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Parent Involvement Data

How to Measure and Improve Representativeness for Indicator B8

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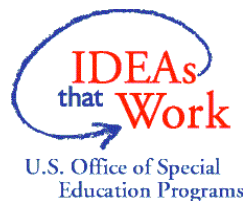
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Parent Involvement Data: How to Measure and Improve Representativeness for Indicator B8

Indicator 8: Percent of parents with a child receiving special education services who report that schools facilitated parent involvement as a means of improving services and results for children with disabilities (20 U.S.C. §1416(a)(3)(A)).

Representativeness is a critical component of data quality. For Indicator 8, representativeness refers to the extent to which the demographics of the children and youth whose parents provided data are representative of the demographics of *all* children and youth receiving special education services in the state. If a state's Indicator 8 data are not representative, the data most likely will not accurately reflect the experiences of parents in the state. This inaccuracy occurs when the opinions or factors for certain groups of parents who complete the Indicator 8 survey differ in meaningful ways from those who do not. Strategies that can help states collect representative data and evaluate and improve the representativeness of their data before, during, and after data collection follow.

Collecting Data That Are Representative

The Office of Special Education Programs (OSEP) requires states to analyze the extent to which the demographics of the children and youth of parents who responded to a survey are representative of the demographics of children and youth receiving special education services. This effort begins with planning and conducting data collection. Beginning with the FFY 2021 SPP/APR submission due in 2023, states must consider race and ethnicity and at least one other category from the examples below or another category that they selected with stakeholder input:

- race/ethnicity (required);
- gender;
- student age;
- disability category;
- geographic location in the state; and
- other category selected with stakeholder input.

Using a Census or Sample

States collect information for Indicator 8 using a census (asking all parents of children and youth receiving services to participate) or a sample (asking only selected parents to participate). Using a sample saves time and money and, when done correctly, can help improve the quality and accuracy of the data by leaving more time and resources for monitoring the data as they arrive and following up with parents as necessary. However, selecting a representative sample can be complicated. (See [Sampling](#) for more information.) Whether states choose a census or a representative sample for Indicator 8 data collection, they will need to

use strategies that encourage participation and data collection methods that ensure they have critical information on representativeness.

Encouraging Participation

Survey design and data collection methods can affect whether parents respond fully, or at all. States should design their survey to make it easy for parents to respond. High response rates make it more likely that the sample will be representative. (See [Response Rates](#) for more information.) States can encourage parents to respond fully and accurately by making sure

- questions are engaging and easy to understand;
- options are clear and categories don't overlap;
- surveys are easily accessible, considering availability online and paper options, use of multiple languages, Section 508 compliance, and multiple methods for delivery and notifications;
- surveys include a clear explanation of purpose and how participation will benefit parents, students, and schools; and
- they have a plan to follow-up with those who do not respond initially.

Gathering the Data

States need to plan carefully and gather specific information so they can evaluate their results and fulfill reporting requirements of the State Performance Plan/Annual Performance Report (SPP/APR). Several strategies that can help states gather the most complete data follow.

- States should gather data confidentially but not anonymously. Anonymous data cannot be traced back to the respondents while confidential data could be traced back; however, to protect the respondents, individual responses are not revealed outside the data collection team. In other words, states should track survey recipients and respondents but keep that information secure, keeping the names of respondents and their individual responses confidential.
- States should make sure they have access, if possible, to all the demographic information they need before they start. If they cannot access needed information through other systems, states will need to ask questions in the survey to gain the information. Information states might want to consider, beyond what OSEP suggests, includes length of time a child received services, family income, and primary language.
- States should ensure they have accurate contact information for parents (e.g., asking parents to verify

Problems with anonymous data

- It prevents states from tracking responses. They will not know whether the parents they asked to participate in the survey did not respond or accidentally responded more than once.
- It means that states have to ask all demographic questions in the survey, increasing the survey's length and burden on parents.
- It increases the likelihood of missing data if parents skip demographic questions.
- It forces states to send out reminders to all parents, wasting resources and potentially annoying those who already responded.

contact information at individualized education program [IEP] meetings, verifying with districts that contact information is complete and accurate).

- States should implement a system to track surveys. Many online survey services automatically combine survey tracking and response monitoring in a single database, allowing states to monitor response rates in real time. Online surveys provide the additional benefit of not requiring data entry.
- States should include a unique identifier (ID) on each survey so they can track responses and match surveys to existing student demographic information. Some online services do this automatically, but states would need to add the ID number manually to paper surveys. With a unique identifier, states can link survey data with existing demographic data in other databases.
- States should keep data secure. They should separate files that contain identifiers from those with survey responses, encrypt personally identifiable information, and limit access to the electronic and hardcopy data.

Evaluating the Representativeness of the Data

There are two ways to think about representativeness of data, both of which relate to whether or not the data come from respondents who are representative of the actual population and subpopulations of interest. One is whether the demographics of the respondents correspond to the demographics of the population on which the indicator focuses—for Indicator 8 that is the entire population of students with disabilities in the state. The other is whether the experiences of those who responded are similar enough to those who did not respond so that states can assume that their responses would have been similar. Keep in mind that although the respondents for Indicator B8 are parents, the issue of representativeness focuses on the demographics of their children, not the parents themselves.

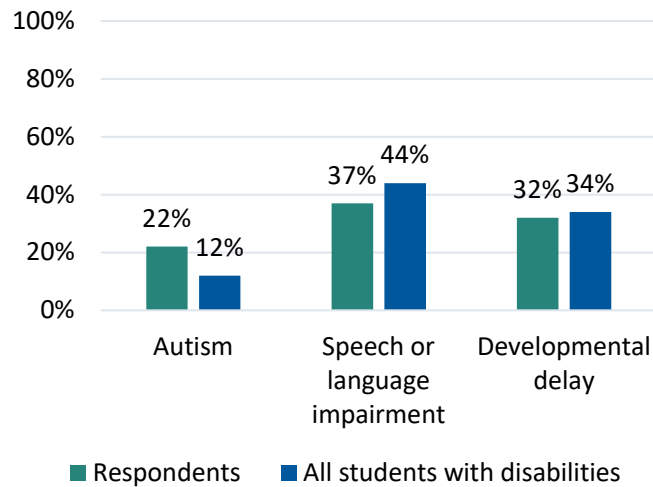
Representativeness of the Respondents

Evaluating the representativeness of respondents is similar to asking, “Were parents of children and youth with certain characteristics more or less likely to respond to the survey than others?” States should compare results in the categories OSEP suggests (i.e., race/ethnicity, student gender, student age, disability category, and geographical location) and any additional categories they might wish to explore, such as income level, length of time child received services, or primary language. For each demographic category, states will need to compare the response percentages in the category to the statewide percentage of all students with disabilities who are in that category.



Consider Figure 1, with hypothetical data from State A. Children and youth with autism are overrepresented in the data because the percentage of respondents in that category is much higher than the percentage of children and youth in that category statewide. On the other hand, children and youth with speech or language impairments are underrepresented because their proportion of respondents is smaller than the proportion of students in that category statewide. Only in the category of developmental delay is the collected data proportional to the population of the target group. Because these data do not fairly represent some groups, the overall data cannot be said to be a good representation of all parents of children and youth with disabilities in the state.

Figure 1. State A proportions of respondents and all children and youth with disabilities, by category



How much of a difference between respondents and the target group is still considered representative? There is no one “threshold” for determining whether data are representative, but OSEP requires that states describe the metric they used to determine representativeness. States commonly use either a threshold of plus or minus three percentage points or statistical significance as their threshold for representativeness. Two tools that states are using to determine if their data meet these thresholds, although not designed specifically for Indicator 8, are

- The National Technical Assistance Center on Transition’s (NTACT) [Response Calculator and Instructions](#), which calculates differences in percentage points and uses a threshold of ± 3 percentage points. This calculator may indicate that responses are not representative unless there are large numbers in all groups a state is reviewing.
- The Early Childhood Technical Assistance Center’s (ECTA) [Response Rate and Representativeness Calculator](#), which uses tests of statistically significant differences. This tool works well even with small group sizes, but it is only appropriate to use with a census that is relatively free from nonresponse bias or with simple random sampling.

Representativeness of the Responses

Regardless of whether response rates are high or respondents are representative, states must consider the likelihood of nonresponse bias. Nonresponse bias occurs when those who did not respond to the survey are different in meaningful ways from those who did respond. These differences might be revealed when states examine the representativeness of their target groups, but other cases of nonresponse bias can occur even when respondents appear to be representative of the overall population. For example, nonresponse bias could happen if parents who are less involved in their children’s education were less likely to respond than parents who are more involved. That would lead to bias in the survey results by underrepresenting the opinions and experiences of parents who are less involved. If that happened, decisions based on those survey results would be faulty, as they likely would not address the needs of all parents and children and youth.

States must analyze their response rate to identify potential nonresponse bias and take steps to reduce any identified bias and promote responses from a broad cross-section of parents of children and youth with disabilities. States should plan to conduct nonresponse follow-up to minimize the possibility of bias and take steps to check for nonresponse bias after they collect data. One way to investigate nonresponse bias is by examining the responses that came in from parents at the end of the data collection period, as a proxy for nonresponders, compared to responses that came in during the beginning and middle of the data collection period. This method does not add additional costs to the data collection and provides insight into whether or not results may be biased.

A better, but more expensive, way to assess nonresponse bias is to assess directly if there are differences between responders and nonresponders. To do this, states will need to make extra efforts to obtain survey responses from a sample of parents who initially did not respond to see if their responses differ from ones the states already have. To collect data from those who originally did not respond, states should follow these steps:

1. Decide on a strategy to encourage responses. States should consider options such as using a shorter questionnaire (perhaps just the questions they are using to calculate Indicator 8) or offering incentives like small payments or gift cards.
2. Randomly select a group of 10 to 20 percent of the parents who did not respond to the survey during the initial data collection window and reach out to them.
3. Contact the parents (usually by phone) to gather responses.
4. Document the responses. For instance, states might complete a paper survey for parents during a phone call or enter their responses into an online survey.

Once states have responses from their group of initial nonresponders, they can compare the responses to the responses they received originally. In the comparison, states should examine the degree of difference between the two groups to determine if it is meaningful. States should consider that some difference in responses could be due to the collection method if they used phone calls for non-responders and another method for the original data collection. To determine whether there are meaningful differences, states could use tests of statistical significance between the two groups of responders. States should consult with a staff member or contractor with statistical expertise to assist with the analysis. States also can contact their [IDC State Liaison](#) for assistance.

Monitoring and Addressing Issues With Representativeness

Monitoring representativeness during data collection is helpful because it allows states to make changes to boost responses and representativeness before collection is complete. After data collection, the chance to improve representativeness ends, but states still can make changes to balance the current data and improve the next round of data collection.

During Data Collection

Regular checks for representativeness during data collection allow states to identify issues in a timely manner and quickly implement steps to help improve representativeness. States should consider checking at least

twice—when they have received responses from about one-third and two-thirds of the expected number of parents. Without these checks, states will lose the opportunity to improve representativeness in that round of data collection.

If states identify representativeness issues during data collection, they will need to work to address those issues as quickly as possible while collection continues. The most effective way to improve representativeness during data collection is to make extra efforts to encourage participation from groups that are underresponding. These efforts could include

- sending additional reminders using different modes of communication, such as social media, mail, or phone calls, to parents in the underresponding groups;
- enlisting support from Parent Centers or other key stakeholder groups to encourage parents from underresponding groups to respond; and
- calling parents who started but did not complete the survey to encourage them to respond either in the original format (e.g., online or mail) or during the phone call.

After Data Collection

When data collection is complete, states should assess representativeness again. If they have been careful when selecting their sample (if they sampled) and have tracked responses, monitored representativeness, and followed up with nonresponders, there is a good chance that they will have relatively representative data.

If, after all of their efforts, their data are still not representative, states can consider statistical adjustment to mimic representative data such as “weighting.” Weighting re-balances the data to reflect the target populations better. It is a procedure by which states count data from some groups more or less than data from other groups to compensate for a lack of representativeness in the data they originally gathered. Weighting is complicated, and states often need multiple weighting techniques, in which case the final weight would be the product of all weighting techniques. Because of this complexity, states should consult with staff or consultants with statistical training and specific expertise in weighting to use weighting techniques.

A more straightforward, but perhaps less adequate, way to treat non-representative or potentially biased data is to be transparent in reporting the data. States can explain areas of under- or over-representation in their results and narrative and caution the reader to interpret the results accordingly. States also should describe the results in terms of parents who completed the survey (i.e., “survey responders”) rather than all parents of children and youth with disabilities, while keeping in mind that data may be representative for certain subgroups with high response rates but not for the total population.

Planning for Next Time

The next round of data collection offers the opportunity to improve the representativeness of the data. OSEP requires states that reported non-representative data to describe their strategies to improve representativeness the next year. To make their plans, states should consider issues that they encountered in their last data collection and how they might correct them. Were there methods or strategies that were more successful? If so, states should implement them earlier and with greater intensity in the next round. For example, if states find that certain groups are underrepresented in their survey responders, in the next year’s

data collection, they may opt to increase outreach to that group, add more survey delivery options such as social media, increase the number of follow-ups to parents, or take other steps designed to increase representativeness. If states conducted a census, they could consider sampling respondents instead to allow them to focus their efforts better among demographic groups. (See [Sampling](#) for more information.)

For questions, more information about representativeness, or assistance regarding analyzing Indicator 8 data for representativeness, states can contact their [IDC State Liaison](#).

Sampling

Sampling can save time and resources compared to attempting to survey all parents of children and youth with disabilities, and it can result in representative data when done well. However, sampling is complex. Therefore, states should consult with someone with expertise in sampling to develop and implement their sampling plan, beginning with selecting the appropriate sample size and the appropriate sampling procedures. For effective consultation, it is helpful to know some basics, so information on sampling methods and creating a sampling plan follow.

Selected Types of Sampling Methods

There are many different types of sampling methods but not all are appropriate for use with parent involvement data. A discussion of a few selected common types follows.

Random Sampling

This method refers to samples selected completely at random from everyone eligible to participate. Random sampling is often preferred to other sampling methods because it should, in theory, result in a representative sample, since every eligible parent has an equal chance of being included in the sample. Random sampling is not always representative, though, and sometimes a random sample will, by sheer bad luck, not be representative.

Oversampling

This method uses sampling to correct for a group that states expect to be underrepresented because of small numbers in the population or expected low response rate. Oversampling works by giving parents in that group a higher likelihood of being randomly selected than parents in other groups. This creates larger subsamples of parents from the target group to better represent that group's views. This method can be effective in gathering enough data from the target group, but it requires special considerations when trying to report statewide data. If states choose this method, they would need to weight the data to account for the fact that different groups had different probabilities of being selected. For example, states might oversample Hispanic parents to ensure that the sample of Hispanic parents is large enough. However, if states combine data across ethnicity groups to get estimates for the entire state, they must apply weights to individual values to adjust for the different selection probabilities.

Probability Sampling

For a probability sample, such as a stratified sample, states sort eligible participants into important categories (e.g., geographic location or race/ethnicity) and then sample from within those categories. Eligible participants don't all have the same probability of being selected (as they would with random sampling), but all within a category have the same chance of being selected as others in that category, and all have some chance of being selected. This method ensures that there will be an appropriate number of parents from each category in the sample, as opposed to random sampling, which might over- or under- represent a category by chance. As with oversampling, states weight final results from each category by how likely parents in the category were to be selected to create unbiased estimates of the entire population.

Purposeful Sampling

Purposeful sampling is a form of non-probability sampling in which states rely on their own judgment when choosing the sample. It does not include any element of random selection. In addition, this limitation prevents states from being able to assess how representative the sample is. Therefore, this method is not appropriate to use for Indicator 8 data collection.

Steps to Take When Sampling

Here are specific steps states should take when sampling.

1. Engage a team member or a [third-party contractor](#) with specific training, expertise, or experience in sampling, since there are multiple technical details that states must consider.
2. Develop a sampling plan that specifies the intended sample size and type of sampling method states plan to use to ensure the data are representative.
3. Implement the sampling plan with fidelity.
4. Review and, if needed, modify the sampling plan periodically, especially if the demographics across the state shifted since states determined their sampling plan. Changing demographics across or within certain districts could mean states need to examine their sampling strategy to ensure the [representativeness](#) of the sample.

Response Rates

OSEP requires states to report the number of parents to whom they distributed surveys and the number of parents who responded. States also must compare response rates from year to year for specific groups of parents and describe strategies they will implement to increase the response rate, particularly for those groups that are underrepresented. It is important that states monitor and report their response rate because low response rates can affect data quality.

An overall high response rate alone does not guarantee representativeness. To know how representative their data are, states combine information about response rates with information about the demographic characteristics of their population of children and youth with disabilities. For example, if one demographic group in the state was less likely to respond than others were, the data will not represent all children and youth with disabilities in the state, even if the response rate overall was high (defined as 80% or higher by the Office of Management and Budget, 2006). Alternatively, if the characteristics of the state's respondents



closely match those of all children and youth with disabilities in the state, the data may be representative even if the response rate was under 80 percent.

References

Office of Management and Budget. (2006). *Guidance on Agency Survey and Statistical Information Collections: Questions and Answers When Designing Surveys for Information Collections*. Washington, DC: Office of Information and Regulatory Affairs.