

## Data Sources: Advantages and Disadvantages

Methods and Tools	Purpose	Basic Information	Advantages	Disadvantages
<b>Assessments and tests</b>	<ul style="list-style-type: none"> <li>Often used to measure academic outcomes or establish a baseline related to academic performance.</li> </ul>	<ul style="list-style-type: none"> <li>Usually quantitative.</li> <li>Can be administered electronically or in person.</li> <li>Can be administered individually or in groups.</li> </ul>	<ul style="list-style-type: none"> <li>Multiple items may be used in combination to create a subscale, often providing a more reliable estimate than any single item.</li> <li>Can be used to establish a baseline for academic performance prior to implementation of a program.</li> <li>Can be cost effective because these data are often collected by schools and districts.</li> </ul>	<ul style="list-style-type: none"> <li>If assessment is not aligned well with the program, data may not be a meaningful indicator of program success.</li> <li>If reliability and validity are not adequate, the data may be poor in quality and inaccurate conclusions may be drawn.</li> </ul>
<b>Administrative databases</b>	<ul style="list-style-type: none"> <li>Often related to student demographic characteristics, attendance, behavioral referrals, or graduation rates.</li> </ul>	<ul style="list-style-type: none"> <li>Usually quantitative.</li> <li>Collected through normal education agency processes.</li> </ul>	<ul style="list-style-type: none"> <li>Can be cost effective because the data are often collected by schools and districts.</li> <li>Can add additional contextual information to program outcomes, such as the backgrounds of students who achieve expected outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>A data request is often needed to obtain administrative data.</li> <li>Entry errors may decrease accuracy.</li> <li>Data collection process for administrative data is out of the control of the evaluation team.</li> </ul>
<b>Surveys and questionnaires</b>	<ul style="list-style-type: none"> <li>Often used to gather information about self-reported perceptions of agreement, importance, behavior, quality, or satisfaction.</li> </ul>	<ul style="list-style-type: none"> <li>Can be either quantitative (for example, responses to scaled questions) or qualitative (for example, responses to open-ended questions).</li> <li>Can be administered in person, over the phone, online, or through the mail.</li> </ul>	<ul style="list-style-type: none"> <li>Surveys can be used to quickly collect information from large numbers of individuals.</li> <li>If conducted in person, response rates can be high.</li> <li>Electronic or online surveys can save time and costs with data entry, and they can improve data quality by reducing data entry errors.</li> </ul>	<ul style="list-style-type: none"> <li>Cannot ask additional probing questions.</li> <li>Response rates of mail and electronic surveys can be low.</li> <li>If questions are confusing or unclear, resulting data may be unusable.</li> </ul>

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<b>Interviews</b>	<ul style="list-style-type: none"> <li>• Often used to obtain in-depth information about individuals' thoughts, perceptions, and behaviors.</li> </ul>	<ul style="list-style-type: none"> <li>• Usually qualitative.</li> <li>• Can be conducted in person or over the phone.</li> <li>• Usually conducted in a one-on-one setting.</li> </ul>	<ul style="list-style-type: none"> <li>• Can be used to explore new ideas or issues.</li> <li>• Follow-up questions can be used to obtain more detail about interviewees' responses, when needed.</li> <li>• Follow-up probes can be used to determine how interviewees are interpreting questions.</li> <li>• Nonverbal communication during in-person interviews aids in response interpretation.</li> <li>• Interviewees might be more comfortable in a one-on-one setting.</li> </ul>	<ul style="list-style-type: none"> <li>• Time-consuming to conduct.</li> <li>• Time-consuming to analyze data.</li> <li>• Limited number of participants.</li> </ul>
<b>Focus groups</b>		<ul style="list-style-type: none"> <li>• Qualitative.</li> <li>• Multiple people are interviewed at the same time.</li> </ul>	<ul style="list-style-type: none"> <li>• Can be used to explore new ideas or issues.</li> <li>• Follow-up questions can be used to obtain more detail when needed.</li> <li>• Follow-up questions can be used to determine how participants are interpreting questions.</li> <li>• Participants can build on one another's responses.</li> <li>• Often more cost effective than interviews.</li> <li>• Nonverbal communication during in-person focus groups can aid in response interpretation.</li> </ul>	<ul style="list-style-type: none"> <li>• Group setting may inhibit participants from speaking freely.</li> <li>• Difficult to coordinate schedules with multiple people.</li> <li>• Participants may focus on one topic, limiting exploration of other ideas.</li> <li>• Requires a skilled facilitator.</li> <li>• Time-consuming to analyze data.</li> </ul>

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<b>Observations</b>	<ul style="list-style-type: none"> <li>Often used to observe processes, situations, interactions, or physical environments.</li> </ul>	<ul style="list-style-type: none"> <li>Can be quantitative when using a rubric or standard form to collect data.</li> <li>Can be qualitative when using notes or reflections to collect data.</li> <li>Can be conducted in person, via videotape, through one-way glass, or from a distance.</li> </ul>	<ul style="list-style-type: none"> <li>Provide a sense of the implementation of a program.</li> <li>Allow the evaluation team to gain an understanding of the environment of participants.</li> <li>Help to provide a context for interpreting data.</li> </ul>	<ul style="list-style-type: none"> <li>Sometimes need multiple observations to gain a realistic sense of a program.</li> <li>Time-consuming to observe, and thus expensive.</li> <li>Time-consuming to analyze.</li> <li>Participant behavior may be affected by the presence of the observer.</li> </ul>

*Note.* Adapted from *Evaluation Matters: Getting the Information You Need from Your Evaluation*, by S. P. Giancola, 2014, U.S. Department of Education, Office of Elementary and Secondary Education (<https://www2.ed.gov/about/offices/list/oese/sst/evaluationmatters.pdf>).

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