

How-To: Participatory Methods



Some Resources for Evaluation Planning

[“An Interactive User’s Guide for Evaluating Learning Outcomes from Citizen Science,”](#) developed by the Program Development and Evaluation group at the Cornell Lab of Ornithology, 2017 includes an extensive section on planning, including developing goals and understanding sample size considerations.

The [“Evaluation toolkit for museum practitioners,”](#) developed by the East of England Museum Hub in 2008, includes an evaluation planning checklist.

Introduction to Participatory Methods

One of the foundational principles of collaborative conservation is participation. “Participatory methods” describes approaches to evaluation and information-gathering in which participants play an active role. In general, using more participatory methods will yield a deeper understanding of “how” and “why” participants think the way they do. These methods yield good information, strong engagement, and lead to good decisions - all while drawing people in.

This How-To sheet gives an overview of several different types of methods that can be used to evaluate certain aspects of the collaborative effort; they can also be used to gather information from stakeholders to inform collaborative decision-making. Each of these methods has pros and cons depending on what it is you want to know, where your data or information will come from, and the context in which you are operating. This How-To sheet provides some considerations to help you choose the best tool for your context and mission, and perhaps encourage you to branch out and try something new.

Participatory methods do not have to be complicated to be robust and valid. Start with a plan that includes what you want to know and why you want to know it, then figure out the best method(s) to answer those questions. This How To includes a decision-making matrix that might be helpful for this.

Because different methods have different strengths and weaknesses, utilizing more than one often gives better information – thus, many people use a mixed-method approach. You can also adapt a tool to better meet your needs.

This How-To sheet is not meant to be an exhaustive list of methods, and many of the considerations provided are generalized. I created this resource because I noticed that many folks tended to choose the go-to methods of surveys and focus groups, yet there are many other creative methods available that might be a better fit for gathering information in ways that promote participation and authentic engagement. I hope you are inspired to try something new!

Appendix I takes a few of these tools and provides more in-depth information in a case study format. Appendix II includes a short, non-comprehensive list of references that provides a good place to start for those looking for additional resources.

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Decision Matrix

What do you want to know? → Tools ↓	Knowledge, understanding	Skills	Attitudes, values	Satisfaction, judge quality of process, feelings of inclusion	Intentions, behaviors, actions	Impact of a program, partnership, or initiative	Social interactions
Survey	Fair/Good	Fair	Fair	Good	Fair	Fair/Good	Fair/Good
Interview	Fair/Good	Fair	Good	Good	Fair	Fair/Good	Fair
Focus Group	Fair	Fair	Good	Good	Fair	Fair/Good	Fair
Observation	n/a	Good	n/a	Fair	Good	n/a	Good
Social Network Analysis	n/a	n/a	n/a	n/a	n/a	Good	Good
Drawings, timelines, photovoice, mapping, etc.	Good	Fair	Good	Fair	Fair	Fair	Fair
Card sorting methods	Good	Fair	Good	Fair	Fair	Fair	n/a
Relationship circles	n/a	n/a	Good	n/a	Fair	n/a	Good
Embedded activity (e.g., concept map)	Good	Fair	Fair	Good	Fair	Good	Fair/Good

Adapted from Word Craft, 2003.

Scale: **good** = offers more benefits than limitations; **fair**: benefits and limitations are close to even; **n/a**: tool in most cases is not appropriate for the project/activity.

We encourage you to use this matrix to think broadly about your options, and perhaps branch out and try something new.



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Tool: The Survey

Description:

A series of structured questions, often including open-ended questions, those with a rating scale, and questions designed to gather demographic information. An efficient way to collect data from a small to large number of participants. Can be used to measure attitudes, knowledge, awareness, feedback, expectations, preferences and beliefs – you can use a survey to measure just about anything.

Considerations:

The questions must be carefully designed; consider conducting interviews with a subset of your respondent pool first and/or using question banks of validated questions. Questions should also be pilot tested with the population to be surveyed to determine how people are interpreting abstract concepts.

Pros	Cons
<ul style="list-style-type: none">• A good tool if the desire is to gather information quickly and inexpensively. Multiple participants can respond at the same time.• Can be used to gather quantitative information from a large group.• When they are anonymous, surveys may encourage participants to provide more candid information.• Relatively fast to complete; most surveys do not require a large amount of time or commitment from participants.	<ul style="list-style-type: none">• Sometimes there is a need to encourage people to complete (surveys can be uninspiring)• It can be difficult to get a representative sample; recruiting the “right” participants may be challenging.• Those that choose to participate may have strong opinions (positive or negative). Some participants may answer the way they think is desirable/normative.• Participants may interpret abstract concepts in different ways.• You don’t know why people respond in certain ways (although open-ended questions can reveal certain motivations).• The responses you receive will be limited to the questions you ask with no opportunity to probe or ask follow-up questions.

Some resources for surveys

The Association for Advancing Participatory Sciences has several resources, including [“Survey Instruments to Measure Learning Outcomes”](#)

A book on the subject: L Robinson, S.B. and K.F. Leonard. 2018. [Designing Quality Survey Questions](#). Sage Publications, Inc.

On-line survey resources, such as SurveyMonkey or Qualtrics, often have “question banks” of common survey questions that have been developed and tested by methodologists. These can be accessed when you create an account; many of these services have options to create a free account.

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Tool: The Interview

Description:

Collect information by listening to people. Can be tightly structured (essentially a survey delivered verbally), semi-structured, or be a more informal conversation. Can yield deeper insight, context, and the “why” - including understanding what a participant’s experience was, whether anything got in the way of learning or understanding, and the underlying reasons for their behaviors.

Considerations:

The questions must be carefully designed; consider conducting interviews with a subset of your respondent pool first and/or using question banks of validated questions. Questions should also be pilot tested with the population to be surveyed to determine how people are interpreting abstract concepts.

Pros	Cons
<ul style="list-style-type: none">• Can explore motivations, attitudes, and a deeper understanding of a participant's experience.• Because you cannot interview large numbers of people, it is important to be highly intentional about selecting interviewees in order for the resulting information to be valuable; sampling may be more representative than a survey.• Often a positive experience for participants.• Can reveal essential information that you may not have considered previously.	<ul style="list-style-type: none">• Time intensive for both the interviewer and the interviewee.• Requires strong and skilled facilitation.• Interviews may present more barriers to some participants (e.g. families with children, those who speak a language other than that of the interviewer) than surveys and other less intensive methods.• Potentially cumbersome to transcribe, review, and analyze.• The power dynamic between the interviewer and interviewee is generally set in favor of the interviewer.

Some resources for interviews

Through the *Children, Youth, and Families Education and Research Network*, Meg Sewell with the University of Arizona developed a [one-pager](#) describing qualitative interviewing, including considerations around design and development.

B.D. Casterle et al. (2012) provides a good explanation of qualitative data coding and provides some step-by-step instructions and considerations: B. D. de Casterle et al. 2012. QUATOL: A guide for qualitative data analysis. *International Journal of Nursing Studies* 49 (2012) 360-371.

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Tool: The Focus Group

Description:

An interview with a group of participants that have been invited because they meet certain criteria or attributes. Focus groups are often characterized by interactions among the group. Includes a pre-determined topic area; a moderator who facilitates the structured discussion by asking open-ended questions; and some way of recording the conversation. Can be used to gather deeper insight, context, and the “why” of participants’ views, attitudes, beliefs, and experiences. Because of the interactions within the group, the discussion can lead to different types of information, ideas, or opinions than might be revealed during a one-on-one interview.

Considerations:

A method best used when you can take advantage of group interactions. A good strategy for testing and refining surveys or other instruments, or to provide depth to survey results. Follow-up probing questions reveal explanations and what’s behind opinions or other statements. The information you gather is likely not representative of the population and shouldn’t be used as quantitative data.

Pros	Cons
<ul style="list-style-type: none">• Especially useful during formative evaluation or the beginning stage of a project.• The discussion might uncover ideas and issues that you may not have considered. Can take a deep dive into issues that come up.• The discussion can also be beneficial to the participants, as they may develop a deeper understanding of an issue through learning others’ perspectives.• Takes less time than interviewing the same number of people.	<ul style="list-style-type: none">• Requires careful and skilled facilitation and group management.• Time intensive for the participants, and it takes time to set up and analyze.• Some participants might dominate the conversation; others might be reluctant to contradict ideas that are brought forth.• Potentially cumbersome to transcribe, review, and analyze.

A focus group case study

“In research I conducted on family relationships in the context of high HIV/AIDS prevalence in southern Africa, I found that informal group interviews provided valuable insights beyond those generated by structured, in-depth interviews. Discussions in the group context focused more on what can and cannot be done in relationships today, while parallel discussions in individual interviews focused more on individual-level explanations for behavior. As a result, the individual-level and group-level data complement one another in ways that enhance ongoing analyses.” [S. Short, 2006. Focus Groups: Focus Group Interviews, in A Handbook for Social Science Field Research: Essays & Bibliographic Sources on Research Design and Methods. Sage Publications.](#)

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Tool: Observation

Description:

Observing how people behave under certain circumstances (e.g., at an event, a place, an exhibit, or with each other) can yield insights into how they use a space or a thing, or act while in a certain context. It can also reveal how they interact with each other and with staff, guides, and others.

Considerations:

Develop a consistent strategy for who or what will be observed and how. Best when combined with other methods, such as interviews, to understand the motivations and underlying reasons behind behaviors and choices. *Consider what kind of permission you will need to obtain from potential participants in order to carry out this method ethically.*

Pros	Cons
<ul style="list-style-type: none">• Able to directly observe actual behavior and events, rather than participants' recollections or reflections.• Able to see not only what people do, but also what they don't do. This is often a more accurate assessment than asking people about their behaviors.	<ul style="list-style-type: none">• Does not reveal the reasons behind the behavior or motivations.• Potential for the space or others to influence behavior.

Some resources for observations

The University of Cambridge Museums & Botanic Garden (Collections in Action series) developed a "[*How to: Visitor Observation*](#)" guide (by Sarah Jane Harknett) that walks through a timing and tracking evaluation method. This can be adapted and applied in many different situations.

And the Kera Collective published a blog post "[*Going Undercover: 3 Ways we Unobtrusively Observe Visitors in Museum Exhibitions*](#)" (2022) that describes three observation techniques, including some of their pros and cons.

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Tool: Social Network Analysis

Description:

A way to visualize social structures through graphical plots that include nodes (people or entities) and the relationships or interactions that connect them. Surveys and interviews can be used to collect data for the social network analysis, which can reveal potential collaborative impacts such as trust, cohesion, expanded connectivity, scale, collaborative culture, and efficiency. This information can be leveraged to address an issue. Requires specialized computer software.

Considerations:

Best when used to answer a question (e.g., to what extent did our collaboration add value by allowing partners to scale their work), not just to reveal the status and strength of current relationships.

Pros

- Quantitative analysis methods are good at revealing trusted connections and the structure of a network, while qualitative methods are useful for understanding individual perceptions of the function and action of the network.

Cons

- Requires specialized knowledge and tools.
- Requires extensive data collection, with the need to survey a large sample size.

Some resources for social network analysis

A case study is included in Appendix 1 of this document.

The [Social System Mapping Community of Practice](#) meets regularly and has some resources on-line.

In [this academic research paper](#), the authors use social network analysis to tease out factors influencing human impact on wildlife ecology (Balasubramaniamht , K.N., 2021).

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Tools: Drawings, Timelines, Photovoice, And More

Description:

This category includes a variety of creative methods that can be used to explore subjective information – a participant’s views, opinions, beliefs, values, tastes, ideas, and perceptions about a subject. These methods are especially useful when the topic of interest includes abstract concepts or the need to explore ideas that words alone would have a hard time expressing. A well-known example is the Draw A Scientist Test (DAST), paired with a checklist of indicators used to systematically analyze the drawings. Another example, the Timeline, has participants reflect on their perspectives about different stages of a project or partnership, jointly recording their responses on a single roll of paper. And participants engaged with PhotoVoice are tasked with taking photographs to represent their ideas, reasons, emotions, and experiences around a topic. The curated photos are used to promote critical dialogue, revealing underlying issues and thematic ideas that an instrument like a survey would not have been able to uncover. These methods often account for low levels of formal education or literacy.

Considerations:

Many of these methods can be paired with interviews to delve more deeply into the participant’s ideas and experiences with the topic area. These participatory methods can be a good approach to better understand the lived experiences of people from underrepresented and underserved populations.

Pros	Cons
<ul style="list-style-type: none">• These methods can authentically capture thoughts and ideas by allowing people to communicate beyond written/spoken language and thus express ideas that might be otherwise difficult to describe .• Often a positive and creative experience for participants.• Often reduces power differentials between researcher and participant.• Translates abstract concepts into tangible ideas.	<ul style="list-style-type: none">• Requires time to analyze drawings, photos, or other responses.• Need to take care to ensure that analysis is consistent across participants.• Requires a certain amount of creativity to design.

Some resources for these participatory methods

The Draw a Scientist Test (with indicators) is described several places, including [here](#).

A blog post of various methods and tools for participatory M&E (monitoring and evaluation) can be found [here](#).

An example of photovoice can be found [here](#).

And example of participatory GIS mapping can be found [here](#).

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Tools: Card Sorting Methods

Description:

Involves people categorizing a set of pictures, objects, or cards with written statements. The analysis of how participants sort these cards gives insights into their mental models and the ways in which they think about and label information. An interesting and fun way to elicit knowledge and have participants express themselves and reflect on issues in a non-verbal way. Helpful for when you are looking for perceptions and knowledge structures, or are interested in having participants rank or prioritize ideas. These methods often account for low levels of formal education or literacy.

Considerations:

These methods are often paired with interviews so that participants can explain their ideas, views, and mental models. The [Q-methodology](#) combines card-sorting and quantitative analysis in a truly hybrid manner.

Pros	Cons
<ul style="list-style-type: none">• A simple, quick, and enjoyable method that is participant-focused.• Requires little explanation – people are familiar with the idea of sorting cards or pictures into categories.• A helpful way to unpack complex issues into component parts.	<ul style="list-style-type: none">• While this method does provide great insights into how people think about a topic, participants are not always consistent in their sorting.• When used alone (e.g., without a follow-up interview), the insights gained may not be as deep as other methods

Some resources for card sorting

A case study is included in Appendix 1 of this document.

“We’ve used this method in northern Kenya to address future of rangeland health (complex issue) to first get discussion and priorities established related to educational access, livestock raiding, women’s empowerment, drought, etc., and then slowly introduced complexity by drawing links between cards. [In this way you] can ‘ease into’ the complexity by first dissecting it.” Shared by Dr. Brett Bruyere, Academic Director and Professor, Human Dimensions of Natural Resources, Warner College of Natural Resources, CSU.

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Tool: Relationship Circles

Description:

A relationship circle diagram describes the nature of a relationship a person has with a social network or a concept, and/or how close these relationships are. It reveals a mental model of how a person views their relationship with a person or a concept, and therefore reveals important aspects of their identity. It can also be used to gauge the level of trust, interdependence, shared knowledge, or more. An example (Figure 1) can be found below; another type of relationship circle diagram is used in a case study presented in Appendix I.

Considerations:

The relationship circle diagram can be adapted for a variety of purposes, and is an excellent way to visualize important aspects of a participant's values and identity. As such, it is important to keep in mind that these concepts are often complex, fluid, and context-based. For example, the way we envision our social networks outside of work are often different than how we think of the same network in the context of work, or school, or in a faith-based context. It is important to be clear about which identities we are interested in mapping, and that the questions asked reflect this goal.

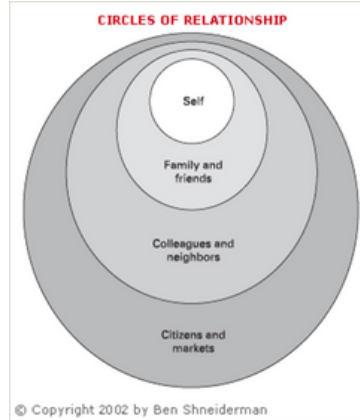


Figure 1. Ben Shneiderman's "Circles of Relationship" visualization

Pros

- A simple, quick, and enjoyable method that is participant-focused.
- Requires little explanation.

Cons

- While this method does provide great insights into how people envision relationships, participants are not always consistent in their mapping.
- When used alone (e.g., without a follow-up interview), the insights gained may not be as deep as other methods.

Some resources for using relationship circles

A case study is included in Appendix 1 of this document.

A blog post describing the relationship between social networks and identity and relative positions of trust can be found [here](#).

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Tool: Embedded Activity

Description:

Participants engage in an activity that can also be used for evaluation or information-gathering. For example, during a program you might have participants draw a concept map that expresses their understanding of how different ideas are related to each other. You could also have participants share a memory they will be walking away with by making a drawing, writing a poem, or taking a picture and sharing it. You could also use meeting notes and other products of a meeting – the activities of the group become the data.

Considerations:

The idea is to have evaluation be a fun part of the experience, rather than an add-on at the end. It can take some restraint to not let the evaluation or need for specific data drive the agenda: let the event unfold and be able to use whatever is produced.

Some resources for using embedded activities

An example of embedded activity can be found [here](#).

A step-by-step use of concept mapping as an assessment tool can be found [here](#).

Pros

- This often happens as a shared experience with others – which can be of interest to participants.
- Often a positive and creative experience for participants.

Cons

- Can be tricky to analyze systematically.
- Will not yield a representative sample.

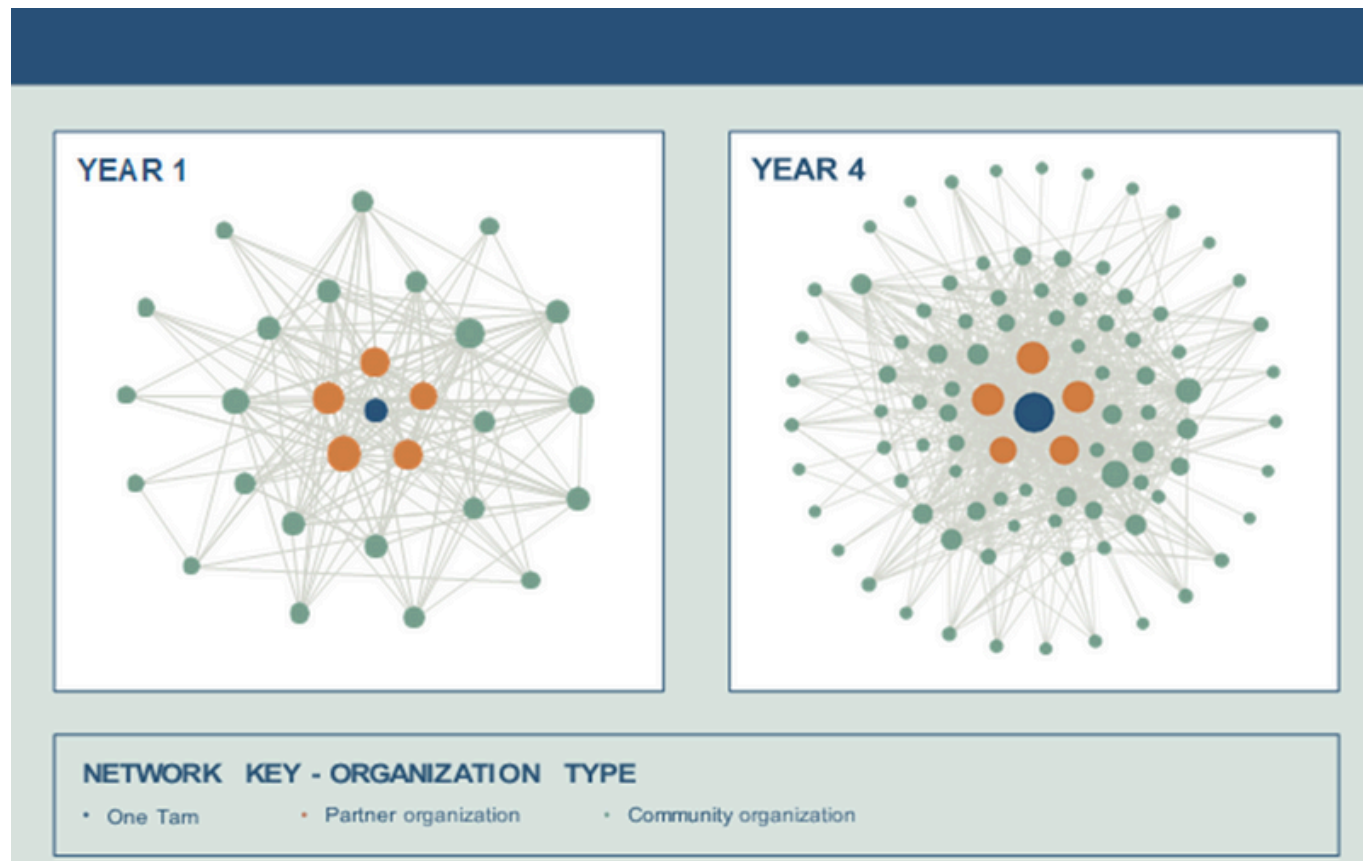
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APPENDIX - CASE STUDY: Social Network Analysis

Case Study: A four-year study of a multi-stakeholder partnership. This social network analysis looked at the informal network from Year 1 (baseline) to Year 4.

Audience: Various stakeholders involved with the network.

Goal: Measure the effectiveness of the network convener – One Tam – in promoting network cohesion as revealed by the indicator: “increase in collaboratives’ importance in the network by expanding its level of involvement in the cohesiveness of the overall network over time.”



YEAR 1: In its first year, the One Tam partner organizations were the most influential in contributing to the cohesiveness of the informal One Tam network. This is reflected by the five larger nodes which represent partner organizations.

YEAR 4: By the fourth year, One Tam has expanded its level of involvement and plays a more central and integral role in the cohesion of the informal network. This is reflected in the One Tam node increasing in size relative to the other nodes from the first year to the fourth year.

From: Mickel, A. E., & Goldberg, L. (2018). Generating, Scaling Up, and Sustaining Partnership Impact: One Tam's First Four Years. P. 15

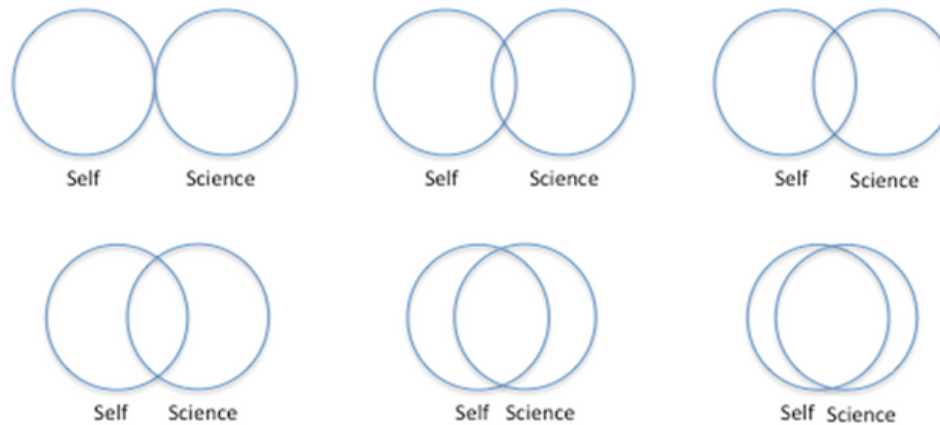
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APPENDIX - CASE STUDY: Relationship Circle Example

Case Study: After-school program (10 sessions) provided by a local science museum.

Audience: Students in grades 3rd-5th.

Goal: One of several methods used to evaluate how an after-school program impacted students' knowledge and attitudes towards science concepts, processes, and careers, as well as their ability to engage in scientific ways of thinking. The Relationship Circle tool is a fast method to assess a subject's attitude toward something or how they feel about something. The evaluators wanted to understand a student's perception about the relationship between "self" and science. Multiple research supports the idea that when we identify with a group, we adopt features of that group as part of our identity. The Relationship Circle method was used to understand whether or not a student's perception of science as an important part of their everyday lives changed after attending the after-school program.



Script: "Think about what yourself and everything you know about science. I want you to choose one of the circle pictures that best matches your relationship with science. The wider apart the circles, the more distant your relationship. The closer the circles, the closer your relationship. If you feel your relationship with science is a close relationship – for example, you feel science is important to you on a personal level – you might choose one of the pictures where the circles are close together (bottom row). If you don't have much of a relationship with science, you might choose one of the pictures where the circles are farther apart (top row). There is no right or wrong answer – I want to know how you feel."

Analysis – Each set of circles was assigned a number, beginning with "1" (the first set of circles indicating the relationship is far apart) and ending with "6" (the last set of circles indicating a close relationship). The tool was used as a pre-test (before the first program) and post-test (after the last program). The hypothesis was that the average number would be significantly greater following the program.

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APPENDIX - CASE STUDY: Card Sort Example

Case Study: Recreationist's perceptions of possible impacts of various recreational activities, including off-highway vehicles.

Audience: Adult recreationists visiting a National Forest.

Goal: Use a picture sort to understand recreationists' perceptions of possible impacts from various recreational activities, including litter and erosion from social trails and OHV use. The degree to which participants recognized visual indications of environmental impact provided information that was used to create targeted educational outreach materials.



Procedure: 20 photos depicting various aspects of recreational impact, including erosion, social trails, litter, damage to biological soil crust; as well as other pictures showing undamaged landscapes. Participants were asked to sort the photos into three piles: those that included some sort of environmental impact; those that do not; and those that you are unsure about. Each photo was numbered on the back; the researcher recorded the number of each photo in each pile. The researcher then asked the participant to choose three photos from the “environmental impact” pile and asked three questions: (1) tell me about the impact you see; (2) do you have experience with this? and (3) what could be done to prevent this?

Analysis – Number of times each picture was chosen, combined with typical qualitative analysis for open-ended questions, including thematic analysis.

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Conclusion: The Tools for Practice

Collaborative conservation relies on practitioners being able to gather information from stakeholders that will inform decision-making and evaluation. As well, practitioners need to know whether or not they are achieving the outcomes of the collaborative effort - not just the conservation effort. For this, practitioners need access to a variety of participatory methods that will yield a deeper understanding of “how” and “why” participants think the way they do. In this How To, we presented a variety of methods, some of their different strengths and weaknesses, and supporting resources.

Additional Resources

[Friendly Evaluation Toolkit](#), a publication of The National Trust Learning.

Foster, H. 2008. [Evaluation Toolkit for Museum Practitioners](#). Produced by Renaissance, East of England.

Lobinger, K. and C. Brantner. 2020. [Picture-Sorting Techniques: Card-Sorting and Q-Sort as Alternative and Complementary Approaches in Visual Social Research](#). The SAGE Handbook of Visual Research Methods, SAGE Publications, Inc.

Mickel, A.E. and L. Goldberg. 2019. [Partnership Impact Evaluation Guide](#). © Golden Gate National Parks Conservancy.

Mickel, A.E. 2021. [Collaborating Consciously: the Four Cornerstones](#). © 2021 by Amy E. Mickel, PhD

Parsons, C. 1994. [Front-End Evaluation: How Do You Choose the Right Questions?](#) Visitor Studies, 6 (1), pp. 66-72.

Phillips, T. B., Faulkner, H., Ferguson, M., Minarchek, M., Porticella, N., and Bonney, R. 2017. [Interactive User's Guide for Evaluating Learning Outcomes in Citizen Science](#). Ithaca, NY: Cornell Lab of Ornithology.

Phillips, T.B., N. Porticella, M. Conostas, R. Bonney. 2018. [A Framework for Articulating and Measuring Individual Learning Outcomes from Participation in Citizen Science](#). Citizen Science: Theory and Practice. V. 3 (2).

Taylor-Powell, E. and M. Renner. 2003. [Analyzing Qualitative Data](#). Program Development and Evaluation, University of Wisconsin Cooperative Extension, Madison Wisconsin.

Taylor-Powell, E. and S. Stelle. 1996. [Collecting Evaluation Data: An Overview of Sources and Methods, Program Development and Evaluation \(G3658-4\)](#) University of Wisconsin Cooperative Extension, Madison Wisconsin.



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