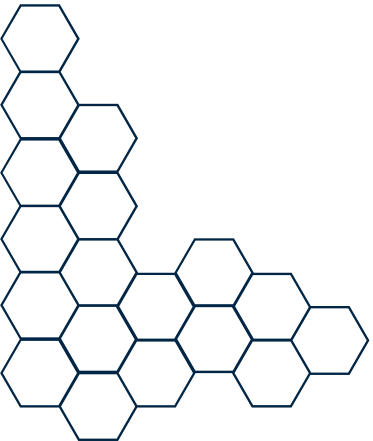


Multimodal Program Assessment Techniques

**Educational Program Assessment
Yale Poorvu Center for Teaching and Learning**



Rationale for this guide:

Developing a more nuanced understanding of a population is best done by combining various forms of data collection. Engaging audiences in various ways can avoid fatigue, limits to access, and bias that often results from common repeated single-modal assessment. This handout offers an overview of several programmatic assessment techniques that serve to reach audiences through creative approaches that engage without overwhelm. We aim that these resources will help assessment professionals brainstorm creative, literature-supported methods for collecting meaningful data aligned with a program's tone and purpose.

Creation of this guide:

These assessment activities have been identified from a comprehensive literature and resource search (updated fall 2024), and refined based on professional knowledge of successful programmatic assessment implementation. Each activity includes a description of the approach as well as examples of its use alongside possible programmatic questions, where relevant. Additionally, each activity is broadly categorized by how well-suited it tends to be across participant group size, the effort required by participants to complete it, and the effort of evaluators to develop, guide, and analyze the data.

Strengths and limitations of this guide:

To compile this list of activities, we performed a comprehensive literature and resource search. Many of our suggested references draw on the foundation of existing robust assessment resources^{1,2}. While the list of program assessment activities detailed in the present handout is extensive, it is not complete. We view this as an evolving resource that will be added to as we increasingly engage in conversations within the assessment community. As with any overview, it contains a level of generalities and there are always exceptions. When considering these approaches, please note that the selection of approach or combination of approaches will depend on the program goals, audience, and assessment questions. Therefore, there is no single “best” approach for a given assessment.

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Each activity is categorized by **group size** and **effort** to help identify an appropriate set of techniques for each program.

Group Size

The suggested group size for a workshop or program to effectively use a specific assessment activity.

Small: The activity can be conducted in programs which have at least 3 participants. These activities are targeted at groups ranging from 3-9 participants.

Medium: The activity can be conducted in programs which have at least 10 participants. These activities are targeted at groups ranging from 10-50 participants.

Large: The activity can be conducted in programs which have at least 50 participants. These activities are targeted at groups with 50+ participants.

Effort (Program Lead)

Effort is split into two categories—effort for program leads/evaluators and effort for participants. These ratings are intended to correlate to how much time and energy are involved for each assessment technique.

Low: The activity takes minimal effort for the program lead to conduct and assess. Little to no advance preparation is necessary.

Medium: The activity takes a moderate amount of effort for the program lead to conduct and assess. Some advance preparation might be necessary.

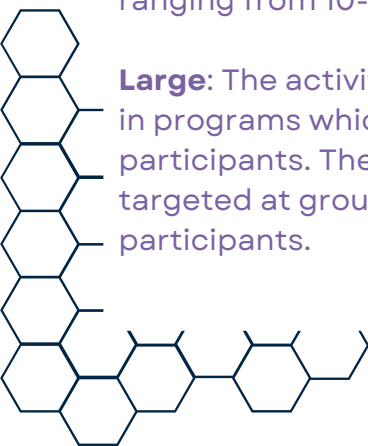
High: The activity takes a significant amount of effort for the program lead to conduct and assess. Advance preparation and/or significant follow-up time is necessary.

Effort (Participant)

Low: The activity is quick, easy, and accessible for participants.

Medium: The activity takes a moderate amount of time and requires some deeper thought or reflection for participants to complete.

High: The activity takes a significant amount of time and reflection, often outside of the program, for participants to complete.



Multimodal Program Assessment Techniques Overview

		Group Size			Effort (Evaluator)			Effort (Participant)		
I.D. Number	Activity	Small	Medium	Large	Low	Medium	High	Low	Medium	High
1	Card Sorting									
2	Card Visualization									
3	Case Studies									
4	Concept Maps									
5	Entry & Exit Tickets									
6	Existing Document Review									
7	Fill-in the Blank									
8	Focused Listing									
9	Individual Journals & Logs									
10	Interviews & Focus Groups									
11	Mid-Session Poll									
12	Minute Paper									
13	Notecards									
14	Observations									
15	One Sentence Summary									
16	Outlines									
17	Photolanguage									
18	Pro and Con Grid									
19	Process Analysis									
20	Participant Perspective Rubrics									
21	Sticky Notes									
22	Visualization									
23	Voting									

Activity information is hyperlinked to each entry in Activity column

Activity	Description & Examples	Context
1. Card Sorting	Description: Card Sorting activities are those which use physical cards to prompt participants' thinking about the relationship between the concepts written on the cards. Cards can be grouped, sorted, or ranked by participants depending on the evaluator's prompt. Card Sorting can be used to track program participant's mental maps of how different concepts are related to one another and/or how participants relatively value concepts. The results from this exercise can be translated into visual representations, such as a tree map². Example Activities & Programmatic Questions: <i>Example activities;</i> • <u>Q-methodology</u>: Q-methodology (also known as Q-sort) is the systematic study of participant viewpoints. This activity asks participants to rank and/or sort cards that have different statements written on them². • <u>Hierarchical Card Sorting</u>: an activity in which the program facilitator writes down key themes, ideas, or terms on cards and asks each participant to sort the cards into two piles based on their choosing of an important distinguishing factor. After documenting which cards have been sorted into each pile, the participant is asked to repeat this process with both piles, explaining each time what the important distinguishing factor is between the two new piles. The participant's train of thought is recorded at each stage of the process (either by the participant themselves or by the program facilitator). This process is repeated until each pile only has one card left². Example programmatic prompt: • Organize the card topics by your understanding from easily understood to very complicated.	SMALL Group Size
		MEDIUM Evaluator Effort
		MEDIUM Participant Effort

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Activity	Description & Examples	Context
2. Card Visualization	Description: Card Visualization is an activity where program participants are prompted with a question or topic and then given markers and colored cards to document their responses. Different colored cards are used for different questions. After participants have finished answering the prompt, the program facilitator collects the cards, reads through the responses, and clusters the cards on a board by categories proposed by the group. This activity should generate group discussion. Card Visualization can be used to allow groups to brainstorm and share their ideas to foster productive discussions and synthesize group ideas. The activity promotes participation from all program attendees, especially in settings where some people might be hesitant to contribute to a group discussion². Example programmatic questions: • What was the most important thing you learned today? • What is a concrete next step you will do after today's session? • What topics from this session do you want to learn more about?	SMALL-MEDIUM Group Size
		MEDIUM Evaluator Effort
		MEDIUM Participant Effort
3. Case Studies	Description: Case studies are tools that can be used to assess how a participant might handle various situations. Case studies typically outline a hypothetical dilemma, issue, or scenario for program participants to engage with. Participants might be asked to indicate how they would respond to these scenarios, how they might consider approaching solving these problems and what questions they would ask, or how they might prioritize various hypothetical issues. These often focus on applying topics or skills learned from the program to project participant behavior¹. Example programmatic questions: • How do participants see the application of subjects discussed to situations beyond the program?	SMALL-MEDIUM Group Size
		HIGH Evaluator Effort
		HIGH Participant Effort

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Activity	Description & Examples	Context
4. Concept Maps	Description: Concept Maps are exercises that can be conducted to understand program participants' thought processes when approaching different concepts, topics, etc. They typically ask participants to draw or diagram the mental connections they have between concepts, topics, etc^{1,4,8}. Example Programmatic Questions: - Where have program participants engaged with this topic prior to the program or workshop? - How do participants see the program topic being integrated into academic or career pursuits beyond the program?	SMALL Group Size
		HIGH Evaluator Effort
		HIGH Participant Effort
5. Entry & Exit Tickets	Description: Entry & Exit Tickets are prompts given to program participants at the beginning (Entry) and ending (Exit) of a program, session, or workshop. Entry tickets help to focus participants' attention on the program's topic or recall relevant background knowledge. Exit tickets can be used to collect feedback on program participants' understandings and takeaways at the end of a program and any remaining gaps in their understanding of the program topic. Collection methods can include a private receptacle, such as a small ballot box in which participants drop their tickets or writing a quick statement on a notecard⁷. Example programmatic questions: - What are you most excited to learn about today? (<i>entry</i>) - Why did you sign up for this workshop? (<i>entry</i>) - What is one thing that stood out to you from today's workshop? (<i>exit</i>) - How did you hear about today's program? (<i>exit</i>) - What questions do you still have after the workshop? (<i>exit</i>)	SMALL-LARGE Group Size
		LOW Evaluator Effort
		LOW Participant Effort

Activity	Description & Examples	Context
6. Existing Document Review	Description: Existing Document Review is an evaluation activity that entails reviewing documents already produced as part of the implementation planning for an activity or program. This can include reviewing implementation documents (i.e. communication materials, meeting notes, project reports, training materials, etc.) and existing monitoring data (i.e. event attendance rates, baseline data, needs assessments, questionnaires, etc.). This tool requires no additional collections of data from participants². Potential Example Questions: • What were the workshop topics discussed this semester? Are there gaps in offerings? • What departments are using the offered resource or programming? Are there areas of campus we would like to reach? • How many individuals have participated in this programming?	HIGH Evaluator Effort
7. Fill-in the Blank	Description: Fill-in the Blank exercises are assessment tools that prompt students to complete a logical series of prompts. This technique can be used to understand the associations participants make with a specific topic or program element^{1,10}. Example activities & programmatic questions: <i>Example activities:</i> • Approximate Analogies: participants are presented with the first half of an analogy and asked to fill in the second half. (CATS) • Remote Associations Test: an evaluation method used to assess a participant's creative process. Participants are prompted with three seemingly unrelated words and asked to think of the fourth word that is linked to them. (RAT; Mednick,1962) <i>Example programmatic questions:</i> • What words do participants associate with today's topic? (can ask before and after the workshop) • What words do participants associate with their career? (can ask before and after the program)	SMALL-LARGE Group Size MEDIUM Evaluator Effort LOW Participant Effort

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Activity	Description & Examples	Context
8. Focused Listing	Description: Focused Listing is an exercise that instructs participants to list ideas related to a “focus”: an important term, name, or concept. Often participants are given a certain time limit, 1-3 minutes, to list everything that comes to mind when they consider the “focus.” These can be collected by the evaluator, or used by the participants to better understand their own knowledge from the program¹. Example programmatic questions: • What words come to mind when you hear today’s topic? • What skills will you use in your daily life after learning about today’s skills? • What words come to mind when you consider participating in another program from our department?	SMALL-MEDIUM Group Size
		LOW Evaluator Effort
		LOW Participant Effort
9. Individual Journals and Logs	Description: Journals and Logs are record-keeping assessment tools intended to capture information about activities, results, conditions, and personal perspectives. Journals and Logs can be used to capture changes in ideas, perspectives, and events over time (i.e. throughout the duration of a program). They are typically utilized by program participants to reflect learnings and takeaways^{2,4,6}. <i>*Note: This technique is best implemented over many sessions, allowing time for reflection.</i> Example programmatic questions: • How did program participants approach their project and what tools did they utilize during the process? • How did participants prepare for a symposium presentation and where did they receive support?	SMALL Group Size
		HIGH Evaluator Effort
		HIGH Participant Effort

Activity	Description & Examples	Context
10. Interviews and focus groups	Description: Interviews and focus groups are conversations that entail an evaluator preparing and asking questions to either one or multiple participants. Interviews can be used to collect information about the opinions, knowledge, and personal experiences of the participant(s). Individual interviews can be useful for discussing personal and/or sensitive topics. Focus groups can be useful for seeking information about a group's experiences; however, social desirability bias and group think are potential risks for the group method². <i>Note:</i> <i>*Based on group size (e.g. one-on-one interview, focus group), the evaluator effort may vary</i> <i>*This may need to be conducted by an external evaluator (not by program lead) to ensure participant's are honest in their responses, or that their data will be held confidentially.</i> Example activities: - Interviews: An in-depth interview is a type of interview with an individual that aims to collect detailed information beyond initial and surface-level answers. (Better Evaluation) The questions may involve asking about specific aspects of the program, experiences of the individual, personal anecdotes about hopes for future programming or career development, etc. - Focus groups: Focus groups are a type of group interview designed to explore people's opinions and attitudes. (Better Evaluation) The questions may involve asking about group dynamics during the program, or how individuals experienced specific program elements.	SMALL-MEDIUM Group Size
		MEDIUM-HIGH Evaluator Effort
		MEDIUM Participant Effort

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Activity	Description & Examples	Context
11. Mid-Session Poll	Description: Mid-Session Polls are surveys conducted in real time during a program. These activities usually use technology, such as keypads or mobile devices (phones, tablets, laptops) to allow participants to access poll questions and respond immediately. The poll results are made available to the program leader and participants in real time, allowing for participants to react and reflect on the responses as they come in. Mid-Session Polls can be used to make program evaluators and participants aware of the knowledge base and opinions of poll participants in the middle of the program. The results can help tailor discussion direction, program goals, and future strategies².	MEDIUM-LARGE Group Size
	Example Activities: • Keypad technology: Keypads are used in group meetings to gauge audience response to presentations and provide valuable feedback in large group settings. (Better Evaluation) • Poll Everywhere: A URL and passcode are input on a mobile phone, tablet, or computer that allows participants to see the poll questions and submit their answers on their device. • Kahoot: A QR code is scanned and/or a URL and passcode are input on a mobile phone, tablet, or computer that takes the participant to the poll on their device. Participants answer the poll on their devices and the responses can be displayed in real time by the poll host.	LOW Evaluator Effort
		LOW Participant Effort

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Activity	Description & Examples	Context
12. Minute Paper	Description: The Minute Paper exercise is a brief activity where program participants are prompted to write down everything they know, think, and believe about a central topic to the program in just 60 seconds. This method can be a particularly successful way of collecting data if a subset of participants are less likely to share thoughts aloud¹. Example programmatic questions: <i>Take a minute to reflect on and write down...</i> • What are you hoping to learn in this program? (<i>beginning of program</i>) • What do you hope to learn for the remainder of the program/workshop? (<i>middle of program</i>) • What was the most beneficial component of your program experience? (<i>end of program</i>)	SMALL-MEDIUM Group Size
		MEDIUM Evaluator Effort
		MEDIUM Participant Effort
13. Notecards	Description: The Notecard exercise is an activity where program leaders distribute an index card in advance or during the program to each participant and the participants respond to an open-ended prompt on the card. This method can often be combined with “entry and exit tickets”. Example activities and programmatic questions: <i>Example activities:</i> • Muddiest Point: The evaluator passes out notecards to participants and everyone writes their term of choice. The terms could be in response to a question gauging challenges and confusions among the group (i.e. What was the muddiest point/most confusing point in _____ ?), though prompts can vary. This activity is well suited to large groups covering high-level topics rather than subjects that emphasize integration, synthesis and evaluation (CATS). <i>Example programmatic questions:</i> • What are you most excited to learn about today? • What is resonating with you most so far during this workshop? • Why did you sign up for this program?	MEDIUM-LARGE Group Size
		LOW-MEDIUM Evaluator Effort
		LOW Participant Effort

Activity	Description & Examples	Context
14. Observations	Description: Observations are activities that entail an evaluator learning about a person or group of interest by attending events in which the party of interest's behaviors and experiences can be assessed. This technique can involve taking 'field notes' as the observer records behaviors. Observations can be conducted purely from the outside (naturalistic observation) or from the inside (participant observation) by the observer joining the party of interest in their activities^{2,3}.	SMALL-LARGE Group Size
	<i>*Note: This will need to be conducted by an external evaluator (not by program lead)</i> Example activities and programmatic questions: <i>Example activities:</i> • Observer Perspective Rubrics- completed by a person or group that exists externally to the person, group, or element being assessed to evaluating the products of a program or the engagement of program participants based on pre-defined categories or metrics.	MEDIUM-HIGH Evaluator Effort
	<i>Example programmatic questions:</i> • What strategies (from a theory-driven pre-determined list if using a rubric) did program participants use when working as a team to design an experiment? • During a workshop, how did participants organically engage with the content (e.g. through taking notes, discussing in partners, raising hand and sharing with the group)? • Did program participants mostly observe or engage in hands-on-learning when introduced to a new engineering tool?	LOW Participant Effort

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Activity	Description & Examples	Context
15. One Sentence Summary	Description: One Sentence Summaries are an exercise where participants aim to synthesize all the takeaways from a program into one sentence¹. Example programmatic questions: - What is one thing that stood out to you from today's workshop? - What is one piece of advice you would give to future program cohorts?	SMALL-LARGE Group Size
		LOW Evaluator Effort
		LOW Participant Effort
16. Outlines	Description: Outlines are tools that prompt program participants to detail the process they anticipate taking in completing a task or assignment. Outlines can also be used to have participants map out their understanding of what they learned from the program in bulleted or hierarchical format¹. Example programmatic questions: - Prior to beginning this program, how do program participants anticipate they will approach their projects and what tools they will utilize? - Categorize what you have learned from this program today from most relevant/useful to least relevant/useful.	SMALL-MEDIUM Group Size
		MEDIUM Evaluator Effort
		MEDIUM Participant Effort
17. Photolanguage	Description: Photolanguage is an activity where participants choose or take a photograph as a metaphor for a topic of interest during the program. The photographs are intended to stimulate imagination, memory, and emotions, and participants are instructed to recognize the associations they have with the images and then discuss them with the group. The goal of the exercise is for participants to react/respond to the images, not analyze them². Example activities: - Take a picture of a location where you feel connection and welcome on campus. - Select a photo from the pile that represents your current perspective on today's topic.	SMALL Group Size
		HIGH Evaluator Effort
		HIGH Participant Effort

Activity	Description & Examples	Context
18. Pro and Con Grid	Description: A tool in which participants can be asked to identify highlights and areas for consideration related to program elements or experiences, filling this in a table with one column for each¹. Example programmatic questions: • What are the highlights and areas for improvement of a new program element? • What are some areas where mentorship guidance was helpful and were there areas where you needed more support?	SMALL-LARGE Group Size
		LOW Evaluator Effort
		LOW Participant Effort
19. Process Analysis	Description: Process Analyses are tools that prompt program participants to detail the process they take in completing a task or assignment. It emphasizes a “show your work/show your thinking” process¹. Example activities and programmatic questions: <i>Example activities:</i> • Documented Problem Solutions: students track in a written format the steps they take to solve problems as if for a “show & tell”. (CATS) <i>Example programmatic questions</i> • How did program participants approach their projects and what tools did they utilize? • How did participants prepare for a symposium presentation and where did they receive support?	SMALL-MEDIUM Group Size
		MEDIUM Evaluator Effort
		MEDIUM Participant Effort

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Activity	Description & Examples	Context
20. Participant Perspective Rubrics	Description: Rubrics are measurement tools, typically comprised of pre-defined categories or metrics, along which participants can quantitatively assess their own skills, understanding, performance, and experience. These rubrics can focus both on self-reflection and self-assessment as well as on participants' experiences in a program. For instance, participant perspective rubrics can offer insights on the impact and outcomes of a program^{1,4,9}. Example programmatic questions: • From participants' perspectives, in what way did they engage with workshop material (e.g. through taking notes, discussing in partners, raising hand and sharing with the group)? • From participants' perspectives, to what ways and how much did their group engage with the activity (e.g. a lot of hands-on learning, a little group discussion)?	SMALL - MEDIUM Group Size
		MEDIUM Evaluator Effort
		MEDIUM Participant Effort
21. Sticky Notes	Description: The Sticky Note exercise involves the program leader writing a prompt on a white board that participants write their responses to on sticky notes and place under the board prompt. Participants can browse responses on sticky notes during the session, workshop, or program. Example Programmatic Questions: • What are you hoping to learn from today's session? • What is one way you hope to engage with this center beyond today's workshop? • What has been the most beneficial aspect of this program?	MEDIUM-LARGE Group Size
		LOW-MEDIUM Evaluator Effort
		LOW Participant Effort

Activity	Description & Examples	Context
22. Visualization	Description: Visualizations are activities that collect data by asking participants to visually model or represent their ideas and learnings. Visualizations can be used to prompt program participants to think creatively about representing their ideas. These activities can be used to unpack more complex or challenging concepts which might be difficult to verbalize. They can also be used with individuals or groups to represent individual thinking or represent the experiences and ideas of a larger group^{1,2}. Example activities: - Human Tableau or Class Modeling: Program participants transform and apply their learning into doing by physically modeling a process or representing an image¹. - Mural: A mural, a large drawing on the wall, can be used to collect data from a group of people about the current situation, their experiences using a service, or their perspectives on the outcomes from a project².	SMALL Group Size
		HIGH Evaluator Effort
		HIGH Participant Effort
23. Voting	Description: The Voting Exercise is an activity in which the program leader prompts the program participants to select an option indicating their stance on an issue, statement, idea, etc. This tool is easily combined with the mid-session poll^{2,5}. Example Activities & Programmatic Questions: <i>Example activities:</i> - Dotmocracy: Program participants are given dot stickers of different colors and instructed to place their stickers next to statements written on large sheets of paper based on their level of agreement with each statement. Different sticker colors can be assigned to different levels of agreement. If using one sticker color, participants will simply distribute their stickers based on their degree of agreement with statements (i.e. statements with more stickers have higher rates of agreement). (Better Evaluation) <i>Example programmatic questions:</i> - What department program or activities have individuals participated in or are aware of? (<i>list of activities and individuals provided</i>) - What topics would you like covered in the next session of this program?	MEDIUM-LARGE Group Size
		LOW Evaluator Effort
		LOW Participant Effort

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