U. S. DEPARTMENT OF THE INTERIOR

YOUTH

PROGRAMS

TOOL KIT

U.S. Department of the Interior

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The U.S. Department of the Interior serves as the steward of our nation's lands, waters, cultural heritage, and tribal customs. Recognizing that engaging youth is critical for success, the Department offers a multitude of exciting initiatives in which youth become involved. For example, youth can:

- Create a new energy frontier;
- Tackle climate change issues;
- Assist American Indian and Alaskan Natives in addressing community needs;
- Build trails to enhance recreational opportunities and appreciation of nature;
- Preserve wildlife habitat; and
- Restore cultural and historic landmarks.

These and other exciting opportunities are meant to engage, employ, and educate young people from diverse backgrounds in exploring, connecting with, and preserving America's natural and cultural heritage. The initiatives have the potential to transform the lives of millions of young people, nurturing the next generation of conservation and community leaders.

Understanding Impact and Implementation

It is important for the Department to conduct rigorous evaluations in order to document the impact youth programs have on their participants, and, through this systematic approach, report achievements, improve current activities, and inform planning, programming and decision-making. This toolkit will provide program staff with information and tools to allow them to:

- Understand the key elements needed for effective evaluations;
- Implement an effective evaluation plan; and
- Understand how results can be used to guide program improvement.

The toolkit is designed to provide an overview of evaluation processes and information that can be used by program staff to design their own evaluations. In addition, guidance is provided on when and how to select and use external evaluators to design and conduct the evaluation.

This toolkit is divided into several sections:

Section 1: Getting Started

Provides information on the purpose of the evaluation, and whether a formal evaluation should be conducted; developing evaluation questions; deciding if an outside evaluator is needed; and methods for estimating how much funding should be allocated for an evaluation.

Section 2: Logic Model

Discusses how to develop a logic model to guide your evaluation design and refine your evaluation questions. Sample logic models from the Department of the Interior youth programs are provided.

Introduction

Section 3: Evaluation Design

Offers in-depth advice to help you determine your evaluation design, including explanations of experimental, quasi-experimental, correlational, case study, and other designs that may be useful for evaluating Department of the Interior programs.

Section 4: Methods for Data Collection

Provides information on surveys, interviews, focus groups, observations, document analysis and other methods for data collection.

Section 5: Planning: Sample, Timelines, Consents

Provides information on how to plan for your evaluation, including how to select samples, how to generate a timeline, and examples of the types of consents and assents that must be collected before the evaluation commences.

Section 6: Implement the Evaluation Design

Shows how to implement the evaluation design, including data collection, data management, and data analysis.

Section 7: Report

Provides information on the typical sections of an evaluation report.

Appendices

Appendix A contains an evaluation checklist, which can be used to ensure that all of the components of the evaluation have been completed.

Appendix B provides sample survey scales that may be useful to program staff if they choose to take a quantitative approach to their program evaluations.

Appendix C has a list of useful resources.

Appendix D has sample participant assent forms and parent consent forms.

Appendix E provides answers to Frequently Asked Questions (FAQs).

Appendix F provides definitions of common evaluation terms.

Development of This Toolkit

In late 2010, the Youth Program leaders and staff from the Department of the Interior initiated the development of a new strategic plan to guide Bureau efforts as they served youth across the United States. To determine impact, improve accountability, and engage in continuous improvement, the planning group included a recommendation that all programs begin to evaluate the outcomes of participation in their programs for youth, the community, and others. A presentation on evaluation was made to participants at a youth program retreat in 2010. Immediately thereafter, a work group representing all of the Bureaus that had youth programming was formed.

The group met regularly in late 2010 and early 2011 to determine common objectives, develop logic models, and discuss the content and format of a toolkit meant to help guide evaluation efforts. This toolkit is a result of their efforts, and includes actual program logic models and descriptions from each Bureau. Hypothetical examples are provided to highlight how an actual program might implement the specific component/steps of the evaluation process. The document was shared widely with program staff and revised with their input. The toolkit is meant to be a living document, and to help prompt rigorous evaluations of the Department of the Interior programs.

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Getting Started

- **Establish a Purpose(s) for the Evaluation**

- **Common Impact Areas**

- **Difference Between Implementation and Impact Evaluations**

- **Determine Your Evaluation Questions**

- **Phrase Your Questions**

- **Decide If the Program Should Be Formally Evaluated**

- **Decide If You Need an Outside Evaluator**

- **Identify Funding Amounts**

- **Institutional Board Review Considerations**

Section I: Getting Started

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This section provides information on establishing the purpose of the evaluation, determining whether a formal evaluation should be conducted, developing evaluation questions, deciding if an outside evaluator is needed, and identifying how much funding should be allocated to the evaluation.

Establish a Purpose(s) for the Evaluation

There are many reasons why people choose to evaluate programs. The most common reasons are that people want to:

- Determine whether their program objectives have been met;
- Document the impacts of their participation in programs;
- Reveal unintended outcomes;
- Understand which program characteristics are associated with impacts so that programs can be improved;
- Fulfill accountability requirements;
- Determine whether programs are implemented with fidelity;
- find out if programs are being implemented with quality;
- Identify whether the program is reaching intended audiences;
- Have evidence to show funders and key stakeholders that the program "works"; and
- Build a knowledge base to inform the field.

Before you begin your evaluation, it is important to talk with various internal and external stakeholders to ensure that you understand and are addressing the purpose of the evaluation.

- What do your program providers want to know?
- What do your program participants want to know?
- What do your funders want to know?
- What are you required to report?
- What would be helpful to know for program improvement?

Common Impact Areas

Department of the Interior youth programs have several overlapping areas where impacts on youth should be explored. These common areas include:

- **Developing Environmental and Cultural Stewardship**

  - Acquiring knowledge, skills, and dispositions in the fields of science and conservation;
  - Making sustainable choices;
  - Preserving cultural and historic heritage; and
  - Promoting responsible and respectful treatment of traditional and cultural heritage.

- **Developing Youth Assets**

  - o Increasing awareness and pursuit of Department of the Interior-related mission and careers;
  - o Developing interpersonal skills in the areas of leadership, teamwork, problem solving, time management, communication, mentoring, and respect/understanding of diverse cultures;
  - o Promoting civic engagement, civic efficacy, social responsibility, ethics, social/ professional networking skills, communication about societal issues, connection to community and society, and volunteerism/ethic of service; and
  - o Promoting healthy lifestyles, including physical, social, and emotional health.

Difference between Implementation and Impact Evaluations

Oftentimes, evaluators separate implementation evaluation from impact evaluation. Implementation refers to what actually happens during the program and includes factors such as the program activities, features such as duration and quality, and preparation of the facilitators of the program.

Impacts refer to the results or the outcomes of participating in the program, and typically address the differences in knowledge, skills, and attitudes acquired through participation.

Exhibit 1 identifies key features of implementation and impact evaluations, and may be useful in helping you to identify which is best for you. Evaluations most often are designed to accomplish both purposes.

The Youth Conservation Corps (YCC) Program example illustrates the ways in which evaluation purposes can be determined.

Exhibit 1. Characteristics of Implementation and Impact Evaluations

Characteristic	Implementation Evaluation	Impact Evaluation
Purpose	• To determine implementation fidelity (the extent to which intervention strategies and activities are done as planned, including adherence to schedules). • To determine the frequency and intensity of the intervention activities. • To determine the extent to which the delivery of the intervention was achieved. • May be used to provide feedback to improve an intervention.	To determine the extent to which the intervention, as implemented, achieved its intended goals and addressed the issues and needs it was intended to address.
Design	• Designed to measure implementation, beginning at program inception and continuing at varying periods throughout program duration.	Designed to determine whether the program has met its purpose and goals. Should help determine how to contrast what happens as a result of the program with what happens without the program.
Reporting	• Report in language easily understood by all stakeholders.	Report in technical language and in language easily understood by all stakeholders.
Use of Findings	• Findings cannot be generalized to future use of the intervention, but can be used to refine and improve current interventions.	Findings can be used to document outcomes of the program and promote adoption by others, while being sensitive to contextual differences and necessary adaptations by others.

(Adapted from U.S. Department of Education, Office of Safe and Drug-Free Schools, (2007). *Mobilizing for evidence-based character education,* p.17)

Example: National Park Service – Youth Conservation Corps

YCC is a youth employment and development program that engages young people in meaningful work experience on our public lands. Based on service-learning principles, the program focuses on helping youth develop an ethic of environmental stewardship and civic responsibility while acquiring knowledge and skills about natural and cultural resources. YCC serves to benefit the *program participants* by providing employment and meaningful experiential education, and promoting stewardship of the *public lands* they are working to preserve, and the *greater communities* to which both the public lands and the participants belong. YCC programs serve youth between the ages of 15 and 18 at the start of the program, and are conducted for 8 to 10 weeks during the summer. This historic program established by Congress (Public Law 93-408) in 1972, was developed as a continuation of the Civilian Conservation Corps legacy. YCC members work, play, learn, and grow in public lands restoring, rehabilitating and repairing the natural, cultural, and historical resources protected as federally preserved places. For example, participants may engage in historic structure preservation, exotic plant removal, fence construction, boardwalk repair, wildlife research assistance, bridge or trail construction, campground restoration, environmental education planning or teaching, habitat preservation, assistance to visitors, energy retrofitting, and more.

Evaluation of YCC could serve many useful purposes. First, an evaluation could show the extent to which the program was able to meet its objectives. The evaluation could determine, for example, whether youth increased their knowledge and skills related to environmental and cultural stewardship; whether they developed a sense of responsibility for preservation of natural, cultural, and historic resources; whether they became more interested in careers related to stewardship; and whether they intend to remain active stewards throughout their lifetimes. Answering questions of this nature shows the impact of YCC participation on the young person.

Alternatively or in addition, the evaluation could investigate the quality of the experiences YCC participants had. The evaluation could examine whether participants enjoyed the activities and thought the duration and intensity of the activities was appropriate for the task and for learning, their sense of the quality of the programming, the facilitators, and the setting; and whether they believed their experiences enhanced their knowledge, skills, and attitudes and why/why not. This type of evaluation focuses more deeply on program implementation.

The evaluation could also track the youth over time, collecting data on the extent to which they changed their behaviors and attitudes toward the environment, became more civically engaged, or pursued coursework or careers related to conservation, the environment, history, or cultural explorations. In addition, the evaluation could examine the impact of YCC on the public lands and greater community. For example, the evaluation could examine the extent to which bridges were repaired, exotic plants were preserved, or visitors found useful the information they received. The evaluation could explore the differences in the way community members viewed youth as resources or changed their own practices toward conservation.

Evaluation can serve many purposes, so the key is to decide which should be your focus.

Determine Your Evaluation Questions

Evaluation questions guide all other aspects of the evaluation process. Your project's purpose will dictate the questions you should ask.

If you are conducting an impact evaluation, your primary evaluation question should be:

> ### To what extent has our program achieved its goals?

To answer this question, you must be clear on the outcomes you desire to achieve. A good way to start answering the question is to think about each of the stakeholder groups participating in the program and what it is that you want to accomplish with each.

- What type of stewardship is your program promoting?
- What youth assets will be developed?

The evaluation question can be general, such as the one stated above that asks the extent to which goals are reached. Alternatively, the evaluation questions can be specific and address the extent to which each of the specified goals is achieved. The latter will result in more evaluation questions, but allow you to provide much more specific answers.

The impact evaluation may also be coupled with implementation questions that address program and/or participant characteristics that may influence outcomes.

- *Program characteristics* may include variables such as program activities, duration and intensity, focus on knowledge versus skills, degree of participating interaction, use of partners and mentors, and/or the experience of the individuals implementing the programs.

- *Participant characteristics* may include variables, such as gender, age, ethnic background or other demographic information, past experience with the program or related activities, and/or factors, such as having specific types of disabilities.

For implementation evaluation, you can ask either general or specific questions. A general evaluation question would be:

> ### What program design factors influence the impact of our program?

> ### What participant characteristics influence the impact of our program?

Samples of good implementation questions include:

> ### To what extent is program duration and intensity related to program impact?

> ### To what extent is the age and gender of participating youth related to program impact?

> ### To what extent is our program being implemented with fidelity?

How frequently are various program activities being implemented and with what intensity?

Was the entire program implemented in a timely fashion?

What do participants think should be done to improve the program?

Did all of our programs end on time?

Did program managers fulfill all of the requirements of the program?

Most evaluations are designed to answer both implementation and impact questions. Remember that the more questions you ask, the more complicated the evaluation. More questions mean that the evaluation will require more time for data collection and analysis and potentially higher levels of funding.

Phrasing Your Questions

A good set of evaluation questions should have the following characteristics:

- Questions are written so there is no predetermined answer.
- Questions address the most important areas of concern.
- Questions may be answered using data that can be measured.
- Questions may be investigated during the time frame indicated.

Section II of this manual presents logic models that can help you to see the relationship between implementation and impacts.

Decide If the Program Should Be Formally Evaluated

While it is important to understand implementation and impacts for any program being developed, not every program should be formally evaluated.

You **SHOULD** conduct a formal evaluation when:

- The program has a set of characteristics that can be described well in terms of its focus and activities;
- There are significant consequences for success or failure;
- There are sufficient resources to conduct an effective evaluation; and
- The program is being piloted and decisions are being made regarding whether to continue and how to improve the program.

You **SHOULD NOT** conduct a formal evaluation when:

- The program is a one-time event that will not be repeated, such as a speech, a one-time only convening to raise awareness, or any program that will never be offered again due to its nature as an event; or
- When the program is not intended to have much of an impact.

Decide if You Need an Outside Evaluator

Another consideration is whether you need to have an external evaluator or whether you can conduct evaluations yourself or internally within your Department, Bureau or office. Effective program evaluations are not easy to accomplish and take a great deal of skill and background knowledge to be effective. Individuals connected with a program may not have the expertise needed to design and implement a high-quality evaluation. In addition, internal evaluations are sometimes considered less credible than those conducted by outsiders since internal staff may be perceived as being biased toward the program. Procuring the services of an outside evaluator should both improve the quality of the evaluation and ensure that the project evaluation is as objective and unbiased as possible. However, outside evaluators are typically more costly than using existing staff. If you have the appropriate expertise, are not worried about bias, and/or have no funds for the evaluation, then internal evaluation may be the right path for you.

Because of the credibility, expertise, and time it would take away from other tasks to conduct the evaluation, most programs choose to hire outside evaluators. Often program staff work closely with the evaluators to design the evaluation to capitalize on the deep knowledge of the program staff; but once the evaluation is designed, the internal staff step back and allow the outside individuals or group to do the work.

Selecting an outside evaluator is not always an easy task. Tips for selecting an outsider evaluator are presented in Appendix A.

Identify Funding Amounts

While there is no hard and fast rule about funding, the National Science Foundation and other funders recommend that funding for evaluation should be at about 10% to 15% of the bottom line of the project. This amount is typically necessary for the evaluator to complete all of the necessary functions to ensure that the evaluation is effective.

Institutional Review Board Considerations

Institutional Review Boards for the Use of Human Subjects in Research (IRBs) may be needed when conducting research with human participants. All of the assessment tools included in Appendix B have reviewed by IRBs. At the evaluation design stage, consult with Department or Bureau consent criteria and processes.

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Logic Model

- **Developing a Logic Model**

- **Cautions**

- **Samples**

- **Steps for Developing Your Logic Model**

Section 2: Logic Model

Representing your program through a logic model helps to focus an evaluation and identify the specific activities, outputs, outcomes, and contexts that affect your programs. This section will tell you how to develop a logic model and will present samples of logic models from several of the Department of the Interior youth programs.

Developing a Logic Model

A logic model is a visual display of a program, which shows the relationship between a program's activities, expected outcomes, and the factors that may serve to explain and/or influence outcomes. Developing a logic model and/or theory of action will help you to clarify exactly what it is that you hope to accomplish with your programs and why, and will serve to guide the evaluation. The primary benefits of using a logic model are to:

- Clarify what a program intends to do;
- Increase intentionality;
- Focus work and keep staff from over-promising;
- Reveal assumptions about the relationship between activities and intended outcomes;
- Guide an evaluation; and
- Promote communication about the way a program "works."

While there is no single way to develop or convey a logic model, most logic model frameworks have at least six parts:

1. **Inputs.** Inputs typically specify the resources that go into a program, and usually include funding, staff time/expertise, materials, facilities, and/or other available factors that serve to fuel a program.

2. **Activities or Processes.** Logic models do not include all of the activities, but rather the major activities or program design characteristics that define the program. Activities may include processes such as provision of professional development, recruitment of participants, participant characteristics, hands-on activities or learning opportunities, or any other descriptors that characterize a program. Some logic models refer to the activities or processes as "outputs."

3. **Outputs.** Outputs refer to a program's reach, and usually are defined as measurable products of a program's activities or services, often expressed in terms of units (hours, number of people, or completed actions). Most often, outputs describe both the types and numbers of people reached. Sometimes outputs will include the number of hours of participation, the number of organizations who partnered, and other related variables.

4. **Outcomes.** Outcomes are often described as the results of a program, typically further defined as the knowledge, skills, attitudes, behaviors, or status changes that program staff hope will change or accrue as a result of program participation. Outcomes may be positive or negative; intended or unintended; and short, medium, or long term. There is no common definition of short, medium, or long term, so these definitions must be specified. An example of a short-term outcome is an increase in knowledge about something addressed in the program; perhaps a medium-term outcome may be greater interest in the content area or higher aspirations for educational attainment; and a sample long-term outcome may be increased academic performance or pursuit of a particular type of career.

5. **Implementation Factors.** Some logic models include program design characteristics or other variables associated with implementation. This allows for the investigation of moderators, mediators, and other sources of influence.

6. **Context.** Context discusses variables in the environment that may affect a project. Contextual variables may include accountability pressures, changes in the policy environment, budget shortfalls, and other things that are not within the control of the program but that affect the program nonetheless.

A logic model nearly always fits onto one page and often uses boxes and arrows, but there is no single commonly used logic model format or development process. Most program designers or staff simply develop a logic model that makes the most sense to use for their purposes and audiences. Simple logic models serve to communicate the key inputs, implementation factors, and outcomes expected and are often used to describe programs to key stakeholders. More complicated logic models are useful for program participants and evaluators who need to understand the underlying theory of action and relationships that designers believe will influence results. No matter whom the audience, the logic models should not be bogged down in detail, but should represent key factors for planning, implementation, or evaluation.

Ideally, a logic model is developed during a program planning phase so that stakeholders can clearly see a visual representation of needed resources, likely activities, and expectations for impact. Planners typically draw lines to illuminate the connections between activities and outcomes within the model. This serves to ensure that a relationship is likely to exist. If you find it difficult to make the connection, you may want to reconsider either the activity or the outcomes.

The logic model typically defines a program well, but does not specify numeric targets or ways in which outcomes will be measured. Rather, the logic model specifies what the likely short-, medium-, and/or long-term impacts are likely to be or at least what is a hoped-for outcome.

Cautions

Logic models are very useful tools, but they have limitations. They tend to represent ideals and do not convey the messiness of program implementation. They do not always identify the right resources, activities, or outcomes to portray, and often overlook both the positive and especially the negative outcomes that may result from program implementation. They are typically unable to represent the complexity that characterizes most programs and thus sometimes lead to a

simplified view of a complicated or multifaceted phenomenon. Because they are linear, even with feedback loops, they may feel static and may be viewed as deterministic, stifling creativity.

All of these limitations are easily overcome if stakeholders consider the logic model to be a dynamic document that requires continual refinement and adaptation as information becomes available.

Samples

The following pages provide a template for logic models, and sample logic models from seven of the Department of the Interior youth programs.

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Sample Logic Model Template

Inputs	Activities	Outputs	Short-Term Outcomes:	Medium-Term Outcomes:	Long-Term Outcomes:	Impact
			Organizational Development:	Organizational Development:	Organizational Development:	

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Bureau of Indian Affairs Logic Model – Fire Management Native Youth Outcomes

Inputs	Activities	Outputs	Short-Term Outcomes:	Medium-Term Outcomes:	Long-Term Outcomes:	Impact
Federal Agencies Staff, funding and policy support	**Pilot Project** Training will be provided to fire crews on Department of the Interior Mission and career opportunities and; *Brief fire crews on concepts of leadership, importance of teamwork, and adapting to changing circumstances; *Understanding and monitoring the balance of the Ecosystem as it relates to fires.	**Ensuring a well-informed and trained work force while fighting fires.** • Support the training of 6,000 to 7,000 (estimated) firefighters annually through a wide range of education. • Outreach to all stakeholders, agencies, nonprofit providers etc., to ensure collaboration and success in the overall program.	**Learning/Knowledge** • Increase knowledge and awareness of interpersonal skills. • Promote civic engagement through cultural concepts as stewards, develop an understanding of environmental stewardships, and acquire skills in science and conservation. • Increase knowledge about the connections between diet/nutrition and their impact on health and wellness, including cultural practices and traditions.	**Learning/Skills** • Obtain skills for managing teamwork and social networks. • Promote civic engagement through efficacy and social responsibility. • Gain a better understanding of sustainable choices and a sense of cultural stewardship. • Develop positive nutritional and physical skills.	**Action/Behaviors and Attitudes** • Have great leaders and mentors to help develop native youth as they fight fires. • Have a stronger connection and communication to the tribal communities. • Apply knowledge and skills regarding traditional foods and physical activities with their families and communities when not fighting fires.	Create healthy and physically fit youth who will continue the practices learned within their communities.
Partners Tribal stakeholders, state and local agencies, non-profit service providers, contractors (trainers, TA providers, evaluators)	**Outreach:** *Connect/collaborate with tribal communities and organizations being served. *Provide education and outreach to the tribal communities being served about Department of the Interior and opportunities for youth hires. *Conduct focus groups with youth hires on attitudes regarding social responsibility.	**Create Healthy, Comprehensive Food Systems Policies** • Develop food committees in tribal/nontribal communities across both Indian Country and the United States to seek vendors who can provide cultural foods.				
Curricula Nutrition, fitness, traditional foods	**Native Youth Training:** • Native youth receive information regarding physical fitness requirements and healthy food selections.					
Food Suppliers and Contractors	**Food Services** • Provide healthy beverages and snacks, seeking better usage of cultural foods whenever possible. • Reduce or eliminate access to sodas and high sugar juices. • Modify food purchases, menus, and food preparation including more fresh, nutritious food that is local or traditional.		**Organizational Development:** • Increased expertise and outreach to a diverse group	**Organizational Development:** • Strong infrastructure creation	**Organizational Development:** • Program sustainability and a stronger diverse workforce	
	Data Collection • Staff secure baseline data and track progress. • Schools compete to achieve individual fitness goals.					

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Bureau of Indian Education Logic Model – Let's Move in Indian Country – Native Youth Outcomes

Inputs	Activities	Outputs	Short-Term Outcomes:	Medium-Term Outcomes:	Long-Term Outcomes:	Impact
Federal Agencies Staff, funding and policy support **Partners** Tribal stakeholders, state and local agencies, non-profit service providers, contractors (trainers, TA providers, evaluators) **Schools** Administrators, contracting offices, teachers, food service staff, dorm staff, parents **Curricula** Nutrition, fitness, traditional foods **Equipment** Fitness, cafeteria **Food Suppliers and Contractors**	**Pilot Project** Pilot schools will develop and implement a culturally relevant school health and wellness policy, and provide a <u>minimum</u> level of activities in each of the following areas: • Nutrition/health education • Physical fitness activities • Changes in food services **Education** Staff training: • Administrators and relevant staff receive general T/TA regarding traditional foods, nutrition and physical fitness. • PE, recreation and health staff receive nutrition/health education/training. • Health and food services staff receive nutrition, menu planning, traditional foods, and food preparation training. **Native Youth Training/Curriculum:** • Native youth receive at minimum 4 hours/month of culturally relevant nutrition education. • Native youth receive 5 hours/week of fitness education. **Food Services** • Staff provide healthy beverages and snacks on campus and on outings. • Schools reduce or eliminate access to sodas and high sugar juices. • Cafeterias modify food purchases, menus and food preparation including more fresh, nutritious food that is local or traditional. **Data Collection** • Staff secure baseline data and track progress. • Schools compete to achieve individual fitness goals.	**Providing a Healthy School Environment** • Support the transformation of 100 schools through accessing Food and Nutrition Services programs, school/community garden support, physical activity programs, and social/emotional health grants. • Standardize food and physical activity policies at all BIE schools to include healthy choices and lifestyle recommendations. **Increase Physical Activity** • Engage 25,000 people in Indian Country in the President's Active Lifestyle Award (PALA) program by 2012. **Create Healthy, Comprehensive Food Systems Policies** • Develop 20 food policy councils/ committees in communities across Indian Country.	**Learning/Knowledge** • Increase knowledge and awareness of health and obesity problems in Indian Country. • Increase knowledge about nutrition and healthy choices, including healthy traditional food choices, cultural. • Increase knowledge about the connections between diet/nutrition and exercise, and their impact on health and wellness, including cultural practices and traditions. **Organizational Development:** • Increased expertise and capacity	**Learning/Skills** • Obtain skills for managing daily nutritional intake. • Practice regular physical activities, and food production and preparation, including traditional activities. • Develop positive social, emotional, cultural and physical skills. **Organizational Development:** • Strong infrastructure creation	**Action/Behaviors and Attitudes** • Make healthy diet and exercise decisions, including physical activity outdoors. • Rates of obesity decline, along with associated health conditions, such as diabetes. • Apply knowledge and skills regarding traditional foods and physical activities with their families and communities when not at school. **Organizational Development:** • Program sustainability	Solve the problem of obesity within a generation.

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Bureau of Land Management Logic Model – Take It Outside – Youth Participants Outcomes

Inputs	Activities	Outputs	Short-Term Outcomes:	Medium-Term Outcomes:	Long-Term Outcomes:	Impact
Federal Agencies Staff, funding and policy support **Partners** Community groups, state and local agencies, schools, nonprofit youth organizations, volunteers, recreation industry/groups **Publications/ Messages** Marketing materials (publicity) for events, information for youth participant, and their families **Equipment** Recreational equipment; tools (for volunteer projects)	**Staff Education** • Washington Office provides guidelines for key components of TIO events (outdoor activity; stewardship; healthy lifestyle). • Where needed, staff receives training on dealing with diverse youth. **Planning** Staff works with partners to develop plans for TIO events and applies for funding, if needed. **Recruitment** Staff and partners recruit youth participants—from diverse populations, when possible—for TIO events. **TIO Events:** • Youth participate in physical activity in an outdoor setting. • Youth receive stewardship and healthy lifestyle messages. • Youth are educated about natural and cultural resources. • Youth receive information about Department of the Interior/Bureau of Land Management and volunteer/career opportunities. • Youth receive "explore your public lands" messages to share with family. **Data Collection** • Staff tracks numbers of participants, including diverse youth. • Staff conducts impact evaluation.	**Provide Outdoor Experiences on Public Lands** • Physically active recreational and/or educational experiences or service projects. • Include messages about healthy lifestyle. • Depending on participants' previous experience in the outdoors, provide introductory activities followed by more in-depth experiences. **Provide Education About Natural and Cultural Resources on Public Lands** • Include stewardship messages. **Provide information about volunteer and career opportunities with Bureau of Land Management and Department of the Interior.** **Provide "take-home" messages about further opportunities to "explore your public lands."**	**Learning/Knowledge** • Increase awareness of recreational opportunities on public lands. • Increase knowledge about natural and cultural resources on public lands. • Increase knowledge about stewardship and sustainable choices. • Increase knowledge about healthy lifestyle choices. • Develop teamwork and problem-solving skills. **Organizational Development:** • Increased expertise and capacity in youth program development and outreach to diverse	**Learning/Skills** • Increase confidence about pursuing recreational activities on public lands. • Expand knowledge about natural and cultural resources. • Identify sustainable choices at home. • Identify and choose healthy life-style options. • Develop communication and leadership skills. **Organizational Development:** • Strong infrastructure creation	**Action/Behaviors and Attitudes** • Identify and choose to participate in recreational activities on public lands. • Choose to pursue study of natural or cultural resources and consider career options in such fields. • Make sustainable choices personally and share knowledge of them with others. • Pursue stewardship activities in the community. **Organizational Development:** • Program sustainability • More diverse workforce	Promote environmental stewardship by creating healthy communities and connecting people with nature and with their public lands.

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Bureau of Reclamation – Youth Conservation Corp Logic Model

Inputs	Activities	Outputs	Short-Term Outcomes:	Medium-Term Outcomes:	Long-Term Outcomes:	Impact
Partner Org. – Collaborative meetings, cooperative agreements, outreach, recruitment and training assistance. **Reclamation Field-** Staff Resources, quarterly reporting.	**YCC youth crews** Work project activities are presented with the goal to promote and stimulate public purposes such as education, job training, development of responsible citizenship, productive community involvement, and furthering the understanding and appreciation of natural and cultural resources through the involvement of youth and young adults in care and enhancement of public resources. **Conservation Career Exposure**	**Important Conservation work projects completed on public lands and cultural heritage sites** Projects include inventorying and documenting natural and cultural resources; monitoring, control and habitat restoration of native plant and aquatic species; conducting resource management, site restoration, re-vegetation, repairing and maintaining recreational facilities and trails, habitat improvement, stream restoration. **Connect Program Activities to Agency Mission** Our mission is to assist in meeting the increasing water demands of the West while protecting the environment. Reclamation also plays a major role in hydropower and water-based outdoor recreation facilities. Reclamation projects include approximately 6.5 million acres of land and water available for public outdoor recreation.	**Learning/Knowledge** • Youth gain greater enjoyment from their experiences. • Youth gain awareness and understanding of conservation careers • Youth develop understanding and respect of land ethics and cultural differences • Youth feel a sense of *belonging* in land and cultural heritage preservation sites	**Learning/Skills** • Youth display increased knowledge and understanding of environmental (including water) and cultural resources • Display positive social, emotional, cultural and physical skills • Youth have a greater desire to pursue career paths related to their experiences • Youth gain a *mastery* of professional skills and develop work ethics	**Action/Behaviors/ Attitudes** • Display an efficacy for environmental and cultural stewardship • Youth utilize lifetime affiliations with the Agency and Partner organizations • Youth advocate for water conservation and environmental awareness and action via sharing experiences with family/peers and participation in social and professional networks. • Youth display *independence* by seeking out federal employment in areas that mirror their interest and stewardship capacity	A more environmentally and culturally conscious community of people develops out of participation in the YCC program Increased diversity and longevity of the Department of the Interior's workforce and mission Participants display *generosity* through lifetime environmental cultural, and community stewardship
			• **Organizational Development:** Increased expertise and capacity in youth program development & outreach to diverse audiences	**Organizational Development:** • Strong infrastructure creation capacity	**Organizational Development:** • Program sustainability • More diverse workforce	

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National Park Service Logic Model – Youth Conservation Corps – Youth Outcomes

Inputs	Activities	Outputs	Short-Term Outcomes:	Medium-Term Outcomes:	Long-Term Outcomes:	Impact
NPS WASO Staff resources, funding, policy updates, support and outreach **Partner Organizations** Collaborative meetings, revised cooperative agreements, outreach, recruitment and training assistance **NPS Field** Staff resources, quarterly reporting, administer surveys	**Youth Conservation Corps Work Projects** Work project activities are presented with the goal of connecting participants on a personal level, with the environmental and cultural aspects of the projects. **Recreational Opportunities** Youth engage in responsible recreation activities and while so doing form a sense of place and responsibility. **Environmental Awareness Curriculum** Environmental Education curriculum coincides with **Civic Engagement/ Leadership Awareness** service-learning models to give participants an intellectual connection to ecosystems and a tangible understanding of conservation issues. **Conservation Career Exposure**	**Important conservation work projects completed on public lands and cultural heritage sites.** **Connect Program Activities to Agency Mission.** **Establish Program Community.** Positive mentorships develop organically.	**Learning/Knowledge** • Youth gain greater enjoyment from their experiences. • Youth gain awareness and understanding of conservation careers. • Youth develop understanding and respect of land ethics and cultural differences. • Youth feel a sense of *belonging* in land and cultural heritage preservation sites.	**Learning/Skills** • Youth display increased knowledge and understanding of environmental and cultural resources. • Display positive social, emotional, cultural and physical skills. • Youth have a greater desire to pursue career paths related to their experiences. • Youth gain a *mastery* of professional skills and develop work ethics.	**Action/Behaviors and Attitudes** • Display an efficacy for environmental and cultural stewardship. • Youth utilize lifetime affiliations with the agency and partner organizations. • Youth advocate for cultural heritage and environmental awareness and action via sharing experiences with family/peers and participation in social and professional networks that reflect. • Youth display *independence* by seeking out federal employment in areas that mirror their interest and stewardship capacity.	A more environmentally and culturally conscious community of people develops out of participation in the Youth Conservation Corps program. Increased diversity and longevity of the Department of the Interior's workforce and mission. Participants display *generosity* through lifetime environmental cultural, and community stewardship.
			Organizational Development: • Increased awareness and public outreach that highlights diversity	**Organizational Development:** • Increased expertise and capacity building that enhances diversity	**Organizational Development:** • Increased qualified and diversified applicants, and public support	

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Office of Surface Mining Logic Model – Volunteers in Service to America (VISTA) – Youth Outcomes

Inputs	Activities	Outputs	Short-Term Outcomes:	Medium-Term Outcomes:	Long-Term Outcomes:	Impact
OSM/VISTA Support Staff National Recruitment Site Supervisors and Mentors Biannual Trainings	Grant writing training to each OSM/VISTA member. Training on reporting to funders to each OSM/VISTA member. Attending and presenting at professional conferences. Environmental monitoring. Education and Outreach to communities being served by the OSM/VISTA. Capacity building of watershed/community organizations being served by the OSM/VISTA.	Writing successful grant applications. Ability to provide pertinent information to funders. Increase in networking opportunities for OSM/VISTAs. Increase in knowledge conducting environmental monitoring. Increase in communication to the community about their watershed and overall environment.	**I Develop Youth Assets** *Interpersonal Skills* • Time Management • Decision-making skills • Communication skills *Promote Civic Engagement* • Ethic of service **II Develop Youth Environment and Cultural Stewardship** *Develop environmental stewardships* • Acquire knowledge skills, actions in science and conservation	**I Develop Youth Assets** *Interpersonal Skills* • Social network • Teamwork skills *Promote Civic Engagement* • Efficacy • Social responsibility **II Develop Youth Environment and Cultural Stewardship** *Develop Environmental Stewardship* • Make sustainable choices *Involve Diverse Populations* *Develop Cultural Stewardship* • Preserve cultural and historic heritage	**I Develop Youth Assets** *Interpersonal Skills* • Leadership skills • Mentoring skills *Promote Civic Engagement* • Connection to Community and Society Communication about societal issues **II Develop Youth Environment and Cultural Stewardship** *Develop Cultural Stewardship* Promote responsible and respectful treatment of tradition and cultural heritage**.**	
			Organizational Development: • Increased expertise of diverse populations • Increased expertise and	**Organizational Development:** • Strong infrastructure creation	**Organizational Development:** • Workforce sustainability and diversity	

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U.S. Fish and Wildlife Service Logic Model – Career Discovery Internship Program – Youth Participant Outcomes

Inputs	Activities	Outputs	Short-Term Outcomes:	Medium-Term Outcomes:	Long-Term Outcomes:	Impact

Federal Agencies Staff, facilities, housing, technology, funding, and policy support
 	
Partners/ Contractors Subject matter experts, evaluator-West Virginia University, recruiters such as Student Conservation Association (SCA)
 	
Curricula Generational/ cultural awareness, team building, problem solving, mentoring, work experience orientation, Department of the Interior agency and career orientation, on-the-job training
 	
Equipment Computers and other as appropriate to curricula and work experience
	Pilot Project Pilot programs will work with SCA and field staff to recruit and select youth from underrepresented groups and mentors for the youth. Field staff will provide a meaningful work experience, with a <u>minimum</u> level of activities in each of the following areas:
	• Diverse tasks that address the bureau mission
	• Leadership
	• Teamwork
	• Problem solving
	• Time management
	• Communication
	• Social/professional networking
	• Ethic of service
	Professional Development Staff training:
	• Site staff receive training regarding cultural/generational awareness and sensitivity.
	• Mentors receive training on building relationships, communication, conflict resolution, coaching.
	Youth Training/Curriculum:
	• Youth receive at minimum 24-hour orientation to include department/agency overview and policies, team-building, problem solving, safety, work etiquette, career opportunities, roles/expectations.
	• Youth receive site-specific orientation and "performance plan" at duty station.
	• Youth receive 12-week, 480-hour work experience.
	• Mentors meet with youth to discuss experience during 12-week internship.
	
	Data Collection
	• Staff secure baseline data and track progress.
		Providing a Supportive Work Environment
		• Integration and retention of up to 90 interns from underrepresented groups through a supportive worksite staff that is trained and involved, relationship-building, embracing diversity, and social/professional networking opportunities.
		• Mentors assist interns with understanding government culture, navigating worksite challenges, and outlining career track.
		
		Providing a Meaningful Work Experience
		• Intern development and performance plan with feedback loop.
		• Broad/varied work tasks that clearly connect to bureau mission.
		
		Providing a Career Path for Underrepresented Groups
		• With a satisfactory job performance, interns will have the opportunity to return for future internships and, as available, Student Career Experience Program (SCEP appointments.
			Learning/Knowledge
			• Increase knowledge of science and/or conservation.
			• Increase awareness of Department of the Interior-related mission(s) and careers.
			
			Organizational Development:
			• Increased engagement of diverse populations
			• Increased expertise and
				Learning/Skills
				• Increase skills and abilities in science and/or conservation related activities.
				• Increase interpersonal skills in:
				  o Leadership
				  o Teamwork
				  o Problem solving
				  o Time management
				  o Communication
				• Increase professional networking skills.
				
				Organizational Development:
				• Strong infrastructure creation
				• Inclusive workplace
					Action/Behaviors and Attitudes
					• Increase respect and understanding of diverse cultures.
					• Increase pursuit of Department of the Interior mission-related careers.
					• Personally make sustainable choices.
					• Apply knowledge and skills regarding ecology and conservation with their families and communities when not at work.
					• Increased volunteerism, service and ethic of service.
					
					Organizational Development:
					• Workforce sustainability and diversity
					• Agency maintains relevancy
						A productive workforce within Department of the Interior that reflects the American population we serve.

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U.S. Geologic Survey Logic Model – EDMAP

Inputs	Activities	Outputs	Short-Term Outcomes:	Medium-Term Outcomes:	Long-Term Outcomes:	Impact
USGS Staff, funding, science, and mentoring support **Partners** Universities, colleges, and State Geological Surveys. Partners provide additional resources to fund geologic mapping efforts. **Students** Students in universities and colleges studying Earth Science disciplines that require geologic mapping. **Funding** USGS with university matching $ for $ and/or in-kind. **Mentoring** by university and college professors, State Geological Survey geologists and USGS scientists.	**Recruitment** • The National Cooperative Geologic Mapping Program (NCGMP) allocates funds to universities and colleges in the United States and Puerto Rico through an annual competitive cooperative agreement process. • Geology professors skilled in geologic mapping, apply for EDMAP funding to support upper-level undergraduate and graduate students at their institution through one-year mentored geologic mapping projects that focus on a specific geographic area. **Mentoring** • As a major component of a proposed mapping project, university and college professors are required to develop and implement a mentoring plan to work directly with their students throughout the project. • USGS facilitates mentoring of students through by identifying opportunities to work closely with State Geological Surveys and USGS geologists. **Outreach:** • Engage in outreach to expand geologic mapping education, identification and recruitment of program partners, and to leverage resources of mutual interest.	• Provide Professional and Technical Experiences and Skills • Students conduct independent research focusing on a specific geologic area. • Each student produces a new geologic map at various scales that covers all or a portion of a 7.5-minute quadrangle. • Individual projects last for one year, however, they may build on the results of previous years' efforts. • Prepare students to build professional relationships through mentoring opportunities with academic faculty, State Geologists and USGS scientists as well as with their peers. • Students become stakeholders and build professional confidence by contributing to the National Geologic Map.	**Learning/Knowledge** • Students learn fundamental principles and techniques of geologic mapping and field methods and apply this knowledge to a mapping project to produce a geologic map. • Students learn scientific and professional skills through structured mentoring and gains experience working with scientists. • Students learn about the geology and paleo-history of their field area and contribute knowledge to the National Geologic Map. • Develop independent and team-setting problem-solving skills. **Organizational Development:** • Increased expertise and capacity in youth program development and outreach to diverse	**Learning/Skills** • Increase in the number of students who continue in geoscience career fields or pursue advanced geoscience degrees. • Increase the number of universities and colleges across all states participating in the EDMAP program. • Increase the diversity of students and faculty participating in the EDMAP program. • Increase in the professional development of communication, networking, and leadership skills. • Increase the number of EDMAP student alumni who may become mentors to new students to the EDMAP program and proponents of geoscience programs. **Organizational Development:** • Strong infrastructure creation • Engage diverse populations in K-12, colleges, and universities in the geosciences • Increase the number and reach of competitive and matched grants to universities throughout the country	**Action/Behaviors and Attitudes** • Increase in the number of students who continue in geoscience career fields or pursue advanced geoscience degrees. • Increase in the number users of geologic maps in order to make sound decisions to solve science or societal issues and problems. • Provide the next generation with geologic mapping knowledge and experience by increasing the number of geologic mappers. **Organizational Development:** • Program sustainability • Increase diverse workforce	Develop the next generation of geologic mappers. Develop the next generation of geologic mapping techniques and technologies. Contribute to the overall National Geologic Map. Develop the flagship educational geologic mapping model for the international geologic mapping community.

Steps for Developing Your Logic Model

Many program staff use the following steps for logic model development:

1. Define your program activities. Describe the activities or processes in a bulleted list.

2. Discuss the inputs or resources that you put into your program. Put the major resources into a bulleted list called "inputs" and place this list to the left of your program activities. Draw lines to show connections. (Think about this as: "If we invest these [specific] resources, then we can implement these activities for these [specific] people . . .".)

3. Identify the measurable products of a program's activities or services. Typically, outputs describe the types and numbers of people reached, and sometimes, the number of hours of participation, number of organizations who partnered, and other related variables.

4. Identify what you think are the most likely outcomes for your program for each type of program participant or recipient of service. Develop a realistic list. Put this to the right of the outputs and draw lines between the activities and the specific outcomes that you expect will result. (Think about this as: "If we implement these activities for these people, then this particular change will happen in the short term, this change will happen in the medium term, and this change will happen in the long term.") If the relationship does not seem right, delete the outcome. Prioritize the outcomes you identify.

5. Decide whether to add moderators or factors that you think might influence the outcomes. These factors could be things such as the quality of the program, the experience of the staff, and so on. Put the factors in a box, and draw a line to the particular outcomes that you think may be affected.

6. Simplify your logic model so that it is easily represented and clear to others.

7. Have others in the program, or those interested in the program, review the model and revise it as needed for greater accuracy or clarity.

Evaluation Design

- **Develop Your Evaluation Design**

- **Experimental Designs**

- **Quasi-Experimental Designs**

- **Pre/Post Designs**

- **Correlational Studies**

- **Case Study**

- **Selecting the Appropriate Evaluation Design**

Section 3: Evaluation Design

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This section provides a discussion of the various evaluation designs that can be used to examine the impact and/or implementation of your programs. The pros and cons of each type are discussed, along with guidance on how to choose which is best for you.

Develop Your Evaluation Design

There are multiple types of evaluation designs that can be used to evaluate programs. Each of these designs varies in terms of their purpose, rigor, cost, and data collection burden. The main types of evaluation designs that are used to evaluate programs are experimental, quasi-experimental, simple pre/post, correlational, and case study. The design types are briefly discussed here to illuminate what they entail and their advantages and disadvantages.

Experimental Designs

The U.S Department of Education's Institute of Education Science (IES) strongly promotes the use of experimental designs when testing for a program's impacts on participants. Experimental designs are also called randomized control trials (RCTs) and are often referred to as the "gold standard" for evaluation because it is the one preferred by the scientific community. Experiments involve randomly assigning subjects to conditions so that all other sources of influence are randomly distributed across the sample with the only source of differences stemming from program participation.

Random assignment can occur at various levels. For example, individuals, classrooms, schools, districts, or other "units" can be randomly assigned to treatment and control conditions. With random assignment, it is assumed that there are no systematic differences in the baseline measures between groups (although this should be checked). Differences using pre/post or post-only measures for the groups that participate and those that do not are tested statistically to determine impacts. These designs are particularly useful for hypothesis testing.

Experimental designs have the advantage of increasing the probability that any differences found between groups can be attributed to their program participation. Many individuals and groups, particularly families, do not like these designs though, because there is systematic withholding of an intervention from the control group. For that reason, in some instances, regulations do not allow experimental designs.

Quasi-Experimental Designs

Quasi-experimental designs use matched treatment and comparison groups. The quasi-experimental design differs from the experimental design in that participants are not randomly assigned, but rather a group that resembles the treatment group is identified and recruited to participate in the study. This comparison group may be a preexisting group or a cohort of an existing group, a convenience sample, or volunteers that want to participate, but the key is to try to match the comparison group to the treatment group as closely as possible. Analysts examine differences between groups at the baseline and statistically control these differences during the analysis. Like experimental designs, most quasi-experimental evaluation designs include administration of pre and posttests, determination of change scores, and examination of group differences.

The advantages of quasi-experimental designs are that they tend to be easier and more practical to implement than experimental designs. While not considered as strong as the experimental design, they are still relatively well regarded by the scientific community.

Both experimental and quasi-experimental designs have several threats to validity. For example, in some instances, programs experience "contamination" of control groups or comparison groups. This typically happens when persons who are supposed to be in the comparison group or the control group get exposed to some or all of what constitutes the treatment. Carefully tracking implementation and participation is important so that the design results in accurate information.

Example: U.S. Geologic Survey – EDMAP

Since 1996, the USGS National Cooperative Geologic Mapping Program (NCGMP) has been training the next generation of geologic mappers through EDMAP. The EDMAP program is a matching-funds competitive cooperative agreement program with colleges and universities in the United States and Puerto Rico. It is an interactive and meaningful program for students to gain experience and knowledge in geologic mapping, as well as contribute to the national effort to geologically map the entire United States.

Geology professors, who are skilled in geologic mapping, request EDMAP funding to support undergraduate and graduate students at their college or university in a one-year mentored geologic mapping project that focuses on a specific geographic area. Although individual projects last for only one year, they may build upon the results of previous years' efforts. The EDMAP geology professors and their students frequently work closely with STATEMAP and FEDMAP geologists who may be mapping nearby. To date, over 800 students (graduate and undergraduate) have been trained and mentored in year-long programs, at over 140 universities across the nation.

As can be seen in the logic model from Section II, EDMAP's goals are to ensure that students who participate in this program learn fundamental principles and techniques of geologic mapping and field methods, scientific and professional skills, knowledge about geology and paleo-history, and problem-solving skills.

An evaluation design for EDMAP could utilize either an experimental or quasi-experimental design. In an experimental design geology professors would recruit students for the EDMAP program and then randomly assign students either to the treatment or program condition or to the control condition, without an EDMAP program, but with a more traditional approach to teaching geologic mapping. This might involve lectures, simulations, or any other approach that is typically used. Students would be given a knowledge test and survey before the courses and program began. The knowledge test could measure fundamental principles, techniques of geologic mapping, field methods and problem-solving skills. The survey could ask them for a self-assessment of their skills and abilities; interest in geology, paleo-history, problem solving; and ability to work well in teams; and, so on.

Students would then be assigned to participate in either the EDMAP program or the traditional course. At the end of the program, participants would be given a posttest and survey, which would be exactly the same as the pretest and pre-survey. Differences for each group over time would be measured and group differences would be determined. If the EDMAP group demonstrated significantly higher scores on the knowledge test or subscales of the survey, then the EDMAP program could claim that it was a better approach for teaching and learning than the geology course alone.

With a quasi-experimental design, there would not be random assignment. Instead the students participating in EDMAP would be closely matched with students in the traditional program in terms of prior knowledge, demographics, interest in the subject matter, and other variables that might influence results. Each group would take the pretests and posttests, and the same sort of analysis would be performed to determine if EDMAP made a difference.

Pre/Post Designs

Pre/post designs are those that measure the status of the participants before and after the treatment or program delivery. The assumption is made that any difference in scores may be attributed to the program. However, this assumption may be faulty because there are a variety of possibilities that may explain increases or decreases in scores. For example, the group may have just had a high-quality experience in their classrooms or they may have been provided with training elsewhere. It simply is not clear whether the changes would have occurred in the absence of the program. For this reason, pre/post designs are considered weak and should not be used without suitable comparison groups.

Correlational Studies

Correlational studies are sometimes used in evaluations to determine connections between project or program activities and anticipated outcomes related to intended outcomes. While these techniques provide some evidence about project or program impact, they are not convincing because they cannot be used to establish causality, but rather only suggest that certain factors are related.

Case Study

A case study generally involves collection of qualitative data, such as answers to interview or focus group questions, results of observations, and/or document analysis. Often the results from these various methods are combined into a case that contains descriptive information about the program and the perceptions of the experiences and outcomes of participation. Qualitative techniques are useful when there is an interest in knowing about how various activities are experienced by different individuals, when there is a need to understand more about the internal dynamics of programs, or when detailed, in-depth information is desired. These techniques are good for hypothesis generation and useful to use when program goals are general, nonspecific, or vague; when programs or projects may affect participants in unanticipated ways; or when evaluators or decision makers want to increase their understanding of programs.

Example: Office of Surface Mining – Volunteers in Service to America (VISTA)

The OSM/VISTA program is a partnership between the Office of Surface Mining (OSM) and AmeriCorps Volunteers in Service to America (VISTA). Comprised of two teams, The Appalachian Coal County Team (ACCT) and the Western Hardrock Watershed Team (WHWT), the mission of the OSM/VISTA Initiative is to assist rural communities impoverished by environmental degradation and its consequences in making their home-place-watersheds healthier places to live and work. OSM/VISTAs are college-educated volunteers who serve fulltime as "capacity builders," combining the science needed to clean up local environments with the community revitalization needed to leverage sustainable environmental progress in the future. The ACCT and the WHWT train and coordinate OSM/VISTA Volunteers, summer interns, and their supervisors to promote environmental change at the grassroots level in the coalfields of Appalachia and the Rocky Mountain West.

The OSM/VISTA program has multiple short-term and long-term goals, as shown in the logic model in Section II. For example, they hope to help participants acquire time management skills, decision-making and communication skills; develop an ethic of service, and develop knowledge and skills in the area of conservation. If OSM/VISTA wanted to explore the extent to which this occurred and for whom and under what conditions, they might wish to engage in a case study. They could, for example, select three sites for study, and visit the sites, observing the work and conducting interviews and focus groups. They might ask the VISTA Volunteers, for example, "How do you think participation in this program has affected you?" and then probe their answers. They may find that participants believe that they have acquired many different types of decision-making and communication skills that they could name, but that some of the VISTAs already had a strong ethic of service and some already knew how to manage time well. Or they might find that no one learned time management skills because these skills were not taught, but that members felt the greatest value was in learning how to work in teams and how important conversation is to the future of the planet. With this information, OSM/VISTA programs might revise their views and measures of outcomes, or revise their programmatic approaches to make sure they are more intentional about addressing the specific outcomes they would like to reach.

Selecting the Appropriate Evaluation Design

The type of design to select to evaluate programs is clearly related to the purpose of the evaluation. Exhibit 2 summarizes the various strengths and weaknesses of the designs presented here and provides some guidance as to which might be best for you.

Exhibit 2. Strengths and Weaknesses of Various Evaluation Designs

Designs	Strengths	Weaknesses	Comments
Experimental Design	Random assignment allows attribution to the intervention.	Random assignment is hard to accomplish due to client resistance and is costly.	The gold standard – considered the most rigorous of all designs.
Quasi-Experimental Design	Easier to conduct; less costly than experimental design.	Hard to recruit comparison groups; hard to find good matches between treatment and comparison.	Considered the second most rigorous design; frequently used by the research community.
Pre/Post	Easy to administer.	Cannot attribute changes to the intervention.	Subject to criticism and lack of credibility by the research community.
Correlational Studies	Demonstrates statistical relationships between variables.	Is not a method to determine causality; not a credible methodology for establishing impact.	Potential for abuse if not used carefully.
Case Study	Has the potential to provide valid insights and depth of understanding; great for exploration and providing insight into implementation and impacts.	Not generalizable across contexts, may be subject to bias.	Can be time intensive and difficult to do well.

Methods

- **Identifying and/or Developing Tools for Data Collection**

- **Surveys**

- **Interviews**

- **Focus Groups**

- **Document Analysis**

- **Observations**

- **Mixed Methods**

- **Piloting Data Collection Tools**

Section 4: Methods

This section provides an overview of various tools that can be developed, adapted, or adopted for use to collect evaluation data. Both quantitative and qualitative methods are discussed, and sample scales related to common impact areas may be found in the Appendix.

Identifying and/or Developing Tools for Data Collection

Data collection tools directly measure the outcomes and the implementation variables identified in the logic model and evaluation questions. The evaluation design typically specifies whether the methods to be used will be quantitative or qualitative or both.

- Quantitative data collection uses numeric data, typically derived from surveys, knowledge assessments, or other number-based data, such as attendance/participation rates, program duration, and so forth.

- Qualitative data collection is narrative based, and includes measures such as responses to interviews, focus groups, and observations. Qualitative data can be coded to be numeric data.

Whenever possible, evaluators should search for existing tools to measure the constructs identified in the evaluation plans and logic models. The measures used in other studies have the advantage of having been tested for reliability and validity, that is, they consistently measure what they are supposed to measure. Existing measures are fairly easy to find on the Internet, in journals, and through books or Web sites with lists and summaries.

Data collection tools typically take the following forms:

Surveys

Surveys are used when the answers to evaluation questions require information from many people and when the data are recorded as numeric ratings. Surveys are the most efficient data collection tool available, allowing evaluators to receive a lot of information on predetermined questions in a relatively short period of time.

Surveys can be administered by mail, online, by telephone, or in person. A sample can be drawn to represent the whole population, and data can be queried in multiple ways to answer a variety of evaluation questions.

The greatest challenge in using surveys is to construct them in ways that measure the outcomes and relationships you want to investigate. Fortunately, there are already many preexisting measurement scales for most of the constructs likely to be identified as outcomes or implementation factors. It is a good idea to review many samples before you select one since constructs may be measured in different ways. If you are adopting scales for surveys, the best ones are those that have reliabilities of .8 or higher, typically indicated in the information provided about the scales or subscales. Make sure that the tools you adopt were developed for the same type of population that you have. For example, scales developed for college students should not be used for elementary or middle school students because the vocabulary or concepts may be too sophisticated for them to understand.

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A set of sample tools that were selected by representatives of various youth programs within the Department of the Interior are presented in Appendix B. The Appendix has information for each tool that shows the construct to be measured (e.g., civic engagement, environmental stewardship), the face validity and internal reliability of the scale, the items in the scale, and the response categories (e.g., an agreement/disagreement scale or a frequency scale).

If you choose to develop your own scales or survey items, you will need to be careful in the way that you construct the items so that they measure single, discrete ideas clearly and are interpreted by your respondents in consistent ways. The language you use for the items must be age appropriate and at a readability level that allows nearly all respondents to reply.

Response categories can take several forms. Some questions can be answered using "yes" or "no." Others use interval scales to measure frequency (e.g., daily, weekly, monthly, yearly, never, or less than yearly) or levels of agreement (e.g., strongly agree, agree, disagree, strongly disagree). Whether a scale is dichotomous (yes or no responses), whether intervals between responses are the same, or whether the scale has an even or odd number of response options, all affect the type of statistical analysis to be conducted. Having more points in a response set allows you to detect smaller changes, but can be difficult to interpret since you may not know, for example, how your respondents defined the differences between strongly agree, mildly agree, and agree. Precision is better and is particularly useful for frequency scales where it is easier for respondents to say, for example, if they did something daily, several times a week, once a week, and so forth.

When selecting or developing scales for your survey, it is best to have the same sorts of response categories with about the same number of responses to help the respondent answer the questions more efficiently and accurately. For example, if you use an agreement scale, you should use the same five points (strongly agree, agree, disagree, strongly disagree, don't know) for all of the measures that use an agreement scale.

Guidelines for survey construction are provided in Exhibit 3. Survey construction is not easy, and program staff should ensure that the evaluators have the appropriate expertise to engage in this type of development.

U.S. Department of the Interior

Exhibit 3. Survey Guidelines

Instructions	Item or Question Wording	Question Sequence
• Clearly state how questions are to be answered. • Define terms that may be misunderstood. • Clearly state what to do if the respondent is unsure or the question is not applicable.	• Wording is clear and precise. • Items address only one idea. • No emotionally tinged words are used. • Technical jargon is avoided. • Response categories are relatively consistent. • Questions are brief. • Closed-ended questions are exhaustive and mutually exclusive. • Avoid double negatives. • Write items so that all responses are equally acceptable.	• Early questions are easy to answer. • Sequencing is logical and clear, going from general to specific. • Later responses are not biased by earlier questions. • Related questions are grouped together. • Sections of questions are not too long. • Include skip patterns as appropriate (when a question does not apply to the respondent).

The example on the next page shows ways in which one program, *Let's Move in Indian Country!*, may choose quantitative measures to evaluate its program impact.

U.S. Department of the Interior

Example: Bureau of Indian Education – Let's Move in Indian Country

Elected Tribal leaders in rural and reservation communities and other community leaders, such as school officials and Urban Indian Center coordinators, have the ability to spur action in the areas of health, wellness, nutrition, and physical activity. Throughout our country's history, American Indian and Alaskan Native communities have provided some of the best examples of healthy food and sustainable community-based practices. Many groups in Indian Country are continuing to lead by example by following traditional paths that have existed for thousands of years.

To build on the strength of this tradition, and to address the health crisis that young American Indians and Alaska Natives are facing, the Obama Administration has formed an interagency collaboration called *Let's Move in Indian Country!* Participants include representatives from First Lady Michelle Obama's *Let's Move!* initiative; the White House Domestic Policy Council; and the Departments of the Interior, Agriculture, Health and Human Services, and Education. The initiative has four goals:

1. To create a healthy start on life, by implementing activities such as increasing the number of health care facilities that use maternity care practices that empower new mothers to breastfeed or to certify all federally run Indian Health Services (IHS) obstetrics facilities as Baby Friendly hospitals by 2012;
2. To develop healthy schools by transforming the school and after-school environments of 100 schools that serve American Indians and Alaskan Native youth through increased access to USDA's Food and Nutrition Services programs, school/community garden initiatives, Education's 21st Century Community Learning Centers program, and physical activity programs; and to standardize health and wellness policies at all Bureau of Indian Education operated schools to include healthy choices and lifestyle recommendations;
3. To increase children's and adults' physical activity levels by engaging 25,000 people in Indian Country in the President's Active Lifestyle Award; and
4. To foster healthy, comprehensive food systems policies by establishing food policy Councils or committees across Indian Country to help stakeholders come together to improve access to affordable, and healthy foods.

To evaluate the effectiveness of this program, the Department of the Interior leaders could choose to develop and administer a set of surveys to various constituencies. For example, before the initiative begins in the schools, program leaders could administer surveys to the children in all or a sample of the 100 targeted schools. Using a pre- and post-design, the survey could ask students to indicate their levels of daily or weekly physical activities, the types of food they typically choose to eat from the cafeteria, the foods that they ate during the past week, and their attitudes toward nutrition and physical fitness. Part of the evaluation design may also require students to keep logs of their activities over the course of the semester. The design may also include measuring the students' body mass index (BMI). The latter is a better indicator of change than height and weight since children of this age tend to have huge variations in growth and development.

For other aspects of the program, evaluators could choose to survey mothers about their intention to breastfeed, then provide information through their visits, and conduct a survey later to see if the informational approach was effective in increasing the number of mothers choosing to breastfeed. Health facilities could be surveyed about their policies and community members could be surveyed about their typical levels of physical activity before and after the initiative.

Interviews

Interviews elicit information on things that are not easily observed, when detailed information on implementation or outcomes is desired, or when a range of outcomes need to be explored. Interviews provide more depth than surveys, but take longer to administer and more time to analyze. They are also not as likely to be generalizable to an entire population.

Interviews can range from informal to highly structured conversations. Informal interviews typically are used for exploration and more structured interviews with probes are used to gain explicit information to answer predetermined questions.

In general, interviews are constructed using the following steps:

- Determine the nature of the population to be interviewed.
- Develop a structured interview guide with the questions to be asked.
- Ask the questions in a logical sequence that builds in complexity.
- Ask follow-up questions and probing questions to clarify responses.

It is a good idea to determine the length of the interview in advance and to stick to the pre-established time set aside for the interview. Be careful to avoid influencing respondents' answers through your body language, nonverbal responses, or ways of asking the questions.

Sample questions for interviews may include questions such as the following:

1. Please describe the history of the program and why you choose to use the particular approaches or strategies for program delivery.
2. Which program activities do you think are the most effective and why?
3. Which program activities are the least effective and why?
4. Do you think your program has different impacts for different types of participants? If so, explain.
5. What types of factors serve to facilitate the effectiveness of your program?
6. Which types of factors serve to impede your effectiveness?
7. What types of activities are underway to help you engage in continuous improvement?
8. What activities are underway to ensure that your program is sustained over time?

Focus Groups

Focus groups are very useful for collecting a lot of information from participants quickly in a format that allows for ideas to build upon one another. Typically, these groups consist of a trained moderator, and eight to ten participants who represent the populations being served by the program or project being evaluated.

It is a good idea to select focus groups that represent the populations that you serve. Focus groups typically are most useful when they are homogeneous, meaning that they are composed of people who have the same roles. For example, teachers and administrators generally should not be in the same focus groups because teachers tend to hold back and defer to administrators due to their relative positions in the hierarchy. Elementary school students should not be

combined with older students since the vocabulary and way of explaining concepts would be different due to developmental differences.

Guidelines to follow for conducting effective focus groups include:

- Identify a representative population of participants with alternates in case the first group you invite cannot attend.
- Develop a structured focus group moderator's guide with the open-ended questions to be asked.
- Encourage all attendees to participate in the conversation.
- Control members who try to dominate the conversation.
- Praise individuals for making contributions, but remain neutral about the content.
- Be ready to probe where necessary to delve deeper into topics of interest.
- Be sure that you have framed all questions in neutral ways and be careful not to bias any responses.
- Probe to be sure you understand an answer and how widely held the answer may be.

Resources to help you develop and implement interviews and focus groups may be found in the resources section of this toolkit.

Document Analysis

Document analysis often provides confirmation that aids in understanding background, policy, decision making, and implementation. These include the following illustrative examples:

- Annual reports;
- Vision or mission statements;
- Demographic profiles of participants;
- Achievement scores;
- Letters or memos;
- Meeting agendas and minutes;
- Attendance rosters;
- Videos;
- Web sites, listservs, or blogs; and
- Printed workshop or activity materials or handouts.

Evaluators typically have a pre-determined set of questions that need to be answered using documents as a source.

Observations

Observations of project or program activities can be very helpful for understanding progress being made toward achieving project goals. Observations can be informal or structured. Structured observation protocols direct the observer to identify and code specific behaviors, verbiage, or other targeted information, often translating the observation into yes/no or frequency and/or types of interactions. For example, observations can be used to determine the

percentage of time an adult speaks versus the percentage of time that youth speak. Observations can be used to determine program fidelity, duration and intensity, alignment to standards, and other important information targets.

Many evaluators script what they see and then code the information using pre-established categories. For example, observers may wish to code the amount of time that the instructor speaks versus the amount of time that participants speak. They may wish to code the types of questions being asked, the topics being discussed, the amount of time participants are on task, and so forth. It is a good idea to determine the types of behaviors that you will code in advance so observers can be trained to document behaviors in an appropriate way.

For formal evaluations, it is important to attain interrater reliability, which means that all of the observers are coding their observations in exactly the same way. Good interrater reliability attains the level of 85% or higher levels of agreement for the codes when individuals observe the same situation. Training should be provided for this purpose, and reliability should be frequently checked to ensure that the evidence is coded accurately.

Observations often represent a "point in time" evaluation, and as such, evaluators should be careful not to overgeneralize what they see. In addition, observers often inadvertently influence the activities being observed by their very presence. After the observation, some evaluators check with those being observed to determine the extent to which the observation was representative of typical practices.

Resources to show you how to construct good observation measures are provided in Appendix C.

Mixed Methods

Some of the strongest evaluation designs use a mixture of quantitative and qualitative methods. The balanced use of these data collection approaches provides rich and detailed information about project implementation and impacts. It is desirable to triangulate answers to evaluation questions by collecting at least three sources of information to answer each one. Consistency of results helps to reassure evaluators that the results are accurate. If different measures yield different results, further data should be collected to understand why differences exist.

The example below demonstrates the ways in which the Career Discovery Internship program may wish to evaluate its impacts and implementation, using qualitative measures.

U.S. Department of the Interior

Example: U.S. Fish and Wildlife Service – Career Discovery Internship Program

The Career Discovery Internship Program (CDIP) is a conservation career experience developed to provide participants with a 4-day orientation and a 12-week work experience at a U.S. Fish and Wildlife Service (FWS) site. This program provides youth participants with an opportunity to gain an awareness and a greater appreciation of the field of conservation and natural resources management, and to interact with a mentor to facilitate understanding government culture, navigating worksite challenges, and outlining career tracks. The target audience is youth ages 18 to 25 from low-participating groups who typically would not seek employment in a conservation agency. Training and program support is provided by the National Conservation Training Center. The program is designed to launch long-term, sustainable changes in the recruitment and retention of youth from low-participating groups.

In the short term, according to the CDIP logic model presented in Section II, CDIP hopes to increase participants' knowledge of science and/or conservation, and increase awareness of the Department of the Interior's mission and Department of the Interior-related careers. Longer-term goals are to increase skills and abilities in science and/or conservation-related activities and increase interpersonal skills in leadership, teamwork, problem solving, time management, and communication. The program also hopes to increase professional networking skills and respect and understanding of diverse cultures, along with nurturing an ethic of service and having participants make sustainable choices in their personal lives, especially regarding conservation and ecology.

Because the program is relatively new, leaders may choose to conduct formative evaluations to explore whether the outcomes that have been identified are the right ones, and whether the short-term and longer-term goals are in the right sequence. Evaluators, then, may design a multiple method evaluation, first observing the activities to determine the extent to which the various goals are being addressed through the program activities and how the youth are responding. The evaluators may then conduct focus groups with the youth participants to ask them what they thought they got out of their participation, and then to probe the areas of intended impact to see whether in fact the outcomes were attained and by whom. Interviews with participants' mentors and supervisors could yield additional useful information about the outcome areas, such as whether the mentor/supervisor thought impacts occurred and for whom, whether they believed the program design could be improved, and the factors that they identified that served to facilitate or impede progress. Findings could show, for example, that participants learn teamwork, time management, and decision-making skills right away, but are not able to retain the time management skills because they cannot apply what they learned to a different set of circumstances. Perhaps youth already have an ethic of service and volunteerism when they enter the program, so that the program has a low probability of affecting this variable. Perhaps an exploration may find that some of the goals are more appropriate for younger participants and some for older participants. It may show that some mentors/supervisors feel unprepared to help youth to develop professional networks or that they do nothing in particular to increase respect or understanding of diverse cultures. These findings all would have implications for either revising the goals or refining the program.

Piloting Data Collection Tools

As mentioned in the previous section, it is important to pilot data collection tools, especially when they are new. Pilot tests can reveal poorly worded questions, illogical sequencing, unclear instructions, words that can be misinterpreted, and a host of other measurement issues. Pilot tests should occur in similar contexts and with similar populations as those being evaluated.

For surveys, it is particularly important to pilot newly developed survey items or scales since there is typically no opportunity to change them once an evaluation begins. Ideally, there should be 5 to 10 participants that test every item on the survey. This allows for the use of statistical techniques, such as factor or cluster analysis, for revising or validating surveys. A good evaluator should be conversant in the use of these and other techniques that allow for testing validity and reliability.

Reliability analyses or the calculations of coefficient alphas are helpful for identifying items that should be eliminated to improve subscale reliabilities. Items that reduce reliability in a subscale typically stand out if they do not appear to measure the same construct that the scale was designed to measure, if they are "double-barreled" or measure two separate constructs in the same item, or if they are confusing or ambiguous.

Results of pilot testing typically are written, shared with program leaders, and used to modify instruments. If dramatic changes are made, it is useful to pilot the instruments again.

Planning: Sample, Timelines, Consents

- **Sampling**

- **Developing Timelines for Data Collection**

- **Planning**

- **Data Collection**

- **Data Management and Analysis**

- **Develop Appropriate Human Subjects Protections**

- **Permission to Participate**

- **Implement the Evaluation Design**

- **Communication With Stakeholders**

- **Communication Between Program Leaders and Program Evaluators**

- **Obtain Appropriate Consents and Assents**

Section 5: Planning: Sample, Timelines, Consents

In this section, the final decisions in your evaluation planning process are discussed, including sampling, communication with stakeholders, and obtaining consents and assents to conduct the study.

Sampling

No matter which method for evaluation is used, evaluators will need to decide who should be the participants in the evaluation (the sample). While some programs prefer to include all participants in their sample ("census" approach), this choice is often unfeasible or too costly, particularly if large numbers of individuals are involved. As an alternative, most evaluators use samples or draw portions of the participants to be in the evaluation.

A pure random sample where each individual has an equal chance of being selected is best for generalizing findings to the general population of participants, but logistics and cost considerations often make pure random sampling impractical. For example, when a set of entire groups, such as classrooms or schools, are involved in projects or programs, it is better to sample classrooms or schools, rather than individuals. In some cases, it makes sense to categorize people ("stratify") and then select the sample so that various types of groups are represented. This is called a stratified random sample. Convenience sampling, as the label implies, takes advantage of situations where pools of participants are easily accessible to sample for data collection activities. This approach is weaker than random sampling because selected participants may not be representative of populations of interest, thus reducing generalizability of findings.

The number of people to select for a quantitative study and how to select them will depend upon how well the evaluator wants to generalize to the population being served. There also needs to be a sufficient number of people in the sample to detect an effect of program participation. Technical statistical procedures are generally used to determine the appropriate sample size and approach.

Sampling strategies also apply to the use of qualitative methods. Participants in interviews and focus groups should be selected in a manner that represents the populations of interest. Observations of activities should also be sampled randomly if only some programs are going to be visited. Certain types of document analyses, such as examination of student work, participant products, or other outcomes, can also be conducted more efficiently by using random sampling techniques.

Many designs include measures of implementation, including variables such as how often participants were involved, how long they participated, and the activities in which they were engaged. Measures of intensity, duration, and fidelity of implementation help evaluators document and determine whether these factors make a difference in program outcomes. Remember that the evaluation questions determine what exactly is in the design. Many evaluators consult the logic model to make the final determination of what should be included in the overall evaluation design.

Developing Timelines for Data Collection

Each phase of the evaluation takes a considerable amount of planning and time for execution.

Planning

- Determining the overall evaluation design will depend upon which design is used and its level of complexity. It can take several months or even years to develop an experimental design, determine the sample size, and recruit individuals to participate. Quasi-experimental designs typically take several months to put into operation, since matched comparison groups must be located and recruited. Other designs, most of which are less complicated, tend to take less time to plan.

- Instrument development can also take days, weeks, or months, depending upon the complexity of the tools. Adopting or adapting existing tools and consent/assent forms cuts time considerably since there may not be as much of a need to pilot the instruments.

- Securing Institutional Review Board (IRB) approval can also be a lengthy process, often taking a few weeks to develop an application and several months for applications to be reviewed and approved.

Data Collection

- Survey administration time will depend on the length of the surveys, the number of sites, whether surveys are print or electronic, whether they are administered by evaluation staff or program staff, and so forth. Typically pre/post administration is used so there are two data collection periods per "term" (year, semester, or before/after programs), often in the fall and spring. It is important for enough time to pass between pre- and post-test administration so there is not a pretest bias, meaning that participants remember the pretest and adjust their answers accordingly.

- Qualitative data collection time will also depend on the length of the interviews, focus groups, and/or observations, the number of sites, and the number of participants. Most interviews and focus groups last about 60 to 90 minutes each. Document analysis time, of course, varies by what is being investigated and how many documents are examined.

- Time needed for collecting existing data, such as achievement scores, will vary depending upon the availability of the data and the methods of transfer being used.

Data Management and Analysis

- Time for data management is typically fairly extensive, since data need to be identified and coded, and stored to protect confidentiality.

- Time needed for data analysis also varies depending upon the nature of the data (e.g., whether data entry is needed or data are electronic), analytic frameworks, and whether the data are quantitative or qualitative. It usually takes several weeks to enter, clean, and analyze quantitative data and longer to analyze data from interviews, focus groups, and observations.

- Report generation also takes time, particularly if there are several drafts or sophisticated data displays and analysis.

Most program evaluations are conducted and completed over the course of a year, and most are implemented annually. However, time may vary based on the complexity of the project and should be negotiated with your evaluator.

Develop Appropriate Human Subjects Protections

All evaluation projects must take steps to protect human subjects, defined as any individual who participates in the study. The steps that are undertaken address two main areas:

1. Obtaining informed consent and assent to participate; and
2. Taking appropriate steps to protect participants' identities and individual responses.

Permission to Participate

All participants in a study must give their permission or "assent" to participate. Their permission should be based on their understanding of the study as conveyed in a letter to them. The letter must contain information on:

- The purpose of the evaluation;
- Evaluation procedures and timelines;
- Potential benefits and risks of participation;
- How participants can withdraw from the study for any reason at any time;
- How confidentiality will be maintained;
- The evaluators and how to contact them;
- How copies of the results may be obtained;
- The voluntary nature of their participation; and
- A place to sign that they understand and agree to participate.

In addition to assent, youth under the age of 18 must have the permission of a parent or guardian in order to participate. This permission form, called a parent consent form, has the same information as an assent form and must be signed by the parent or guardian.

There are two types of consent forms. Active consent requires written consent for the youth to participate. With active consent, evaluators or program personnel must collect the form showing explicit agreement. Passive consent, on the other hand, does not require written consent. Rather, the letter is provided to the parents or guardians of the youth, and the letter is returned with a signature only if the parent or guardian does not want their child to participate.

Some school districts and programs require active parent consent and will not allow any evaluation to be performed without it. Others only require passive consent. The evaluator who works with a school or school district must check and abide by the rules of the district.

Sample consent and assent forms may be found in Appendix C of this toolkit.

Implement the Evaluation Design

Implementation of the design requires effective communication with stakeholders, consistency with all required human subjects protections, and efficient data collection strategies. Data collection issues nearly always surface, so it is good to anticipate and address as many as possible as part of the overall evaluation plan.

Communicate With Stakeholders

Communication with stakeholders about the purpose of the evaluation, their roles, and results of the evaluation is important for any type of evaluation if it is to be successful. Typically program evaluators either meet with stakeholders; hold a Webinar, conference call, or other informational meeting; or send information about the evaluation to all of those being affected by it.

During initial communications, evaluators and program leaders should explain:

- The purpose of the evaluation and its benefits to participants;
- The types of information being collected (e.g., program implementation and outcomes);
- The methods being used to collect data (e.g., surveys, focus groups, interviews, and/or samples of documents);
- Sampling;
- Consent and assent forms and their distribution and collection;
- Timelines for data collection;
- Site responsibilities;
- How data will be analyzed and reported;
- How they can access copies of the report; and
- Troubleshooting, including who they can call or contact with any concerns.

If you are going to employ more rigorous designs, such as the experimental designs with random assignment, you will likely need to engage in more specialized communications since stakeholders may not understand why they have or do not have access to a program. Communication about experimental designs needs to reassure stakeholders that no one is being denied an opportunity, but rather that innovative approaches are being tested.

Communication between Program Leaders and Program Evaluators

Good evaluation processes include regular communication between program staff and the evaluator. Typically the evaluator has worked closely with program staff on the logic model, evaluation questions, evaluation design, methods for data collection, and data collection processes. To ensure effective ongoing communications, consider establishing an agreement between the evaluator and the program leaders that includes the following communication processes:

- Identify communication mechanisms. Do you want to communicate in person, through e-mail, through conference calls, or other means?

- Set a communication schedule. Do you want to communicate weekly, monthly, or during important benchmark periods?

- Determine a liaison. Who should be the primary contact for the program staff and for the evaluator?

- Discuss how evaluation challenges will be resolved. Who will handle questions about design, methodology, consents and assents, and other procedural issues? Who will handle parent or family questions? Who will decide if data collection timelines can be extended? Consider many of the data collection challenges and decide in advance who will resolve the problems and how they will be resolved and how and when information about the challenges should be shared with the program staff or evaluation partner.

- Regularly review progress. Communicate immediately if there are any barriers to progress.

- Review a draft report before finalizing so that any issues or "red flags" can be discussed.

- Revise the evaluation plan, if needed, based on experience.

Obtain Appropriate Consents and Assents

As discussed in Section 3, it is important to abide by all of the applicable human subjects protections so that confidentiality is preserved and appropriate consents and assents are collected.

The consents are to be collected from parents or guardians of youth under 18. In most cases, youth may not participate in a study unless informed consent procedures have been followed. If the project requires active consent, then the evaluator must receive those data and verify that only those from youth whose parents or guardians give their consent for them to be in the study are included. Thus, if a young person inadvertently completes a survey or otherwise participates in the study without parental consent, those data must not be used. If the project requires passive consent, the evaluator must verify that no one is included whose parents or guardians objected to the study. Typically the data collector is responsible for ensuring that individuals without appropriate consents are not engaged, but the evaluator must act as a second check to guarantee compliance.

Consents are typically collected onsite either by the evaluator or the data collector and then housed at the evaluator's site. They must be available for audit, should anyone choose to review the evaluation process (including the Institutional Review Board). Consents are usually distributed at least a week before data collection is to begin.

In most studies, all participants, adult and youth, must also assent to be in the study. This is usually a separate sheet of paper with a signature or checkbox indicating that the participant knows that their participation is voluntary, that they understand the purpose of the evaluation and how data will be used, and that they agree to participate. Assents are usually obtained right before data are collected.

To preserve confidentiality, assent forms should be removed from the data collection tool once identification numbers are assigned. Assent forms with identification numbers should always be protected for confidentiality. Usually this means that the assents and identification numbers are kept in a locked file if they are in print, or a password-protected file if they are electronic.

Data cannot be collected until consent and assent forms are completed.

Obtaining consent and assent forms is often time-consuming and has associated costs. Forms must be copied and distributed, collected, and tracked. Checks must be conducted to ensure that no one without the appropriate form is included in the study. Storage of the forms may also incur costs in terms of software or files. Follow up to ensure that data collectors are following appropriate protocols can also incur expenses.

Implement the Evaluation Design

- **Data Collection**

- **Data Management**

- **Data Analysis**

- **Issues in Data Analysis**

Section 6: Implement the Evaluation Design

Implementation of the design requires consistent communication with stakeholders and effective and efficient data collection strategies. Data collection issues nearly always surface, so it is good to anticipate and address as many as possible as part of the overall evaluation plan. This section discusses data collection, management, and analysis, along with some implementation challenges that may emerge and how to address them. Suggestions for choosing the right statistics are also provided.

Data Collection

Data collection procedures should be outlined as part of the evaluation plan. Depending upon the cost and decisions made, data may be collected by the evaluator, by onsite personnel, by program staff, or through self-report.

As part of the plan, participants should be apprised of the method being used, the length of time needed to complete data collection processes, and how to handle any issues that may arise. For example:

- If surveys are being administered, the plan should specify either who will hand out and collect the print surveys or shepherd the participants to a place where online surveys can be accessed and completed.

- If focus groups or interviews are being conducted, the plan should specify who is to participate and how long the interview will take. A quiet place to conduct the focus group or interview should be reserved, and equipment that may be used, such as tape recorders, should be tested in advance to ensure good receptivity and working order. If refreshments are to be made available, arrangements must be made in advance for delivery and clean up.

- If observations are to occur, the plan should specify who is to be observed, the length of the observation, and what type of notification is to be given. If the plan calls for videotaping the observations, prior arrangements must be made and the equipment should be tested.

- If documents are to be collected, the plan should specify the nature of the documents, the form they should take (electronic or print), and when the documents should be available.

- If records are to be accessed, the plan should specify who is to extract the information, along with when, where, and how.

- If tests or assessments are to be given, then appropriate arrangements must be made for copying and test administration.

The data collection plan should also include information about what assistance (if any) that data collectors can give to participants. Evaluators should determine in advance how data collectors are to handle specific questions that may arise (such as what to do if a participant does not understand a word, if the participant wants to change an answer, or if the participant needs to interrupt data collection for a restroom break).

In addition, the data collection plan should address how data will be collected from participants who are not conversant in the English language. This may require surveys to be translated or for interpreters to be present for the data collection activities. Likewise, plans should address data collection from people with disabilities.

If the data collectors experience any anomalies while administering the data collection protocols, they must report them to the evaluator. Anomalies, such as an adult telling youth how to answer questions, fire drills, or someone getting sick, can influence outcomes and, as such, must be noted.

Once data are collected, the plan should specify how they are to be transmitted to the evaluator. Sometimes surveys are bundled and labeled onsite and either mailed or hand carried to the evaluator. Tape recordings may be duplicated to ensure against loss. Documents may be scanned or "borrowed" by the evaluator and later returned to the program staff.

It is helpful to include training for data collectors to ensure quality control. Some evaluators also offer practice sessions for data collectors. Evaluators should then check in frequently with data collectors to ensure that collection processes are operating effectively. Troubleshooting should occur immediately, and both program leaders and lead evaluators should be notified.

Examples of data collection processes for evaluation designs using surveys and for evaluation designs using qualitative information are presented below.

Example: Bureau of Land Management – Take It Outside

The Bureau of Land Management's (BLM's) *Take It Outside* program promotes and supports outdoor activities and experiences for children on the public lands. The program strives to improve the health of our nation's children, families, and communities, while at the same time developing the next generation of public land stewards. BLM's *Take it Outside* programs annually provide opportunities for over 100,000 children and families to get outside, explore, and learn about public lands. Many of the *Take It Outside* projects under way throughout the BLM this year also meet the goals of *Let's Move Outside*, including getting youth outside in nature and increasing their physical activity.

As shown in the logic model in Section II, *Take It Outside* intends to impact participants by increasing their awareness of recreational activities and their knowledge about nature and cultural resources on public lands. *Take it Outside* programs also promote stewardship, sustainable and healthy lifestyle choices, and help youth develop teamwork and problem-solving skills. Because over 100,000 youth participate each year, the time, effort, logistics, and cost of surveying each student may be prohibitive. For example, the most low cost way to survey participants would be to have them complete an electronic survey. However, to execute this data collection strategy, letters would need to be sent home to the parents of every participant, consents would need to be tracked, and computers or handheld devices would have to be made available to each participant. A better strategy would be to sample programs, either by randomly selecting them or by having a stratified random selection that identified areas of importance for selection, such as region, age of the participants, or other program characteristics, dividing the programs into categories and randomly selecting from those categories. In the best case scenario, letters would be sent to the parents and youth participants when they were accepted into the program discussing the purpose of the

evaluation and obtaining consent for participation. These letters would be part of the information package that would be sent. This would save time and money, and allow the evaluation to be a "natural" part of the program. Youth participants could then take a pre/post-survey that would allow evaluators to determine which, if any, of the intended outcomes were met. Designing an evaluation plan such as this would likely increase the response rate and ensure that the findings could be generalized to the entire program.

Example: Bureau of Indian Affairs – Fire Management

The Bureau of Indian Affairs, Pima Agency – Fire Management and the Gila River Indian Community Employment and Training Department partner to provide employment and training to community members under the Workforce Investment Act (WIA). The crew members are paid daily through WIA funding and switch to the automatic deposit pay plan when assigned to incidents. The intent of the program is to target community youth and provide training and mentorship towards federal employment. Four community members were sponsored through the program and worked with fire management. The goal was to give them the training and experience needed to compete for federal jobs.

As shown in the Section II logic models, this program is intended to increase knowledge and awareness of interpersonal skills; promote civic engagement through cultural concepts as stewards, develop an understanding of environmental stewardships, and acquire skills in science and conservation; and increase knowledge about the connections between diet/nutrition and their impact on health and wellness, including cultural practices and traditions.

Because the program involves so few individuals, the best choice for evaluation would be in-depth interviews with each one. The interviews would involve collecting a lot of information through open-ended questions that probe the outcome areas, the types of experiences and activities that the participants had, and how they would improve the program. The time frame for evaluation would likely need to be extended until at least 10 participants answered the question. This would be more likely to preserve their confidentiality. Data would be aggregated and participants could be anonymously quoted to illustrate program impact. In addition, evaluators would want to see the extent to which participation led to employment in Fire Management or a related career by conducting follow-up interviews with each participant several months or years after completion of the program.

Data Management

Most evaluators create a data management plan to help them to monitor the data collection process, ensure quality control, and process the data according to the rules of the Institutional Review Board. Just as data collectors need to have protocols for their work, data processors also need to have procedures in place for handling, identifying, entering, and analyzing the data. To ensure confidentiality, for example, most evaluators assign a particular staff member or members to provide discrete identification numbers to the data collected from any given individual, and then separate the name from the data so that the data are identified by number rather than by name. The list with the name of the participant and the identification number that is assigned is typically housed in a separate protected file, locked or password-protected, away from the actual data. Confidentiality is best preserved when the person assigning the identification numbers never sees the data again.

Once data are assigned identification numbers, then the data typically must be cleaned and coded to ensure that the appropriate answer categories were used, data sets are complete, treatment and comparison groups answered the appropriate surveys, and so forth.

If data include surveys, focus groups, or interviews and there is a separate data entry or coding procedure, at least 5% of all data should be checked to ensure there are no errors. If there are a significant number of errors, data may need to be reentered or recoded.

At the end of the data collection period, evaluators should ensure that they have received all of the appropriate data from the site in the proper form.

Data Analysis

Data analysis should be directed toward answering the evaluation questions. Typically, an evaluation plan will include the procedures to be used to analyze the specific types of quantitative and/or qualitative data that were collected. If the data are quantitative, specific types of statistical analysis should be predetermined. If they are qualitative, data coding, reduction, and summarizing protocols should also be preestablished.

Data that derive from experimental or quasi-experimental designs often also have additional data analysis procedures. For example, evaluators may examine both the group differences and the program design characteristics or participant characteristics that moderate or influence the outcomes. The analysis plan may call for an examination of differences in impact by program characteristics, such as dosage or quality, or differences by participant demographics, such as gender or ethnic background. Other types of analysis may include testing the relationships that were specified in the logic model. Many evaluators also specify the relationships between short-, medium-, and long-term outcomes.

Evaluators should, of course, use the most appropriate analysis technique for the type of data that were collected. Many evaluators triangulate their data, checking to see whether there is consistency between and among different measures of the same constructs. This type of reliability check is important to ensure that data are accurate.

Data analysts typically also examine the data to ensure that they understand the extent to which outcomes are affected by various factors related to the evaluation itself. For example, analysts should report the response rate, and evaluate whether the evaluation participants resemble and represent all of the program participants. Evaluators should investigate program attrition to see if program dropouts at the pretest level are different from those who remain. If there are differences, interpretation of the data may be affected.

Evaluators should also systematically check for consent bias to determine whether those who participate in the evaluation are different from those who decline to participate, and response bias to determine whether participants are consistently using one end of the scale or another or are providing answers that appear to reflect social desirability. Nonresponse patterns should also be investigated.

Data analysis procedures can be complicated or simple. Exhibit 4 provides an example of some of the statistical analysis procedures that could be used.

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Exhibit 4. Typical Types of Statistical Analyses

Number of Dependent Variables	Nature of Independent Variables (IVs)	Nature of Dependent Variable(s)	Test(s)
1	0 IVs (1 population)	interval and normal	one-sample *t* test
		ordinal or interval	one-sample median
		categorical (2 categories)	binomial test
		categorical	Chi-square goodness-of-fit
	1 IV with 2 levels (independent groups)	interval and normal	2 independent sample *t* test
		ordinal or interval	Wilcoxon Mann-Whitney test
		categorical	Chi-square test
			Fisher's exact test
	1 IV with 2 or more levels (independent groups)	interval and normal	one-way ANOVA
		ordinal or interval	Kruskal Wallis
		categorical	Chi-square test
	1 IV with 2 levels (dependent/matched groups)	interval and normal	paired *t* test
		ordinal or interval	Wilcoxon signed ranks test
		categorical	McNemar
	1 IV with 2 or more levels (dependent/matched groups)	interval and normal	one-way repeated measures ANOVA
		ordinal or interval	Friedman test
		categorical	repeated measures logistic regression
	2 or more IVs (independent groups)	interval and normal	factorial ANOVA
		ordinal or interval	???
		categorical	factorial logistic regression
	1 interval IV	interval and normal	correlation
			simple linear regression
		ordinal or interval	non-parametric correlation
		categorical	simple logistic regression
	1 or more interval IVs and/or 1 or more categorical IVs	interval and normal	multiple regression
			analysis of covariance
		categorical	multiple logistic regression
			discriminant analysis
2 or more	1 IV with 2 or more levels (independent groups)	interval and normal	one-way MANOVA
	2 or more	interval and normal	multivariate multiple linear regression

Adapted from Leeper, J.D., Choosing the correct statistic ; Retrieved from http://bama.ua.edu/~jleeper/627/choosestat.html

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Issues in Data Analysis

Data analysis procedures should be carefully monitored to ensure that the analysis addresses various challenges or threats to validity and reliability. Each of the following should be discussed by evaluators when conducting the analysis:

- **Fidelity.** It is not unusual for programs to be delivered with a number of variations, but when there is a lack of fidelity to a program design, results may be affected. Evaluators should ask, "To what extent did the participants experience the program as it was meant to be implemented? If there were variations, what were they and what was the likelihood that they may have affected the results?"

- **Consent Bias.** One of the likely scenarios in evaluating youth programs is that there is a difference between those who are allowed by their parents to participate in the evaluation and those who are not. There is also likely to be a difference between those youth who voluntarily agree to be in the study and those who do not. The analysis must take into account any variations that may result in these differences. In addition, evaluators and program staff should encourage all potential participants to be in the study, and if possible, engage in random assignment to avoid systematic biases in the sample.

- **Attrition.** Many programs experience dropouts, that is, young people who leave the program before the end. These youth may be different than those who remain, and may have dropped out because of negative experiences with the program. For comparison purposes, an effort should be made to collect data from any individuals who dropped out. If the dropouts cannot be accessed, the results of the study must be interpreted in light of the difference in the sample.

- **Contamination.** When a study has an experimental or quasi-experimental design, it is possible that those who were not supposed to be exposed to the treatment may inadvertently had some experience with it. Exposure to the treatment is referred to as contamination and leads to problems when comparing the groups. Contamination is best addressed by providing strict rules about program implementation and involvement of participants and by asking control or comparison participants about any possible exposure to the program that was offered.

- **Time frame issues.** All data should be collected within the same time frame to avoid influence of other events that may occur because of timing. For example, if one group has a posttest at the beginning of December and another equivalent group has the posttest at the end of December, the groups may have different results simply because the second group of youth are anticipating the holidays and are not taking the survey as seriously. The literature is rife with examples of youth engagement declining in the late spring as the end of the school year winds down. Time frame issues must be taken into account in the analysis.

- **Response bias.** Response bias occurs when respondents deliberately provide answers to serve a purpose other than giving candid, accurate responses. For example, respondents in the program may wish to please the program staff, especially if they are in the room, and answer more positively than they otherwise would. Respondents may also decline to answer certain questions or react either overly positively or negatively to individuals administering the survey or what they perceive to be the intent of the survey. The best way to deal with response bias is to ask all respondents to be candid and stress the importance of honesty in the answers. Evaluators should also triangulate the data to examine responses for consistency.

Report

- **Generate the Report**

- **Present the Findings and Engage Stakeholders in Discussions About Program Improvement**

- **Provide an Evaluation Brief for the Public**

Section 7: Report

This section provides a brief overview of what should go into a report and how to make the results more accessible to the general public.

Generate the Report

To be effective, evaluation reports should be clear and easily understood by program stakeholders. Most stakeholders will appreciate language that is not technical in nature, though technical information should be included to ensure that sophisticated readers understand the contents of the report.

A typical report has the following sections:

- **Executive Summary**

   This section provides the "headlines" from the report, usually including a paragraph on the background of the program, a paragraph on methodology, and then a series of bulleted findings, followed by a paragraph of interpretation and/or a list of recommendations for improvement.

- **Introduction**

   This section presents information about the program purpose, pertinent history, participation rates, and implementation. Many evaluators include the logic model in this section of the report.

- **Methodology**

   This section is a thick description of the evaluation design, the measures being used and their validity and reliability, and the characteristics of the sample that participated in the evaluation.

- **Findings**

   This section typically has both a summary and an analysis of the findings, often organized by evaluation question. Data are often reported using both narratives and data displays, such as pie charts, bar or line graphs, and simple tables. Critiques of the evaluation itself, such as low response rates or data collection issues, and cautions about data interpretation are usually presented in this section.

- **Conclusions**

   This section summarizes findings and provides conclusions related to implementation and impacts. Often the conclusions relate findings back to the logic model.

- **Recommendations**

  This section provides a set of specific recommendations for program improvement derived from the evaluation findings or elaborates on the recommendations for improvement that were listed in the Executive Summary.

- **Appendix**

  This section typically provides copies of the instruments for data collection and often also includes individual item analysis.

The report should be provided to the program staff in draft form for their review. While findings cannot be changed, the program staff may identify areas that need more explication or "red flags" where wording changes are desired. The report should then be revised as needed and finalized for distribution.

Present the Findings and Engage Stakeholders in Discussions about Program Improvement

If the evaluation is effective, it will contain trustworthy information on program strengths, challenges, and outcomes, and recommendations for how to change programs to become more effective. When done well, the evaluations can illuminate what works best and why.

As budget and time allow, it is very useful to have the evaluator present the findings from the report to key stakeholders, ensuring that they understand how the data were obtained, what the findings mean, and the extent to which the data are reliable enough to use to guide improvement. Recommendations should be discussed in detail.

If possible, it is a good idea to include the evaluator in discussions about program improvement. Evaluators often have insights to share about the likelihood to which specific types of changes may result in desired outcomes. For example, they may know whether participant experience matters, whether sites differ in the extent to which they deliver programs with fidelity, and which types of youth benefit most. Their input should not drive decisions, but should be taken under serious consideration.

Any improvements that are made should be reflected in the logic model and, if possible, tested during the next year's evaluation. That way, you can better determine whether the change resulted in improved outcomes and under which conditions.

Provide an Evaluation Brief for the Public

As part of an accountability plan, programs should provide a short brief for the public to understand their program impacts. Typically evaluators prepare the brief so that it is clear that program staff are not biasing the information.

An evaluation brief typically is only a page or two in length and includes key findings with little or no technical information. If the program has strong impacts, positive or negative, it is important to show those impacts in a graph to maximize impact.

A typical brief has a sentence about the program and its purpose, a sentence about the methodology and the group evaluating the program, and then several paragraphs with headlines and short descriptions of details of the results. Most evaluators pick key conclusions from their reports to highlight in the brief. Recommendations do not usually appear. At the end of the brief, there is usually information about where to get the full report or more information about the program.

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Selecting an Outside Evaluator

Evaluation Planning Checklist

Appendix A

Selecting an Outside Evaluator

Identifying a pool of effective evaluators and selecting the ones who will best meet your needs can be a long process. However, most program leaders will tell you that it is well worth the time since the relationship with the evaluator, the processes being used, and the reports being generated are all important to the effectiveness of the evaluation project.

While the specific characteristics you desire in an outside evaluator may vary by project, there are some characteristics that are essential. The outside evaluator should:

- Have the **expertise and experience** needed for evaluation design, data collection instrument development or identification, data collection processes including the ability to protect human subjects and preserve confidentiality, data analysis expertise, and ability to write clear reports at the technical level required.

- Have **knowledge** of the context and content of the programs being evaluated.

- Have the **relationship skills** and cultural competencies needed for communicating with program leaders, staff, and participants.

- Have the **credibility and independence** needed to be accepted as evaluators by field personnel.

- Have an **evaluation philosophy** that is compatible with the program leaders and staff (that is, for example, agree upon the purposes of the evaluation, use of data, ownership of data.)

Six steps that you should take in identifying and selecting an outside evaluator are as follows:

1. **Become familiar with your organization's rules for contracting with outside evaluators,** including whether you must use a competitive bid process, select from a pre-vetted pool, or follow other requirements.

2. **Determine the qualifications that you desire**. Typically program staff identify expertise in the form of a graduate training related to evaluation, experience conducting program evaluations, knowledge of the field, and other characteristics aligned with the qualifications discussed on the previous page. Translate the qualifications into a list for posting.

3. **Identify potential candidates**. Ask others who have used outside evaluators for their recommendations, consult lists of evaluators from organizations such as the What Works Clearinghouse, the American Evaluation Association, research and evaluation organizations, and colleges and universities.

4. **Contact potential candidates to determine their alignment with your needs**. Ask for interest and affordability. Follow up by requesting resumes, references, sample reports, and sample descriptions of evaluations of related projects.

5. **Screen candidates**. Interview the evaluator or representatives from the evaluation group to assess expertise and compatibility with your staff and needs. Explore whether the candidate has a good record for delivering evaluations on time and within budget. Determine if they have the appropriate experience in procuring Institutional Review Board approval for protecting human subjects. Be sure they have experience in working with youth and adults from various backgrounds. If needed, ensure they have the capability of translating materials into languages other than English. Discuss your program with them in detail so they can determine whether they have the sufficient expertise, availability, and interest to work with you.

6. **Select your evaluator**. Choose the individual or group that is the best match for you, considering all of the qualifications you desire. Make sure you select someone with whom you can establish a good working relationship.

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Evaluation Planning Checklist

Section 1:   **Getting Started**

_____   Establish a purpose(s) for the evaluation.
_____   Common impact areas.
_____   Difference between implementation and impact evaluations.
_____   Determine your evaluation questions.
_____   Phrasing your questions.
_____   Decide if the program should be formally evaluated.
_____   Decide if you need an outside evaluator.
_____   Identify funding amounts.

Section 2   **Logic Model**

_____   Developing a logic model.
_____   Cautions.
_____   Samples.
_____   Steps for developing your logic model.

Section 3:   **Evaluation Design**

_____   Develop your evaluation design.
_____   Experimental designs.
_____   Quasi-experimental designs.
_____   Pre/post designs.
_____   Correlational studies.
_____   Case study.
_____   Selecting the appropriate evaluation design.

Section 4:   **Methods**

_____   Identifying and/or developing tools for data collection.
_____   Surveys.
_____   Interviews.
_____   Focus groups.
_____   Document analysis.
_____   Observations.
_____   Mixed methods.
_____   Piloting data collection tools.

Section 5: Planning: Sample, Timelines, Consents

_____ Sampling.
_____ Developing timelines for data collection.
_____ Planning.
_____ Data collection.
_____ Data management and analysis.
_____ Develop appropriate human subjects protection.
_____ Permission to participate.
_____ Implement the evaluation design.
_____ Communication with stakeholders.
_____ Communication between program leaders and program evaluators.
_____ Obtain appropriate consents and assents.

Section 6: Implement the Evaluation Design

_____ Data collection.
_____ Data management.
_____ Data Analysis.
_____ Issues in data analysis.

Section 7: Report

_____ Generate the report.
_____ Present the findings and engage stakeholders in discussions about program improvement.
_____ Provide an evaluation brief for the public.

Measures

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Civic Engagement Measures – Attitudes

Construct	Civic Engagement Attitudes
Source	Furco, A., Muller, P. and Ammon, M. S. (1998). Civic Responsibility Survey for k-12 Students Engaged in Service Learning. Berkley, CA: University of California, Berkley. Retrieved September 30, 2010 from http://www.peecworks.org/PEEC/PEEC_Inst/0038CEB0-007EA7AB.1/furcosurvey%20civicrespons.pdf
Population	Elementary School Students
Validity	Face and Content
Reliability	Alpha = .76
Stem	Please say whether you disagree or agree with each sentence. Circle the number that bests matches your answer. (1 = Disagree, 2 = Agree A Little, 3 = Agree A Lot)
Items	1. I feel like I am a part of a community. 2. I pay attention to news events that affect the community. 3. Doing something that helps others is important to me. 4. I like to help other people, even if it is hard work. 5. I know what I can do to help make the community a better place. 6. Helping other people is something everyone should do, including myself. 7. I know a lot of people in the community, and they know me. 8. I feel like I can make a difference in the community. 9. I try to think of ways to help other people. 10. Everyone should pay attention to the news, including myself.
Response Categories	1 = Disagree, 2 = Agree A Little, 3 = Agree A Lot

Civic Engagement Measures – Attitudes

Attitudes Toward Voting and Other Political Participation

Construct	Political Interest
Source	Luo, J., & Jamieson-Drake, D. (2005, November). Linking Student Precollege Characteristics to College Development Outcomes: The Search for a Meaningful Way to Inform Institutional Practice and Policy. *AIR IR Applications: Using Advanced Tools, Techniques, and Methodologies, 7*, 1–18.
Population	College Freshmen
Validity	Face and Content
Reliability	Alpha = .79
Stem	*Please indicate the importance to you personally of each of the following: **For the activities below, indicate how frequently you engaged in each (*stem abbreviated)*: ***What is your best guess as to the chances that you will:
Items	a. Influencing the political structure* b. Keeping up to date with political affairs* c. Influencing social values* d. Becoming a community leader* e. Helping to promote racial understanding* f. Developing a meaningful philosophy of life* g. Participated in political demonstrations** h. Take part in Student Protests*** i. Participate in Student Government***
Response Categories	*1 = Essential, 2 = Very Important, 3 = Somewhat Important, 4 = Not Important **1 = Frequently, 2 = Occasionally, 3 = Not At All ***1 = Very Good Chance, 2 = Some Chance, 3 = Very Little Chance, 4 = No Chance

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Civic Engagement Measures – Attitudes

Motivations and Attitudes Toward Volunteering

Construct	Expectations for Engagement in Community Issues
Source	Flanagan, C. A., Syvertsen, A. K., & Stout, M. D. (2007, May). *Civic measurement models: Tapping adolescents' civic engagement* (CIRCLE Working Paper 55). College Park, MD: Center for Information and Research on Civic Learning and Engagement.
Population	Middle and High School Students
Validity	Face and Content
Reliability	Alpha = .80; .80 (pretest; posttest)
Stem	When you think about your life after high school, how likely is it that you would do each of the following?
Items	a. Do volunteer work to help needy people. b. Get involved in issues like health or safety that affect your community. c. Work with a group to solve a problem in the community where you live.
Response Categories	1 = Not At All Likely, 2 =, 3 = Maybe, 4 =, 5 = Extremely Likely

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Civic Engagement Measures – Attitudes

Responsibility for Community Issues and Social Problems

Construct	Civic Responsibility Survey
Source	Furco, A., Muller, P., & Ammon, M.S. (1998). *Civic responsibility survey for K-12 students engaged in service-learning.* UC Berkeley, CA: Service-Learning Research and Development Center.
Population	High School Students
Validity	
Reliability	Alpha = .93 (overall); .63 (connection to community); .88 (civic awareness); .85 (civic efficacy)
Stem	Please indicate how strongly you disagree or agree with each statement.

Items	Connection to Community
	  a. I have a strong and personal attachment to a particular community.
	  b. I benefit emotionally from contributing to the community, even if it is hard and challenging work.
	  c. I feel a personal obligation to contribute in some way to the community.
	  d. I have a lot of personal contact with people in the community.
	Civic Awareness
	  e. I often discuss and think about how political, social, local or national issues affect the community.
	  f. It is my responsibility to help improve the community.
	  g. I am aware of the important needs in the community.
	  h. I am aware of what can be done to meet the important needs in the community.
	  i. Helping other people is something that I am personally responsible for.
	  j. It is easy for me to put aside my self-interest in favor of a greater good.
	  k. Becoming involved in political or social issues is a good way to improve the community.
	  l. Being concerned about state and local issues is an important responsibility for everybody.
	  m. Being actively involved in community issues is everyone's responsibility, including mine.
	  n. I understand how political and social policies or issues affect members in the community.
	Civic Efficacy
	  o. I participate in political or social causes in order to improve the community.
	  p. Providing service to the community is something I prefer to let others do.
	  q. I feel I have the power to make a difference in the community.
	  r. I often try to act on solutions that address political, social, local or national problems in the community.
	  s. I participate in activities that help to improve the community, even if I am new to them.
	  t. I try to encourage others to participate in community service.
	  u. I believe that I can personally make a difference in the community.
	  v. I believe that I can have enough influence to impact community decisions.
	  w. I am or plan to become actively involved in issues that positively affect the community.
	  x. I try to find time or a way to make a positive difference in the community.

Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Agree, 6 = Strongly Agree

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Civic Engagement Measures – Attitudes

Responsibility for Community Issues and Social Problems

Construct	Connection to Community
Source	Corporation for National and Community Service, Office of Research and Policy Development. (2008, May). *Still serving: Measuring the eight-year impact of AmeriCorps on alumni.* Washington, DC: Author.
Population	Participants in AmeriCorps between 1999 and 2001
Validity	Face and Content
Reliability	Alpha = .58
Stem	Please indicate how strongly you agree with each of the following statements about your community.
Items	a. I have a strong attachment to my community. b. I often discuss and think about how larger political issues affect my community. c. I am aware of what can be done to meet the important needs of my community. d. I have the ability to make a difference in my community. e. I try to find time or a way to make a positive difference in my community.
Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree

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Civic Engagement Measures – Attitudes

Responsibility for Community Issues and Social Problems

Construct	Neighborhood Obligations
Source	Corporation for National and Community Service, Office of Research and Policy Development. (2008, May). *Still serving: Measuring the eight-year impact of AmeriCorps on alumni.* Washington, DC: Author.
Population	Participants in AmeriCorps between 1999 and 2001
Validity	Face and Content
Reliability	Alpha = .77
Stem	Do you feel that each of the following is not an important obligation, a somewhat important obligation, or a very important obligation that a citizen owes to the country?
Items	a. Reporting a crime you may have witnessed. b. Participating in neighborhood organizations. c. Helping keep the neighborhood safe. d. Helping keep the neighborhood clean and beautiful. e. Helping those who are less fortunate.
Response Categories	1 = Not Important, 2 = Somewhat Important, 3 = Very Important

Civic Engagement Measures – Attitudes

Responsibility for Community Issues and Social Problems

Construct	Participatory Citizen
Source	Flanagan, C. A., Syvertsen, A. K., & Stout, M. D. (2007, May). *Civic measurement models: Tapping adolescents' civic engagement* (CIRCLE Working Paper 55). College Park, MD: Center for Information and Research on Civic Learning and Engagement.
Population	Middle and High School Students
Validity	Face and Content
Reliability	Alpha = .82; .82 (pretest; posttest)
Stem	1. How much do you agree or disagree with each of these statements? 2. When you think about your life after high school, how likely is it that you would do each of the following?

Items	1.
	  a. Being actively involved in community issues is my responsibility.
	  b. Being concerned about state and local issues is an important responsibility for everybody.
	  c. I believe I can make a difference in my community.
	  d. By working with others in the community I can help make things better.
	2.
	  e. Get involved in issues like health or safety that affect your community.
	  f. Work with a group to solve a problem in the community where you live.

Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, 5 = Strongly Agree

Civic Engagement Measures – Attitudes

Responsibility for Community Issues and Social Problems

Construct	Personally Responsible Citizen
Source	Flanagan, C. A., Syvertsen, A. K., & Stout, M. D. (2007, May). *Civic measurement models: Tapping adolescents' civic engagement* (CIRCLE Working Paper 55). College Park, MD: Center for Information and Research on Civic Learning and Engagement.
Population	Middle and High School Students
Validity	Face and Content
Reliability	Alpha = .89; .91 (pretest; posttest)
Stem	How much do you agree or disagree with each of these statements?
Items	a. I think people should assist those in their lives who are in need of help. b. I think it is important for people to follow rules and laws. c. I try to help when I see people in need. d. I am willing to help others without being paid e. I try to be kind to other people f. I think it is important to tell the truth.
Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, 5 = Strongly Agree

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Civic Engagement Measures – Attitudes

Responsibility for Community Issues and Social Problems

Construct	Social Concern
Source	Luo, J., & Jamieson-Drake, D. (2005, November). Linking Student Precollege Characteristics to College Development Outcomes: The Search for a Meaningful Way to Inform Institutional Practice and Policy. *AIR IR Applications: Using Advanced Tools, Techniques, and Methodologies, 7*, 1–18.
Population	College Freshmen
Validity	Face and Content
Reliability	Alpha = .64
Stem	*What is your best guess as to the chances that you will: **Please indicate the importance to you personally of each of the following: ***For the activities below, indicate how frequently you engaged in each *(stem abbreviated)*: ****Mark one in each row:
Items	a. Participate in volunteer or community service work* b. Participating in a community action program** c. Helping others who are in difficulty** d. Being involved in programs to clean up the environment** e. Performed volunteer work*** f. Felt overwhelmed by all I had to do*** g. The federal government should do more to control the sale of handguns**** h. Colleges have the right to ban extreme speakers from campus****
Response Categories	*1 = Very Good Chance, 2 = Some Chance, 3 = Very Little Chance, 4 = No Chance **1 = Essential, 2 = Very Important, 3 = Somewhat Important, 4 = Not Important ***1 = Frequently, 2 = Occasionally, 3 = Not At All ****1 = Agree Strongly, 2 = Agree Somewhat, 3 = Disagree Somewhat, 4 = Disagree Strongly

Civic Engagement Measures – Attitudes

Responsibility for Community Issues and Social Problems

Construct	Social Responsibility
Source	RMC Research (2007). *Survey of Social Responsibility.* Denver, CO
Population	Middle and High School Students
Validity	Face and Content
Reliability	Alpha =.83; .84 (pretest; posttest)
Stem	Please indicate how much you agree or disagree with each of the following statements.
Items	a. Students my age can do things to make the world better. b. I can make a difference in my neighborhood or town. c. I feel responsible for helping others. d. I often think about the needs of others. e. Helping to solve community problems is something everyone should do. f. I intend to volunteer throughout my whole life.
Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, 5 = Strongly Agree

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Civic Engagement Measures – Attitudes

Sense of Personal Efficacy and Empowerment

Construct	Personal Effectiveness of Community Service
Source	Corporation for National and Community Service, Office of Research and Policy Development. (2008, May). *Still serving: Measuring the eight-year impact of AmeriCorps on alumni.* Washington, DC: Author.
Population	Participants in AmeriCorps between 1999 and 2001
Validity	Face and Content
Reliability	Alpha = .65
Stem	Thinking of all your voluntary community service or volunteer activities over the past 12 months, please indicate how much you agree with the following statements.
Items	a. I felt I made a contribution to the community. b. I felt like part of the community. c. I felt I could make a difference in the life of at least one person.
Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree

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Civic Engagement Measures – Attitudes

Sense of Personal Efficacy and Empowerment

Construct	Political Efficacy
Source	Flanagan, C. A., Syvertsen, A. K., & Stout, M. D. (2007, May). *Civic measurement models: Tapping adolescents' civic engagement* (CIRCLE Working Paper 55). College Park, MD: Center for Information and Research on Civic Learning and Engagement.
Population	Middle and High School Students
Validity	Face
Reliability	N/A
Stem	The following questions ask about your opinions. Indicate how much you agree or disagree with each statement.
Items	a. I believe I can make a difference in my community. b. By working with others in the community I can help make things better.
Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, 5 = Strongly Agree

Civic Engagement Measures – Attitudes and Behaviors

Construct	Civic Engagement Attitudes
Source	Furco, A., Muller, P. and Ammon, M. S. (1998). Civic Responsibility Survey for k-12 Students Engaged in Service Learning. Berkley, CA: University of California, Berkley. Retrieved September 30, 2010 from http://www.peecworks.org/PEEC/PEEC_Inst/0038CEB0-007EA7AB.1/furcosurvey%20civicrespons.pdf
Population	High School Students
Validity	Face and Content
Reliability	Alpha = .93
Stem	Please indicate how strongly you disagree or agree with each statement. Circle the number that best describes your response (1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Agree, 6 = Strongly Agree)
Items	1. I have a strong and personal attachment to a particular community. 2. I often discuss and think about how political, social, local or national issues affect my community. 3. I participate in political or social causes in order to improve the community. 4. It is my responsibility to help improve the community. 5. I benefit emotionally from contributing to the community, even if it is hard and challenging work. 6. I am aware of the important needs in the community. 7. I feel a personal obligation to contribute in some way to the community. 8. I am aware of what can be done to meet the important needs in the community. 9. Providing service to the community is something I prefer to let others do. 10. I have a lot of personal contact with people in the community. 11. Helping other people is something that I am personally responsible for. 12. I feel I have the power to make a difference in the community. 13. I often try to act on solutions that address political, social, local, or national problems in the community. 14. It is easy to put aside my self interest in favor of the greater good. 15. I participate in activities that help improve the community, even if I am new to them. 16. I try to encourage others to participate in community service. 17. Becoming involved in political or social issues is a good way to get involved in the community. 18. I believe that I can personally make a difference in the community. 19. I believe that I can have enough influence to impact community decisions. 20. I am or plan to become actively involved in issues that that positively affect the community. 21. Being concerned about state and local issues is an important responsibility for everybody. 22. Being actively involved in community issues is everyone's responsibility for everybody. 23. I try to find time or a way to make a positive difference in the community. 24. I understand how political and social policies or issues affect members in the community.
Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Agree, 6 = Strongly Agree

Civic Engagement Measures – Behaviors

Participating in Collective Actions Outside of Service-Learning

Construct	Civic Activity Indicators
Source	Keeter, S., Zukin, C., Andolina, M., & Jenkins, K. (2002). *Improving the Measurement of Political Participation*. College Park, MD: Center for Information and Research on Civic Learning and Engagement.
Population	High School Students and Older
Validity	Face and Content
Reliability	Test/Retest: r = 62.4 - 94.3%
Stem	N/A
Items	a. Have you ever worked together informally with someone or some groups to solve a problem in the community where you live? If YES, was this in the last 12 months or not? b. Have you ever spent time participating in any community service or volunteer activity, or haven't you had the time to do this? By volunteer activity, I mean actually working in some way to help others for no pay. If Yes, have you done this in the last 12 months? Thinking about the volunteer work over the last 12 months, is this something you do on a regular basis, or just once in a while? c. Do you belong to or donate money to any groups or associations, either locally or nationally? Are you an active member of this group/any of these groups, a member but not active, or have you given money only? d. Have you personally walked, ran, or bicycled for a charity cause – this is separate from sponsoring or giving money to this type of event?
Response Categories	1 = Yes, 2 = No

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Civic Engagement Measures – Behaviors

Participating in Collective Actions Outside of Service-Learning

Construct	Community-Based Activism
Source	Corporation for National and Community Service, Office of Research and Policy Development. (2008, May). *Still serving: Measuring the eight-year impact of AmeriCorps on alumni.* Washington, DC: Author.
Population	Participants in AmeriCorps between 1999 and 2001
Validity	Face and Content
Reliability	Alpha = .65
Stem	How often do you do each of the following?
Items	a. Participate in events such as community meetings, celebrations, or activities in my community. b. Join organizations that support issues that are important to me. c. Write or e-mail newspapers or organizations to voice my views.
Response Categories	1 = Never, 2 = Not Very Often, 3 = Sometimes, 4 = Very Often, 5 = Always

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Civic Engagement Measures – Behaviors

Participating in Collective Actions Outside of Service-Learning

Construct	Community Engagement
Source	RMC Research (2007). *Survey of Community Engagement.* Denver, CO
Population	Middle and High School Students
Validity	Face and Content
Reliability	Alpha = .82; .84 (pretest; posttest)
Stem	Please think about the community as the agencies, businesses, and neighborhoods <u>outside your school</u> and indicate how much you agree or disagree with each statement.
Items	a. I do things to make the community a better place. b. I am aware of the important needs in the community. c. I pay attention to news that affects the community. d. I talk with my friends about community problems. e. I help to address problems in the community. f. I try to encourage others to work on community problems.
Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree

Civic Engagement Measures – Behaviors

Participating in Collective Actions Outside of Service-Learning

Construct	Electoral Activity Indicators
Source	Keeter, S., Zukin, C., Andolina, M., & Jenkins, K. (2002). *Improving the Measurement of Political Participation*. College Park, MD: Center for Information and Research on Civic Learning and Engagement.
Population	High School Students and Older
Validity	Face and Content
Reliability	Test/Retest: *r* = 62.4 - 94.3%
Stem	N/A
Items	a. We know that most people don't vote in all elections. Usually between one-quarter to one-half of those eligible actually come out to vote. Can you tell me how often you vote in local and national elections? Always, sometimes, rarely, or never? b. When there is an election taking place do you generally talk to any people and try to show them why they should vote for or against one of the parties or candidates, or not? c. Do you wear a campaign button, put a sticker on your car, or place a sign in front of your house, or aren't these things you do? d. In the past 12 months, did you contribute money to a candidate, a political party, or any organization that supported candidates? e. Have you ever volunteered to work without pay for a political organization or candidates for office? Was this in the last 12 months?
Response Categories	1 = Yes, 2 = No

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Civic Engagement Measures – Behaviors

Participating in Collective Actions Outside of Service-Learning

Construct	Political Voice
Source	Flanagan, C. A., Syvertsen, A. K., & Stout, M. D. (2007, May). *Civic measurement models: Tapping adolescents' civic engagement* (CIRCLE Working Paper 55). College Park, MD: Center for Information and Research on Civic Learning and Engagement.
Population	Middle and High School Students
Validity	Face and Content
Reliability	Alpha = .75; .79 (pretest; posttest)
Stem	When you think about your life after high school, how likely is it that you would do each of the following?
Items	a. Contact or visit someone in government who represents your community. b. Contact a newspaper, radio, or TV talk show to express your opinion on an issue. c. Sign an email or written petition.
Response Categories	1 = Not At All Likely , 2 =, 3 = Maybe, 4 =, 5 = Extremely Likely

Civic Engagement Measures – Behaviors

Reading About/Listening to News

Construct	Critical Consumer of Political Information
Source	Flanagan, C. A., Syvertsen, A. K., & Stout, M. D. (2007, May). *Civic measurement models: Tapping adolescents' civic engagement* (CIRCLE Working Paper 55). College Park, MD: Center for Information and Research on Civic Learning and Engagement.
Population	Middle and High School Students
Validity	Face and Content
Reliability	Alpha = .88; .82 (pretest; posttest)
Stem	How much are each of the following like you?
Items	a. I listen to people talk about politics even when I know that I already disagree with them. b. When I see or read a news story about an issue, I try to figure out if they're just telling one side of the story. c. When I hear news about politics, I try to figure out what is REALLY going on.
Response Categories	1 = Strongly Disagree , 2 = Disagree, 3 = Uncertain, 4 = Agree, 5 = Strongly Agree

Civic Engagement Measures – Behaviors

Reading About/Listening to News

Construct	Overall Media Consumption
Source	Flanagan, C. A., Syvertsen, A. K., & Stout, M. D. (2007, May). *Civic measurement models: Tapping adolescents' civic engagement* (CIRCLE Working Paper 55). College Park, MD: Center for Information and Research on Civic Learning and Engagement.
Population	Middle and High School Students
Validity	Face and Content
Reliability	Alpha = .78; .81 (pretest; posttest)
Stem	In a typical week, how often do you:
Items	a. Watch the *local* news on TV for information on politics and current events? b. Watch *national* news or cable shows (such as CNN) for information on politics and current events? c. Listen to news about political and current events on the *radio*? d. Read a *newspaper* for information on politics and current events? e. Read news on the *Internet* about politics and current events?
Response Categories	1 = Strongly Disagree , 2 = Disagree, 3 = Uncertain, 4 = Agree, 5 = Strongly Agree

Civic Engagement Measures – Behaviors

Volunteering Outside Service-Learning

Construct	Charitable Involvement
Source	HERI (2004). *The spiritual life of college students: A national study of college students' search for meaning and purpose.* University of California, Los Angeles: Higher Education Research Institute.
Population	College Freshmen
Validity	Face and Content
Reliability	Alpha = .74
Stem	*During the last year, please indicate how often you have: **Below is a list of community service/volunteer activities. Indicate which of these you participated in during high school. ***Please indicate the importance to you personally of each of the following: ****During your last year in high school, how much time did you spend during a typical week doing the following activities?
Items	a. Participated in community food or clothing drives* b. Performed volunteer work* c. Donated money to charity* d. Helped friends with personal problems* e. Tutoring/teaching** f. Counseling/mentoring** g. Environmental activities** h. Child care** i. Elder care** j. Hospital work** k. Substance abuse education** l. Other health education** m. Services to the homeless** n. Community improvement/construction** o. Conflict mediation** p. Service to my religious community** q. Other community service** r. Participating in a community action program*** s. Volunteer work****
Response Categories	*1 = Frequently, 2 = Occasionally, 3 = Not At All **Marked of left blank ***1 = Essential, 2 = Very Important, 3 = Somewhat Important, 4 = Not Important ****1 = None, 2 = Less Than 1 Hour, 3 = 1-2, 4 = 3-5, 5 = 6-10, 6 = 11-15, 7 = 16-20, 8 = Over 20

Civic Engagement Measures – Behaviors

Volunteering Outside Service-Learning

Construct	Civic Activity Indicators
Source	Keeter, S., Zukin, C., Andolina, M., & Jenkins, K. (2002). *Improving the Measurement of Political Participation.* College Park, MD: Center for Information and Research on Civic Learning and Engagement.
Population	High School Students and Older
Validity	Face and Content
Reliability	Test/Retest: r = 62.4 - 94.3%
Stem	N/A
Items	a. Have you ever worked together informally with someone or some groups to solve a problem in the community where you live? If YES, was this in the last 12 months or not? b. Have you ever spent time participating in any community service or volunteer activity, or haven't you had the time to do this? By volunteer activity, I mean actually working in some way to help others for no pay. If Yes, have you done this in the last 12 months? Thinking about the volunteer work over the last 12 months, is this something you do on a regular basis, or just once in a while? c. Do you belong to or donate money to any groups or associations, either locally or nationally? Are you an active member of this group/any of these groups, a member but not active, or have you given money only? d. Have you personally walked, ran, or bicycled for a charity cause – this is separate from sponsoring or giving money to this type of event?
Response Categories	1 = Yes, 2 = No

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Civic Engagement Measures – Behaviors

Other Constructs

Construct	Student Ownership (School Climate)
Source	Flanagan, C. A., Syvertsen, A. K., & Stout, M. D. (2007, May). *Civic measurement models: Tapping adolescents' civic engagement* (CIRCLE Working Paper 55). College Park, MD: Center for Information and Research on Civic Learning and Engagement.
Population	Middle and High School Students
Validity	Face and Content
Reliability	Alpha = .77; .75 (pretest; posttest)
Stem	Indicate how much you agree or disagree with each statement.
Items	a. At our school, everyone tries to keep the school looking good.* b. Students feel like they're an important part of this school. c. Students feel proud to be part of this school. d. Students have a say in how the school is run. e. Students trust teachers. f. Most students care about each other, even people they do not know well.
Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, 5 = Strongly Agree

*Item not included in post-survey.

Communication Measures

Communication Adaptability Scale

Through a 5-factor structure, this scale measures social communication competence. The authors report this scale has been associated with other dispositional factors, such as, communication apprehension, cognitive complexity, communicator style, and communication satisfaction.

Construct	Communication competence
Source	Duran, R.L. (1992). Communicative adaptability: A review of conceptualization and measurement. *Communication Quarterly*, 40(3), 253-268
Population	College Students/Adults
Validity	Face, Convergent, and Discriminant in Published Studies
Reliability	Alpha = .74 - .84
Stem	The following are statements about communication behaviors. Answer each item as it relates to your general style of communication (the type of communicator you are most often) in social situations. Please indicate the degree to which each statement applied to you by placing the appropriate number (according to the scale below) in the space provided.

Items	Social Competence
	  a. I feel nervous in social situations.*
	  b. In most situations I feel tense and constrained.*
	  c. When talking, my posture seems awkward and tense.*
	  d. My voice sounds nervous when I talk to others.*
	  e. I am relaxed when talking to others.
	Social Confirmation
	  f. I try to make the other person feel good.
	  g. I try to make the other person feel important.
	  h. I try to be warm when communicating with another.
	  i. While I'm talking I think about how the other person feels.
	  j. I am verbally and nonverbally supportive of people.
	Social Experience
	  k. I like to be active in different social groups.
	  l. I enjoy socializing with various groups of people.
	  m. I enjoy meeting new people.
	  n. I do not "mix" well at social functions.*
	Appropriate Disclosure
	  o. I am aware of how intimate my disclosures are.
	  p. I am aware of how intimate the disclosures of others are.
	  q. I disclose at the same level that others disclose to me.
	  r. I know how appropriate my self-disclosures are.
	Articulation
	  s. When I self-disclose I know what I am revealing.
	  t. When speaking, I have problems with grammar.*
	  u. At times I don't use appropriate verb tense.*
	  v. I sometimes use one word when I mean to use another.*
	  w. I sometimes use words incorrectly.*
	  x. I have difficulty pronouncing some words.*

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	Wit
	  y. When I am anxious, I often make jokes.
	  z. I often make jokes when in tense situations.
	  aa. When I embarrass myself I often make a joke about it.
	  bb. When someone makes a negative comment about me I respond with a witty comeback.
	  cc. People think I am witty.
	*Reverse scored

Response Categories	1 = Never True of Me, 2 = Rarely True of Me, 3 = Sometimes True of Me, 4 = Often True of Me, 5 = Always True of Me

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Communication Skills Measures

Personal Report of Communication Apprehension (PRCA-24)

This scale presents a series of communication scenarios and asks for
a rating of each scenario. Scenarios are those that may illicit an
anxious reaction (e.g., group meeting, giving a speech, etc.).

Construct	Communication Apprehension/Anxiety
Source	McCroskey, J.C., Beatty, M.J., Kearny, P., and Plax, T. (1985). A measure of communication apprehension across communication contexts. *Communication Quarterly,* 33(3), 165-173.
Population	Young Adults/Undergraduates
Validity	Content and Convergent
Reliability	Alpha = .93 - .95
Stem	This instrument is composed of 24 statements concerning feelings about communicating with other people. Please indicate the degree to which each statement applies to you by marking whether you: (SCALE RESPONSES HERE). Work quickly; record your first impression.
Items	d.　I dislike participating in group discussions. e.　Generally, I am comfortable while participating in group discussions. f.　I am tense and nervous while participating in group discussions. g.　I like to get involved in group discussions. h.　Engaging in a group discussion with new people makes me tense and nervous. i.　I am calm and relaxed while participating in group discussions. j.　Generally, I am nervous when I have to participate in a meeting. k.　Usually, I am calm and relaxed while participating in a meeting. l.　I am very calm and relaxed when I am called upon to express an opinion at a meeting. m.　I am afraid to express myself at meetings. n.　Communicating at meetings usually makes me uncomfortable. o.　I am very relaxed when answering questions at a meeting. p.　While participating in a conversation with a new acquaintance, I feel very nervous. q.　I have no fear of speaking up in conversations. r.　Ordinarily, I am very tense and nervous in conversations. s.　Ordinarily, I am very calm and relaxed in conversations. t.　While conversing with a new acquaintance, I feel very relaxed. u.　I'm afraid to speak up in conversations. v.　I have no fear of giving a speech. w.　Certain parts of my body feel very tense and rigid while I am giving a speech. x.　I feel relaxed while giving a speech. y.　My thoughts become confused and jumbled when I am giving a speech. z.　I face the prospect of giving a speech with confidence. aa.　While giving a speech, I get so nervous I forget facts I really know.
Response Categories	1 = Strongly Agree, 2 = Agree, 3 = Are Undecided, 4 = Disagree 5 = Strongly Disagree

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Communication Skills Measures

Writing Apprehension Test

Scale designed to measure the degree to which an individual
is apprehensive towards various writing activities and situations.

Construct	Apprehension Regarding Written Communication
Source	Daly, J.A. and Miller, M.D. (1975). The empirical development of an instrument to measure writing apprehension. *Research in Teaching of English,* 9, 242-249.
Population	Undergraduates
Validity	Face and Convergent
Reliability	Alpha = .93
Stem	Below are 20 statements that people sometimes make about themselves. Please indicate whether or not you believe each statement applies to you by marking whether you: SEE RESPONSES BELOW
Items	a. I have no fear of my writing being evaluated.* b. I look forward to writing down my ideas.* c. I am afraid of writing essays when I know they will be evaluated. d. Taking a composition course is a very frightening experience. e. Handing in a composition makes me feel good.* f. My mind seems to go blank when I start to work on a composition. g. Expressing ideas through writing seems to be a waste of time. h. I would enjoy submitting my writing to magazines for evaluation and publication.* i. I like to write my ideas down.* j. I feel confident in my ability to clearly express my ideas in writing.* k. I like to have my friends read what I have written.* l. I'm nervous about writing. m. People seem to enjoy what I write.* n. I enjoy writing.* o. I never seem to be able to clearly write down my ideas. p. Writing is a lot of fun.* q. I expect to do poorly in composition classes even before I enter them. r. I like seeing my thoughts on paper.* s. Discussing my writing with others is an enjoyable experience.* t. I have a terrible time organizing my ideas in a composition course. u. When I hand in a composition I know I'm going to do poorly. v. It's easy for me to write good compositions.* w. I don't think I write as well as most other people. x. I avoid writing. y. I don't like my compositions to be evaluated.* z. I'm no good at writing. *Reverse scored
Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Are Neutral, 4 = Agree 5 = Strongly Agree

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Environmental Attitudes

Construct	Environmental Attitudes
Source	Stokking, K., Van Aert, L., Meijberg,W., and Kaskens, A. (1999). Evaluating Environmental Education. Gland, Switzerland: International Union for Conservation of Nature and Natural Resources. Retrieved September, 2010 from: http://intranet.iucn.org/webfiles/doc/CEC/Public/Electronic/CEC/Books/Evaluating_Environmental_Ed.pdf
Population	Students in Upper Primary Education
Validity	Face and Content
Reliability	
Stem	Please indicate below whether for you these statements are 'Not True', 'Slightly True', 'Fairly True' or 'Entirely True.'
Items	1. I am afraid that in the future there will be more and more natural disasters. 2. As long as only animals suffer from environmental pollution, I'm not too bothered. 3. I am afraid of having to live in a world without trees and animals. 4. I feel sad when I hear that children have got sick because of environmental pollution. 5. I am not afraid of natural disasters in the future. 6. I feel sad when I think about ailing trees. 7. It makes me cross that industry pollutes the environment. 8. It annoys me that many adults do not care for the environment. 9. I believe it is worthwhile if I do something for the environment. 10. I get really cross when I hear that a shipping accident has caused large oil slicks into the sea. 11. I believe that people will find a way of saving the environment just in time. 12. Anything I could do for the environment would be pointless. 13. Environmental pollution is nowhere near as bad as people make out. 14. There is so much talk about environmental pollution that I don't listen any more. 15. I sometimes worry a lot about environmental pollution. 16. I am afraid that problems in the third world will never be solved.
Response Categories	1 = Entirely Untrue, 2 = Slightly Untrue, 3 = Fairly True, 4 = Entirely True

Source: Original source: Szagun, G. & V.I. Pavlov (1993). Umweltbewusstsein bei deutschen und russisschen Jugendlichen: ein interkultureller vergleich. In: G. Eulefeld, *Studien zur Umwelterzeihung. Band 2.* Kiel: Institut für die Pädagogik der Naturwissenschaften an der Universität Kiel.

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Environmental and Civic Attitudes

Construct	Environmental and Civic Attitudes
Source	Brandeis University. (1998). The Earth Force Survey We Want to Know What You Think! Waltham, MA: Author. Retrieved September, 2010 from http://cart.rmcdenver.com/instruments/earth_force.pdf
Population	High School Students
Validity	Face and Content
Reliability	
Stem	*1-34. Please answer the questions below as carefully and honestly as you can. There are no right or wrong answers. We just want to know how you think or feel. For each statement below, please tell us if you feel that the statement is Very True For You, Sort of True For You, Not Very True, or Not True At All. Please be sure to fill in the circle completely. **35. Finally, we would like to know more about some of the skills you learned as a result of being in Earth Force this year. For each of the following questions, please tell us how well you could do each type of task at the beginning of the school year and now. Could you do it Not At All? A Little? Pretty Well? Or Very Well? For example, in the sample question below, we ask you how well you could 'identify an environmental problem in your community.' To answer, first you need to fill in one of the circles on the left side of the page to tell us how well you could identify an issue at the beginning of the year. Then, you would fill in one of the circles on the right side of the page to tell us how well you think you can identify an issue now. In the example below, we have filled in the circle indicating that you could identify an issue 'a little' at the beginning of the year and 'very well' now. How well could you do each of the following?
Items	1.* I want to help solve environmental problems. 2.* I would be willing to change my personal habits if it helped improve the environment. 3.* I feel that it is my responsibility to help solve environmental problems in my community. 4.* I think each person in the community should do what he or she can to protect the environment. 5.* I believe that what I do every day can have an impact on the environment. 6.* I am committed to working on environmental issues now and later in life. 7.* I am aware of environmental issues in my school or community. 8.* I know where to find information on environmental issues. 9.* I know how to contact adults in my community to get information on community or environmental issues. 10.* I know what it takes to change the rules and laws that affect the environment in my school or community. 11.* I know how to work with others to solve an environmental problem in my school or community. 12.* I believe that I can personally make a difference in my school or community. 13.* I believe that young people can persuade other youth and adults to do things to improve the environment. 14.* I believe that people working together can solve community problems.

	15.* I am confident in expressing my opinions in front of a group of adults.
	16.* It is important to listen to people on all sides of a community issue if we want to find a solution that will work well for everyone in the community.
	17.* I think it is more important to look for ways to help the environment for a long time than to do something that will just make a difference for a few days.
	18. I talk about local environmental issues with my friends or parents.
	19.* I pay attention to local environmental issues when I hear about them.
	20.* I will act in ways to protect the environment for the rest of my life.
	35. **
	a. Identify an environmental issue in your community (sample question).
	b. Find the right person to give you information on a community or environmental issue.
	c. Identify what is good or bad about an idea of how to solve an environmental problem.
	d. Change what you are doing on a project to make it work better.
	e. Decide whether a piece of information is likely to be correct and useful.
	f. Make decisions based on clear criteria.
	g. Make decisions only after looking at both sides of an issue.
	h. Talk to people you don't know about an issue you think is important.
	i. Write letters, brochures, or stories to inform people about a community or environmental issue.
	j. Work with other youth and adults to identify and solve a community or environmental problem.
	k. Look at different ways to solve a problem until you find a solution.
	l. Identify the steps you need to take to put a project into action.
Response Categories	*1 = Very True For You, 2 = Sort of True For You, 3 = Not Very True, 4 = Not True At All **At the beginning of the school year: 1 = Not At All, 2 = A Little, 3 = Pretty Well, 4 = Very Well Now: 1 = Not At All, 2 = A Little, 3 = Pretty Well, 4 = Very Well

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Environmental Knowledge

Construct	Environmental Knowledge
Source	Coyle, K. (2005). *Environmental Literacy in America: What Ten Years of NEETF/Roper Research and Related Studies Say About Environmental Literacy in the U.S.* Washington, DC: The National Environmental Education & Training Foundation. Retrieved September, 2010 from http://www.neefusa.org/pdf/ELR2005.pdf
Population	College Students
Validity	Face and Content
Reliability	
Stem	1. There are many different kinds of animals and plants, and they live in many different types of environments. What is the word used to describe this idea? Is it . . . 2. Carbon monoxide is a major contributor to air pollution in the U.S. Which of the following is the biggest source of carbon monoxide? Is it . . . 3. How is most of the electricity in the U.S. generated? Is it . . . 4. What is the most common cause of pollution of streams, rivers, and oceans? Is it . . . 5. Which of the following is a renewable resource? Is it . . . 6. Ozone forms a protective layer in the earth's upper atmosphere. What does ozone protect us from? Is it . . . 7. Where does most of the garbage in the U.S. end up? Is it in . . . 8. What is the name of the primary federal agency that works to protect the environment? Is it the . . . 9. Which of the following household wastes is considered hazardous waste? Is it . . . 10. What is the most common reason that an animal species becomes extinct? Is it because . . . 11. Scientists have not determined the best solution for disposing of nuclear waste. In the U.S., what do we do with it now? Do we . . . 12. What is the primary benefit of wetlands? Do they . . .

Items	1. *
	   a. Multiplicity
	   b. Biodiversity
	   c. Socio-economics
	   d. Evolution?
	   e. Don't know
	 2. *
	   a. Factories and businesses
	   b. People breathing
	   c. Motor vehicles, or
	   d. Trees?
	   e. Don't know
	 3.*
	   a. By burning oil, coal, and wood
	   b. With nuclear power
	   c. Through solar energy
	   d. At hydroelectric power plants?
	   e. Don't know
	 4.*
	   a. Dumping of garbage by cities
	   b. Surface water running off yards, city streets, paved lots, and farm fields
	   c. Trash washed into the ocean from beaches, or
	   d. Waste dumped by factories?

e. Don't know

5.*
a. Oil
b. Iron ore
c. Trees, or
d. Coal
e. Don't know

6.*
a. Acid rain
b. Global warming
c. Sudden changes in temperature, or
d. Harmful, cancer-causing sunlight?
e. Don't know

7.*
a. Oceans
b. Incinerators
c. Recycling centers, or
d. Landfills?
e. Don't know

8.*
a. Environmental Protection Agency (the EPA)
b. Department of Health, Environment, and Safety (the DHES)
c. National Environmental Agency (the NEA), or
d. Federal Pollution Control Agency (the FPCA)?
e. Don't know

9.*
a. Plastic packaging
b. Glass
c. Batteries, or
d. Spoiled food?
e. Don't know

10.*
a. Pesticides are killing them
b. Their habitats are being destroyed by humans
c. There is too much hunting, or
d. There are climate changes that affect them?
e. Don't know

11.*
a. Use it as nuclear fuel
b. Sell it to other countries
c. Dump it in landfills, or
d. Store and monitor the waste?
e. Don't know

12.*
a. Promote flooding
b. Help clean the water before it enters lakes, streams, rivers, or oceans
c. Help keep the number of undesirable plants and animals low, or
d. Provide good sites for landfills?
e. Don't know

Response Categories	*Choose One Correct Answers: 1b, 2c, 3a, 4b, 5c, 6d, 7d, 8a, 9c, 10b, 11d, 12b.

U.S. Department of the Interior

Environmental Knowledge

Construct	Environmental Knowledge
Source	The National Environmental Education & Training Foundation, Roper Starch Worldwide. (2001). *Lessons from the Environment: Why 95% of Adult Americans Endorse Environmental Education. The Ninth Annual National Report Card on Environmental Attitudes, Knowledge, and Behavior.* Washington, DC: Author. Retrieved September, 2010 from http://www.neefusa.org/pdf/roper/Roper2000.pdf
Population	College Students
Validity	Face and Content
Reliability	
Stem	1. Most of the time, do you think environmental protection and economic development can go hand in hand, or that we must choose between environmental protection and economic development?
	2. When it is impossible to find a reasonable compromise between economic development and environmental protection, which do you usually believe is more important: economic development or environmental protection?
	3. There are differing opinions about how far we've gone with environmental protection laws and regulations. At the present time, do you think environmental protection laws and regulations have gone too far, or not far enough, or have struck about the right balance?
	4. Thinking now about some specific areas, at the present time, do you think laws and regulations for (READ ITEM) have gone too far, not far enough, or have struck about the right balance?
	5. Please indicate for each of the following statements whether you strongly agree, mostly agree, mostly disagree, or strongly disagree.
	6. In general, how much do you feel you yourself know about environmental issues and problems—would you say you know a lot, a fair amount, only a little, or practically nothing?
	7-20. The next group of questions are about issues that have been covered in the media during the past two years or so. They are designed to tell us how much accurate information people are getting from television, newspapers, magazines, and other sources. Each question has four possible answers. If you don't know the answer, you can just state that you don't know.
	7. There are many different kinds of animals and plants, and they live in many different types of environments. What is the word used to describe this idea? Is it . . .
	8. Carbon monoxide is a major contributor to air pollution in the U.S. Which of the following is the biggest source of carbon monoxide? Is it . . .
	9. How is most of the electricity in the U.S. generated? Is it . . .
	10. What is the most common cause of pollution of streams, rivers, and oceans? Is it . . .
	11. Which of the following is a renewable resource? Is it . . .
	12. Ozone forms a protective layer in the earth's upper atmosphere. What does ozone protect us from? Is it . . .
	13. Where does most of the garbage in the U.S. end up? Is it in . . .
	14. What is the name of the primary federal agency that works to protect the environment?
	15. Which of the following household wastes is considered hazardous waste? Is

	it . . .
	16. What is the most common reason that an animal species becomes extinct? Is it because . . .
	17. Scientists have not determined the best solution for disposing of nuclear waste. In the U.S., what do we do with it now? Do we . . .
	18. What is the primary benefit of wetlands? Do they . . .
	19. Now I would like to ask you about some of the things you may do in your day-today life. For each of the following things, would you please tell me whether you never do it, sometimes do it, or frequently do it.
	20. The following questions are about environmental education for children in grades kindergarten through 12. Please answer each question with yes, no, or don't know.
	21. There are many ways that environmental education in schools can affect children. I'd now like you to tell me the extent to which you think environmental education effects each of the following. Do you think environmental education has a great deal of effect, a moderate amount of effect, only a little effect, or no effect at all on?
	22. Finally, I am going to ask you about some different activities and hobbies that people can engage in. For each one, would you please tell me if you have done it in the past 12 months or not?
Items	1. *
	a. Can go hand in hand
	b. Must choose between environment and development
	c. Depends (vol.)
	d. Don't know
	2. *
	a. Economic development
	b. Environmental protection
	c. Depends (vol.)
	d. Don't know
	3. *
	a. Gone too far
	b. Not far enough
	c. Struck about right balance
	d. Don't know
	4. *
	a. Fighting air pollution
	b. Protecting wild or natural areas
	c. Protecting endangered species of plants, animals, and insects
	d. Protecting wetland areas
	e. Fighting water pollution
	5. *
	a. Technology will find a way of solving environmental problems
	b. The condition of the environment will play an increasingly important role in the nation's economic future
	c. Private companies should train their employees to solve environmental problems
	d. Government agencies should support environmental education programs for adults
	6. *
	a. A lot
	b. A fair amount

     c. Only a little
     d. Practically nothing
     e. Don't know

7. *
     a. Multiplicity
     b. Biodiversity
     c. Socio-economics
     d. Evolution?
     e. Don't know

8. *
     a. Factories and businesses
     b. People breathing
     c. Motor vehicles, or
     d. Trees?
     e. Don't know

9. *
     a. By burning oil, coal, and wood
     b. With nuclear power
     c. Through solar energy
     d. At hydroelectric power plants?
     e. Don't know

10. *
     a. Dumping of garbage by cities
     b. Surface water running off yards, city streets, paved lots, and farm fields
     c. Trash washed into the ocean from beaches, or
     d. Waste dumped by factories?
     e. Don't know

11. *
     a. Oil
     b. Iron ore
     c. Trees, or
     d. Coal
     e. Don't know

12. *
     a. Acid rain
     b. Global warming
     c. Sudden changes in temperature, or
     d. Harmful, cancer-causing sunlight?
     e. Don't know

13. *
     a. Oceans
     b. Incinerators
     c. Recycling centers, or
     d. Landfills?
     e. Don't know

14. *
     a. Environmental Protection Agency (the EPA)
     b. Department of Health, Environment, and Safety (the DHES)
     c. National Environmental Agency (the NEA), or
     d. Federal Pollution Control Agency (the FPCA)?
     e. Don't know

15.*
    a. Plastic packaging
    b. Glass
    c. Batteries, or
    d. Spoiled food?
    e. Don't know

16. *
    a. Pesticides are killing them
    b. Their habitats are being destroyed by humans
    c. There is too much hunting, or
    d. There are climate changes that affect them?
    e. Don't know

17. *
    a. Use it as nuclear fuel
    b. Sell it to other countries
    c. Dump it in landfills, or
    d. Store and monitor the waste?
    e. Don't know

18. *
    a. Promote flooding
    b. Help clean the water before it enters lakes, streams, rivers, or oceans
    c. Help keep the number of undesirable plants and animals low, or
    d. Provide good sites for landfills?
    e. Don't know

19. *
    a. Recycle things such as newspapers, cans, and glass
    b. Avoid using chemicals in your yard or garden
    c. Buy biodegradable or recyclable products
    d. Conserve water in your home and yard
    e. Turn off lights and electrical appliances when not in use
    f. Try to cut down on the amount of trash and garbage you create
    g. Use other types of transportation, such as biking or the bus, instead of driving your car
    h. Participate in a volunteer clean-up day

20. **
    a. Do the schools in your community have environmental education?
    b. Do you think that environmental education should be taught in schools?

21. ***
    a. Teaching children to respect the people and places around them
    b. Helping children perform better in science
    c. Helping children perform better in social studies
    d. Encouraging children to get involved in community service projects
    e. Preparing children to better understand environmental issues when they are adults
    f. Helping children find jobs later in life as the environment will play a larger role in future employment opportunities

22. ****
    a. Gone fishing
    b. Gone swimming outdoors
    c. Gone hunting

	d. Gone motor boating e. Gone downhill skiing f. Played golf g. Gone hiking h. Gone bicycling i. Gone running or jogging
Response Categories	*Choose one **1 = Yes, 2 = No, 3 = Don't Know ***1 = Great Deal of Effect, 2 = A Moderate Amount of Effect, 3 = Only a Little Effect, 4 = No Effect At All ****Select All That Apply

Environmental Knowledge and Attitude

Construct	Environmental Knowledge and Attitude
Source	Lasso de la Vega, E. (2004). Awareness, knowledge, and attitude about environmental education: Responses from environmental specialists, high school instructors, students, and parents. Dissertation Abstract International, 66(2), 544A. (UMI No. AAT 3163611) Retrieved September 20, 2010, from Dissertations and Theses database. Retrieved September, 2010 from http://etd.fcla.edu/CF/CFE0000207/LassodelaVega_Ernesto_R_200412_EdD.pdf
Population	High School Students
Validity	Face and Content
Reliability	Alpha = .71 - .85
Stem	1. Please indicate how often you have had following experiences by circling the option that best represents you. 2. Please indicate how you feel local environmental issues have become since you have lived here. 3. Please indicate how concerned you are about the following environmental issues in Southwest Florida. 4. Please indicate how much you agree or disagree with following statements. 5. Please circle Yes or No to indicate which actions you have taken on behalf of environmental issues. If you choose Yes, also indicate how effective you feel this action was. 6. Do you Agree or Disagree with each of the following statements? 7. What do you think is the single most important environmental issue facing Southwest Florida? 8. What is the 2nd most important environmental issue facing Southwest Florida?
Items	1. a. Participating in outdoor experiences such as camping and fishing. b. Having your parents or grandparents encourage you to care for the environment. c. Having a teacher encourage you to care for the environment. d. Watching television programs with an environmental message. e. Reading books or magazines with an environmental message. 2. f. The water quality in your local streams, rivers, and lakes. g. The level of pollution or waste produced by nearby businesses, farms, and industries. h. The misuse of chemicals such as fertilizers and pesticides. i. Water shortage. j. The number of exotic animals and plants. k. Wetland protection. l. Endangered species protection. m. The population of native animals such as fish, birds, and mammals. n. The overall environmental state of Southwest Florida. 3. o. Water pollution from industries, farmland, and urban development. p. The conditions of wetlands and nature preserves. q. Water shortage. r. Unlimited development of cities. s. Solid waste management. t. Endangered species.

4.
   u. We are approaching the limit of the number of people the Earth can support.
   v. Humans have the right to modify the natural environment to suit their needs.
   w. When humans interfere with nature it often produces disastrous consequences.
   x. Science and technology can overcome any environmental problem.
   y. Humans are severely abusing the environment.
   z. The Earth has plenty of natural resources if we just learn how to develop them.
   aa. Plants and animals have as much right as humans to exist.
   bb. The balance of nature is strong enough to cope with the impacts of modern industrial nations.
   cc. Despite our special abilities humans are still subject to the laws of nature.
   dd. The so-called "ecological crisis" facing humankind has been greatly exaggerated.
   ee. The Earth has very limited room and resources. Humans were meant to rule over the rest of nature.
   ff. The balance of nature is very delicate and easily upset.
   gg. Maintaining economic growth is more important than protecting the natural environment.
   hh. If things continue on their present course, we will soon experience a major ecological catastrophe.
   ii. I am very well informed about environmental issues in Florida.
   jj. I pay very little attention as environmental issues are reported by the news media, including radio, TV, newspapers, and magazines.
   kk. Fishermen and hunters know a lot about environmental issues.
   ll. Environmental education is as important as any other curriculum in school.
   mm. There is a lot I, as an individual, can do to protect the environment in my community.
   nn. I perceive myself as very concerned about environmental issues in my   community.
   oo. I am willing to have my taxes increased to protect the environment in my community.
   pp. I would be willing to have the government reallocate existing money to protect   the environment in my community.
   qq. One person can influence how environmental problems and issues are resolved.
   rr. Personally, working as an individual and on your own, can influence the solution of environmental issues.
   ss. The use of powerful people is the most effective way to influence how environmental problems and issues are resolved.
   tt. Personally, working with others, can influence the solution of environmental issues.
   uu. Chance determines how environmental problems and issues are solved.
   vv. You can influence the resolution of environmental issues in your community using action strategies.

5.
   ww. Wrote a letter to the newspaper
   xx. Attended a meeting
   yy. Made a formal submission
   zz. Read or sought information
   aaa. Wrote a letter to an organization or public official
   bbb. Telephone a public official
   ccc. Took part in a protest
   ddd. Complained to the company/person causing the damage
   eee. Joined an action group
   fff. Signed a petition
   ggg. Contributed money to an environmental cause

hhh. Other (specify)

iii. None of the above

6.

jjj. Pollution in SW Florida's rivers and streams comes mainly from farmland.

kkk. Most storm water drains and road gutters drain directly into streams, rivers or the sea.

lll. Saving endangered plant species is just as important as saving endangered animal species.

mmm. The most effective way to save an endangered animal is to establish a large enough reserve for it to live and reproduce.

nnn. As the population in an area increases, the potential for pollution decreases.

ooo. Manatees should be protected because they control the water hyacinth.

ppp. Most water for human consumption in Florida comes from rivers and lakes.

qqq. Each summer your neighborhood is sprayed with the same bug killer to control mosquitoes. After many years of spraying the same product the mosquitoes will likely become resistant to the spray.

7.

rrr. Water pollution

sss. Endangered species

ttt. Exotic plants or animals

uuu. Wetland destruction

vvv. Water shortage

www. Air pollution

xxx. Unlimited development

yyy. Solid waste

zzz. Other

8.

aaaa. Water pollution

bbbb. Endangered species

cccc. Exotic plants or animals

dddd. Wetland destruction

eeee. Water shortage

ffff. Air pollution

gggg. Unlimited development

hhhh. Solid waste

iiii. Other

Response Categories	1. 1 = Never, 2 = Seldom, 3 = Often, 4 = Very Often 2. 1 = Much Worse, 2 = Worse, 3 = Better, 4 = Much Better 3. 1 = Not Concerned At All, 2 = Somewhat Concerned, 3 = Concerned, 4 = Very Concerned 4. 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree 5. 1 = Not Effective At All, 2 = Slightly Effective, 3 = Fairly Effective, 4 = Very Effective 6. 1 = Disagree, 2 = Agree 7.-8. Please Circle One.

Environmental Knowledge, Attitude and Behavior

Construct	Environmental Knowledge, Attitude and Behavior
Source	Musser, L. M., Malkus, and A. J..*(1994, Spring). The children's attitudes toward the environment scale. Journal of Environmental Education*, Spring94, Vol. 25(3), 22-28.
Population	Elementary School Students
Validity	Face and Content
Reliability	Alpha = .70 - .85
Stem	

Items	1.
	  a. Some kids like to leave water running when they brush their teeth.
	  b. but Other kids always turn the water off while brushing their teeth.
	2.
	  a. Some kids use both sides of the paper when they draw or write.
	  b. but Other kids use only one side of the paper when they draw or write.
	3.
	  a. Some kids think we should throw away things when we're done with them.
	  b. but Other kids think we should recycle things.
	4.
	  a. Some kids think dams on rivers are bad because they hurt plants and animals.
	  b. but Other kids think dams on rivers are good because they prevent floods.
	5.
	  a. Some kids like to bring home plants or bugs they find outside.
	  b. but Other kids like to look at plants or bugs outside but they never bring them home.
	6.
	  a. Some kids don't like to make bird feeders or bird houses.
	  b. but Other kids like to make bird feeders or bird houses.
	7.
	  a. Some kids think outdoor light should be turned off at night because they use electricity.
	  b. but Other kids think outdoor lights should be left on at night because they keep us safer.
	8.
	  a. Some kids think people are more important than animals.
	  b. but Other kids think people and animals are equally important.
	9.
	  a. Some kids are concerned about the rain forest.
	  b. but Other kids aren't concerned about the rain forest.
	10.
	  a. Some kids think we should build more landfills to hold our garbage.
	  b. but Other kids think we should find other ways to deal with our garbage.
	11.
	  a. Some kids like visiting national parks.
	  b. but Other kids don't like to go to national parks.
	12.
	  a. Some kids don't worry about animals becoming extinct.

	b. but Other kids worry about animals becoming extinct.
	13.
	  a. Some kids throw things away when they are done with them.
	  b. but Other kids reuse things or give them to other people to use.
	14.
	  a. Some kids think we should use chemicals and fertilizers in our gardens.
	  b. but Other kids think we shouldn't use chemicals and fertilizers in
	15.
	  a. Some kids pick up trash and throw it our gardens.
	  b. but Other kids don't like to pick up smelly trash.
	16.
	  a. Some kids don't sort trash.
	  b. but Other kids sort their trash and recycle it.
	17.
	  a. Some kids like to live where there are lots of plants and animals
	  b. but Other kids like to live where there are lots of people.
	18.
	  a. Some kids touch or catch wild animals.
	  b. but Other kids never touch or catch animals they find outside.
	19.
	  a. Some kids don't like carpool because they don't like being crowded in the car.
	  b. but Other kids like to carpool even if it is a little crowded.
	20.
	  a. Some kids are excited about solar energy.
	  b. but Other kids don't care about solar energy.
	21.
	  a. Some kids believe people should be able to live wherever they want.
	  b. but Other kids believe that people should be careful not to destroy animals' homes.
	22.
	  a. Some kids worry about air pollution.
	  b. but Other kids don't worry about air pollution.
	23.
	  a. Some kids think we should be able to hunt all wild animals.
	  b. but Other kids think that animals need protection.
	24.
	  a. Some kids turn off the lights when they leave.
	  b. but Other kids leave the lights on.
	25.
	  a. Some kids get their parents to drive them places they want to go.
	  b. but Other kids ride their bikes or walk when they can.

Response Categories	A = Lot Like the Described Children, B = Little Like the Children Described

Note. Under each statement are two boxes (one large, one small) for marking answers. The larger box is checked if children think they are a lot like the children described in the statement. The smaller box is checked if children feel they are only a little like the children described in the statement.

Environmental Knowledge, Attitudes, and Behavior

Construct	Environmental Knowledge, Attitudes and Behaviors
Source	Belden Russonello & Stewart Research and Communications. (2002, February). Americans and Biodiversity: New Perspectives in 2002 Questionnaire and Topline Results for Biodiversity Project. Washington, D.C.: Author. Retrieved September, 2010 from http://www.biodiversityproject.org/docs/publicopinionresearch/americansandbiodiversitynewperspectivesfor2002.PDF
Population	Higher Education
Validity	Face and Content
Reliability	
Stem	2. Thinking about environmental issues, please tell me how serious a problem you think each of the following is.
	15. The Federal Endangered Species Act protects the land and water where endangered plants and animals live. Which of these comes closer to your viewpoint:
	19. Here's the first one: How important is this to you personally as a reason to care about protecting the environment?
	20. If you could choose only one of these six reasons, which one would you say is most important to you personally as a reason for you to care about protecting the environment:
	21. How important is each of these reasons for maintaining biodiversity—very important, somewhat, not very, or not at all important?
	23. Please rate how effective each of the following is as a way for individuals to help protect biodiversity? Very effective, somewhat effective, not very effective or not at all an effective way for individuals to help protect biodiversity.
	24. Now, thinking about what you, yourself might do or not do, if there was an issue relating to the environment that you cared about, would you be more likely to: Now here are some types of actions that government can take to help protect biodiversity. Please tell me how effective you think each type of action would be to help protect biodiversity: very effective, somewhat effective, not very effective, or not at all effective: Have the government . . .
	25. Now I have a few questions for statistical purposes only.
	25a. Which of the followings activities have you yourself actively participated in the last 12 months:
	25d. Which of these have you ever done? Have you . . .? IF YES: Did you happen to do that in the last 12 months?
Items	1. Thinking about the near future, do you think your personal financial situation will be better, worse, or about the same in a year from now?
	2.
	a. Air pollution
	b. Water pollution
	c. Toxic waste
	d. Global climate change
	e. Loss of rain forests
	f. Overconsumption of resources in the United States
	g. The rate at which land is being developed and places in nature are being lost
	h. The rate at which plant and animal species are becoming extinct

i. Damage being done to oceans

j. Damage being done to forests here in the United States

12. In your opinion, is the quality of the environment in the United States currently improving, getting worse, or staying about the same? Is that a great deal or somewhat (better/worse)?

13. Have you ever heard about the loss of biological diversity, or biodiversity?

14. In your own words, how would you define the loss of biological diversity, or biodiversity?

15.
   a. We should reduce the number of plants and animals covered by the Endangered Species Act because the list is too long and protecting so many hurts the economy; or
   b. We should maintain a strong Endangered Species Act because protecting many different kinds of plants and animals is important to the environment and the economy.

16.
   a. What I do in my life does not impact the health of natural habitats, those places in nature that are home to plants and animals.
   b. It is often not worth the cost in jobs to try to save endangered species, like spotted owls and snail darters.
   c. The world would not suffer if some species, like poison ivy and mosquitoes, were eliminated.
   d. Increasing protections for natural habitats and wildlife will result in too many government restrictions on individuals and local communities.
   e. There is so much land that is undeveloped, it is unlikely that we could do lasting damage to the earth in our lifetimes.
   f. We should loosen up environmental regulations on mining and drilling for oil in the U.S. because we need these resources for national security.
   g. We have a personal responsibility to the earth to protect all plant and animal life.
   h. We have a moral responsibility to the earth to protect all plant and animal life.
   i. We do not need to worry so much about environmental problems because new technologies will help us solve most of them.
   j. One of the most important things to me, in my life, is living in a world with a wide variety of plants and animals.
   k. Nature provides me with inspiration and peace of mind.

17. The term biodiversity refers to the variety of living plants and animals in the world. Maintaining biodiversity means preventing the extinction of plants and animals. How important is maintaining biodiversity to you personally?

18. From what you have heard, would you say the number of plant and animal species in the world is increasing, decreasing, or staying about the same?

19.
   a. Nature is God's creation and humans should respect God's work
   b. A respect for nature for its own sake
   c. A personal responsibility to leave the earth in good shape for future generations
   d. An appreciation of the beauty of nature
   e. A desire to protect the balance of nature for you and your family to enjoy a healthy life
   f. A desire, as an American, to protect our country's natural treasures and natural history

20.
   a. nature is God's work,

b. respect nature for its own sake,

c. to protect the balance of nature for you and your family to enjoy health,

d. appreciation for nature's beauty,

e. responsibility to future generations to protect the earth, and

f. to protect America's natural history.

21.

a. Marshes, forests, rivers, and streams are nature's tools for cleaning the air and water we rely on. By destroying these habitats, humans are endangering the services that nature performs for us.

b. New medicines to treat diseases like cancer, heart disease, and hypertension are derived mostly from plants and animals.

c. Only five percent of all plant species have been studied for their potential use. We need to preserve the variety of species to find out how they can help us.

d. Forests in the U.S. are important because they clean our drinking water.

e. Forests improve our lives by giving us quiet spaces and beautiful landscapes.

f. Habitat protection is essential because habitats are home to so many species of plants and animals. Save one habitat and you have saved hundreds of species.

g. Human activity kills dozens of species of life every day.

h. The diversity of plants and animals is part of our national wealth that we should safeguard for national security. We will be weaker as a country if we must rely on a limited number of plants and animals to supply our food, create our medicines, and produce other products.

i. We need strong protections to ensure that our natural treasures in the US are not destroyed. SPLIT SAMPLE A: Every two years forest land the size of the state of Massachusetts is destroyed in the eastern U.S.

j. We need strong protections to ensure that our natural treasures in the US are not destroyed. SAMPLE B: Right now only fourteen percent of forests in the eastern U.S. are permanently protected from development.

22. How important is maintaining biodiversity to you personally? Very important, somewhat important, not very important, or not at all important?

23.

a. Stop using pesticides on gardens and lawns because the pesticides end up in rivers and streams and contaminate drinking water.

b. Buy fewer consumer goods, because it reduces the demand on natural resources.

c. Only eat fish that were caught or farmed in a way that protects the oceans and rivers.

d. Buy organic fruits and vegetables, because they do not require pesticide use on the land, even if they cost a little more to buy.

e. Skip a car trip once a week, and walk or bike instead.

f. Do not buy a house in a new development that was previously farmland or forest areas.

24.

a. donate money to an environmental or conservation organization,

b. send a letter, e-mail, or call a public official,

c. pay a little more for products that are friendlier to the environment,

d. all three, or

e. none of the above

25.

a. Buy privately-owned forests and other land to protect them from development.

b. Strongly enforce regulations that limit development that destroys habitats.

c. Toughen the enforcement of antipollution laws on business and industry.

d. Offer more tax incentives to encourage consumers to use environmental and energy saving products.

e. Offer tax incentives to encourage private property owners and farmers to keep natural areas from being developed.

25a. Do you or someone else in your household own a pet?

25b. How often do you read a daily or Sunday newspaper? Rarely, once or twice a week, two to four times a week, or five to seven times a week?

25c.
a. Hunting
b. Bird watching
c. Cross country skiing
d. Down hill skiing
e. Fishing
f. Hiking
g. Camping overnight
h. Worked in your own vegetable or flower garden
i. Gone to a zoo or an aquarium
j. Gone to a national or state park for recreation
k. Gone to a museum
l. Gone to the beach or lake
m. Mountain-biking
n. Snowboarding
o. Snowmobiling

25d.
a. Made a contribution to any environmental organization or conservation group?
b. Written to the editor of a magazine or newspaper?
c. Written, telephoned, or visited an elected official about an issue or some matter of public business?
d. Change what you do as a consumer by paying a little more for products that are friendlier to the environment?
e. Performed volunteer work for an environmental or conservation project in your community?

25e. Do you think of yourself as an active environmentalist, or sympathetic toward environmental concerns but not active, or neutral, or generally unsympathetic to environmental concerns?

Response Categories	
1.	1 = Better, 2 = Worse, 3 = About the Same, 4 = Don' Know, Refuse
2.	Use a scale of 1 to 10 where one means something is not a problem at all and 10 means it is an extremely serious problem:
12.	1 = Great Deal Improving, 2 = Somewhat Improving, 3 = About Same, 4 = Somewhat Worse, 5 = Great Deal Worse, 6 = Don't Know, Refuse
13.	1 = Yes, 2 = No, 3 = Don't Know, Refuse
15.	1 = Strongly a) Reduce, 2 = Somewhat a) Reduce, 3 = Somewhat b) Maintain, 4 = Strongly b) Maintain 5 = Don't Know, Refuse
16.	1 = Strongly Agree, 2 = Somewhat Agree, 3 = Somewhat Disagree, 4 = Strongly Agree, 5 = Don't Agree, Refuse
17., 21., 22.	1 = Very Important, 2 = Somewhat Important, 3 = Not Very Important, 4 = Not At All Important, 5 = Don't Know, Refuse
18.	1 = Increasing, 2 = Decreasing, 3 = Staying the Same, 4 = Don't Know, Refuse
19.	Please think of a 1 to 10 scale. This time 1 means something is not at all a reason to you personally and 10 means it is an extremely important reason to you personally to

care about protecting the environment:
20. Choose One
23., 25.   1 = Very Effective, 2 = Somewhat Effective, 3 = Not Very Effective, 4 = Not At All Effective, 5 = Don't Know, Refuse
24. Choose one
25a., 25c.   1 = Yes, 2 = No, 3 = Don't Know, Refuse
25b. 1 = Rarely, 2 = Once or Twice, 3 = Two to Four Times, 4 = Five to Seven, 5 = Don't Know, Refuse
25d. 1 = Yes Recently, 2 = Yes, Not Recently, 3 = No, Don't Know
25e. 1= Active, 2 = Sympathetic, 3 = Neutral, 4 = Unsympathetic, 5 = Don't Know, Refuse

Environmental Political Attitudes

Construct	Environmental Political Attitudes
Source	Schaaf, K. A. and Broussard, S. R. (2006). Private forest policy tools: A national survey exploring the American public's perceptions and support. Forest Policy and Economics, 9, 316– 334. Retrieved September, 2010 from http://human-dimensions.org/images/Private_forest_policy_tools.pdf
Population	Adults 18 and Over
Validity	Face and Content
Reliability	Alpha = 0.81
Stem	
Items	1. The government should be able to regulate the use of forests located on private land. 2. The government should have the right to tell private forest owners how to manage their forests. 3. There should be regulations regarding the cutting of trees on private forestland. 4. The government should fine private forest owners who fail to practice forest conservation. 5. There should be financial incentives, such tax credits or grants, to encourage private forest owners to practice conservation. 6. The government should conduct workshops on forest conservation techniques for private forest owners. 7. The government should promote understanding of forest conservation. 8. The government and private forest owners should work together toward forest conservation. 9. The government should use positive images, such as Smokey the Bear, to promote forest conservation. 10. The government should use negative images, like floods and mudslides, to show the negative consequences of not conserving forests.
Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Stongly Agree

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Leadership Skills – Environmental Attitudes

Construct	Environmental Attitudes
Source	Manoli, C. C., Johnson, B., Dunlap, R. E. (2007). Assessing Children's Environmental Worldviews: Modifying and Validating the New Ecological Paradigm Scale for Use With Children. The Journal of Environmental Education, 38(4), 3-13. Retrieved September, 2010 from http://0-vnweb.hwwilsonweb.com.skyline.ucdenver.edu/hww/results/external_link_main contentframe.jhtml?_DARGS=/hww/results/results_common.jhtml.43
Population	Elementary School Students
Validity	Face and Content
Reliability	Goodness of Fit Index = 0.96
Stem	
Items	1. Plants and animals have as much right as people to live. 2. There are too many (or almost too many) people on earth. 3. People are clever enough to keep from ruining the earth. 4. People must still obey the laws of nature. 5. When people mess with nature it has bad results. 6. Nature is strong enough to handle the bad effects of our modern lifestyle. 7. People are supposed to rule over the rest of nature. 8. People are treating nature badly. 9. People will someday know enough about how nature works to be able to control it. 10. If things don't change, we will have a big disaster in the environment soon.
Response Categories	1 = Strongly Agree, 2 = Agree, 3 = Not Sure, 4 = Disagree, 5 = Strongly Disagree

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Leadership Skills

Generalize Opinion Leadership Scale (short)

Scale designed to measure an individual's opinion
of themselves as it relates to a series of scenarios.

Construct	Opinions of Self as it Related to Leadership
Source	Gnambs, T. and Batinic, B. (2011). Evaluation of measurement precision with Rasch-type models: The case of the short generalized opinion leadership scales. *Personality and Individual Differences*, 50(1), 53-58.
Population	Young Adults
Validity	Content and Convergent
Reliability	Test/Retest =.81 (both occasions)
Stem	Indicate how much you agree or disagree with each statement.
Items	a. Among my friends and acquaintances, I often decide which issues are current. b. My friends and acquaintances often discuss subjects that I brought up. c. I usually succeed if I want to convince someone about something. d. It is easy for me to influence other people. e. I am often the one among my friends and acquaintances who has to approve important decisions. f. I am often asked to make decisions for friends and acquaintances. g. People in my social circle frequently act upon my advice. h. I have the impression that I am regarded by my friends and acquaintances as a good source for tips and advice. i. I often use my persuasive powers during discussions to reach agreements quickly.
Response Categories	1 = Do Not Agree At All, 2 =, 3 =, 4 =, 5 = Agree Completely

Leadership Skills

Leadership Attributes Inventory (LAI)

The LAI been used as a self-report measure and as an assessment of changes in leadership attributes. Although the creators of this scale clearly favor its use as an assessment of others leadership ability, they conclude (and provide evidence for) its use as a self-report measure, as well.

Construct	Leader Attributes
Source	Moss, J. and Preskill, H. (1991). Developing the leader attributes inventory: An odyssey
Population	College Students
Validity	Face and Convergent
Reliability	Alpha = .64 - .92
Stem	Not formally listed in source
Items	a. I approach my work with great energy and have the stamina to work long hours when necessary. b. I reflect on the relationships among events and grasp the meaning of complex issues quickly. c. I encourage and accept suggestions and constructive criticism from my coworkers and am willing to consider modifying my plans. d. I look to the future and create new ways in which the organization can prosper. e. I am comfortable handling vague and difficult situations where there is no simple answer or no prescribed method for proceeding. f. I am committed to achieving my goals and strive to keep improving my performance. g. I hold myself answerable for my work and am willing to admit my mistakes. h. I readily express my opinion and introduce new ideas. i. I feel secure about my abilities and recognize my shortcomings. j. I am willing to assume higher level duties and functions within the organization. k. I continue to act on my beliefs despite unexpected difficulties and opposition. l. I think positively, approach new tasks with excitement, and view challenges as opportunities. m. I am patient and remain calm even when things don't go as planned. n. I can be counted on to follow through to get the job done. o. I am willing to try out new ideas in spite of possible loss or failures. p. I have a sense of humor and an even temperament even in stressful situations. q. I work to benefit the entire organization, not just myself. r. I am honest and practice the values I espouse. s. I learn quickly and know how and when to apply my knowledge. t. I act consistently with principles of fairness and right or good conduct that can stand the test of close public scrutiny. u. I listen closely to people with whom I work and am able to organize and clearly present information both orally and in writing. v. I genuinely care about others' feelings and show concern for people as individuals. w. I create an environment where people want to do their best. x. I develop cooperative relationships within and outside of the organization. y. I work with others to develop tactics and strategies for achieving organizational objectives.

	z. I am comfortable assigning responsibility and authority. aa. I establish effective and efficient procedures for getting work done in an orderly manner. bb. I facilitate the development of cohesiveness and cooperation among the people with whom I work. cc. I help people with whom I work develop knowledge and skills for their work assignments. dd. I bring conflict into the open and use it to arrive at constructive solutions. ee. I schedule my own work activities so that deadlines are met and work goals are accomplished in a timely manner. ff. I am able to deal with the tension of high pressure work situations. gg. I use a variety of approaches to influence and lead others. hh. I believe in and model the basic values of the organization. ii. I make timely decisions that are in the best interest of the organization by analyzing all available information, distilling key points, and drawing relevant conclusions. jj. I effectively identify, analyze, and resolve difficulties and uncertainties at work. kk. I am able to identify, collect, organize, and analyze the essential information needed by my organization.
Response Categories	Tested with a 5, 7, and 9-point Likert. 7-point Likert is recommended, but not formally listed in source.

Mentorship – Attitudes

Construct	Mentee Relationship With Mentor
Source	Belle Liang, B., Tracy, A. J., Kenny, M. E., Brogan, D. and Gatha, R. (2010). *The Relational Health Indices for Youth: An Examination of Reliability and Validity Aspects.* Measurement and Evaluation in Counseling and Development. 42(4), 255-274.
Population	Middle and High School Students
Validity	Face and Content
Reliability	Alpha = .81
Stem	
Items	a. My mentor helps me even more than I ask or imagine. b. My mentor helps me to get to know myself better. c. My mentor encourages me and believes in me. d. I feel happy after being with my mentor. e. My mentor tries hard to understand my feelings and goals about school, my life or whatever is important to me. f. My mentor and I can work out our differences without worrying if he/she will think badly of me.
Response Categories	1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always

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Mentorship – Attitudes and Behaviors

Construct	Mentorship Relationship and Impact
Source	Crisp, G. (2009). *Conceptualization and Initial Validation of the College Student Mentoring Scale (CSMS).* Journal of College Student Development, 50(2), 177-194.
Population	College Students
Validity	Face and Content
Reliability	Alpha = .85 - .91
Stem	While in college, I have had someone in my life who . . .
Items	a. I look up to regarding college-related issues b. helps me work toward achieving my academic aspirations c. helps me realistically examine my degree or certificate options d. I can talk with openly about social issues related to being in college e. I admire f. helps me perform to the best of my abilities in my classes g. encourages me to consider educational opportunities beyond my current plans h. I want to copy their behaviors as they relate to college-going i. provides ongoing support about the work I do in my classes j. gives me emotional support k. encourages me to talk about problems I am having in my social life l. sets a good example about how to relate to other people m. helps me to consider the sacrifices associated with my chosen degree n. expresses confidence in my ability to succeed academically o. serves as a model for how to be successful in college p. discusses the implications of my degree choice q. makes me feel that I belong in college r. encourages me to use him or her as a sounding board to explore what I want s. shares personal examples of difficulties they have had to overcome to accomplish academic goals t. helps me carefully examine my degree or certificate options u. I can talk with openly about personal issues related to being in college v. encourages me to discuss problems I am having with my coursework w. questions my assumptions by guiding me through a realistic appraisal of my skills x. recognizes my academic accomplishments y. provides practical suggestions for improving my academic performance
Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

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Mentorship – Attitudes and Behaviors

Construct	Time Management Skills
Source	Berk, R. A., Berg, J., Mortimer, R., Walton-Moss, B. and Yeo, T. P. (2005). *Measuring the Effectiveness of Faculty Mentoring Relationships*. Academic Medicine, 80(1), 66–71. Retrieved February 3, 2011 from http://www.indiana.edu/~acoustic/s685/berk-effictive-mentor.pdf
Population	University Students and Faculty Members
Validity	Face and Content
Reliability	The ratings by each mentee are usually based on different role profiles. Hence, the ratings are not comparable and do not have the same meaning. Since a statistical sample of mentor ratings cannot be obtained, validity coefficients and standard indices of internal consistency reliability, such as coefficient alpha, as well as other group-based psychometric statistics, cannot be computed.
Stem	Directions: The purpose of this scale is to evaluate the mentoring characteristics of, who has identified you as an individual with whom he/she has had a professional, mentor/mentee relationship. Indicate the extent to which you agree or disagree with each statement listed below. Circle the letters that correspond to your response. Your responses will be kept confidential. Please make additional comments on the back of this sheet.
Items	a. My mentor was accessible. b. My mentor demonstrated professional integrity. c. My mentor demonstrated content expertise in my area of need. d. My mentor was approachable. e. My mentor was supportive and encouraging. f. My mentor provided constructive and useful critiques of my work. g. My mentor motivated me to improve my work product. h. My mentor was helpful in providing direction and guidance on professional issues. (e.g., networking). i. My mentor answered my questions satisfactorily (e.g., timely response, clear, comprehensive). j. My mentor acknowledged my contributions appropriately (e.g., committee contributions, awards). k. My mentor suggested appropriate resources (e.g., experts, electronic contacts, source materials). l. My mentor challenged me to extend my abilities (e.g., risk taking, try a new professional activity, draft a section of an article).
Response Categories	SD = Strongly Disagree, D = Disagree, SLD = Slightly Disagree, SLA = Slightly Agree, A = Agree, SA = Strongly Agree, NA = Not Applicable

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Mentorship – Behaviors

Construct	Mentorship Impact
Source	Ensher, E. A. and Murphy, S. E. (April, 2010). *Mentoring Relational Challenges Scale Development and the Impact of Mentoring Stages, Types, Context, and Gender on Mentoring Relationships. Alexandria, VA: Society for Human Resource Management.* Retrieved February 4, 2010 from http://74.125.155.132/scholar?q=cache:Ckn9BxOvQ8AJ:scholar.google.com/+impact+of+youth+mentoring+questionnaire+survey+scale&hl=en&as_sdt=0,6&as_vis=1
Population	Graduate and Undergraduate Students
Validity	Face and Content
Reliability	Alpha = .80 - .91
Stem	
Items	Demonstrating Commitment and Resilience a. gave me an initial assignment when we first met (i.e., read a recommended book, perform a task, etc.). b. challenged me to reach a difficult, specific goal. c. encourages me to improve certain aspects of my personality. d. has challenged me to think clearly about my career aspirations. e. made it clear that I needed to put in the work for my job, rather than just expecting to take the easy road to advance my career. f. thinks it is important for me to be very dedicated to my job or my career. g. challenges me to think in ways I have never thought of before. h. expects that he or she can trust me. i. may give me critical feedback. j. expects me to take critical feedback without being defensive. Measuring up to Mentor's Standards k. seemed to expect that I would overcome particular hurdles before he or she would establish our mentoring relationship. l. put me under initial scrutiny. m. seemed to be interested in whether I was a competent individual before investing a great deal of time in developing our relationship. n. strongly suggests I take his or her advice. o. feels it is important for me to see the world similarly to the way he or she sees it. p. tested me specifically on my skill level and I felt if I did not have those skills I might run afoul of my mentor. q. pressures me in my performance by telling me not to mess up. Career Goal and Risk Orientation a. has suggested that I take risks in my career. b. asks me to get involved in additional projects that I would not normally do. c. waits for me to take the initiative to set up meetings. d. expects me to know what I need to do to accomplish my career goals. e. is willing to go out on a limb for me in exchange for my loyalty.
Response Categories	1 to 4; 1 = Not At All True, 4 = Very True

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Mentorship – Behaviors

Construct	Mentorship Impact
Source	Pamuk, S. and Thompson, A. D. (August, 2009). Development of a technology mentor survey instrument: Understanding student mentors' benefits. Computers & Education, 53(1), 14-23
Population	Graduate Students
Validity	Face and Content
Reliability	Alpha =.78
Stem	
Items	<u>Professional Benefits</u> a. The one-on-one mentoring program was effective in building professional friendships. b. The one-on-one mentoring program was effective in improving my communication skills. c. This case study was an important step in my academic life in building new experiences such as conference attendance or publishing. d. Having seen publications or conference presentations done by previous mentors encouraged me to do the same things. e. Hearing stories from other mentors in class provided me with alternative ideas and approaches to help my mentee. f. Sharing ideas with other mentors was helpful. g. Working with my mentee improved my leadership skills. h. Overall, I benefited from this mentoring relationship in terms of my professional growth.
Response Categories	Not Provided

Problem Solving Skills

Attitudes Towards Problem Solving Scale

This scale assesses attitudes in areas of willingness to engage in
problem-solving activities, perseverance during the problem-solving
process, and self-confidence with respect to problem solving.

Construct	Attitude Towards Problem Solving
Source	Zakaria, E., Haron, Z., and Daud, M.D. (2004). The reliability and construct validity of scores on the attitudes toward problem solving scale. *Journal of Science and Mathematics in S.E. Asia,* (27)2, 81-91.
Population	Current source was with secondary students in Asia. However, this scale has been used in in United States with adult populations.
Validity	Criterion, Convergent, and Discriminant (cited elsewhere)
Reliability	Alpha = .89 for total scale; .75 - .81 for subscales
Stem	Indicate your feelings on the following items:
Items	1. I like to try hard problem.+ 2. I will put down any answer just to finish a problem.* 3. It is no fun to try to solve problems.+ 4. I will work a long time on a problem.* 5. I will try almost any problem.+ 6. When I do not get the right answer right away I give up.* 7. My ideas about how to solve problems are not as good as other students' ideas.# 8. I am sure I can solve most problems.# 9. I can only do problems everyone else can do.# 10. I will keep on working on a problem until I get the right answer.* 11. I give up on problems right away.* 12. I can solve most hard problems.# 13. I need someone to help me work on problems.# 14. I am better than many students at solving problems.# 15. There are some problems I will just not try.+ 16. I do not like to try problems that are hard to understand.+ 17. I will keep working on a problem until I get it right.* 18. I like to try to solve problems.+ 19. I am a good problem solver.# 20. Most problems are too hard for me to solve.# Note: '+' = Willingness to engage in problem solving subscale; '*' = Problem solving perseverance; '#' = Problem solving self-confidence. Negative items are reverse scored.
Response Categories	1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

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Problem Solving Skills

Educational Performance Scale

Measures skills within several educational domains.
Measures problem solving directly and indirectly throughout the measure.

Construct	Perceived Performance on Several Educational Domains, and Assesses Problem Solving Throughout.
Source	Kang, M., Jo., I., Shin, J., and Seo, J. (2010). Developing an educational performance indicator for new millennium learners. *Journal of Research on Technology in Education,* 43(2), 157-170.
Population	High School and Older
Validity	Content
Reliability	Alpha = .92
Stem	Indicate how much you agree or disagree with each statement.

Items	Cognitive Information Management
	  a. When I study, I collect necessary data.
	  b. I usually make use of other sources of data than the textbook.
	  c. When study, I look for answers on the Internet or in the library.
	  d. I can locate and make use of data or information that are helpful to my studies.
	Knowledge Construction
	  e. I usually ask myself whether I understood class content well.
	  f. I usually reflect upon the content even if I understood it well.
	  g. When I study, I try to find answers to my questions.
	  h. If I cannot understand the content, I try to fully make sense of it by asking other people.
	Knowledge Utilization
	  i. I try to apply things I learned in class to the real world.
	  j. I usually raise questions on ordinary thoughts and look for alternatives.
	Problem Solving
	  k. I provide solutions that no one else thought of.
	  l. I can find solutions even though the problem is complex.
	  m. I usually think of the solution and deal with the problem calmly.
	Affective Self-Identity
	  n. I know my strengths and weaknesses.
	  o. I have dreams and goals that I can clearly explain to others.
	  p. Self-Value EP 16 I try to maintain integrity in my life.
	  q. When I did something dishonest, I try to rectify it.
	  r. I try my best to keep promises I made with myself or with others.
	Self-Directedness
	  s. I take good care of the list of things I have to do.
	  t. If I get lower grades than I expected, I try to find out why.
	Self-Accountability
	  u. I am usually reliable in a group learning situation.
	  v. I try my best to perform my role in a group learning situation.
	  w. I usually submit school assignments on time.
	Sociocultural Social Participation
	  x. I think it is important to have chances to meet new people through extracurricular (club) activities.

	y. I have others besides school friends with whom I can share my feelings. Social Receptivity z. I am usually nice to new students in the class. aa. I can hang around with classmates with personalities and interests very different from mine. bb. I don't think ethnicity has anything to do with making friends. Socialization cc. I usually cooperate and work well with others. dd. I am confident that I can gain the trust of my friends. Social Fulfillment ee. I try to be a leader in a group learning situation. ff. In a situation where we need to make decisions together, my friends usually follow my choice. gg. I contribute more than an average amount when I am in a group learning activity.
Response Categories	4-point Likert scale, format not discussed in source.

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Service-Learning 21st Century Skills

Construct	Service-Learning 21st Century Skills
Source	Markow, D., et. al. (2005). The National Survey on Service-Learning and Transitioning to Adulthood. Saint Paul, MN: National Youth Leadership Council. Retrieved September, 2010 from http://www.nylc.org/happening_newsarticle.cfm?oid=5453
Population	Adults 18 to 28
Validity	Face and content
Reliability	
Stem	*Q645 Thinking about this service project you participated in as part of school before you were 18 years old, was each of the following part of that experience? Again, if you participated in more than one service project, please think about your most meaningful service project that was part of school. *Q655 Why were these service experiences [INSERT Q650 IN LOWER CASE]? *Q660 You indicated that you had participated in a service project as part of an organization before you were 18 years old. Thinking about the service project you participated in before you were 18 years old as part of an organization, which of the following were part of that experience? If you participated in more than one project, please think about the most meaningful service project you participated in as part of an organization. **Q675 Overall, what effect has your service experience had on your life today? Has your service experience had a negative effect, a positive effect or not much effect on your . . . ?
Items	**Section 600: Service and/or Service-learning experience** **Did Service in a School** Q645* 1. I chose or helped to choose the type of project I worked on. 2. I helped design or plan the service project. 3. I worked directly with the people in the community (a "hands-on" project). 4. I was required to write about or reflect on my service experience for the class or group. 5. I received a grade for the project or it was related to my class grade. 6. I met people from different economic, racial or cultural backgrounds from my own. 7. I used and developed problem-solving skills. 8. I learned a lot. 9. The teachers or adult leaders set high expectations. 10. I analyzed or evaluated whether the project was a success. 11. I did research, read articles or books to prepare for the project. 12. The project was important for the group it served. 13. I met adults I would go to if I were in trouble or needed help. 14. I had in-class discussions about the project. Q655* 1. Because of the efforts of an adult leader. 2. I developed better relationships with adults.

3. I made a difference in my community.
4. It made me realize what I wanted to do with my life.
5. It helped me enjoy learning.
6. I met people whose lives were very different from my own life.
7. I realized that I have special talents.
8. Like helping others.
9. It was fun/enjoyed it.
10. Feel good/satisfied.
11. Something else.
12. None/Nothing.
13. Don't know.
14. Decline to answer/No answer.

Did Service as Part of an Organization

Q660*
1. I chose or helped to choose the type of project I worked on.
2. I helped design or plan the service project.
3. I worked directly with the people in the community (a "hands-on" project).
4. I was required to write about or reflect on my service experience for the group.
5. I met people from different economic, racial or cultural backgrounds from my own.
6. I used and developed problem-solving skills.
7. I learned a lot.
8. The adult leaders set high expectations.
9. I analyzed or evaluated whether the project was a success.
10. I did research, read articles or books to prepare for the project.
11. The project was important for the group it served.
12. I met adults I would go to if I were in trouble or needed help.
13. I had discussions about the project.
14. None of these

Q670 Why else did you participate in service activities before you were 18 years old? Responses were coded back into Q665.

Did Service Anywhere

Q675**
1. Friendships and family life
2. Ability to work well with other people
3. Ability to avoid difficulty with the law
4. Career development or advancement
5. Ability to accomplish goals
6. Ability to help others
7. Being a good citizen
8. Self-confidence
9. Being responsible financially
10. Respecting others
11. Leadership ability
12. Ability to see the world from someone else's perspective

Response Categories	*Please select all that apply. **1 = Negative Effective, 2 = Positive Effective, 3 = Not Much Effect, 4 = Does Not Apply

Time Management Skills – Behaviors

Construct	Time Management Skills
Source	Carter, D. N. and Kotrlik, J. W. (2008). *Factors Related to the Developmental Experiences of Youth Serving as 4-H Camp Counselors.* Journal of Agricultural Education, 49(2), 50-63.
Population	High School Students
Validity	Face and Content
Reliability	Alpha = .90 (for entire instrument)
Stem	
Items	a. I put all my energy into this activity b. Practiced self discipline c. Learned to focus my attention d. Learned to push myself e. Learned about setting priorities f. Used my imagination to solve a problem g. Observed how others solved problems h. Learned about organizing time i. Learned about developing plans for solving a problem j. Learned to consider possible obstacles when making plans k. Learned to find ways to achieve my goals l. I set goals for myself in this activity.
Response Categories	1 = Not At All, 2 = A Little, 3 = Quite a Bit, 4 = Yes, Definitely

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Time Management Skills – Behaviors

Construct	Time Management Skills
Source	Hansen, D. M. and Larson, R. (2005, February). *The Youth Experience Survey 2.0: Instrument Revisions and Validity Testing*. Champaign, IL: University of Illinois, Urbana-Champaign. Retrieved January 5, 2011, from http://www.tpsr-alliance.org/toolbox/docs/Youth_Experience_Survey.pdf
Population	High School Students
Validity	Face and Content
Reliability	Initiative Experiences Subscale: Alpha = .94
Stem	Based on your current or recent involvement please rate whether you have had the following experiences in [name of activity]

Items	Initiative Experiences
	Goal Setting
	  a. I set goals for myself in this activity
	  b. Learned to find ways to achieve my goals
	  c. Learned to consider possible obstacles when making plans
	Effort
	  a. I put all my energy into this activity
	  b. Learned to push myself
	  c. Learned to focus my attention
	Problem Solving
	  a. Observed how others solved problems and learned from them
	  b. Learned about developing plans for solving a problem
	  c. Used my imagination to solve a problem
	Time Management
	  a. Learned about organizing time and not procrastinating (not putting things off)
	  b. Learned about setting priorities
	  c. Practiced self-discipline

Response Categories	1 = Yes, Definitely, 2 = Quite a Bit, 3 = A Little, 4 = Not At All

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Resources

    Evaluation Toolkits

    Logic Models

    Content-Related Resources

Appendix C

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Evaluation Toolkits

Applied Environmental Education Program Evaluation

Designed to help online course participants evaluate their education and outreach programs, and provides participants with an overview of evaluation and an opportunity to practice skills designing and using evaluation tools for environmental education and outreach programs.
https://www.uwsp.edu/natres/eetap/aeepe_course_page.aspx

Ecological Understanding as a Guideline for Evaluation of Nonformal Education (EUGENE)

Easy-to-use, practical instrument that can help users assess baseline knowledge of ecological principles, and assess knowledge gain in those same principles at the end of programs. Through the Web site, users can select which ecological principles are appropriate to assess, add up to four customized questions, print an instrument for pre- and post-testing, enter data following instrument administration, and analyze results.
https://projecteugene.org/cgi-bin/eugene

Educators' Guide to Service-Learning Program Evaluation

Provides introductory information for youth development program staff on how to evaluate programs that feature service-learning as an instructional approach.
http://servicelearning.org/filemanager/download/37/EvaluationToolkit.pdf

Educators' Guide to Collecting and Using Data: Conducting Focus Group Research; Conducting Surveys; Conducting Classroom Observations

Three RMC Research booklets that provide specific guidance on how to develop protocols and conduct focus groups, survyes, and classroom observations.
http://www.rmcdenver.com/Default.aspx?DN=29e6b628-bd88-457f-840a-0d95b21908d9

Evaluating Your Environmental Education Programs: A Workbook for Practitioners

Walks users through how to design and conduct an evaluation. A case study of one program demonstrates how to use each chapter to conduct an evaluation.
http://www.naaee.org/publications

Evaluation Assessment: Examining the Readiness of a Program for Evaluation

An Office of Juvenile Justice and Delinquency Prevention resource from the program evaluation briefing series to help users decide when to evaluate a program. Other papers discuss hiring and working with an outside evaluator, cost benefit analysis, incorporating evaluation into the request for proposal (RFP) process, and strategies for evaluating small juvenile justice programs.
http://www.jrsa.org/pubs/juv-justice/evaluability-assessment.pdf

Evaluation Toolkit for Magnet Schools

A toolkit with information, interviews, glossaries, and presentations to show how to evaluate magnet school programs.
http://evaluationtoolkit.org

Mobilizing for Evidence-Based Character Education

A booklet produced by the U.S. Department of Education for evaluating character education programs.
http://www2.ed.gov/programs/charactered/mobilizing.pdf

My Environmental Education Evaluation Resource Assistant (MEERA).

MEERA is an online "evaluation consultant" created to assist you with your evaluation needs. It will point you to resources that will be helpful in evaluating your environmental education program. MEERA can help you: Learn more about evaluation and its importance; Move through the evaluation process step-by-step, with tips and pitfalls to avoid; Obtain suggestions on important evaluation topics, for example, on how to find, select, and work with an external evaluator; Search through example EE evaluations and obtain detailed insights about these evaluations; Find additional evaluation resources such as "how-to" guides and links to evaluation tools; Identify and learn about related professional development opportunities.
http://meera.snre.umich.edu/

Needs Assessment in Environmental Education and Interpretation

Presents a basic, practical approach to needs assessment in an EE/I context to help users develop a plan for carrying out a needs assessment.
https://www.uwsp.edu/natres/eetap/naeei_course_page.aspx

Teacher's and Practitioner's Professional Development Needs

Identifies 89 professional development needs for the field of environmental education, and presents the specific priorities of educators who work with pre-kindergarten through college-age students in formal education systems and practitioners who work as informal or nonformal educators outside of these systems.
http://www.eetap.org/pages/dynamic/web.page.php?page_id=150&topology_id=1&eod=1

The 2002 User Friendly Handbook for Project Evaluation.

A National Science Foundation publication explaining the main components of evaluation, evaluation issues and concerns, and the complexity of being culturally responsive in evaluation.
www.nsf.gov/pubs/2002/nsf02057/nsf02057.pdf

User-Friendly Handbook for Mixed Methods Evaluations

A National Science Foundation publication to help people learn about evaluations using both quantitative and qualitative data, and which methods to use for which purposes.
http://www.nsf.gov/pubs/1997/nsf97153/start.htm

W.K. Kellogg Foundation Evaluation Handbook

Offers a blueprint for conducting project-level evaluations.

http://www.wkkf.org/knowledge-center/resources/2010/W-K-Kellogg-Foundation-Evaluation-Handbook.aspx

Logic Models

Developing a Logic Model: Teaching and Training Guide

A booklet that describes and provides training materials to help individuals learn how to develop a logic model.
www.uwex.edu/ces/pdande

Logic Models

A Web site by the Office of Juvenile Justice Programs that provides information and templates on what should be included in a logic model.
www.ojjdp.gov/grantees/pm/logic_models.html

W.K. Kellogg Foundation Evaluation Handbook/Logic Model Development Guide CD

A handbook showing why logic models are important and how to construct logic models.
http://www.wkkf.org/knowledge-center/resources/2010/W-K-Kellogg-Foundation-Evaluation-Handbook.aspx

Content-Related Resources

Introduction to Geologic Mapping

A summary of the principles and practices of Geologic Mapping.
http://ncgmp.usgs.gov/ncgmpgeomaps/geomapping

History of USGS Geologic Mapping

Overview of the USGS geologic mapping from 1879 to present.
http://ncgmp.usgs.gov/ncgmpgeomaps/geomaphistory

National Geologic Map Database

Geoscience resource for maps and related data about geology, hazards, earth resources, geophysics, geochemistry, geochronology, paleontology, and marine geology.
http://ngmdb.usgs.gov/

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Assent and Consent Forms

Sample Assent Form

Sample Active Consent Form

Sample Passive Consent Form

Appendix D

Character Education Study

(Name of Company)

Participant Student Survey (Grades 6-12) – Spring 2011

Directions: (Company name) is conducting a research study of your attitudes about yourself, your school, and your community, and the following pages have questions about each of these categories. This is a *survey,* not a test. There are no right or wrong answers. It is important that you answer each question honestly. The survey will take about 20 minutes to complete. You do not have to participate in the study, and you can stop participating at any time. You can skip a question if you do not want to answer it. It you decide not to participate, there will be no negative consequences. If you have any questions about the survey, please raise your hand and the person distributing the survey will help you.

By writing your name below, you agree to complete the survey. The survey is voluntary. We will make every effort to keep the information we collect confidential, and your individual answers will not be reported to anyone.

Name (please print):   _____

Name (signature):   _____

Date: _____

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Sample Active Consent Form

(Date)

Dear Parent or Guardian:

(Company name), on behalf of the (Client), is conducting a research study of the effects of service-learning on students in alternative education programs. In service-learning programs, students work with their class on projects that benefit the community and that are linked to their academic program. These are not court-ordered community service programs. The information gathered in this important study will help teachers and researchers understand how service-learning programs at alternative education sites can be improved. We are requesting your permission to include your child in this study. Every effort will be made to keep the information collected confidential. No identifying information about your child will be retained in our database, and **no individual information will be reported – only group information.** No names will be used in any report.

Your child will be asked to participate by taking a short survey (approximately 20 minutes) during the orientation to and exit from the program. The survey consists of multiple choice questions regarding students' attitudes toward learning, school, and related work. No questions of a personal and sensitive nature, such as health, will be asked. A staff person from school will administer the survey. We will also work with district and/or state administrators to collect data on student achievement, attendance, and disciplinary referrals. The information will be used to determine if participation in service-learning has academic and behavioral impacts. This information will be closely safeguarded. No individual data will be reported – only group summaries.

Your child's participation is entirely voluntary, and you may choose not to have your child participate or stop participating at any time. Your child may also choose not to participate or to withdraw from the study at any time. There will be no penalty for not participating. We recommend that you discuss your decision about his or her participation with your child. Strict rules for data collection are written and enforced to prevent violations of your child's confidentiality. During the group interviews, students share their thoughts, and while we will ask them not to divulge what was said, they may do so. For our reports, no names or personally identifying information will be used. Potential risks of this study are minimal. If students become embarrassed or feel uncomfortable about any part of the survey or interview administration, they have the right to talk with a school counselor.

The attached form indicates your willingness for your child to participate. If you give permission for your child to participate in the survey and interview, please check the boxes saying "yes." If you have any objection for any reason to your child participating in one or both activities, simply check the box saying that you do not want your child to participate. Without receiving a "yes," we cannot include your child in the study. If you would like a copy of your signed consent form, please ask the staff person assisting you at intake or orientation and he or she will provide one.

This study is a significant step in a national effort to identify effective practices for service-learning programs at alternative education sites. Thus, we hope you consider allowing your child to participate. If at any time before, during, or after the study you have questions about the study, please contact the service-learning team at (Company name and telephone number). We will be happy to answer any questions you may have. If you have any questions about your child's rights as a research participant, you can contact the (Institutional Review Board name and telephone number). Thank you for your attention and help.

Sincerely,

Parent/Guardian Permission Form

Your child is at a school that is participating in a study on the impacts of service-learning programs on students. This study is funded by the (Client name). Your child will be asked to complete a 20-minute survey during the orientation to and exit from the program. Your child's participation is voluntary. Every effort will be made to keep your child's information confidential, and his/her name will not appear in any report. No individual information will be reported – only group information.

Please indicate below whether it is okay for your child to participate in this study and return the form to the staff person assisting you.

Permission to take student survey:

_____   Yes, I agree to have my child take the survey as part of the study on service-learning programs.

_____   No, I do not want my child to take the survey as part of the study on service-learning programs.

_____ _____ Child's name (Please print.)
          first   last

_____ Your Name (Please print)

_____ Your signature

_____
          Date

Thank you.

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Sample Passive Consent Form

Character Education
PARENT PERMISSION FORM: Spring, 2011

The (Client) _____ is currently implementing a character education program in many of the district's schools. (Company) is conducting an evaluation of the program. The purpose of this study is to measure the impacts of the program on participating students and teachers, in comparison to students and teachers not involved in the program.

Your child will be asked to participate in the study by completing a brief survey at the beginning and end of the school year. The survey consists of multiple choice questions regarding attitudes about themselves, school, and community. The survey will be administered during class time, and participation should take about 20 minutes. We will also work with district administrators to collect group information on student achievement, attendance, and disciplinary referrals. Approximately 1,500 students will be in this study.

There are no foreseeable risks to students who participate in this study. No questions of a personal nature will be asked. Your child's participation in this study is completely voluntary. You or your child may choose not to have your child participate or to stop participating at any time. There will be no penalty for not participating. If you or you child decide your child should not complete the survey, he or she will be given an alternative assignment.

Strict rules for data collection are written and enforced to prevent violations of confidentiality. Other than the research team, no one will see your child's answers. **No individual information about your child will be reported or shared with anyone. No names will be used in any reports. Results will only be reported for whole classrooms.** If at any time before, during, or after the study you have questions, please contact (name and telephone number) and they will be happy to answer any questions you have.

Authorization: *__You only need to return this form if you do NOT want your child to participate in this study__.* The section below indicates your willingness for your child to participate in this study. If it is okay with you for your child to take the survey, you may do nothing or you may check the box that says "yes." If you have any objection for any reason, simply check the box saying "no," and we will make arrangements for your child to do a different activity while other students are taking the survey. *__If we do not get a form, we will assume your child can participate__.*

If you have questions about your rights as a research participant please contact the (Name) Institutional Review Board at (telephone number).

Please check one:

☐ Yes, my child can participate.

☐ No, I do not want my child to participate.

Name of Participant (printed) _____

Name of Parent or guardian (printed) _____

Signature of Parent or guardian _____ Date _____

Frequently Asked Questions

Appendix E

1. **How much does evaluation cost?**

    Costs for evaluations can range from a small to very large amount of money. Many funders, such as the National Science Foundation, recommend that programs spend between 10% and 15% of their bottom lines on evaluation services. Qualitative and multi-method evaluations typically cost more than quantitative evaluations. Sometimes it pays to ask an external evaluator what they can do for a certain amount of money and offer options for additional work. While evaluations may seem costly, they are well worth the time and effort since they will yield important outcome information that can be used to generate additional funds and show the worth of the program, as well as guidance for what to do to improve. *See Section 1 for more information.*

2. **What is the benefit of conducting evaluations?**

    The primary benefit is to show how youth programs impact their participants. The information can be used for accountability, documentation, program improvement, marketing, and more. *See Section 1 for more information.*

3. **When and what should I evaluate?**

    Evaluations can occur at any time, for formative or summative purposes. Those programs that are to be repeated, require major time and effort for the Bureau, and/or represent important projects for the Department of Interior. One-time events that are not likely to be repeated should not be evaluated. Typically an evaluation investigates the impact of participation on youth and others. The logic model should be used to guide what is to be evaluated, and all evaluations should be guided by evaluation questions. *See Sections 1, 2, and 3 for more details.*

4. **Am I authorized to evaluate? Am I authorized to survey?**

    You should always receive approval from your supervisor before undertaking an evaluation. Specific protocols must be followed and funds must be allocated.

5. **Who needs to see the evaluation results?**

    It is important to share the results widely, primarily for accountability and improvement purposes. Funders, leaders, and program staff should all see the results, but not in the same form. Often an evaluation brief or sharing an executive summary is better than sending an entire report. *See Section 7 for more information about dissemination and what should be shared to whom.*

6. **How do I analyze data?**

    If you have the appropriate levels of expertise, you can analyze the data to show impact and trends. You should be careful to remain objective, follow appropriate evaluation principles, and triangulate all of your findings. If you do not have the appropriate expertise, seek outside help. *See Section 6 for more information.*

7. What consents do I need to collect data?

For any evaluation involving human subjects, you must obtain an assent from the individual that is the object of the evaluation. Both adults and young people must agree to participate, and must be informed about the disposition of the data; that is, whether the data will be treated anonymously, confidentially, or with names. They must also know the purpose of the evaluation, that their participation is voluntary, the benefits to be accrued, any potential risks of participation, and how the results will be used. Children and youth under the age of 18 must also have parental consent to participate. To collect program data, you need to have Institutional Review Board (IRB) and/or Office of Management and Budget (OMB) approval to ensure that you are treating your human subjects appropriately. *See Section 4 for more information and Appendix C for sample assent and consent forms.*

8. Certain questions I can't ask children/adults?

While you can ask nearly any type of question, the requirements for human subjects protections and type of review required vary depending upon the nature of the questions being asked. Anything of a personal nature, such as lifestyle choices, drug or alcohol use, and participation in risky behaviors, must go through a very rigorous review process before being approved for an evaluation. Your IRB and OMB will have more information on these requirements.

9. How hard is conducting an evaluation? How much time does it take?

Depending upon the design, the evaluation can be quick or very lengthy. Administering a quick online survey using existing instruments is quite easy and simple to analyze. Conducting a rigorous experimental design is very difficult and takes years. Most often, you will want to hire an external evaluator to conduct the work. *See Sections 1, 2, 4, 5, 6, and 7 and the Appendices for more information.*

10. How will evaluation results be used by leaders? Is my program in jeopardy if results are unfavorable?

Evaluation results are used to document impacts, make programmatic decisions, and improve programs. Leaders typically use the results to help improve programs if results are unfavorable. After all, in times when funds are scarce, it is important that all programs have a strong impact. No information at all about impacts is just as negative as having unfavorable results.

11. What are the differences between outputs and outcomes in the logic model?

An output is generally a quantifiable result of programming, typically referring to the number of hours of participation, the number of people who participate in a program, and other easily documented variables related to time and effort. An outcome is the same as an impact and refers to the difference that the program made for those who participated. *See Section 2 for more information.*

12. How do I choose my methodology?

There are different advantages and disadvantages to each evaluation design and methodology you may wish to choose. Generally, you want to choose the most rigorous design that you can afford. *See Sections 3 and 4 for more details.*

13. How do I know if I have to go to an outside evaluator?

Generally, the more complicated and/or rigorous the design and the more "high stakes" the use of the data, the more likely you would be to choose an outside evaluator. *For information on when to use an outside evaluator, see Section 1 and for tips on choosing an outside evaluator, see Appendix A.*

Glossary

Appendix F

Accountability: The obligation to assess the outcome of one's efforts to ensure that objectives are being met; taking responsibility for the effectiveness of one's programs.

Analysis: Examination of data using appropriate tools to answer evaluation questions.

Assent: Agreement to participate in the evaluation; includes specific information that must be shared with the evaluation participant.

Attrition: Loss of program participants or subjects from a study sample.

Coding: Assignment of a descriptive or analytic label, used for categorizing data.

Comparison group: A carefully chosen group of people that is not participating in the program whose demographics and other characteristics closely match those who do participate (treatment group). Used for quasi-experimental studies.

Confidentiality: Protection of data and information from anyone other than those authorized to see the data. Confidentiality requires that individual names of participants cannot be identified and survey data with fewer than 10 participants cannot be reported.

Consent bias: Inaccurate reporting of data because those who participate have different characteristics than the general population that they represent.

Control group: A randomly selected group of individuals from a given population that does not participate in the study (are not in the treatment group) but from whom data are collected. Used in experimental designs.

Data: Factual information that can be collected. Includes demographic information, opinions, test scores, interview results, or any other information related to the evaluation.

Data collection tools: Instruments used to collect information, including surveys, interviews, focus groups, observations, records, logs, and other data.

Design: The process of creating procedures for conducting the evaluation.

Evaluation plan: A written document that describes the design, methodology, timelines, analytic approach, and other aspects of the evaluation.

Experimental design: Random assignment of individuals that participate and do not participate in a program. The most efficient way to determine causal effects and the most rigorous design available for evaluation.

Fidelity: The extent to which a program is implemented as designed, with little variation.

Focus group: A group convened by a facilitator to discuss answers to a series of questions posed by the facilitator, all of which are designed to answer evaluation questions and solicit group members' opinions, observations, experiences, and insights.

Institutional Review Board (IRB): A committee often associated with an institution of higher education (or a commercial venture) that serves as a compliance group to ensure that an evaluation plan follows particular procedures to help guarantee that no human subject will be harmed as a result of his/her participation. The body reviews applications and can approve, ask for revisions on, or reject evaluation plans and forms.

Logic model: A diagram or visual display that shows the rationale underlying a program or intervention. Typically shows anticipated inputs, outputs, and a range of short-, medium-, and long-term impacts.

Longitudinal study: An evaluation or research project that follows subjects over time to determine longer-term impacts.

Methodology: The process and procedures used to collect data.

Outcomes/Impacts: Measurable changes in knowledge, skills, dispositions, or behaviors that result from program participation.

Pilot test: A preliminary study of the evaluation, usually conducted to test the instruments to be sure they are valid and reliable.

Pre/post study: An evaluation design that involves using the same measure before and after program participation to determine changes over time.

Qualitative data: Information that is primarily descriptive and interpretive in nature, usually collected through focus groups, interviews, and/or observations.

Quantitative data: Information that is numeric, usually collected through surveys or tests.

Quasi-experimental studies: Studies that used a matched treatment and comparison group design where the program participants are matched as closely as possible to nonparticipants to show program impacts. Results in correlational analysis, but cannot be used for causal analysis.

Random assignment: A procedure in which potential participants are indiscriminantly assigned to an experimental or control group, usually by using a table of random numbers or drawing names from a hat. Creates two statistically equivalent groups.

Random sampling: Selecting people in a way that ensures that each has an equal opportunity to be chosen for the program.

Reliability: The extent to which a procedure or instrument will get the same results over repeated administrations.

Response bias: Degree to which a self-reported answer reflects the desire to please the evaluator or program staff and does not accurately represent the subject's true feelings.

Sample: A subset of the total population that should represent the population as a whole.

Statistical significance: The extent to which measurable differences found between groups cannot be attributed to chance.

Triangulation: Use of at least three sources of data that measure the same idea or construct.

Validity: The degree to which a data collection tool measures what it is meant to measure.

Variable: An attribute of knowledge, skills, dispositions, or behaviors.