Program Evaluation Toolkit

Module 4
Evaluation Samples

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Module 4
Evaluation Samples
Chapter Progression
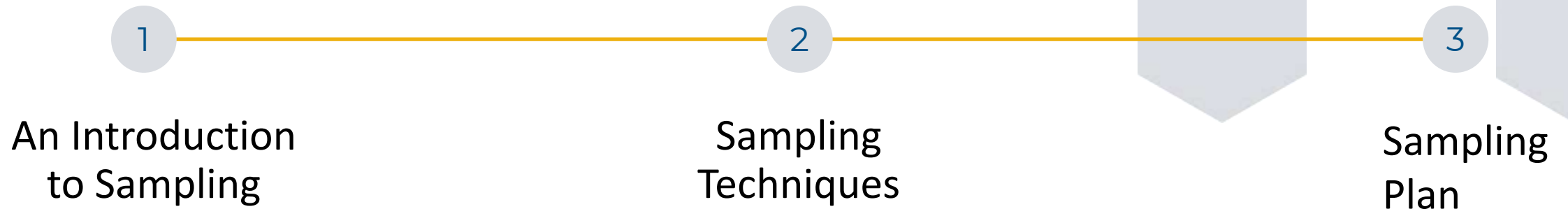
1 — An Introduction to Sampling

2 — Sampling Techniques

3 — Sampling Plan

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Can Data Be Collected from Everyone?

- The set of all possible participants is called the *population*.[1]

  o *Census*: The process of collecting data from the entire population.

  o *Sample*: A smaller subset that represents the entire population.

- If the sample does not represent the population, the results may not be useful.

Identifying Your Sample

- In terms of sampling, you do not have to eat the entire bowl of ice cream to know how it tastes.

- But you can not take a haphazard approach, or you will not get the full picture.

Using a Systematic Approach

- Scientists have devised systematic sampling approaches for gathering information from part of a population in order to understand the entire population.[1]

Sampling Considerations

- **Representativeness:**[2] How well the subset from which you collect data represents the entire population of interest.

- **Generalizability:**[3] The extent to which your results will apply to different types of individuals and contexts.

- **Weighting:**[4] Refers to making statistical adjustments to your data to help improve representativeness.

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Representativeness[2]

- What demographic characteristics should I consider (for example, locale, gender, age, race/ethnicity)?

Sample

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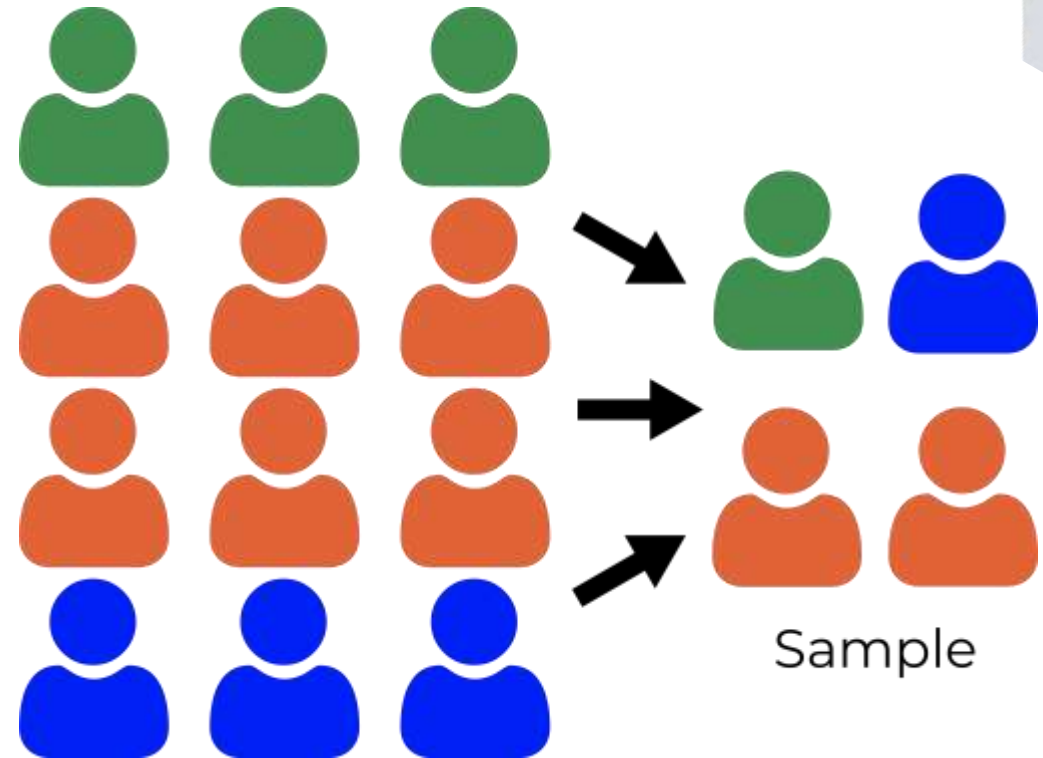
Representative Sample Activity

- The demographics of the district teaching staff are listed below. If you can select only 10 people to interview, what selections will you make?

Gender	Race/Ethnicity	Age	Academic Degree	Experience
76% female 24% male	80% White 7% Black 9% Hispanic 3% Asian 1% other	15% age 30 or younger 77% ages 31 to 59 8% age 60 or older	2% no degree 40% bachelor's degree 47% master's degree 11% doctorate	10% less than 3 years 28% 3 to 9 years 62% 10 years or more

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Additional Resources   • *Representative Sample Activity*

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Representative Sample Activity: Discussion

- It is challenging to construct a sample that is representative of the population with respect to many different characteristics.

- Random sampling can ensure that, at least on average, a sample is representative of the entire population.

- However, to effectively represent the population, a random sample must be sufficiently large.

Generalizability[3]

- The extent to which results from an evaluation involving a sample (for example, 1 to 2 schools, 15 teachers) will apply to the entire population (for example, all schools, all teachers).

Weighting[4]

Before Weighting		
Sample	Number of Teachers Surveyed	Actual Percentage
6th Grade Teachers	5	25 percent
7th Grade Teachers	5	25 percent
8th Grade Teachers	5	50 percent

Before Weighting			
Sample	Weighted Teachers Surveyed	Weighted Percentage	Weight
6th Grade Teachers	3.75	25 precent	0.75
7th Grade Teachers	3.75	25 precent	0.75
8th Grade Teachers	7.5	50 precent	1.5

Additional Resources

- The Generalizer is a tool to guide you in selecting a sample of schools that is representative of a particular population of public schools:

  - https://www.thegeneralizer.org/
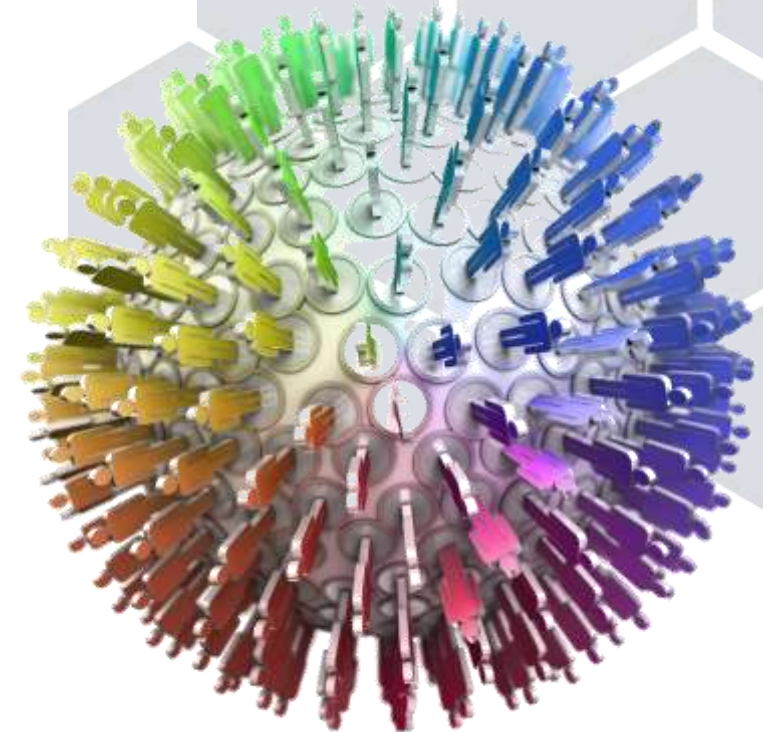
Thank You

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and for access to our many free resources.

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References

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2. Kruskal, W., & Mosteller, F. (1979). Representative sampling, I: Non-scientific literature. *International Statistical Review, 47*(1), 13–24. https://doi.org/10.2307/1403202

3. Schreier, M. (2018). Sampling and generalization. In U. Flick (Ed.), *The Sage handbook of qualitative data collection* (pp. 84–98). Sage.

4. Kalton, G., & Flores-Cervantes, I. (2003). Weighting methods. *Journal of Official Statistics, 19*(2), 81–97. https://www.scb.se/en/documentation/statistical-methods/journal-of-official-statistics-jos/