Review how participants are invited and protocol for getting participants to log-on to the course.

b) Early and frequent communication with participants by instructors will facilitate getting all participants on track.

c) Add a conference call through Go To Meeting or Illuminate after participants have completed the first unit to ensure that everyone is on track and progressing as intended.

F. Timing/Lengthen of Course

12. Participants agreed that 4 weeks was a sufficient length of time to complete the course. In addition, instructors need at least 2 additional weeks to review and provide feedback to

participants prior to the in-person workshop. Therefore, a total of 6 weeks should be allowed for each subsequent workshop.

13. More time (at least 1 week) is needed to create participant presentations for the in-person workshop.

Solution:

Presentations for the in-person workshop are now due 1 week prior to the start of the in-person workshop. Instructors will provide feedback to each participant on their draft logic model in time for changes to be incorporated into the material they develop for their presentation.

VI. Recommendations

1. After consultation with NOAA OED staff, instructors should revise the online course and in-person workshop to comply with the suggestions and recommendations offered by the HI training participants', as feasible, practical, and cost effective.
2. Instructors should contact participants earlier and more frequently to ensure appropriate progress throughout the online course.
3. Instructors should provide more case studies and examples of real education projects.
4. Evaluator should follow-up with participants to establish how they are using information and tools from the training.

Appendix A: Pre-/Post-Training Test

NOAA Designing Education Projects – Pre-, Post-Test

1. The activities, services, and products that are generated through the investment of resources are considered a project's _____.
 - a. inputs
 - b. effects
 - c. outputs
 - d. outcomes

2. What are three learning domains used in writing objectives for an education or outreach project?
 - a. Effective, social, kinesthetic
 - b. Cognitive, psychomotor, affective
 - c. Kinesthetic, emotional, knowledge
 - d. Effective, emotional, progressive

3. A logic model ...
 - a. is a tool for linking project planning and evaluation.
 - b. shows the project in action.
 - c. can be used to monitor project processes.
 - d. all of the above

4. A _____ is any person or group who has an interest in the planning, implementation, and evaluation of a project.
 - a. stakeholder
 - b. participant
 - c. board member
 - d. target audience

5. Why is it important to assess the needs of your target audience?
 - a. It gives your audience a chance to voice their satisfaction with your current services.
 - b. Different audiences expect to be asked about their wants and needs.
 - c. To determine what services and projects to provide potential participants.
 - d. All of the above

6. What type of evaluation would you conduct if you wanted to provide staff with information on how to improve their project?
- Implementation evaluation
 - Needs assessment
 - Summative evaluation
 - Improvement evaluation
7. Observable evidence of project accomplishments, changes made, or progress achieved is known as a/an _____.
- benchmark
 - standard
 - input
 - Indicator
8. To get an in-depth picture of your project, what type of data would you collect?
- Quantitative
 - Qualitative
 - Numeric
 - Demographic
9. What type of evaluation would you conduct if you wanted to provide funders with information on the long term impacts or your project?
- Formative evaluation
 - Needs assessment
 - Outcome evaluation
 - Cumulative evaluation
10. Which data collection method is dependent on the interactions among project participants?
- Focus group
 - Interview
 - Concept mapping
 - Questionnaire
11. Which of the following is NOT recommended as a way to increase your response rate when conducting a survey?
- Sending multiple reminders
 - Offering incentives
 - Using a formal tone to establish reputability
 - Sending a pre-notification letter letting them know what to expect

12. What type of sampling takes place when individuals are selected on the basis of their availability to be surveyed?
- Convenience
 - Cluster
 - Random
 - Quota
13. If you were interested in determining whether teachers are using workshop materials in their classrooms which indicator would you use to collect this information?
- Pre-post test
 - Number of activities conducted
 - Increase in student knowledge
 - Not sure
14. Which is NOT an advantage of using a questionnaire to collect data.
- Can reach a large number of people
 - Can take a random sample
 - Avoid problems with socially desirable responses
 - Can be completed on respondents' own time
15. _____ is the extent to which a study, test, or any measuring procedure yields consistent results.
- Correlation
 - Validity
 - Reliability
 - None of the above
16. Which levels in the TOP model hierarchy would you collect data for a needs assessment?
- Social, knowledge, practice
 - Inputs, outputs, outcomes
 - Reactions, behaviors, social action
 - Resources, activities, economic

For the following questions please select the most appropriate data gathering tool for the evaluation scenario presented.

17. Which evaluation instrument or tool is the best choice for determining if middle school students learned how to correctly use the equipment at a weather station?
- Focus group
 - Pre-post test
 - Observation
 - Concept map

18. Which evaluation instrument or tool is the best choice for determining the current level of knowledge about climate change and conservation practices of local residents?

- a. Questionnaire
- b. Focus group
- c. Observation
- d. Pre-post test

19. You are interested in knowing whether local residents understand the terminology used by the National Weather Service to classify a variety of hazardous weather conditions.

- a. Focus group
- b. Interview
- c. Questionnaire
- d. Concept map

20. You are interested in surveying teachers that have participated in your workshops, but you are not sure what questions to ask.

- a. Observation
- b. Questionnaire
- c. Focus group
- d. Interview

21. Rate your level of confidence with the following aspects of the project development process.

	Not Confident	Somewhat Confident	Confident	Very Confident
a. How confident are you with your knowledge of project evaluation?	1	2	3	4
b. How confident are you in your ability to develop an evaluation plan for evaluating a specific educational project?	1	2	3	4
c. How confident are you in your ability to differentiate among different evaluation phases?	1	2	3	4
d. How confident are you in your ability to write specific, measurable objectives to guide project planning and evaluation?	1	2	3	4

e. How confident are you in your ability to create a logic model for your program?	1	2	3	4
f. How confident are you in your ability to develop a plan for conducting a needs assessment?	1	2	3	4
g. How confident are you in your ability to select appropriate evaluation tools (questionnaires, observations, concept mapping) to answer specific evaluation questions?	1	2	3	4
h. How confident are you in your ability to analyze data from a needs assessment or evaluation?	1	2	3	4