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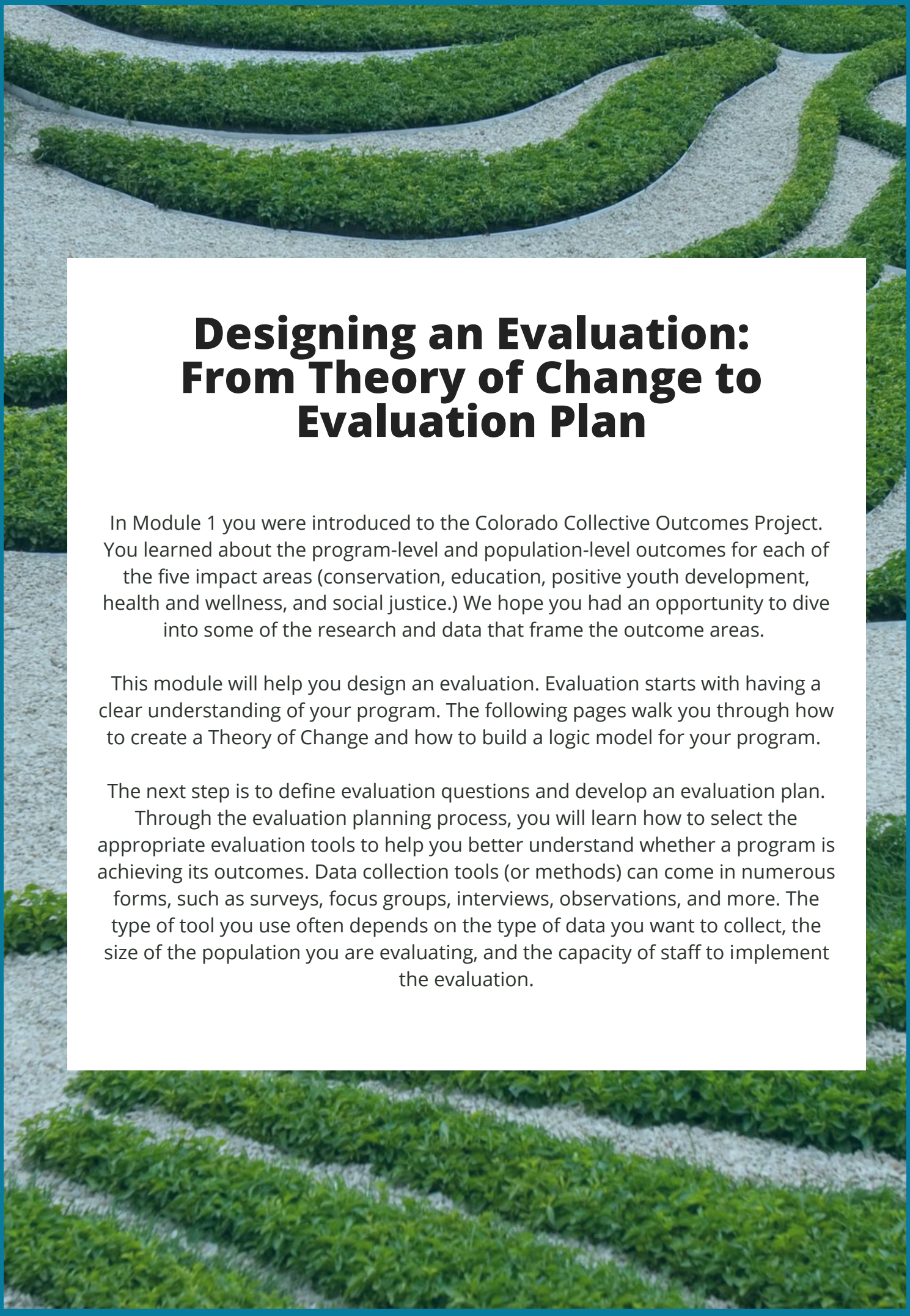
Colorado Collective Outcomes Evaluation Toolkit

Module 2: Designing an Evaluation



Designing an Evaluation: From Theory of Change to Evaluation Plan

In Module 1 you were introduced to the Colorado Collective Outcomes Project. You learned about the program-level and population-level outcomes for each of the five impact areas (conservation, education, positive youth development, health and wellness, and social justice.) We hope you had an opportunity to dive into some of the research and data that frame the outcome areas.

This module will help you design an evaluation. Evaluation starts with having a clear understanding of your program. The following pages walk you through how to create a Theory of Change and how to build a logic model for your program.

The next step is to define evaluation questions and develop an evaluation plan. Through the evaluation planning process, you will learn how to select the appropriate evaluation tools to help you better understand whether a program is achieving its outcomes. Data collection tools (or methods) can come in numerous forms, such as surveys, focus groups, interviews, observations, and more. The type of tool you use often depends on the type of data you want to collect, the size of the population you are evaluating, and the capacity of staff to implement the evaluation.

Articulating a Theory of Change

To start your evaluation, it is helpful to articulate a Theory of Change for your program. A **Theory of Change** statement articulates the overall goals of the program and how the program will reach them. A comprehensive theory of change takes into consideration the following:

- Needs of the community
- The target population the program engages
- Key program elements
- Intended goals and outcomes

A simple Theory of Change statement can utilize the following formula:

"By providing X to Z, Y will occur."

Examples of a Theory of Change statement include the following:

- By providing a weeklong experiential outdoor education program to sixth-grade students at Outdoor Education Center, students will increase their desire to participate in positive environmental actions and will have an increase in self-agency in the outdoors.

- By engaging elementary students in field trips at Beautiful State Park, students will have an increased connection to nature and increase in positive attitudes toward nature and the environment.

Not only is a Theory of Change statement helpful in understanding your program, it also provides a concise description of your program to stakeholders, funders, and your community.

Consider engaging program participants in developing a Theory of Change statement. What do they see as the biggest needs and how to address them?

Create your own Theory of Change using the formula, "By providing X to Z, Y will occur."

Developing a Logic Model

In order to evaluate your program accurately and efficiently, you must first have a clear understanding of what your program is trying to accomplish and how it intends to do it. One way to do this is by developing a programmatic logic model.

A **logic model** is a high-level visual representation of a program that links program activities to intended outcomes. A logic model should include the following components:

- *Inputs*. The resources that go into the program, such as curriculum, staff, and partnerships.
- *Activities*. The specific actions and key components of your program and its implementation.
- *Outputs*. Quantifiable results of the program's activities.
- *Outcomes*. The changes that will occur as a result of your program (often changes in access, knowledge, skills, attitudes, behavior, etc.). Outcomes are often broken out into short-term, medium-term, and long-term outcomes and impacts.

The Logic Model is a great way to engage program participants, the community and staff in conversations about your program. Consider how you can authentically engage multiple voices in this process.

Connecting Your Logic Model to Colorado Collective Outcomes

While you are drafting your logic model, be sure to have the Colorado Collective Outcomes Population-Level and Program-Level Outcomes Table on hand. Make note of the following questions while thinking through the Logic Model components:

- Are there program-level outcomes from Colorado Collective Outcomes that align with your activities?
- Are you tracking outputs that coincide with either population-level or program-level outcomes?
- Which program-level outcomes can you include as your own outcomes?

We would love to hear from you which program-level outcomes from Colorado Collective Outcomes align with your work!

Refer to Colorado Collective Outcomes program-level outcomes when drafting your Logic Model. Where is there alignment?

Logic Model Template

THEORY OF CHANGE STATEMENT: Articulates the overall goals of the program and how the program will reach them. Example: "By providing X to Z, then Y will occur."

LOGIC MODEL: A logic model is a high-level visual representation of a program that links program activities to intended outcomes.

Inputs	Activities	Outputs	Short-term Outcomes	Medium-term Outcomes	Long-term Outcomes and Impact
What resources are going into your program?	What activities will you be doing to achieve your outcomes?	What are the quantifiable results of your program—number of participants served, number of sessions held, number of weeks of programs, etc.?	What do you hope to achieve through your program? What are your goals? Short-term often refers to changes in knowledge, skills, and/or attitudes.	Medium-term often refers to changes in actions, behaviors, practices, or policies.	Long-term often refers to changes in conditions or status, whether social, economic, civic, or environmental.

Are there program-level outcomes from the Colorado Collective Outcomes Project that align with your work?

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Example Logic Model for eeProgram

THEORY OF CHANGE STATEMENT: By providing hand-on field trips and in-class instruction to K-12 students, students will have an increased connection to nature and an increased desire to participate in positive environmental actions.

Inputs	Activities	Outputs	Short-term Outcomes	Medium-term Outcomes	Long-term Outcomes and Impact
Staff Volunteers Curriculum Partnerships with local schools and teachers Partnership with State Park eeFunder	In-class instruction • Introduction to content • Hands-on activity Field Trips to State Park • Hiking time • Instruction time • Reflection time Reflection activity in class with teacher	# of school partnerships # of classrooms # of teachers # of students # of field trips # of weeks of programming	Increase in connection to nature. Increase in desire to participate in positive environmental actions. Increase in positive attitudes toward nature and environment. Increase in self-agency in the outdoors.	Increase in stewardship actions. Increase in time in nature. Increase in perceived wellness and health as a result of being in outdoors.	Decrease in barriers to accessing nature. Increase in environmental behaviors.

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Determining Evaluation Questions

Evaluation questions guide the evaluation. It is often unrealistic to evaluate everything you want to explore about the program. Prioritizing evaluation questions will help focus your time and resources.

To refine your evaluation questions, think through the following two factors:

- *What you want to learn through the evaluation*. Are you trying to determine if the program is being implemented as planned, or the same at multiple sites? Do you want to understand whether you are achieving your outcomes? Do you want to understand if volunteers are satisfied? It's important to define what you want to learn through the evaluation.

- *Who the intended audience for evaluation results will be*. Are results of the evaluation to be used by program staff to improve and refine the program? Are you reporting out to funders? Are you presenting to your community or target population? Once you understand who will use the information, you'll be able to refine your evaluation questions even further.

Once you've thought through the above factors, you'll be able to identify the evaluation questions. A few example evaluation questions may include:

- To what extent are we achieving our outcomes?
- To what extent are we increasing youth connection to nature?
- Did students increase knowledge of environmental education content?
- To what extent were the activities completed?
- Is the program being implemented the same at each school site?
- Is the program reaching the intended audience/target population?

Talk to your team and your participants about their evaluation questions. How can you authentically involve the community in framing the evaluation? What do they want to learn? Who will be using the results and how?

Creating an Evaluation Plan

The final step in developing your evaluation is thinking through each element of the **evaluation plan**. Like the logic model, an evaluation plan helps provide a concise picture of your evaluation. A comprehensive evaluation includes the following elements:

- *Outcomes.* These come from your logic model and are selected based on your evaluation questions.

- *Indicators.* Indicators help direct you to the information that will answer your evaluation questions and inform whether you've achieved your goals. It is often helpful to identify multiple indicators for each outcome. For example, if you're looking to increase youth environmental stewardship, indicators would include youths' environmental awareness, environmental knowledge, and personal responsibility. Similarly, if you're looking to increase conservation efforts in your community, indicators may include participants' nature connection, attitudes toward nature and the environment, and stewardship actions.

- *Objectives.* Objectives break the outcomes down into specific and measurable statements. Objectives answer the question, "How much change is enough?" They help you think through what percentage change you want to see or what percentage of the population will achieve the results. For example, if we look at the indicator options above pertaining to environmental stewardship, an objective may be, "85% of students report an increased understanding of how to take care of the environment," or "75% of participants indicate a greater appreciation for the outdoors."

- *Data Collection Tools and Methods.* Once you've identified the type of information you need to gather, you'll decide which data collection tools and methods to use. Here, you'll think through whether you want quantitative or qualitative data and how you will collect it—through methods such as surveys, focus groups, interviews, observations, etc.

- *Timeline and Staff.* In order for any evaluation to be successful, you'll need to have a clear action plan of when you will collect the data and who will be responsible for it.

Start thinking through your evaluation using the Evaluation Plan Template included with this toolkit. Remember to include program-level outcomes from the Colorado Collective Outcomes project when applicable!

Evaluation Plan Template

Outcomes	Indicators	Objectives	Data Collection Tools and Methods	Timeline and Staff
What do you hope to achieve through your program? What are your goals? (Taken from Logic Model.)	What information will inform whether you've achieved your goals?	How much change is enough? What percentage change do you want to see? What percentage of the population will achieve the results?	What tools will you use to collect/gather the data?	When does the data need to be collected and by whom?

Example Evaluation Plan for Colorado Collective Outcomes

Outcomes	Indicators	Objectives	Data Collection Tools and Methods	Timeline and Staff
Participants will report an increase in connection to nature.	Time spent in nature Nature connection	80% of students will report they want to visit this place again. 80% of students will report they love and care for nature. 80% of students will report that being in nature makes them happy.	Student survey	At the end of the unit by the naturalist
Program participants will report an increase in desire to participate in positive environmental actions.	Knowledge of the environment Knowledge of the impacts humans have on the environment Knowledge of environmentally conscious practices	75% of students will report they learned how to take good care of nature. 75% of students will report they understand that their actions can be good or bad for nature. 75% of students will report they want to tell others how to take good care of nature.	Student Survey	At the end of the unit by the naturalist
Participants will increase their self-agency in the outdoors.	Confidence Engagement in outdoors	60% of students will report they are more confident to engage in outdoor activities. 80% of students will report they want to spend more time outside.	Student Survey Focus Groups	At the end of the unit by the naturalist Once every 6 months

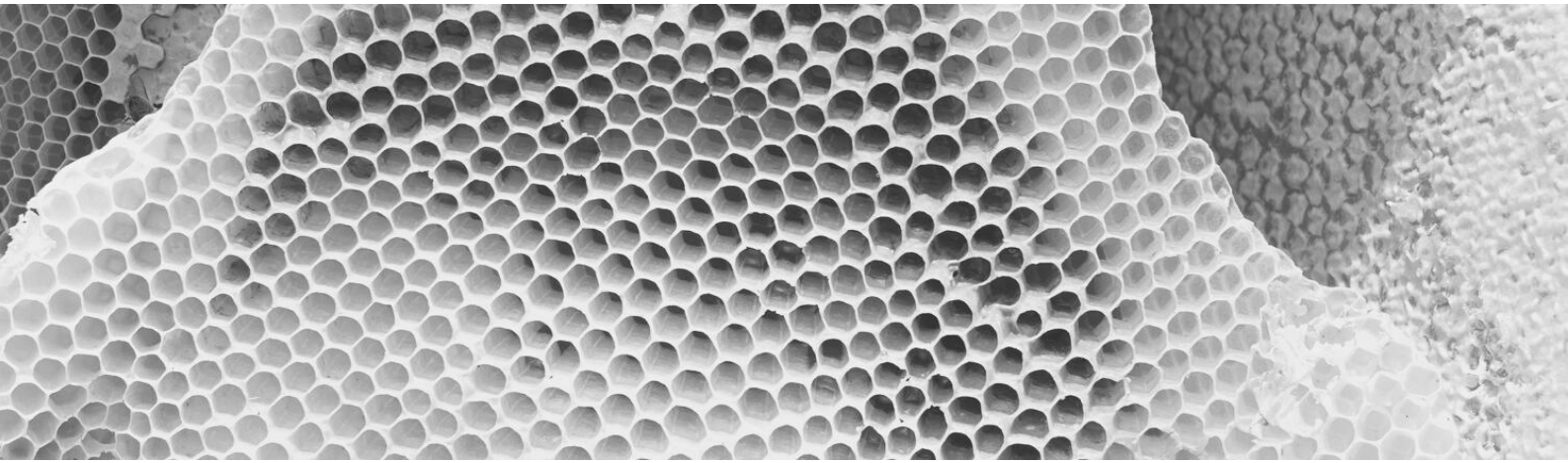
Quantitative and Qualitative Data

Quantitative Data

Quantitative data refers to numerical data (number of students served), data that can be defined by categories (agree, somewhat agree, disagree), or data that can be placed on a scale (scale of 0 to 10, where 0 = Nothing at all and 10 = A huge amount). Quantitative data is particularly useful when you want to include a large number of participants in the evaluation and can gather information through fixed response option. Quantitative data collection tools include surveys, tracking sheets, pre- and post-tests, student achievement data, and demographic information, to name a few.

Qualitative Data

Qualitative data includes descriptive or narrative data. Qualitative data collection allows you to gather rich and meaningful data from participants that dives deeper into their thoughts, feelings, and perceptions. This type of data is useful when you want to understand why participants have their perceptions of the program or when you want to dig into how the program is truly impacting them. Examples of qualitative data collection tools include focus groups, interviews, observations and open-ended survey questions.



Types of Data Collection Tools

There are many types of data collection tools you can utilize for your evaluation. Table 1 details a few of the most common quantitative and qualitative data collection tools. When developing your evaluation plan and identifying the tools you plan to use, it is important to understand staff time and capacity as well as the needs of your participants and community. Additionally, when capacity allows, a mixed-methods approach (using both quantitative and qualitative tools) is recommended to create a robust picture of program outcomes and fully address evaluation questions.

Table 1. Data Collection Tools

Data Collection Tool	Definition	Best time to use
Survey	A tool that can be administered by paper or online and is used to gather information from participants. Often, surveys include questions with fixed responses or scales.	When gathering information from a lot of people, when confidentiality is important, when time is limited.
Tracking Log	Used to track program activities, events, participants, and other outputs.	When tracking program outputs and numbers, or when you need to understand program implementation.
Focus Group	Used to gather in-depth qualitative information from a small group of individuals. Focus group protocols have pre-defined, open-ended questions used to elicit discussion.	When gathering in-depth information from a group of individuals with a shared experience, or when group discussion can draw deeper conversation.
Individual Interview	Used to gather in-depth qualitative information from individuals in a one-on-one setting, either in person, by phone, or through a virtual communication platform. Interview protocols have pre-defined, open-ended questions to gather feedback.	When gathering in-depth information from specific individuals, when information is sensitive, or when confidentiality is needed.

Observation	Used to gather information in real-time settings, either overtly (individuals know they are being observed) or covertly (individuals do not know they are being observed).	When gathering information on how a program is implemented, when outcomes can be observed, or when gathering information on interactions between people.
Photo Elicitation	Combines participant-directed photography with interviews to explore participants' perceptions of a place or time period.	When wanting to add a visual element to the evaluation, when pictures can elicit additional information.

Whenever possible, considering selecting more than one evaluation tool and consider collecting both quantitative and qualitative data.

Make sure the tools you select represent the needs of your population.

Collecting Data in a Virtual World

Evaluation doesn't have to stop when programming goes virtual. Many, if not all, of the evaluation tools can continue to be used virtually, with the right modifications.

- **Surveys** are an excellent tool to complement virtual programming. Upload your survey into an online platform such as Survey Monkey or Google Forms and administer it to your participants through email, text, or chat.
- **Focus Groups** can also be successful through virtual platforms such as Zoom or Google Meet. Encourage program participants to activate their cameras to thoughtfully engage and discuss with other focus group participants.
- **Interviews** are ideal over the phone. Schedule your interview ahead of time so you know you won't catch your interviewee at a bad time.
- If programming is taking place through a virtual platform, **observations** can also happen simultaneously. If the observer wants to be non-intrusive, encourage them to turn off their camera and chances are participants will forget they are even there.
- You can continue to encourage participants to utilize **photo elicitation** by taking pictures and sharing them with you through text or email. Follow up with a telephone interview to understand what the photos mean to them.

Population and Sample Sizes

It is important to understand the difference between population and sample when embarking on your evaluation. Population refers to the entire group that is the focus of the evaluation. For example, if you are facilitating a program on environmental stewardship with all sixth-grade students in the entire school district, the population would be the 6,000 member, sixth-grade student body. A sample, on the other hand, is a portion of the larger population that is randomly selected with the goal that it will reveal information about the population as a whole. In this case, a sample could be 500 of the sixth-grade students in the district.

While it would be great to implement an evaluation with your program's entire population, that is often not realistic, nor is it necessary. When identifying an appropriate sample for your evaluation, consider the following:

- Is it representative of your overall population (gender, age, race, etc.)?
- Is it randomly selected (you are not targeting one portion of the population over another)?
- Is it aligned with your staff capacity (don't attempt to survey 1,000 students if you do not have the capacity to do so)?
- Is it guided by the evaluation plan (you are selecting from a population that can address your evaluation questions)?

Additional Resources

Bowers, E. P., Larson, L. R., & Parry, B. J. (2021). Nature as an Ecological Asset for Positive Youth Development: Empirical Evidence From Rural Communities. Frontiers in Psychology, 12, 688574. https://doi.org/10.3389/fpsyg.2021.688574

Brooks, S., Braun, S., Backe, K., and Jones, C.V. (2020) Cultural Responsiveness Self-Evaluation Tool for Outdoor School. Oregon State University Extension Service Outdoor School Program. https://outdoorschool.oregonstate.edu/about-us/research-evaluation-assessment/self-evaluation-tools/

Harmon, Elena. (2019). The Great Nonprofit Evaluation Reboot: A New Approach Every Staff Member Can Understand. Pleasant View, Tennessee: CharityChannel Press.

North American Association for Environmental Education, eeLEARN Module 3: Research and Evaluation
https://eepro.naaee.org/learning/eelearn/eelearn-3-research-and-evaluation

University of Wisconsin-Madison Program Development and Evaluation, Logic Model Examples, Templates and Resources.
https://fyi.extension.wisc.edu/programdevelopment/designing-programs/

Robert B. Powell, Marc J. Stern, Brandon Troy Frensley & DeWayne Moore (2019). Identifying and developing crosscutting environmental education outcomes for adolescents in the twenty-first century (EE21), Environmental Education Research, 25:9, 1281-1299, DOI: 10.1080/13504622.2019.1607259. Link to this article:
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Salazar, G., Kunkle, K. & Monroe, M. C. (2020). Practitioner guide to assessing connection to nature. Washington, DC: North American Association for Environmental Education.