IDC IDEA DATA CENTER
Building Capacity for High-Quality *IDEA* Data

Parent Involvement Toolkit

Making the Most of Parent Involvement Data: Improving Quality and Enhancing Understanding

Jill Lammert
Hadley Moore
Amy Bitterman

Westat®

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Authors:
Jill Lammert
Hadley Moore
Amy Bitterman
IDC

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Introduction

Parent involvement[1] is one of the most important predictors of students' educational success. Compared to students whose parents are not involved in their education, students whose parents participate in their education tend to

- Have better grades
- Stay in school
- Graduate from high school at higher rates
- Demonstrate better social skills and behavior[2]

It is important that schools take actions to facilitate this involvement.[3] Importantly, "the education of children with disabilities can be made more effective by…strengthening the role and responsibility of parents and ensuring that families…have meaningful opportunities to participate in the education of their children at school and at home."[4]

The *Individuals with Disabilities Education Act* (IDEA) states that schools must give parents the opportunity to be involved in

- Determining their children's eligibility for services based on assessment and evaluation results
- Determining appropriate educational placement
- Serving as individualized education program (IEP) team members for their children[5]

Each year, to comply with requirements of IDEA, states must submit to the U.S. Department of Education's Office of Special Education Programs (OSEP) their State Performance Plan/Annual Performance Report (SPP/APR), which outlines their progress on a series of indicators related to improving outcomes for children with disabilities and their families. One part of this is related to Indicator B8, described in **Box 1**, which relates to parent involvement. In addition to helping states report on Indicator B8, collecting data on parent involvement is an important step in the process of determining how to improve the programs and services offered to children with disabilities and their families.

A Note On This Toolkit

This toolkit is designed to assist states as they plan for and carry out their efforts to collect, report, and use high-quality parent involvement data. It defines key concepts; offers guidance on ways to improve the quality of the collection, analysis, and use of parent involvement data; and provides resources and tools to help states in their efforts.

The toolkit is designed to allow various navigation options. There are four primary sections: preparing for data collection (READY), collecting data (RUN), analyzing data (REFLECT), and using the collected information to consider current results and goals and share data with others (REACH). In addition, there are links to other resources and "deeper dive" sections that provide additional information states may find helpful. States can proceed through the sections in a linear manner or use the navigation pane to go to individual sections.

[1] The term parent involvement includes family involvement. Parent involvement is used throughout this guide, as it is the term used in State Performance Plan (SPP)/Annual Performance Report (APR) Indicator B8.

[2] Castro et al. 2015; Henderson and Mapp 2002; Van Voorhis et al. 2013; Wilder 2013.

[3] Henderson and Mapp 2002.

[4] Individuals with Disabilities Education Improvement Act of 2004, P.L. 108-446, Section 601(c)(5).

[5] Ibid.

What is Indicator B8?

Indicator B8 measures the extent to which parents perceive that schools facilitate parent involvement as a means of improving services and results for children with disabilities. **Box 1** outlines OSEP's instructions regarding the data source and measurement states should use to report on Indicator B8.[6]

Box 1. Requirements for Indicator B8

FFY 2013–2018 Part B SPP/APR Indicator Measurement Table—Indicator 8

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)).

Data Source: State-selected data source. Measurement: Percent = number of respondent parents who report that schools facilitated parent involvement as a means of improving services and results for children with disabilities divided by the total number of respondent parents of children with disabilities, times 100.

Instructions for Indicator/Measurement: Sampling of parents from whom response is requested is allowed. When sampling is used, submit a description of the sampling methodology outlining how the design will yield valid and reliable estimates. Describe the results of the calculations and compare the results to the target. Include a description of how the state has ensured that the response data are valid and reliable, including how the data represent the demographics of the state. Provide the actual numbers used in the calculation.

Why is it important to improve the quality of Indicator B8 data?

Given the importance of parent involvement to students' educational outcomes, it is essential that states collect and report high-quality data related to that involvement and that the key audiences use those data effectively. Doing so will inform state and local education agencies on how they can improve the programs and services offered to students with disabilities and their families. Indicator B8 requires all states to collect and report parent involvement data—an important part of ensuring that parents of children with disabilities are given the opportunity to participate in their children's education. Yet, a 2014 report published by the U.S. Government Accountability Office (GAO) found that because of differences in the Indicator B8 data collection and analysis methods used by states, OSEP cannot determine states' individual performance or compare states' performance in facilitating parent involvement. This variation across states limits OSEP's ability to oversee state dispute resolution activities and monitor the level of parent involvement for issues that may require improvement activities. [7] Perhaps more importantly, issues with the quality of parent involvement data that are collected and reported to key stakeholders at state and local levels means that opportunities to increase parent involvement, and thereby improve educational outcomes for students with disabilities, may be missed.

In response to the GAO report, OSEP agreed to take steps to improve the comparability of parent involvement data, while minimizing the burden on states. OSEP directed the *IDEA* Data Center (IDC) and other national technical assistance (TA) centers to develop and widely distribute (a) exemplars of best practices for collecting parent involvement data, including model surveys and methodologies, and (b) materials to assist states in analyzing and using parent involvement data to improve the provision of special education services.

[6] U.S. Department of Education 2014.

[7] U.S. Government Accountability Office 2014.

What are states currently doing to collect and report on Indicator B8?

Currently, all states are conducting surveys to gather their Indicator B8 data; these are outlined in **Table 1**.

Table 1. Types of surveys used to collect parent involvement data

Survey	Description	How states have used the survey
NCSEAM The National Center for Special Education Accountability Monitoring (NCSEAM) developed the Schools' Efforts to Partner with Parents Scale (SEPPS) specifically to meet the requirements of Indicator B8. The scale is commonly referred to as the "NCSEAM."	The NCSEAM scale measures schools' efforts to facilitate parent involvement and is recognized as a high-quality tool for collecting data related to Indicator B8. NCSEAM recommended a 25-item version of the scale in 2006, although there are 78 items that states can select from an "item bank." The complete list of the 78 validated items, along with a full description of the development of the scale and its psychometric characteristics, is included in Elbaum, Fisher, and Coulter (2011). Elbaum (2014) includes the 25-item version of the scale.	Approximately 40 percent of states have reported using the NCSEAM.[a] Most states using the NCSEAM have used the 25-item version of the NCSEAM scale.[b]
State-developed surveys	Many states have created their own surveys to gather parent involvement data, many of which are adapted from the NCSEAM scale.	Approximately 40 percent of states have reported using a state-developed survey, and an additional 11 percent have reported using a modified version of the NCSEAM scale or the Family Outcomes Survey, or ECO.[c, d] States have used different approaches to developing surveys: • Adding new items to the NCSEAM • Adding selected NCSEAM items to a new survey • Adapting the ECO survey so it can be used with both a 3- to 5-year-old population and a school-aged population • Creating a new survey

[a.] Elbaum 2014.

[b.] *Elbaum, Fisher, and Coulter 2011*.

[c.] The Family Outcomes Survey was developed by the Early Childhood Outcomes (ECO) Center. This survey is commonly referred to as the "ECO."

[d.] U.S. Department of Education 2016.

READY: How can my state improve the quality of its parent involvement data?

Collecting, analyzing, and using parent involvement data can be complex and challenging, and the process requires resources and support from personnel at the school, district, and state levels. Some states have internal personnel who work to collect, analyze, and report their parent involvement data, others collaborate with key stakeholder groups, and still others hire third-party contractors to conduct some or all of their parent involvement data collection and reporting activities.

Consider the elements of data quality when planning data collection

As your state begins planning its parent involvement data collection and analysis activities, you should consider what it means to collect high-quality data. **Table 2** outlines five characteristics of high-quality data, lists questions you should ask about the data, and offers some examples related to collecting parent involvement data.[8]

Table 2. Elements of high-quality data to keep in mind as you plan to collect data

Element	Questions to ask	Examples of parent involvement focused questions
Precision	• To what extent do the data collected reflect an exact measurement (for quantitative data) or include the narrative information (for qualitative data) needed to respond to a question?	• Does your survey ask parents to give a specific number (e.g., 5) or range (e.g., 3-5) of times they have actively participated in meetings related to their child's education?
Accuracy	• To what extent do data reflect the actual value of an observation or achievement? • Do the data provide a "true" (e.g., verifiable) account of a phenomena or experience?	• In the survey responses, is the number of times parents report being invited to participate in individualized education program (IEP) meetings "off" by one or more meetings (when compared to additional data collected from school staff)?
Reliability	• To what extent can a data measurement be replicated with accuracy and precision? • When gathering data from individuals, might a person have any reason to respond falsely?	• Does the survey produce similar results when administered to groups of parents who would be expected to respond in similar ways? • Might parent focus group participants exaggerate the level of parent involvement at a particular school?
Consistency	• To what extent do data or individuals' responses agree with each other?	• When you compare responses to your parent survey with data about parent involvement provided by the school district or data collected through a teacher focus group, is the level of reported parent involvement similar across the different data sources?
Completeness	• To what extent is complete information provided?	• When a survey asks how often parents meet with their child's teachers, do the responses provide detailed information such as 2-3 times per month? • Is there enough context provided during an interview to understand a mother's statement that her child's school "has no interest in getting parents involved"?

[8] *Adapted from Lammert, Heinemeier, Howell et al. 2016.*

Choose data collection methods that will produce high-quality and rich data

As you've learned, all states currently use surveys as their primary collection method for Indicator B8 data. **But keep in mind that states are not required to use a particular method!!** Your state may be interested in exploring other options due to cost considerations or a desire for more in-depth information. Additional data collection methods may include

- Conducting interviews or focus groups with parents
- Conducting secondary data analysis using data maintained in state and district data systems related to parent involvement (e.g., data on disputes or complaints, parent attendance at events, and active participation in the individualized education program [IEP] process)
- Observations of parent involvement activities using rubrics completed by schools or districts with indicators of parent involvement, including opportunities for parent involvement, type and level of parent involvement, and partnerships between parents and teachers to jointly set goals for students

This toolkit focuses primarily on the use of **parent surveys** to collect parent involvement data, since that is the method states are currently using, but the steps involved with planning for and conducting data collection, and analyzing and communicating your results, can be applied to other methods of data collection. If your state wants to use another method, keep in mind that it will be necessary to identify or develop valid and reliable data collection instruments and implement standard data collection and analysis procedures to ensure that the data collected are high quality. States interested in exploring other data collection methods can contact their IDC State Liaison for assistance or should consider working with a third-party contractor experienced in data collection.

READY: How can my state ensure the data collected are representative?

In the case of Indicator B8 data, "representativeness" refers to the extent to which the demographics of the students whose parents participated in data collection activities are representative of the demographics of all children receiving special education services in the state. **Representativeness is very important. If your data are not representative, they will not paint an accurate picture of the nature and level of parent involvement in your state.** For example, if only a small group of parents who are highly motivated to respond to your survey (such as those who have had very positive or very negative experiences related to parent involvement) participate in the survey, you may be over- or underestimating families' feelings of involvement in their children's special education programs.

A number of factors influence whether and how well the demographics of the students whose parents participate in your data collection activities are representative of the demographics of all students with disabilities. Things to keep in mind and address are

- Whether and how specific groups of parents are chosen (or not chosen) to participate (often referred to as "sample selection")
- Whether you have the information necessary to determine if the data you collect are representative
- Whether your data collection instruments and procedures facilitate participation and allow you to track
  - The number of parents who participate compared to the number invited to participate (also known as "response rate")
  - Whether parents who participate in data collection activities are similar to those who do not participate (which, in the case that they are not similar, might be an indication of "nonresponse bias")

Carefully select the group that will participate in data collection

To determine which group(s) your state will include in the Indicator B8 data collection activities, your state will need to look to its evaluation questions and the types of analyses it would like to conduct. For example, if the state wants more in-depth or varied information about parent involvement, they might involve school administrators, teachers, parents, and students in the data collection activities beyond those that are usually carried out for Indicator B8.

What States Are Doing

Approximately half of states send their Indicator B8 parent involvement survey to a sample of parents rather than to all parents whose children receive special education services (OSEP 2016).

While it is technically possible to conduct a census of all parents of students with disabilities for your Indicator B8 data collection, it is often not feasible or desirable. For example, surveying all the parents of students with disabilities in your state would be time-consuming, costly, and likely to result in a low response rate. Selecting a sample allows your state to save time and money and, when done correctly, can help to improve the quality and accuracy of your parent involvement data by leaving more time and resources for conducting ongoing checks of response rates and representativeness and following up with parents.

When making decisions about whether and how to select a sample, consider the following:

- How much time and money can be spent? Is it feasible to conduct a census?
- How many people are available to work on the data collection and analysis activities (e.g., to recruit parent participants, collect data, analyze data)?
- Will the analysis compare groups (e.g., compare the level of parental involvement in districts with certain types of special education programs to the level of involvement in districts without those programs)? If so, how many groups?
- Does the study team plan to conduct descriptive statistical analysis, inferential statistical analysis, or qualitative analysis of interview/case study data?
  - What is the minimum sample size needed in order to reach conclusions with a pre-specified level of confidence (when conducting statistical analyses of the results)?

Sampling is an area where a team member—or a third-party contractor—with specific training, expertise, or experience is needed, as there are multiple technical details that must be considered. For more information, consult the important information about sampling provided in the Resources section. We also recommend that you contact your IDC State Liaison to connect you with resources and individuals with expertise related to sampling procedures.

Gather data on demographics and other important considerations related to representativeness

When planning your state's data collection activities, you must take steps to ensure you will have the information needed to track response rates and assess representativeness of the data you collect. **When thinking about collecting demographic and other data, it is important to know the difference between collecting anonymous data and keeping data confidential.** Anonymous data are data that cannot be traced to the parent or student, while confidential data can be traced but will not be improperly disclosed. **We strongly recommend that you do not try to keep your parent involvement surveys (or other data collections) anonymous, but it is still important to maintain the security (and confidentiality, if promised to responders) of your data** (see the notes about Keeping Data Anonymous and Data Security and Confidentiality for more information).

A Note About Keeping Data Anonymous

Keeping data collection anonymous can hinder your efforts to collect high-quality data by, for example:

- Making it harder to track responses to know whether the particular individuals you have asked to participate in your data collections actually participate and to calculate response rates
- Requiring that you ask your participants a lot more questions to be able to report on representativeness, increasing the length of the data collection instruments and potentially increasing the burden on responders
- Forcing you to send out reminders to the entire group of potential participants, rather than targeting specific individuals to get them to respond, which may annoy participants who have already responded

A Note About Data Security and Confidentiality

Data security is extremely important. Data protection processes and systems should be in place before data collection begins. Safeguards are imperative if parents were assured confidentiality. As a reminder, confidential data can be traced but will not be improperly disclosed. Here are some steps you can take to protect confidentiality as well as ensure the security of data:

- Use ID codes on surveys in place of identifying information
- Separate files that contain student or parent identifiers (e.g., names and addresses) from survey responses; the unique ID number can be used to link the files
- Encrypt personally identifiable information
- Limit access to the electronic and hard-copy data and track user access
- Use security codes and password protection to restrict access to computerized records
- Automatically lock users out of the electronic system after a certain period in the event someone forgets to log off
- Install firewalls
- Use secure data transfer protocols
- Conduct regularly scheduled updates to antivirus software
- Use locked data filing for hard copies of data collection instruments and forms
- Properly dispose, destroy, or delete study data/documents, when appropriate, using secure methods of data destruction, including destroying backup copies, shredding paper copies, and electronic "wiping" of computer disks

The recommendations we make in this toolkit assume that you will not try to keep your data collections anonymous, but that you will work hard to keep your data secure and maintain confidentiality, if promised.

Below are some of the steps you can take to ensure you will have the information you need:

- Send out a unique identifier for each survey (or other data collection instrument) so that you can track responses and match surveys to demographic information
- Collect demographic and other data on
  - All parents of children with disabilities in the state or district
  - Parents who respond to the survey (also called "responders")
  - Parents who do not respond to the survey (also called "nonresponders")

For example, if you are going to be looking at the proportion of surveys received by race/ethnicity, geographic variables, child's disability category, child's gender, child's age, length of time in services, income, and/or primary language, you will need to ensure that you have access to these data before you send your surveys out or you will need to collect the data through the survey itself.

If demographic data are currently part of a separate data file or system, you will need to use a consistent linking variable across files, such as a unique ID number. You should create the linking variable in your demographic file and your survey file before you send out any surveys so you know that you are able to track the demographic information of responders (and nonresponders) when you begin receiving completed surveys.

Choose or design data collection instruments with participation and representativeness in mind

Whether you are choosing which existing data collection instrument(s) you will use to gather your Indicator B8 data (such as the NCSEAM scale) or designing a new instrument, keep in mind that the design of data collection instruments can affect whether and how individuals respond. A well-designed data collection instrument will make it easier for individuals to respond fully and accurately and be accessible to all potential respondents. As you plan for data collection, be sure to

- Use or create instruments that facilitate participation
- Make instruments accessible

We have included two survey examples in the online toolkit that you can refer to if you intend to create a new survey. The purpose of the sample surveys is to demonstrate possible layouts and illustrate survey design principles described in this toolkit (see the section on modifying or creating a new survey for more information). Tips presented in this toolkit are noted throughout the sample surveys. The example items included in the sample surveys are ones commonly found in different surveys that states use.

How Can Stakeholders Help?

Pennsylvania developed its infant/toddler and preschool early intervention survey in tandem with the family survey process that spans Pennsylvania's early childhood programs. These included the Pennsylvania Pre K Counts program, Head Start State Supplemental Program, Home Visiting programs, and Keystone STARS (TQRIS). The state wanted to develop a survey that would contain core items to use across all of its early childhood programs and maintain items that provide feedback on more specialized areas of the programs (e.g., items related to timely service delivery). The survey development process started with an internal stakeholder group, comprising staff from different programs in the Office of Child Development and Early Learning. This internal group reviewed a series of existing surveys and created an item bank from those. The internal stakeholder group then rated the items based on their relevance and developed a draft survey. To ease the transition to a new survey, the group maintained most items from the previously used NCSEAM survey. A broad array of stakeholder groups, including a family advisory group and the State Interagency Coordinating Council, then reviewed the survey and provided feedback that informed revisions. The state also engaged in a pilot of the survey and used feedback from the process to make final changes to the survey.

Table 3 includes some issues that might arise if a state administers a poorly designed survey, information about the possible effect on survey respondent behavior and the quality and representativeness of data, along with some possible solutions.

Table 3. How instrument design can affect respondent behavior, data quality, and representativeness

Instrument design issue	Possible effect on respondent behavior	Possible effect on data quality and representativeness	Possible solution
The definition of "parent involvement" is unclear, so the interpretation of what constitutes "parent involvement" is left up to individual responders.	• Responders have different ideas of what "parent involvement" means, so responses cannot be easily interpreted. • Responses related to the level of involvement vary widely from one district to the next, even if the actual level of involvement is not that different (based on data collected through other sources). • Responders choose not to answer the questions because they do not understand what is meant by "parent involvement."	• Data collected through the survey are not reliable because the survey will produce different results depending on the respondent's interpretation of "parent involvement." • Data collected through the survey are not reliable because the survey will produce different results depending on the respondent's interpretation of the level of involvement. • Data may not be representative if certain parents decide not to answer questions based on different understandings or because they are confused.	• Include a clear definition of "parent involvement" at the beginning of the survey so all responders know how to interpret the term. • Get stakeholder input on how to define "parent involvement." • Include clear definitions of the different levels of involvement (e.g., provide definitions of what low/ moderate/high involvement looks like) so that responders will respond consistently.
Individual survey questions (also called "items") are unclear or poorly written (e.g., include multiple ideas within one question).	• Parents do not know how to respond to the question so they do not answer it. • Parents only answer one part of the question (for items that include multiple ideas).	• Data collected through the survey are not reliable because the survey will produce different results depending on the respondent's interpretation of individual questions. • Data may not be representative if certain parents decide not to answer questions based on different understandings. • Data may not be representative if certain parents decide to stop the survey because they get frustrated.	• Be sure that all survey items are well designed (see the section on how to modify or create a survey for more information on how to design high-quality items). • Pilot test survey items with different potential respondent groups to see if they understand them in the same way.
The survey does not include clear instructions for how the respondent is supposed to proceed from one section to the next (especially when using questions that "skip" responders to different sections based on how they respond to a particular item).	• Parents who are supposed to answer specific questions do not answer them because they went to the wrong section. • Parents who are NOT supposed to answer specific questions answer them because they went to the wrong section. • Parents get frustrated and do not complete the survey.	• Data collected through the survey are not valid because the responders did not answer the questions correctly. • Data may not be representative if certain parents decide to stop the survey because they get frustrated.	• Use an online survey that has "skip patterns" built into it so that parents are automatically moved from one section to the next based on their responses. • Pilot test the survey with different potential respondent groups to see if they understand how to complete it.

Instrument design issue	Possible effect on respondent behavior	Possible effect on data quality and representativeness	Possible solution
The survey is only available in English and/or is not made accessible to individuals with disabilities.	• Parents who do not read or speak English cannot respond to the survey. • Parents with disabilities cannot access the survey so they cannot respond.	• Data will not be representative if certain parents are unable to answer the survey because of a language barrier or another type of accessibility issue.	• Offer the survey in various languages, based on the demographics of your state's population. Be sure to use trained translators! • Offer accessible versions of all surveys for individuals with disabilities. See the regulations for Section 508 compliance for more information on how to make instruments accessible.

Create data collection procedures and tools to facilitate participation and track responses

Just as the design of the data collection instruments affects data quality and representativeness, the way you go about collecting data is also important. Here are some tips to help you increase participation and ensure that you are gathering high-quality, representative data.

What States Are Doing

Almost all states use self-administered paper or online surveys to collect data on parent involvement.

- Consider when and for how long you will collect data
- Think carefully about which mode of data collection to use
- Be sure to have updated contact information for potential responders
- Set up a database to track data collection and plan to do nonresponse follow-up

Timing Is Important. Two elements of timing are important for data collection: scheduling and the field period.

- **Scheduling:** Conducting data collection activities at inconvenient times may increase respondent burden, result in overlapping data collection efforts, and ultimately decrease response rates. *Coordinate data collection efforts with state and local officials and avoid school breaks and holidays whenever possible.*
- **Field Period:** Field period refers to the amount of time planned for data collection. *Allow sufficient time for all data collection efforts, including*
  - *Time to send surveys to parents*
  - *Time for parents to complete and return the survey*
  - *Time for data collectors to follow up with parents who do not respond initially*

Mode Matters. Data collection mode or delivery method can affect both data quality and response rate. Common issues associated with different survey modes include

- **Online surveys**
  - **Internet access:** Many households still lack internet access; those with internet access differ from those without internet access, with more affluent households and non-Hispanic White households having greater access.[9] *Use more than one mode (e.g., online and paper) to minimize potential issues with representativeness and response bias.*
  - **Browser/mobile access:** Parents may have difficulty responding to a survey using a browser that does not adequately support the survey.[10] Additionally, many parents access the internet through their mobile devices. *Design online surveys with these issues in mind.*
  - **Email filters:** Many parents have email filters that block "unwanted" or unsolicited emails. Send surveys from a state agency or other official email address to make it more likely that surveys are delivered to their intended recipients.
- **Paper surveys**
  - **Survey complexity:** Surveys with complicated question structures (e.g., those that filter how a respondent proceeds through questions based on responses to prior questions) can be difficult to complete when they are in paper format, which may affect responses and response rates. *Create uncomplicated paper surveys, or*

[9] File and Ryan 2014.

[10] Tourangeau, Conrad, and Couper 2013.

use online surveys to program question patterns and make it more likely that responders will answer the questions they are intended to answer.

- **Online & paper surveys**
  - **Perceived importance:** Many potential responders overlook emails or letters inviting them to participate in data collection because they are not aware of the importance of the effort*. Use official letterhead in communications and enlist support of stakeholder groups to notify potential responders of the importance of participating in data collection.*

Contacts Are Critical. Having complete and accurate contact information is very important. The better the quality of parents' contact information, the better the chance of achieving a higher response rate.

- **When planning for data collection**
  - Enlist district and school staff support to review, verify, and update parent contact information. Obtain physical and email addresses and phone numbers to allow for nonresponse follow-up.
  - If using mail surveys, use an address correction service such as the ACS service from the U.S. Postal Service to request address corrections. Include a unique code in a specified format on the mailing label to receive electronic notice about any address changes. There are fees associated with this service based on the number of address changes.
  - Ask parents to verify contact information at IEP meetings or other meetings at school.
- **During data collection**
  - If using online surveys, investigate any bounce-back emails for data entry errors or inactive accounts. Follow up on email bounce-backs by mail or by phone.

Tracking Is Key. To monitor response rates and representativeness, you must have a system to track your data (such as Microsoft Access or Excel). See the section on creating a data file for more information about how to set up your tracking file to ensure that the data you enter are accurate.

- **Unique IDs:** The only way to know who responds to your survey is to include a unique ID on each survey. Some online services do this automatically, whereas paper surveys will require the state to add the ID number to each survey. *Ensure all surveys include a unique ID for tracking purposes.*
- **Database:** Many online survey services automatically combine survey tracking and response monitoring in a single database, allowing you to monitor response rates in real time. With these services, survey responses are automatically entered in digital format, reducing the amount of work needed later to enter data. *Design your tracking system to track surveys that were sent out and those that were received.*
- **Response rates:** There are two primary types of response rates to consider: overall response rates and item response rates. Low response rates can affect data quality and can be especially problematic if certain groups of parents are more (or less) likely to respond than others. *Combine information about response rates with*

What States Are Doing

Connecticut modified its survey distribution process in an effort to increase response rates. The state sent districts an Excel template with the state-assigned student identifiers for the special education students in their district and asked districts to enter the most current mailing address for each student. This process was a change from prior years when the state sent districts an Excel spreadsheet with students' mailing addresses prepopulated (as extracted from the state's special education data system) to confirm the mailing addresses. This revised process helped to ensure that each district reviewed and edited the Excel spreadsheet with the most current addresses. In addition, districts were able to indicate if a child had moved out of the district or if any additional students had been identified. The state also asked districts to provide parents' email addresses, when available, to allow for direct parent access to the survey through a personalized link. Nearly all districts were able to provide emails for some or all parents of students with disabilities.

information about the demographic characteristics of your parent population to learn more about the representativeness of your data.

  - **Overall response rates:** The proportion of completed surveys compared to the number of surveys sent out. Calculate overall response rates to know whether the group of responders is representative of your overall parent population.
  - **Item response rate:** The proportion of parents who responded to a particular question compared to the total number of parents who responded to the survey. Parents might accidentally skip a particular question or deliberately skip one that is hard to understand or that they do not want to (or cannot) answer. Calculate item response rates to know whether particular groups of parents were more or less likely to respond to certain items on the survey, which may affect the representativeness of your data.

- **Nonresponse bias:** Nonresponse bias occurs when the individuals who complete the survey differ in meaningful ways from those who do not. For example, if parents who are less involved in their children's education are less likely to respond than parents who are more involved, the results of the survey will be biased and parents who are less involved will be underrepresented. *Plan to conduct nonresponse follow-up to minimize the possibility of bias and take steps to check for nonresponse bias after data are collected.*

Carefully select the mechanism for getting parents to participate

Once you have notified parents (or school administrators, teachers, or other groups you may be collecting data from) about the data collection effort, you need to make sure they follow through and actually participate. You might do this by

- Sending the survey directly to parents by mail or email
- Giving the paper survey to parents during in-person meetings or at pick-up/drop-off times for them to complete at a different time and return to the school
- Having parents complete the survey when they visit the school
- Sending the survey home with students for parents to complete and return to the school

Table 4 presents different approaches your state might adopt to deliver the survey to parents, along with benefits, drawbacks, and considerations for each approach. No one approach is the best, so think carefully about your parent population and consider how you can get as many of them as possible to participate. Consult with district/school staff and other key stakeholders for suggested approaches and support. Consider a rolling approach:

- Start with one approach first, such as emailing parents a link to an online survey
- Give parents time to respond
- Follow up using another approach, such as mailing out links to the survey or hard-copy surveys to parents who have not responded

In the section on working to improve response rates, you will see some sample timelines for mail and online surveys that you can use to guide your efforts.

Table 4. Approaches to delivering surveys to parents

Approach	Good to use when…	Benefits	Drawbacks	Keep in mind…
Mail	• Only mailing addresses are available • High percentages of parents have no or limited internet access	• Familiar approach—parents often expect mail communications from schools and districts • Allows for sending paper surveys or links to online surveys	• Requires staff time to prepare and mail materials; postage costs • Follow-up will likely be required, which increases cost • No way to monitor whether the mail is opened or whether it is opened in time for parents to respond within the data collection period • The person who opens the mail may not be willing or able to complete the survey (e.g., because she is not the parent, or because he does not know the answers)	• Mailed materials should • Look official • Prominently display the sponsor(s) • Clearly communicate the importance of the data collection • Be easily understood • Design survey materials to stand out (e.g., putting them in bright orange envelopes) so parents pay attention to them • Include self-addressed stamped envelopes with the materials to encourage parents to respond
Email	• Complete and accurate email addresses are available • Parents already expect to receive school/ district communications via email	• Inexpensive—no need to pay for staff time to address and mail materials; no postage costs • Allows for embedding a link that takes parents directly to the online survey • Online survey services allow for tracking who receives and completes the survey	Spam filters may block emails • Parents may quickly shift their attention to other incoming emails • Parents may be reluctant to click on embedded links due to fear of malicious software or phishing scams • Follow-up will likely be required, which increases staff time	• Prevent emails from going to parents' spam or junk folders by • Using plain text rather than HTML messages • Sending individual emails rather than using bulk mailing options • Testing the email message before sending, using a spam analyzer
In-person during meetings, pick-up/ drop-off times	• Most parents regularly visit the school for meetings, including IEP meetings, pick-up/drop-off • Parents do not have physical mailing addresses (e.g., transient populations) and email addresses are unavailable or parents have no or limited email access	• Ensures parents who visit the school receive the materials • Limits need for follow-up to mailings/emails • Allows parents who do not have physical mailing addresses or email addresses to participate if they visit the school • Inexpensive—no need to pay for staff time to address and mail materials; no postage costs	• Only parents who visit the school receive the materials, limiting the number of parents who can participate and possibly reducing the representativeness of the data • Surveys might get mixed up with other materials distributed during the meetings and overlooked • Parents may be processing information discussed during the meetings and forget about the survey or consider it a low priority • Parents may not pay careful attention to materials handed out during pick-up/drop-off due to other demands on their attention	• Design survey materials to stand out (e.g., putting them in bright orange envelopes) so parents pay attention to them • Separate survey materials from other materials that are distributed during the meetings or pick-up/drop-off • Include self-addressed stamped envelopes with the materials to encourage parents to respond • School staff must be able to answer questions about the survey, or provide contact information to parents with questions

Approach	Good to use when…	Benefits	Drawbacks	Keep in mind…
Survey access at school	• Most parents regularly visit the school for meetings, including IEP meetings, pick-up/drop-off • Parents do not have physical mailing addresses (e.g., transient populations) and email addresses are unavailable or parents have no or limited email access	• Ensures parents who agree to participate in this way complete the survey • Limits need for follow-up to mailings/emails • Inexpensive—no need to pay for staff time to address and mail materials; no postage costs • Gives parents who have email addresses but no or limited internet access an opportunity to complete online surveys	• Only parents who visit the school can complete the survey, limiting the number of parents who participate and possibly reducing the representativeness of the data • Parents must have time and be willing to complete the survey at school, during school hours • Additional staff and computer resources may be needed for parents to complete surveys • Parents may feel pressured to respond differently (e.g., more positively) when they complete it on the school premises, which affects data quality	• More effort may be required to get parents to come to the school and complete the survey • Keep the survey short to encourage parents to complete it while at school • School staff must be able to answer questions about the survey, or provide contact information to parents with questions
Send home with students	• Parents already expect to receive school/ district communications in this way • Parents do not have physical mailing addresses (e.g., transient populations) and email addresses are unavailable or parents have no or limited email access	• Inexpensive—no need to pay for staff time to address and mail materials; no postage costs	• Requires that students actually deliver the surveys to parents • No way to monitor whether the materials are delivered or whether they are opened in time for parents to respond within the data collection period • The survey may get mixed up with other school materials and be lost or forgotten • Students or parents may not pay careful attention to materials due to other demands on their attention • School staff will need to track survey responses and follow up with students whose parents have not completed the survey	• Design survey materials to stand out (e.g., putting them in bright orange envelopes) so parents pay attention to them • Separate survey materials from other materials that are distributed during the meetings or pick-up/drop-off • Include self-addressed stamped envelopes with the materials to encourage parents to respond

RUN: How can my state maximize participation in its parent involvement data collection activities?

Carefully planning your state's Indicator B8 data collection activities is an important first step in obtaining high-quality, representative data. As you transition to collecting data, certain actions will help increase the likelihood of a successful data collection effort.

Be clear about who is sponsoring data collection

Data collection activities supported or sponsored by organizations that parents recognize and consider legitimate may help improve response rates. Sponsorship conveys to parents a sense of purpose and indicates that the information they provide will be used to benefit them and their children. **Whether your state is managing data collection activities directly—or working with stakeholders or third-party contractors to collect data—it is important to highlight the sponsor of the survey (e.g., state, district, and/or school) to demonstrate the authority and legitimacy of the effort.** Because parents commonly receive communications from their child's school and district, it is often a good idea to have one of them sponsor the effort, such as having a cover letter signed by a school or district official whose name parents may recognize. Prominently display the sponsor's name and logo on all data collection materials.

Formally invite potential responders to participate

No matter how your state chooses to collect its Indicator B8 data (e.g., through a survey, interviews, or focus groups), you should formally invite potential parents to participate. **Whenever possible, personalize communications (including envelopes, letters, and emails) by using the parents' names, as research has shown that doing so can boost response rates.**[11]

What States Are Doing

States reported a number of different methods for getting the survey to parents, including mailing a paper survey, mailing an invitation to participate by web, or emailing a link to the web survey when email addresses were available.

When inviting parents to participate, be sure to include

- A brief introduction that states the purpose of the survey and who will be collecting the data
- How and why the parent was selected
- Benefits to the parent (and/or the child) and to the community or state
- Information about confidentiality or anonymity of the data
- Explanation of how data will be used and kept secure
- Assurance that participation is voluntary
- Information about incentives (if you offer them)
- Contact information for help with questions [Important note: Be sure to identify speakers of languages other than English in the schools or districts who can answer questions or provide needed assistance in the parents' native language.[12] Also include accessibility information for individuals with disabilities.]
- A time estimate for completing the survey
- Instructions on how and when to participate in data collection (e.g., how and when to submit the survey)

[11] Dillman, Smyth, and Christian 2014.

[12] Harkness, Villar, and Edwards 2010.

- An expression of your appreciation for the parent's participation[13]

Consider offering incentives

Offering an incentive to potential participants can improve response rates, and there has been little indication that using incentives decreases the quality of the data collected.[14] Additionally, although incentives add a cost to survey administration, they can reduce cost in other areas, such as reducing the need for extensive nonresponse follow-up.

Here are some additional factors to consider when thinking about using incentives:

- Monetary incentives are more effective than nonmonetary ones (e.g., pens, magnets)[15]
- Prepaid incentives (i.e., incentives that are paid before the survey is completed) are more effective than promised incentives (i.e., incentives that are contingent upon survey completion)[16]
- Incentives might help improve representativeness of the data by encouraging parents who may not have otherwise completed the survey to do so
- Consider offering incentives to districts and schools, such as recognition on the state website or opportunities for additional professional development, to enlist their support in encouraging participation in your data collection effort

A Note on Using Incentives

It is important to review district, state, and federal policies regarding incentives, as there may be specific guidance or prohibitions against their use. Some view offering incentives as an inefficient (or inappropriate) use of funds (i.e., taxpayers' money). Using donations received outside of federal or state funding to support incentives can offset this concern.

Monitor response rates

As you begin collecting your parent involvement data, you should pay careful attention to response rates. The section on creating data collection procedures and tools to facilitate participation pointed out that there are two primary types of response rates: overall response rates and item response rates. Response rates are important because they give information about how well the data you collect represent the views of all of the parents of students with disabilities in your state. **Table 5** defines these response rates and provides information about how they can inform data quality and representativeness.

[13] *Adapted from Carlson and D'Agostino 2015*.

[14] Singer and Ye 2013.

[15] Mercer et al. 2015; Singer and Ye 2013.

[16] Mercer et al. 2015; Singer and Ye 2013.

Table 5. Information about overall and item response rates

Type	What is it?	How can it inform data quality and representativeness?
Overall response rate	Overall response rates tell you how many parents responded compared to the total number of parents who were invited to participate in data collection.	A high overall response rate can be an indication of data quality, IF • The survey is well-designed; AND • The views expressed by the group of parents who respond are representative of the views of all parents of students with disabilities; AND • There is little missing data; AND • There is no indication of nonresponse bias. A low overall response rate indicates that the data may not reflect how the majority of parents would respond.
Item response rate	Item response rates tell you whether parents were more likely to answer some questions in the survey than other questions.	Given the same caveats listed for overall response rates, a high item response rate can be an indication of data quality. A low item response rate may be an indication of • Issues with survey design, such as – Unclear instructions for completing the survey and proceeding from one question to the next – Confusing language that frustrates parents or makes it hard for them to understand how to respond – Sensitive language that makes some parents feel uncomfortable responding – Insensitive or inflammatory language that may cause some parents to refuse to respond • Nonresponse bias

A Note on Nonresponse Bias

Nonresponse bias occurs when certain groups of parents are more or less likely to respond to the survey or to certain questions within the survey. It is a particular concern for data quality and representativeness if demographic data show that the students whose parents responded to your survey (or to particular items) differ substantially from the overall group of students with disabilities. This may mean that certain groups who may have unique opinions or experiences may not be represented in survey responses and, in turn, in results for Indicator B8. In such instances, any decisions made that are based on survey results may not appropriately address parents' and students' needs.

Table 6 presents the equations for calculating overall and item response rates if you are using a census or a sample, and gives examples of each. **Box 2** lists some online response rate calculators that you can use with your data. **Do not wait until data collection is over to calculate response rates, because then it will be too late!** As you will see in the next section, your state should take steps to improve response rates during data collection.

Table 6. How to calculate overall and item response rates

Type	Overall Response Rate	Example
Census	$\frac{\#\ of\ parents\ who\ responded}{\#\ of\ parents\ of\ SWD\ in\ the\ state} \times 100$	$\frac{6{,}000}{10{,}000} \times 100$ $0.6 \times 100 = 60\%$
Sample	$\frac{\#\ of\ parents\ who\ responded}{\#\ of\ parents\ in\ the\ sample} \times 100$	$\frac{275}{500} \times 100$ $0.55 \times 100 = 55\%$
	Item Response Rate	**Example (For the sample cited above)**
Census & Sample	$\frac{\#\ of\ parents\ who\ responded\ to\ the\ item}{\#\ of\ parents\ who\ responded\ to\ the\ survey} \times 100$	$\frac{125}{275} \times 100$ $0.45 \times 100 = 45\%$

NOTE: SWD = students with disabilities.

Box 2. Online response rate calculators

- ***AAPOR's Standard Definitions*** is a resource for determining and assigning disposition codes and calculating response rates.
- ***National Post-School Outcomes Center Response Calculator***, ***Instructions for the National Post-School Outcomes Center Response Calculator***, and ***Post-School Outcomes: Response Rates and Nonresponse Bias* paper** are resources developed for Indicator 14, but can also be used for Indicator B8, to understand response rates and representativeness and to calculate an overall response rate by demographic variables.
- ***ECTA's Response Rate and Representativeness Calculator*** is an Excel-based calculator developed to guide response rate calculations as well as representativeness for Part C family outcomes, but it can also be tailored for use with Indicator B8.

What States Are Doing

Rhode Island uses a live dashboard, provided by a third-party contractor, for state staff and district leadership to monitor districts' and schools' response rates.

RUN: What steps should my state take to improve data quality during data collection?

Earlier you learned that response rates can be indicators of data quality when certain criteria about the data collection activities are met (e.g., the surveys well-designed, the group of parents who responded to the survey is representative of all parents of students with disabilities). In this section you will learn how to take certain steps to monitor data quality during data collection, including

- Working to improve response rates based on what you learn from your response rate calculations
- Checking representativeness of data using demographic data collected through the survey (or some other means)
- Working to improve representativeness of data

Additionally, you will learn how to plan to improve representativeness of future data collections based on the data you collect.

Work to improve response rates

You must monitor and take any necessary steps to improve response rates *while data collection is ongoing* if you want any chance of collecting high-quality, representative data. Here are some tips to help improve response rates during data collection:

- Investigate incorrect contact information immediately
- Send follow-ups and reminders
- Track responses and follow up with those who have not responded (also called “nonresponders”)

Investigate incorrect contact information

No matter how well you plan, once you start data collection you will undoubtedly find errors in the contact information you have for parents. When this happens—and it will—it is important that you take immediate steps to obtain the correct information. You might do this by

- Asking the district or school to verify the information
- Sending a request for updated information home with students
- Getting help from a Parent Center to contact parents and get the correct address/email/phone number
- Asking parents to verify their contact information during conferences, IEP meetings, or other in-person interactions with parents
- Calling the parent, or mailing a letter requesting the correct email—if using an online survey with email notifications

The sooner you get the correct information, the sooner you can follow up and encourage the parent to respond, so plan to have staff time available for doing this task during the data collection period.

Send follow-ups and reminders

An effective strategy for increasing response rates is sending periodic follow-ups and reminders about the data collection activities and timeline to parents. Whenever possible, try not to send reminders to individuals who have already completed the survey. **Table 7** and **Table 8** give examples of processes and timelines for contacting parents for

mail and online surveys, respectively. When sending reminders or replacement mailings/emails, be sure to change the message, usually in the cover letter or email content, to remind parents of previous attempts to solicit a response.

Table 7. Example of a process and timeline for contacting parents for a mail survey

Contact	Activity	Timing
1	Initial survey mailing (survey, cover letter, & return envelope)	
2	Reminder contact (usually postcard thanking them for their participation and reminding them to complete the survey if they have not done so)	1 week after initial mailing
3	Replacement survey mailing (survey, 1st replacement cover letter, & return envelope)	3 weeks after initial mailing
4	2nd replacement survey mailing (survey, 2nd replacement cover letter, & return envelope) sent via FedEx or USPS Priority Mail	6 weeks after initial mailing

Source: Adapted from Dillman, Smyth, and Christian 2014.

Table 8. Example of a process and timeline for contacting parents for an online survey, with email as primary method of contact

Contact	Activity	Timing
1	Prenotification by mail (cover letter from sponsor)	
2	Online survey invitation via email	5 days after mail prenotification
3	1st email reminder	3 days after web survey invitation sent
4	2nd email reminder	2 weeks after web survey invitation sent
5	3rd email reminder	1 month after web survey invitation sent

Source: Adapted from Dillman, Smyth, and Christian 2014.

The examples of processes and timelines presented here are general guidelines; if desired, you may want to adjust the timeline by

- Increasing timing between contacts for mail surveys to account for possible delays in mail delivery
- Reducing timing between contacts for online surveys because parents are not required to mail anything back

Track responses and follow up with nonresponders

In the section on creating data collection procedures and tools to facilitate participation, we discussed the importance of tracking responses—and, in particular, the importance of having a unique ID for each survey. As you start collecting data, the database or other data tracking system you created while planning your data collection will become very useful.

If you are doing an online survey, you may be able to download data in real time to identify which parents have completed the survey out of all of the surveys that were sent. You also can track who accesses or starts the survey but fails to complete it, suggesting a parent may be interested in participating but has not yet done so. This might be an indication of an issue with the survey, or just a result of the parent getting interrupted or distracted. Either way, it is important to follow up with those parents to encourage them to complete the survey. If they will not complete the survey, try to obtain their reason for not completing it, which may give you information about issues with survey design, nonresponse bias, or some other issue.

If doing a mail survey, you will need to enter the data into your data tracking system. You should have already created procedures for entering data when planning your data collection. If not, go to the section on creating data collection procedures and tools to facilitate participation to learn more about it. It might be possible to scan the surveys into a

digital format—if your survey has this capability; otherwise, you must enter the data manually. Here are some things you need to do as you collect your data:

- Create clear and consistent disposition codes for the various survey statuses (e.g., complete, unreturned, refusal, ineligible, nonlocatable).
- As you receive surveys or learn information about the parent, enter and update the codes for each parent in the tracking system.
  - Use the unique survey ID to track the survey status for each survey that was sent out. You may also want to create a field that indicates the date that the tracking status was entered or updated.
  - Follow up with parents that have not yet responded during the period of data collection. Try different methods of contacting parents (if you have different types of contact information, to increase the likelihood that you will reach the parent).
  - Clearly mark the final disposition code for each survey. This is the information that you will use to calculate your overall response rate and assess the data for representativeness later on.

Conduct periodic checks for representativeness

Using demographic data collected from the parents who respond to your survey, you should conduct periodic checks for representativeness. You might first do this after you have received responses from approximately one-third of the expected number of participants and then again after you have received responses from about two-thirds of expected participants. In this section you will learn about

- Determining whether data are representative
- Comparing the characteristics of students whose parents complete the survey with those of all students with disabilities
- Comparing the characteristics of responders and nonresponders

Decide how you will determine whether data are representative

There is no one "threshold" for determining whether data are representative. In fact, different organizations have set different thresholds for what constitutes "acceptable differences" among groups. For example,

- The National Post-School Outcomes Center uses a threshold of ±3 percent
- The Early Childhood Technical Assistance (ECTA) Center's Response Rate and Representativeness Calculator uses tests of statistically significant differences

As you consider the representativeness of your data, we recommend that you consult with key stakeholders, such as Parent Centers, for input and guidance. You can also talk with your IDC State Liaison for assistance.

Compare characteristics of students whose parents completed the survey with all students with disabilities

One way to test for representativeness is to compare the demographic characteristics of students whose parents responded to the survey to the characteristics of all students with disabilities in the state or district. [17] In fact, OSEP requires states to analyze the extent to which the demographics of the students whose parents responded are representative of the demographics of children receiving special education services. States should consider categories, such as

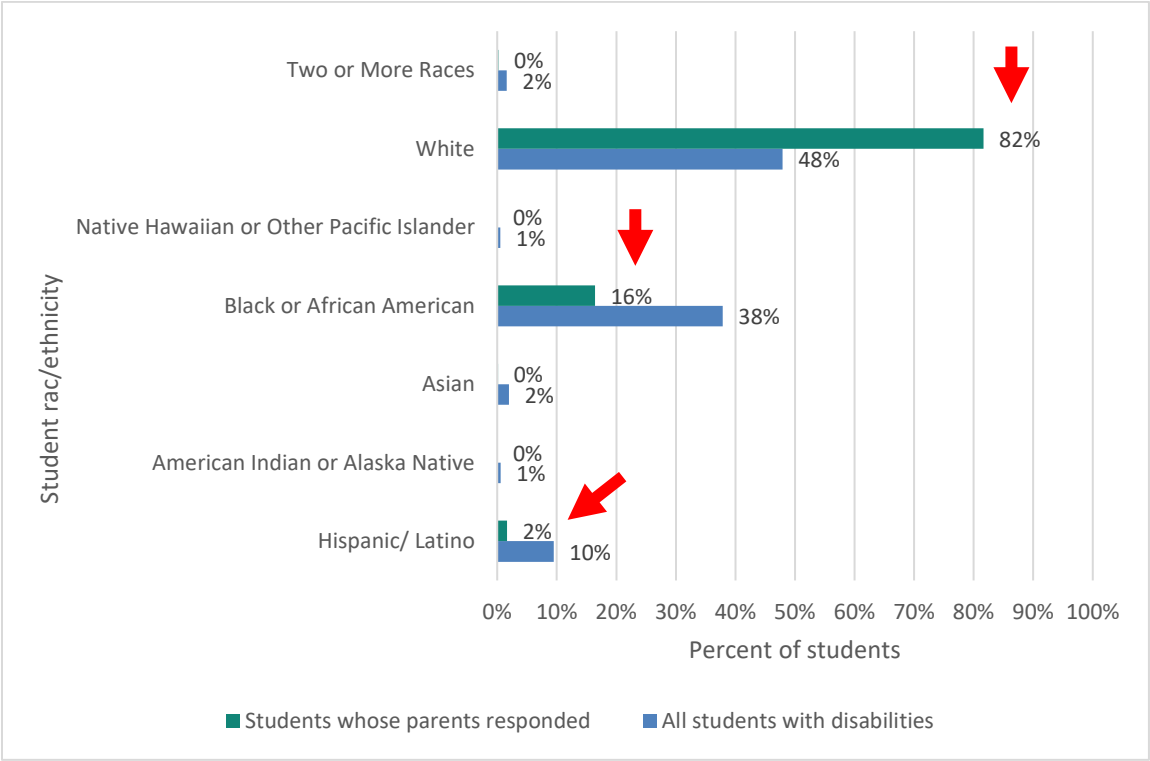
- Race/ethnicity

[17] Garrison-Mogren 2007.

- Sex
- Age of the student
- Disability category
- Geographic location in the state[18]

When examining representativeness, ask yourself this question: "Are some groups under- or overrepresented among survey responders?" Or, to put it another way, you can ask "Were parents with certain characteristics more likely to respond to the survey than others?"[19] Consider **Figure 1**, which presents data for the students whose parents responded to a survey with all students with disabilities in a fictitious state. What do the data show?

Figure 1. Comparing students whose parents responded to all students with disabilities in the state



NOTE: The numbers in the figure may not add up to 100 due to rounding.

Clearly, the survey data presented in **Figure 1** are not representative at this point. Specifically, White students are highly overrepresented, while Black or African American and Hispanic/Latino students are underrepresented, relative to all students with disabilities.

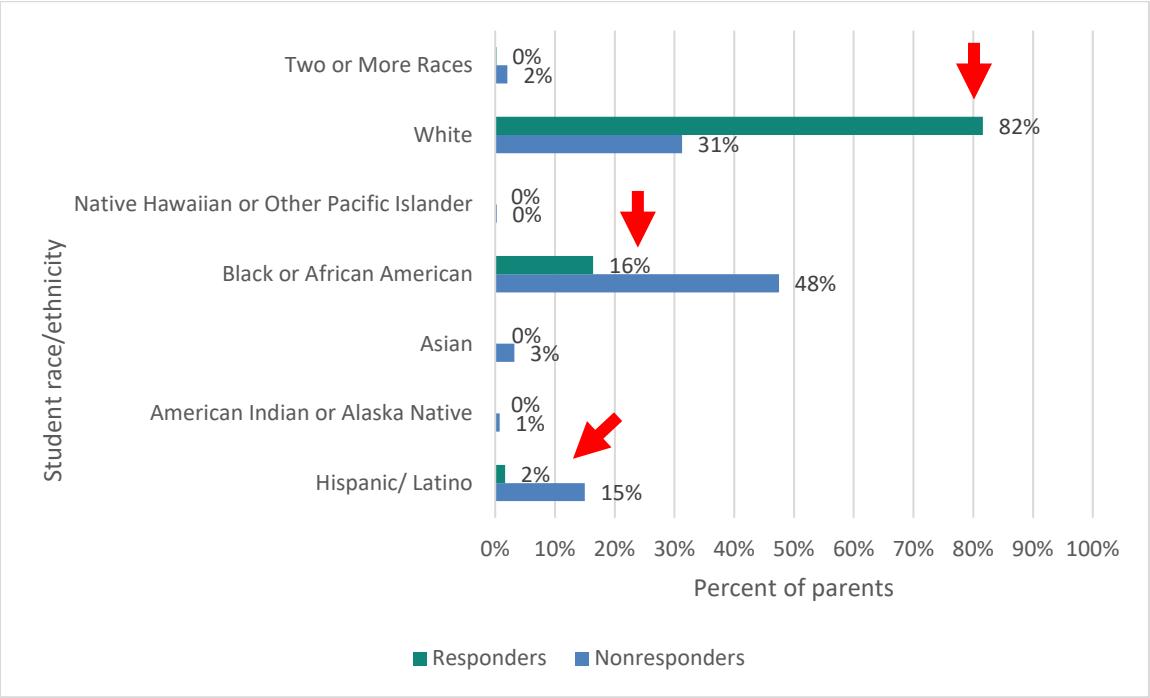
Compare characteristics of responders and nonresponders

Another way to test for representativeness is to compare the students whose parents responded ("responders") with the students whose parents did not respond ("nonresponders"). Using the demographic characteristics of both groups, you can compare them and see if they differ, as in **Figure 2.**

[18] U.S. Department of Education 2014.

[19] *Lammert, Heinemeier, Schaaf et al. 2016, p. 74*.

Figure 2. Comparing responders to nonresponders



Here, too, the data collected so far are not representative. Specifically, compared to nonresponders, responder parents of White students are highly overrepresented, while parents of Black or African American and Hispanic/Latino students are underrepresented. Both **Figure 1** and **Figure 2** indicate that if you do not take steps to improve the representativeness of your data prior to the end of the data collection period, the data you collect will not accurately represent the views of all parents of students with disabilities in the state.

Work to improve representativeness

Once you have looked at the representativeness of the initial data, you will need to work to address any issues as quickly as possible. If you were careful from the start to select potential participants who would be representative, a straightforward way to address any issues is to make an extra effort to improve response rates, because that will automatically improve representativeness. Other, more targeted ways to improve representativeness during data collection might involve

- Sending additional reminders and follow-ups to parents who have the specific characteristics that are underrepresented
- Enlisting support from Parent Centers or other key stakeholder groups to encourage parents from underrepresented groups to respond
- 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

In the next section you will learn how to reflect on what you can learn from the data. This process of reflection involves

- Preparing the data for analysis so that you can be sure you are working with high-quality data
- Conducting rigorous analyses that will enable you to have confidence in your findings

REFLECT: How can we prepare our data for analysis?

Regardless of the way you collected your data, it is important to first check the data for accuracy and completeness. You should ensure that the data are as close to perfect as possible and ready for analysis. In this section you will learn how to

- Create a data file
- Enter the data accurately and completely
- Clean and code the data

Create a data file

You should set up a data file to manage all data, preferably before data collection begins. Your data file can be part of the same database that you are using to track responses, or it can be a separate file. See the section on creating data collection procedures and tools for some important considerations about data security. Also, consider using the tips listed here when you prepare for data collection.

Regardless of how you choose to organize the two files, your data file will ultimately contain all of the responses that parents provided on their surveys. Right from the start, take some time to consider

- Which software program to use to manage quantitative and qualitative data
- How the data file will be organized

If you administered paper surveys and are entering the data by hand or scanning the data, you may choose to use a spreadsheet program like Microsoft Excel or a statistical software program like SPSS or SAS. Here are several tips for setting up the data file:[20]

- Tip 1: Each row should include all of the data for one parent (each with a unique ID number), and each column should correspond to a different variable of analysis. Variables might include survey items, respondent demographic information, district or school information, etc. See **Table 9** for an example.

Table 9. Example of organizing data in rows and columns in a data file

ID	AGE	SEX	RACE	DATE	Q1	Q2	Q3	Q4	Q5
00001									
00002									
00003									
00004									

NOTE: Q1 = survey item 1, Q2 = survey item 2, etc.

[20] Carlson and D'Agostino 2015.

- Tip 2: Create a table with information about each variable in the data file, including
  - The variable name (which may be the survey item number or an abbreviated label that describes the variable)
  - A description for each variable, the unit of measurement, and the type of data (e.g., text, numeric, date)
  - The maximum size of the entry (i.e., how many characters can be typed into the file)
  - The possible values or any value restrictions

  If you are working in a program like SPSS, the program will automatically direct you to do this; if you are using a program like Microsoft Excel, you may want to create this table in a new worksheet or in a separate file. See **Table 10** for an example that illustrates a variable information table corresponding to the example in **Table 9**.

Table 10. Example of table with information about each variable included in the data file

Variable name	Description	Units	Data type	MaxSize	Values and value restrictions (blank=none)
AGE	Age of child	Years	numeric	2	3-21
SEX	Gender	-	numeric	1	0 = Female 1 = Male
RACE	Race/ethnicity	-	numeric	1	1 = American Indian or Alaska Native 2 = Asian 3 = Black or African American 4 = Hispanic/Latino 5 = Native Hawaiian or Other Pacific Islander 6 = White 7 = Two or more races
DATE	Date survey completed	-	date	8	dd/mm/yyyy
Q1	Survey Item 1: [DESCRIPTION OF ITEM]	-	numeric	1	1 = Very strongly disagree 2 = Strongly disagree 3 = Disagree 4 = Agree 5 = Strongly agree 6 = Very strongly agree

- Tip 3: Set restrictions on cells in the data file to minimize data entry errors. For example, you can set up cells to accept only text, numbers, or dates. Also, you can limit the number of characters allowed in a cell and specify the permissible range (e.g., only allow ages 3 to 21 for student's age). See **Figure 3** for an example of how to do this in Excel.

Figure 3. Example of setting age restrictions on cells in Excel data files

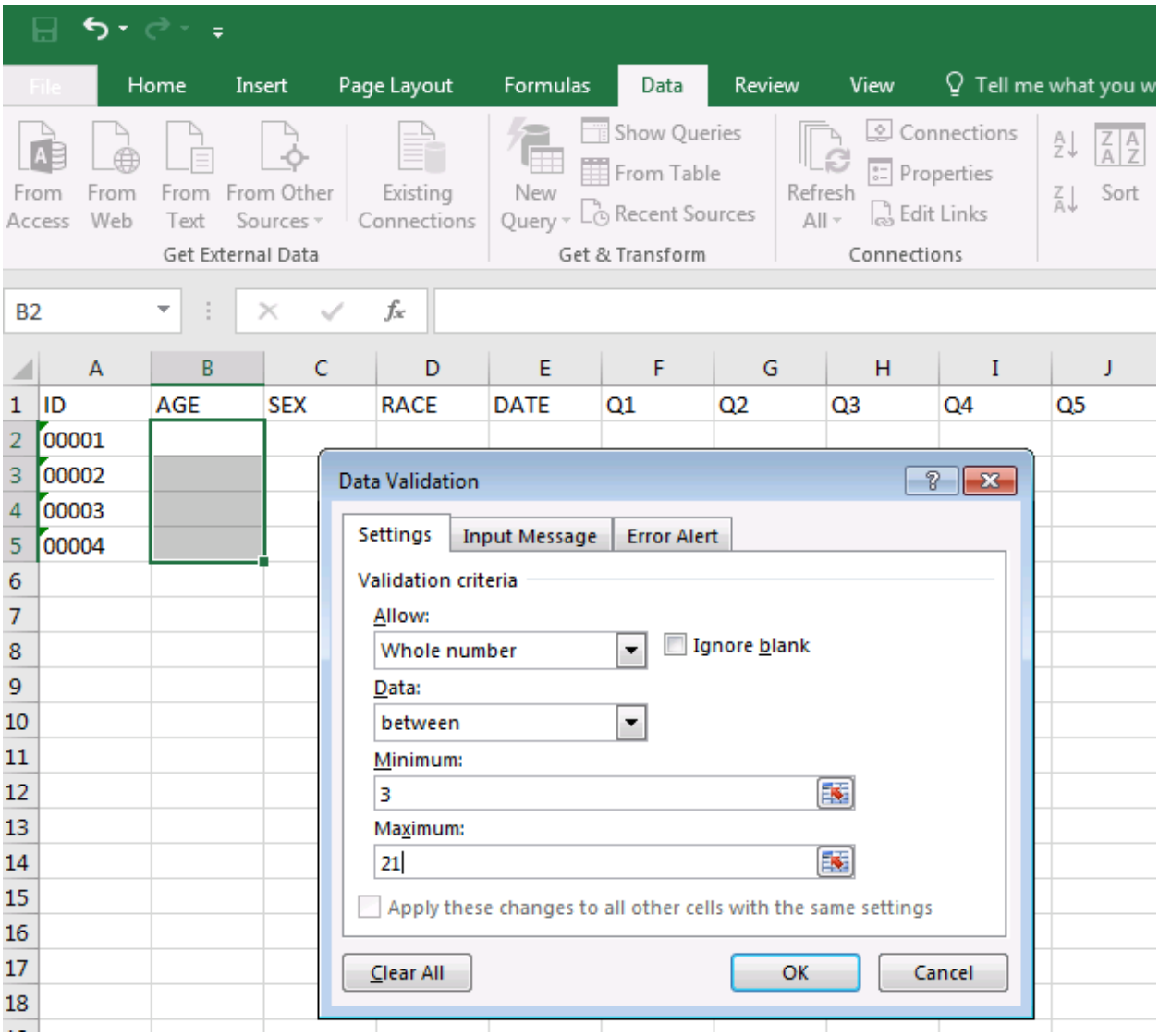
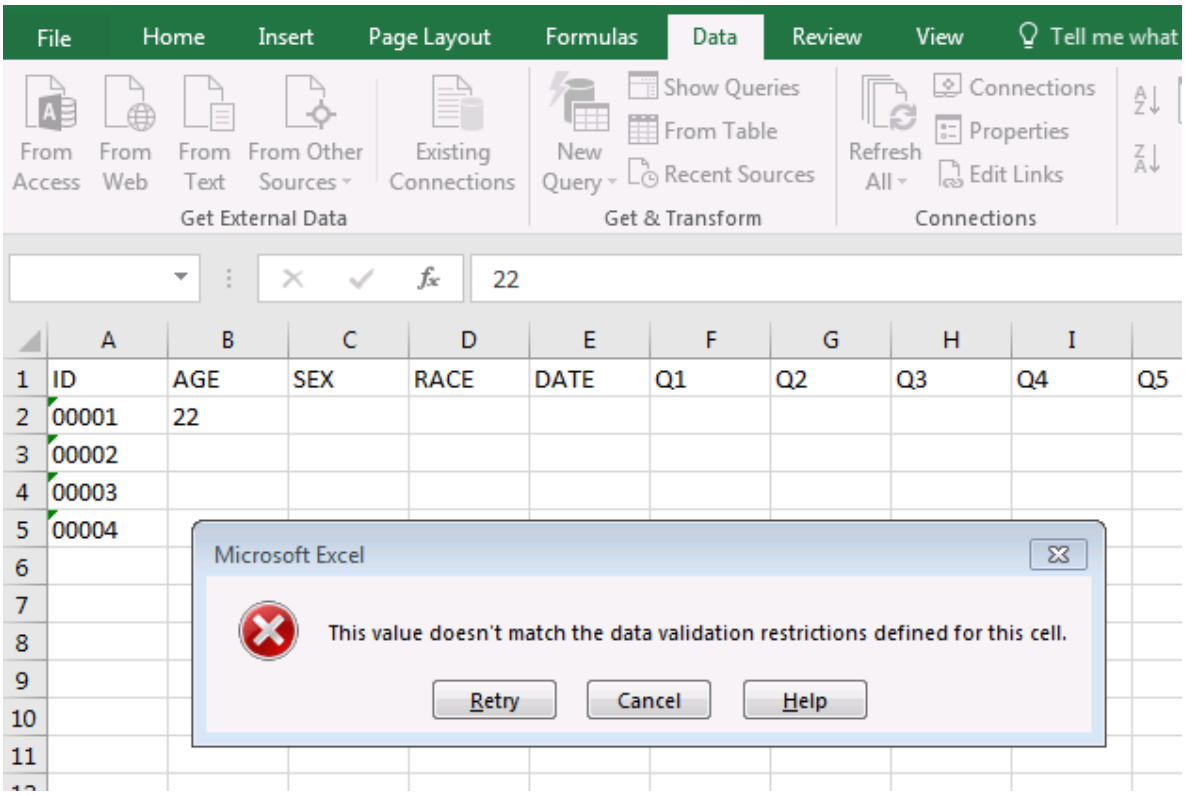


Figure 4 presents an example of the error message that you will see if you try to enter an age outside of the prespecified range (as established in **Figure 3**).

Figure 4. Example of entering incorrect values into the database



- Tip 4: When possible, create drop-down menus to help ensure consistency of data entry. The drop-down menu will only allow users to select preset responses. **Figure 5** and **Figure 6** illustrate this. A simple Google search of how to create drop-down menus in Excel will produce step-by-step instructions.

Figure 5. Part 1 of creating drop-down menus in Excel

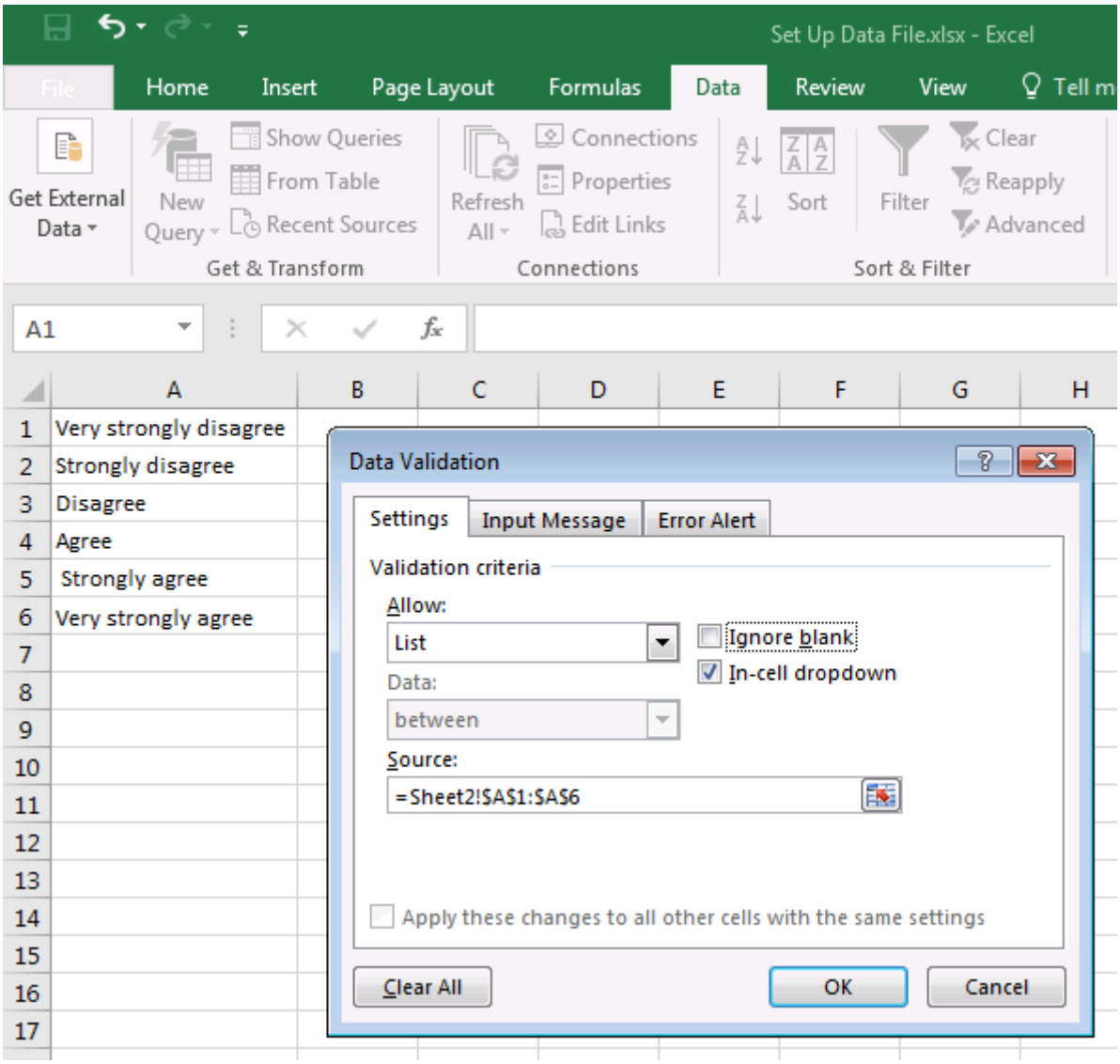
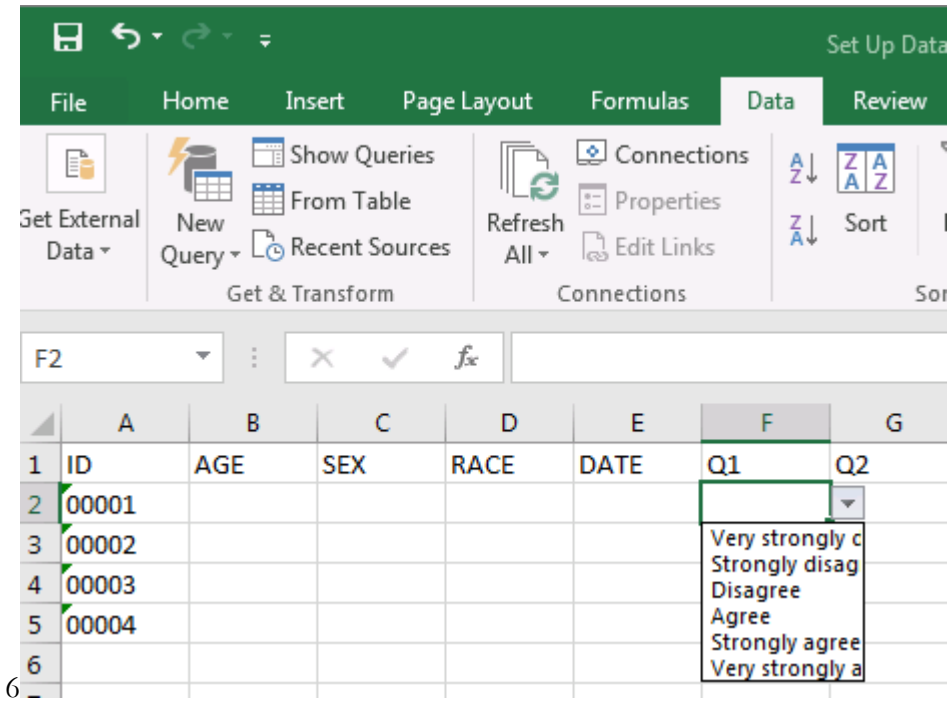


Figure 6. Part 2 of creating drop-down menus in Excel

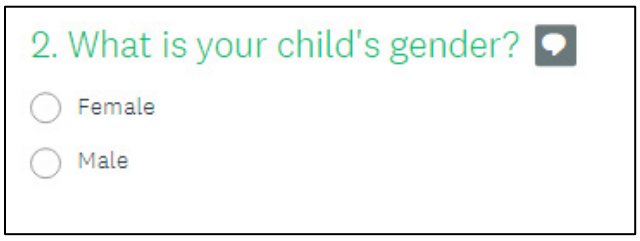


- Tip 5: Set up a separate data file for responses to open-ended items to make the analysis of qualitative data easier. You can use a spreadsheet, such as Excel, or a software program designed specifically for analyzing qualitative data, such as NVivo, ATLAS.ti, or Dedoose. See the section on analyzing qualitative data for more information about how to analyze open-ended responses.

Online survey programs often allow you to automatically export the data from the survey into your data file. There are usually instructions available within the online survey program that describe the steps for exporting the data, and in many cases, you will have the option to export the data to Excel, SPSS, or SAS. You can take some steps when creating your web survey to ensure that your data file will be set up correctly when you download the data. For instance,[21]

- Consider designing your web survey with checkboxes or radio buttons to restrict the way participants enter responses and to help ensure your data are clean and consistent when you download them, as illustrated in **Figure 7**.

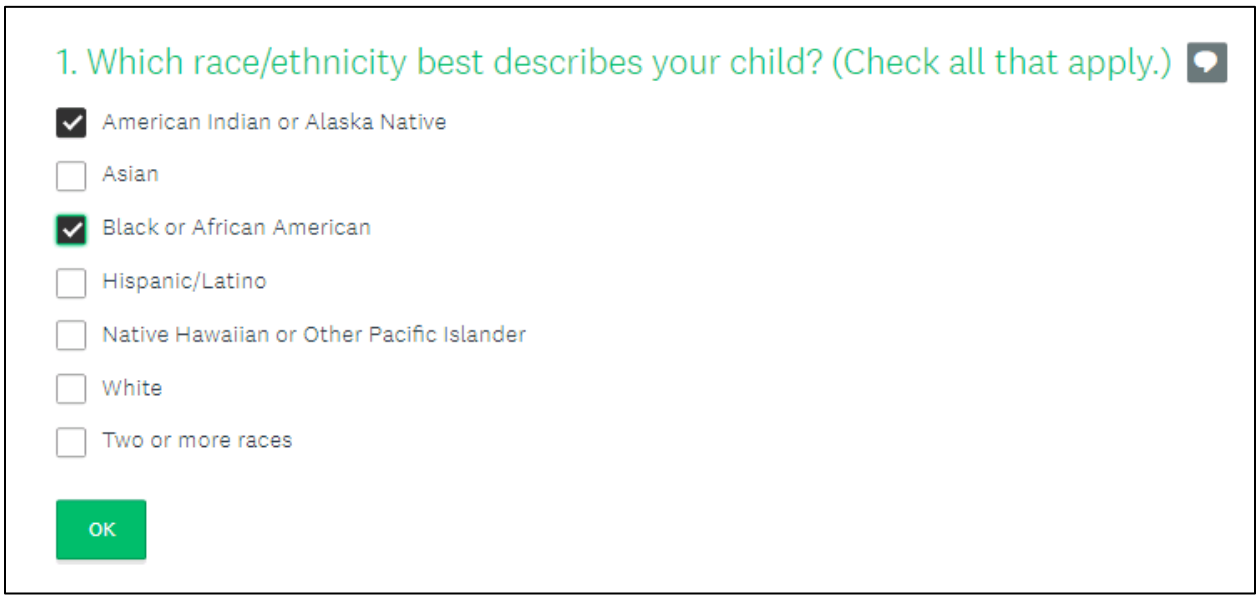
Figure 7. Example of using radio buttons to restrict responses



[21] Carlson and D'Agostino 2015.

- Verify that all items have the correct format so that, for example, a parent can check more than one box if a question asks responders to "select all that apply," as shown in **Figure 8**.

Figure 8. Example of using the correct format for an online survey question



Each online survey program has its own processes and procedures for setting up the survey, so we recommend that you consult someone with expertise in online survey development to ensure the survey is set up correctly. You can also ask your IDC State Liaison for assistance.

Enter data

As you begin to collect data, be sure to track responses in your tracking file! Then you can start entering the data into your data file (which might be the same as, or separate from the tracking file). The process you use will depend on what format you are using to collect your data (e.g., paper or online survey).

What States Are Doing

Arkansas, Florida, and Rhode Island are some of the states that have used scannable forms to collect their survey data. This helps to minimize data entry errors and helps ensure data consistency.

- With online surveys, responses typically are entered directly into a database by the online survey program as parents complete the survey and then can be downloaded and imported into a data file for later analysis.
- With paper surveys, you can choose to scan in results (if the surveys are on a scannable form) or enter the data by hand. If you decide to scan your surveys, be sure to train staff on the scanning equipment and software.

If you need to enter the responses by hand, you must train staff on how to enter data accurately. **Establish standardized data entry procedures and document the instructions that staff need to follow.**

- Explain exactly how data should be entered (refer to **Table 10** for an example).
- Provide a set of instructions with the specific data entry requirements and include examples of correct and incorrect entries. If possible, include the instructions within the data entry or spreadsheet file so that staff can refer back as needed.
- Stress to staff that they should save and back up the data often.[22]

[22] Carlson and D'Agostino 2015.

Even with a carefully trained data entry staff, you should take measures to ensure that staff are entering data correctly and completely. It is important in this step of the process to ensure that staff are entering the responses into the data file as they are received. It is not the place of the data entry staff to try to clean the data at this point—that will come later. **Table 11** outlines some steps you might take.

Table 11. Steps you might take to ensure quality and completeness of data entry

Step	What is it?	How can it be used?
Double-keying	With double-keying, you enter the data twice into a data file, and if the second entry matches the first entry, the cell turns green. If the entries do not match, the cell turns red to flag errors for correction.	You can set up a spreadsheet, such as Excel, for double-keying the data. You can use double-keying with all your data or with a subset of your data.
Conditional checks	Conditional checks test whether conditions are true or false and make logical comparisons between expressions in data. For example, you might use conditional checks to verify that the time a child is reported to have been receiving services does not exceed their age.	In Excel, you can use the AND, OR, NOT, and IF functions to create conditional formulas to verify if the data entered are accurate.
Visual inspection	With visual inspection, data entry staff compare the original hard-copy surveys against the entered data on at least a sample of surveys to check for accuracy and completeness.	Visual inspection can reveal mistakes as well as areas where additional training may be needed (for example, if you come across patterns of data entry errors).

Clean your quantitative data

Data cleaning includes documenting all processes and decisions involved in ensuring that the dataset is complete, accurate, and ready for analysis; evaluating and addressing missing data; reviewing data for accuracy; and coding data.

Document all rules and procedures for handling data issues

Throughout the process of cleaning the data and creating a complete dataset, it is critical to establish and fully document rules and procedures for dealing with any data issues so that you can apply them consistently. This might include rules and procedures for

- How to deal with any issues that you encounter (such as missing data or inconsistent responses)
- How you will code quantitative and qualitative data for analysis

Documenting rules and procedures will also help to ensure consistency from year to year. For example, if there are new staff, or if current staff do not recall the procedures used previously, there will be a record of the processes.

Identify and address missing data

Almost every survey administration will result in at least some missing data, so your rules and procedures should include a consistent plan for dealing with missing data. Addressing the problem of missing data is particularly important when conducting inferential statistical analyses, but having missing data in a study can potentially affect the results, no matter what type of analysis you do. It is not within the scope of this toolkit to go into detail about the different methods to treat missing data. However, here are some tips:

- Decide how you want to handle cases where parents skip large numbers of questions. For example, you may want to create a rule that if a parent skips more than half of the items on the survey, their entire survey will be coded as missing.

- Create and document all decisions and rules for handling missing data and follow them consistently.
  - The easiest way to code missing data is to leave it blank. Using a code like 99 can cause errors in calculations.[23]
- Train all data entry staff on the rules so that they know what to do when they encounter missing data.

The U.S. Department of Education provides guidance on what to do with missing data in experimental studies (see https://ies.ed.gov/ncee/pubs/20090049/index.asp). For additional information about what to do with missing data, see the resources in **Box 3**.

Box 3. Resources for handling missing data

Howell, D.C. (2012, December 12). Treatment of Missing Data—Part 1. [Web Log Post.].

Allison, P.D. (2001). *Missing Data*. Thousand Oaks, CA: Sage Publications.

Baraldi, A.N., and Enders, C.K. (2010). An Introduction to Modern Missing Data Analyses. *Journal of School Psychology, 48*(1): 5-37. DOI: 10.1016/j.jsp.2009.10.001

Verify data accuracy

Ensuring that your data are accurate is a very important part of preparing for data analysis. Verifying the accuracy of your data may require you to eliminate some data (for example, by deleting duplicate or inconsistent data). However, **it is important that you retain your original dataset, which should include all of the original survey responses prior to any changes that you make during data cleaning, to ensure that you have an accurate dataset!** Save a new version of the dataset (indicating in the file name that it is the clean file) and only eliminate or change data in that file. At a minimum, ensure that you have separate files for the original dataset, the clean dataset, and the final complete dataset used for analysis (which might, for example, differ from the clean dataset, if you had to remove a number of duplicate entries).

There are several types of checks you can do to verify the accuracy and quality of survey data.[24] **Table 12** outlines some questions you can ask about the data, gives ideas for checks you can do to answer the questions, and offers suggestions for actions to take to address the issue with the data. As you perform these checks and take action to address any issues you might find, remember to only work in a new version of the data file! Keep in mind that many of these checks apply primarily to quantitative data, but some of them can also apply to qualitative data.

[23] Carlson and D'Agostino 2015.

[24] Carlson and D'Agostino 2015.

Table 12. Checks you can do to verify data accuracy

Question about data	How might you know the data are accurate?	Action
Do the responses indicate that the parent should not have responded to the survey (i.e., have the survey inclusion criteria been violated?)?	• Identify the specific criteria that determine whether a parent can be included in the data collection activities (e.g., does their child have an Individualized Education Program [IEP] during the school year in question?). • Use the survey responses or other demographic data collected about the parent to see whether the inclusion criteria have been violated (e.g., no, the child does not have an IEP for the school year in question).	Remove all of the data for this parent from the data file.
Has a parent completed more than one survey about the same child?	• Check for duplicates of the parent's unique ID number. • Check for duplicate names AND addresses (e.g., if there is more than one Jim Smith or Maria Rodriguez among survey participants)	Eliminate the duplicate data from the file. Be sure to look at the responses carefully to ensure that they are consistent across both entries. If they are not, consider following up with the parent to obtain the correct responses.
Are all responses in the correct format?	• Check that any text you coded numerically (e.g., 1 = very strongly disagree) are in numerical format in the database file. • Check that dates are in date format. • Check that open-ended responses are in text format.	Correct any format errors in the data file (e.g., change "one" to "1').
Did parents follow the skip patterns appropriately?	• Using your survey as a guide, look to see if the way parents responded follows the required pattern. For example, if the survey instructs parents who answered "no" to question 2 to skip question 3 and move to question 4, is question 3 actually blank? (Note: This is particularly important for paper surveys, but problems with skip patterns can also happen with online surveys.)	Apply the rules you established about what to do if parents don't follow the skip patterns correctly. This might involve deleting the data from question 3 or taking some other action.
Do any of the responses differ from the predefined set of possible responses for each question?	• Identify the set of possible responses for each question (e.g., ages 3 to 21, a scale of 1-6 from very strongly disagree to very strongly agree). • Review data frequencies (descriptive statistics that show counts of parents who provided each response for every question) to ensure all reported values fall within the set of possible responses (e.g., a parent responding "50" to a question about his or her child's age, which can only be from 3-21).	If possible, follow up with the parent to obtain the correct response. If this is not possible, remove the response from the data file and count it as missing data.

Question about data	How might you know the data are accurate?	Action
Are there inconsistencies in responses among questions that ask for related or similar data?	• Identify any survey questions that ask for related or similar data, such as a question that asks a parent what grade her child is in and a question that asks if her child has already created a transition plan after high school. • Look to see if there are inconsistencies in responses to both questions. For example, it would be inconsistent if a parent indicated her child was in preschool but responded to questions about the child having completed a transition plan for after high school.	• For quantitative data, if it is clear that inconsistencies are due to an error (e.g., if the parent did not follow skip patterns correctly), you can eliminate the data for questions that should not have been answered. If you cannot determine the source of the inconsistency, you may have to eliminate all of the inconsistent data from that parent's survey. • For qualitative data, consider following up with the parent to get more information about her response. Even if the response is inconsistent, if the parent seems to be making an important point, consider consulting with stakeholders about any implications the response might have for policy and practice.
Are there outliers in the data?	• Review data frequencies and check for values that fall outside of the expected range. • Examine qualitative data to see if there are responses that differ greatly from the responses of other parents. These responses might be an example of an extreme case, but they also might provide important information about areas for improvement. (Note: Outliers are not necessarily incorrect; they may reflect data entry errors or an actual extreme response reported by a parent.)	• For quantitative data, check the original data source for a possible data entry error. If there was no error, apply the rules you established for dealing with outliers, which might mean removing the response from the data file. • For qualitative data, consider following up with the parent to get more information about his response or consulting with stakeholders about any implications the response might have for policy and practice.

You may find that data cleaning raises additional questions about specific responses. For this reason, it is important to make decisions, or rules, about how you will deal with different types of data issues that arise, document those rules, and apply them consistently whenever you encounter issues with the data.

Code data

Data coding refers to categorizing survey responses (or responses to other types of data collections) into a defined set of values. Your parent survey may include items with different types of response options, such as

- Yes/No questions
- Questions answered on a Likert scale (e.g., very strongly disagree, strongly disagree, disagree, agree, strongly agree, very strongly agree)
- Questions with short, specific answers such as the different racial/ethnic groups
- Questions that result in numerical data (e.g., "How many times did you go to the school last year?" or "How old is your child?")

You may need to convert these different types of responses to numerical values (e.g., 1, 2, 3, 4, 5, 6) depending on the type of analysis you have planned. Many online surveys automatically convert these responses to numerical values, so they will be in that format when you download the data.

As you start coding your quantitative data, you will need to think about the types or levels of data that you have. Numerical data can be divided into four types or levels:

- **Nominal:** The data points have no quantitative meaning (e.g., male and female).
- **Ordinal:** The order of the data points is meaningful, but the difference between each data point is unknown (e.g., data collected with Likert Scales with categories such as very strongly disagree, strongly disagree, disagree, agree, strongly agree, very strongly agree).
- **Interval:** The order of the data points is meaningful and the difference between each data point is exactly the same (e.g., time).
- **Ratio:** The order of the data points is meaningful, the difference between each point is exactly the same, and there is an absolute zero (e.g., height and weight).[25]

A Note on Coding Survey Data

While surveys most often generate nominal or ordinal data, the responses to survey questions are often treated as interval data and analyzed accordingly. For example, if you use a survey with a Likert scale (such as a 6-point scale from "strongly disagree" to "strongly agree"), you can assign numerical values to each category. You can then use these numerical data in your analyses. However, if you do this, it is important to keep in mind that the numerical values are arbitrary. You do not really know the distance in a parent's mind between "very strongly disagree" and "disagree." One parent's standard for choosing "strongly agree" versus "agree" could be very different from another's. If you accept this degree of arbitrariness and assign numbers for "very strongly disagree" to "very strongly agree," as is commonly done, you can produce numerical data using this type of scale.

When coding quantitative data, make sure you code all data in the same direction. This means that if a question is worded such that a high rating means something positive (e.g., very strongly agree), then a high rating should mean something positive for every question.[26] If questions were originally written so that a high rating (e.g., a score of 6) is positive for some items and a high rating is negative for others, you will have to recode some of your data so that it is all coded in the same direction (i.e., so that a high rating is always positive). **Table 13** provides an example of a survey item that was recoded to make it consistent with the coding of other survey items.

Table 13. Examples of recoding survey items

Item	Original rating	Recoded rating	Note
1. I know my rights as a parent of a child with special needs.	6 = Very strongly agree	N/A	This does not need to be recoded because the response already has a high rating associated with a positive response.
2. My child's school does not promote parent involvement.	6 = Very strongly agree	1 = Very strongly disagree	This item needed to be recoded so that a higher rating indicates that the parent feels that the school *does* promote parent involvement. [NOTE: We give this example to illustrate why it might be necessary to recode data to make it consistent with the other items. However, we strongly suggest that you do not use negatively worded items with "agree/disagree" response scales because they can be difficult for responders to understand and interpret.]

As seen in **Table 13**, if you want a higher rating to reflect a positive response for all items, you will have to reverse the coding for the items where a higher rating actually reflected a negative response. In the example presented in the table, a rating of 6 for question 2 actually indicates that the parent does not think that the school promotes parent involvement (a negative response), so the coding needs to be reversed so that the response is consistent with the coding

[25] University of California Davis, n.d.

[26] Carlson and D'Agostino 2015.

for Question 1 (and a higher rating indicates a positive response). To reverse the coding, you switch the 6 to a 1—or you might switch a 5 to a 2 or a 4 to a 3.

Another way to code the data would be to combine responses for some items, such as grouping the responses "strongly agree" and "agree" together. In the example of the Likert scale mentioned above, rather than having six possible values (ranging from 1-6) you will have three possible values (1 = strongly disagree/disagree, 2 = neither disagree nor agree, 3 = agree/strongly agree).

Prepare your qualitative data

Similar to the steps discussed in the section on cleaning quantitative data, the first steps in working with your qualitative data are entering, cleaning, and preparing the data for analysis. Here are some additional considerations related to working with qualitative data.

- Enter the data into a spreadsheet or qualitative data analysis software program. With some online survey programs, you can automatically download your qualitative data along with your quantitative data, which can facilitate the process of creating a qualitative dataset.
- Once you have your qualitative data all in one place, look it over for any data issues, such as missing data, responses provided in the wrong field, and misspellings (which will interfere with automated sorting and searching).
- Develop decision rules to provide consistency in the handling of data issues, but we strongly recommend against deleting responses!
- When you identify errors, go back to the original response for clarification or to make a correction. If possible, consider going back to the respondent to gain additional clarification.

A Note on Cleaning Qualitative Data

When cleaning qualitative data, keep in mind that all responses—especially those that might be considered "outliers" in quantitative analysis—potentially can provide valuable insight into the nature and extent of parent involvement in your state. "Data issues" specifically refer to problems of missing or erroneous data, not data that might not seem to fit preconceived ideas of what the parent involvement data "should" look like. Use caution when applying decision rules.

Address issues with representativeness after data collection

Assess representativeness of all collected data

Once you have completed data collection, you should again assess representativeness of responders—using the steps outlined in the section on conducting periodic checks for representativeness—but using the entire dataset. If you have been careful when selecting your sample (if you sampled) and have tracked responses, monitored response rates, and followed up with nonresponders, there is a good chance that you will have relatively representative data.

An additional way to assess representativeness is to try to obtain survey responses from a sample of parents who initially did not respond to see if the way they respond to the survey differs from the responses you already have. To do this, you can follow these steps:

1. Randomly select a group of approximately 10-20 percent of the parents who did not respond to the survey during the initial data collection window
2. Contact (usually by phone) the parents and ask them for responses to key questions (such as the questions you are using to calculate your Indicator B8 percentage)

3. Document the responses, depending on the method you used to obtain their responses (e.g., either by completing a paper survey for them during a phone call or entering their responses into an online survey)

Once you have responses from your group of nonresponders, you can compare their responses to the responses of parents who originally responded to the survey. In your comparison, examine the degree of difference between the two groups to determine if it is meaningful.

- One option is to use tests of statistical significance between the two groups of responders.[27] If you decide to use statistical significance as your threshold for a meaningful difference, consult with a staff member or contractor with statistical expertise to assist with the analysis. You can also contact your IDC State Liaison for assistance.

Remember, there is no one threshold for determining whether data are representative. For example,

- The National Post-School Outcomes Center Response Calculator uses a threshold of ±3 percent in observed data
- The ECTA's Response Rate and Representativeness Calculator uses tests of statistically significant differences to determine representativeness

Following up with nonresponders is advantageous because it allows you to directly assess if there are differences between responders and nonresponders, but it can cost more compared to other techniques because you may need to make extra effort to get nonresponder parents to respond!

For example, you may need to use

- Different survey administration techniques, such as using a shorter questionnaire or asking parents questions over the phone
- Incentives, such as gift cards or small payments, to motivate parents to respond

Keep in mind that some of the differences in responses might be due to differences in the way that parents responded to the survey (the mode). You could mention this possible limitation of the data when you report results.

If, after all of your efforts, your data are still not representative, you can use techniques such as "weighting" to address remaining issues, as discussed in the next section.

What States Are Doing

Utah assesses the representativeness of their survey data by comparing the demographic characteristics of the students whose parents responded to the survey with the demographic characteristics of all special education students. In 2015-2016, this comparison indicated the results were representative:

- By geographic region where the student attended school
- By the grade level of the student
- By the primary disability of the student

However, parents of White students were slightly more likely to respond than parents of non-White students: 84 percent of the parents who returned a survey were parents of a White student, whereas 73 percent of the special education students in the sample were White.

To try to address this issue for the future, Utah held a meeting with a Hispanic consultant at the Utah Parent Center (Utah's Parent Training Information Center) to develop a plan to solicit a higher response rate from Spanish-speaking parents.

[27] Montaquila and Olson 2012.

Weight to account for nonrepresentative data

If you examine your data and find that they are not representative, you may be able to achieve representativeness with postsurvey adjustments such as "weighting." Weighting is a procedure in which data from some groups are assigned multipliers so they carry more or less weight to compensate for representativeness shortcomings.[28] There are several types of weighting; here are two that may be appropriate for your purposes:[29]

- **Weighting to adjust for unit nonresponse** is a type of weighting that is applied to adjust for groups of parents who are underrepresented in the dataset.
  - **Example:** Suppose that the response rate is 80 percent for parents of a child with autism and 75 percent for parents of children with other disabilities, which implies that parents of children with other disabilities are underrepresented in the dataset. Two weights are then created to adjust the differences in response rates, w_i=1/0.8 for parents of a child with autism and w_i=1/0.75 for parents of children with other disabilities. The nonresponse adjusted weight is obtained as the product of the base weight and the nonresponse adjustment.

- **Poststratification weighting for sampling variance reduction, undercoverage, and unit nonresponse** assures that sample totals are equal to the external total based on the target population.
  - **Example:** Suppose, after the nonresponse adjustment, the sum of the weights for males is the same as the sum of the weights for females. However, there are more males than females with disabilities in the state—65 percent vs. 35 percent. The weights for males need to be inflated (i.e., 0.65/0.5=1.3) by factoring in the larger percentage of males with disabilities in the state, and the weights for females need to be deflated (i.e., 0.35/0.5=0.7) by factoring in the smaller percentage of females with disabilities in the state, thereby restoring the outside population distribution for the weighted sample.

You can use more than one weighting technique; if you do, the final weight is the product of all weighting techniques.

We highly recommend consulting a statistician on weighting because it is quite complex. You can also consult your IDC State Liaison for assistance.

What States Are Doing

Utah uses a standard weighting procedure every year when calculating state-level results to ensure that the parent survey results reflect the parent population. Districts, and parents within districts, have an equal probability of selection, so responses are weighted by the size of the population of students with disabilities. Thus responses from parents in a district that has four times the number of students with disabilities as another district, will receive four times the weight in computing overall state results.

Idaho selects districts for survey participation each year using a 2-year cycle and a stratified process. Stratification is by total enrollment, percent Hispanic, geographical region of the state, percent Native American, and special education enrollment. The two largest districts are always surveyed in separate years. Results are weighted according to the population size of the district to ensure the overall state's parent involvement percentage is an accurate reflection of the experience of parents of students with disabilities ages 3 to 21.

[28] U.S. Department of Education 2012.

[29] DiSogra 2007.

Take steps to improve representativeness in future data collection efforts

If you find that you have had issues with representativeness, it is important that you take steps to improve it in the future. For example, if you find that certain groups are underrepresented in your survey responders, in the next year's data collection you may opt to

- Employ a probability sampling strategy, such as stratified sampling or cluster sampling
- Include larger subsamples of parents from underrepresented groups (called "oversampling")

Keep in mind that if you purposely oversample from certain groups, you will need to weight the data to account for the fact that different groups had different probabilities of being selected (also known as having "differential selection probabilities"). For example, a state might oversample Hispanic parents to ensure that the sample of Hispanic parents is large enough to draw conclusions. However, if the state combines data across ethnicity groups to get estimates for the entire population, the state must apply weights to individual values to adjust for the different selection probabilities. The state calculates the selection weight for each parent as the inverse of the selection probability. **Here, too, we recommend consulting a statistician or your IDC State Liaison for assistance.**

To learn more about sampling, see important information about sampling later in this toolkit.

Now that you have taken steps to clean and code your data and address any issues with representativeness, it is time to turn toward analysis.

REFLECT: How can we conduct high-quality data analyses?

As you analyze your parent involvement data, you will definitely need to calculate the Indicator B8 percentage, but you should also consider doing other analyses to explore your data and learn more about parent involvement in your state. In this section you will learn about

- Choosing the right method to calculate the Indicator B8 percentage, based on what survey you use
- Generating descriptive statistics to show patterns in your quantitative data
- Conducting inferential statistical analyses to test hypotheses about group differences or changes over time
- Using rigorous qualitative analysis to gain a more nuanced understanding of your data
- Combining quantitative and qualitative findings to learn more about parent involvement in your state

Use the right method to calculate the Indicator B8 percentage

When using survey data to calculate the Indicator B8 percentage for your SPP/APR, it is very important to consider the type of survey your state is using. **The way that you calculate the Indicator B8 percentage will differ depending on whether your state is using the NCSEAM, a state-developed survey, or a modified NCSEAM.** Since all states are currently using surveys, and the majority of state surveys include Likert-type scales, we focus here on methods you can use with such scales. In this section you will learn how to calculate the percentage using these different types of surveys so that you can be sure that you are calculating the percentage correctly and reporting accurate data.

What States Are Doing

In addition to states that are using the NCSEAM scale as it was developed, many state surveys are adapted from the NCSEAM scale. Some states have added their own items and combined these with NCSEAM items.

Calculate the B8 percentage using NCSEAM data

The NCSEAM scale was built on the Rasch measurement framework, and surveys that incorporate the NCSEAM scale should be scored using Rasch analysis. Since Rasch analysis requires an understanding of measurement principles and is typically conducted using specific software (e.g., WINSTEPS),[30] **we recommend working with a measurement expert or a third-party contractor if your state is using the NCSEAM or has included some of the NCSEAM items in its state-developed survey.** Go to the section on Additional Information About the NCSEAM if you want to learn more about the NCSEAM scale.

Here are some key points you need to know to calculate the B8 percentage correctly if you used the NCSEAM:[31]

- Within the Rasch framework, each parent survey receives a score.
- Then the score on each survey is compared to an established cut-point score.
  - A nationally representative group of stakeholders convened by NCSEAM recommended using 600 as the cut-point score (they thought 600 was the minimum score to count as fulfilling the intent of Indicator B8).

What States Are Doing

Some state-developed items were tested using a Rasch measurement framework and were found to demonstrate good fit with the NCSEAM items; these items can be used in the Rasch item analyses. However, other independently developed items that either do not demonstrate good fit with the NCSEAM items or have not been tested should be analyzed separately.

[30] *Linacre 2017.*

[31] Data Accountability Center 2008.

  - States can either adopt the recommended cut-point score of 600 or work with statisticians and stakeholders to establish their own cut-point scores.

- To calculate the percentage required for Indicator B8, divide the number of survey responders whose scores are at or above the cut-point by the total number of survey responders. Multiply the resulting decimal by 100 to obtain the percentage on Indicator B8.

Calculate the B8 percentage using the NCSEAM Excel Scoring Program

A group of experts, including two of the developers of the NCSEAM scales, developed an Excel-based scoring program (the Schools' Efforts to Partner with Parents Scale [SEPPS] Excel Scoring Program) that approximates the results achieved by doing Rasch analysis, using specialized software programs. The Excel-based program is designed to be used with the 25-item version of the NCSEAM. Go to the section on Additional Information About the NCSEAM if you want to learn more about the NCSEAM scale. The Excel program calculates a score for each completed survey and, applying a cut-score of 600, yields a percentage for Indicator B8. Box 4 provides references to the Scoring Program and instructions for its use.

Box 4. References to NCSEAM Survey: Excel Scoring Program

Data Accountability Center. (2008). *Use of the NCSEAM Measurement Scales to Address Reporting Requirements for Indicator 8 of the Part B State Performance Plan and Indicator 4 of the Part C State Performance Plan: Frequently Asked Questions*.

Elbaum, B., Celimli, S., and Fisher, W.P., Jr. (2012a). SEPPS Excel Scoring Program.

Elbaum, B., Celimli, S., and Fisher, W.P., Jr. (2012b). *Instructions for Use of the Schools' Efforts to Partner with Parents Scale (SEPPS) Excel Scoring Program*.

It is extremely important that you keep in mind some limitations of the Excel Scoring Program:

- The Scoring Program is only designed to be used with the 25-item version of the NCSEAM.
- You can use the Scoring Program if each survey has responses to most of the 25 items. However, if responses to many items are missing, the validity of scores produced by the program will decline.
- If you are using a modified version of the NCSEAM—meaning that (a) you have added some items to the NCSEAM scale, or (b) you have added NCSEAM items to your state-developed survey—you cannot score responses to the non-NCSEAM items using the Scoring Program.[32]

A Note on the SEPPS Excel Scoring Program

The program developers caution that, while comparisons of scores obtained through the Excel Scoring Program and Rasch analysis indicate that the Excel Scoring Program produces comparable results, "the extent to which responses from any given sample of parents conform to the Rasch measurement model cannot be ascertained through the use of the SEPPS Excel Scoring Program," (Elbaum 2012, p. 2). As such, the authors include the following disclaimer:

> *Neither the Office of Special Education Programs, NCSEAM, or the developers of the SEPPS can be held accountable either for the results of analyses that utilize the SEPPS Excel Scoring Program or for inferences that might be drawn from these results. Consistent with policy related to the SPP, it is the sole responsibility of states to conduct their own data quality checks and to ensure the reliability and validity of the results that are reported in the Annual Performance Report (Elbaum 2012, p. 2).*

[32] Elbaum 2012.

Calculate the B8 percentage using a state-developed survey or a modified NCSEAM

If your state is using its own state-developed survey, or if it has modified the NCSEAM in a way that affects the ability to analyze the modified survey using Rasch analysis, there are various ways you might calculate your Indicator B8 percentage. In this section you will learn two ways to calculate the percentage using basic arithmetic. We include two examples based on whether your state is using a single Likert-scale item or multiple Likert-scale items to collect its Indicator B8 data.

A Note on Using Items From State-Developed Surveys to Calculate Indicator B8

The percentage that you report for Indicator B8 may be more accurate and reliable if you calculate it using the results of multiple survey items rather than the results of a single item. Using multiple items allows for a more reliable measurement of the true attitudes of parents and protects against response errors or misunderstandings that might occur with using the results of only a single question.

There are many additional advanced analysis methods that you can use to calculate your Indicator B8 percentage, such as cluster or factor analysis, analysis of variance (ANOVA), regression, or other modeling techniques such as Rasch analysis, which is used for the NCSEAM scale. However, unless you are experienced with these analytic methods, we recommend enlisting the help of a statistician or a third-party contractor.

Calculate a percentage from a single Likert-scale item

If you are only using a single survey item to report data for Indicator B8, you can calculate the percentage by dividing the number of parents who responded to a certain category (or categories, such as "strongly agree" and/or "agree") by the total number of parents who responded to the item, and multiply that number by 100, as illustrated below.

$$\text{Indicator B8 Percentage} = \frac{\text{\# of parents who responded to a certain category}}{\text{\# of parents who responded to the item}} \text{ x } 100$$

Table 14 presents the responses to the following hypothetical survey item with six Likert-scale categories and 525 responders.

> Item 1 [INDICATE YOUR LEVEL OF AGREEMENT WITH THIS STATEMENT]: Over the past year, my child's school facilitated parent involvement as a means of improving services and results for my child receiving special education services.

Table 14. Fictional survey data: Responses to single Likert scale item *(n=525)*

	Responses (n=525)						
Item 1	**Very strongly disagree**	**Strongly disagree**	**Disagree**	**Agree**	**Strongly agree**	**Very strongly agree**	**Total**
Number of responders	25	50	75	100	125	150	525
Percentage of responders	5%	10%	14%	19%	24%	29%	100%

NOTE: The percentages in all columns do not total 100% due to rounding.

To calculate the percentage of parents who chose "very strongly agree" for this hypothetical item, follow these steps:

$$\text{Indicator B8 Percentage} = \frac{\text{\# of parents who responded "very strongly agree"}}{\text{\# of parents who responded to the item}} \text{ x } 100$$

$$\text{Indicator B8 Percentage} = \frac{150}{525} \text{ x } 100 = 28.6\%$$

Or, if you just want to determine the percentage of parents who responded with some level of agreement to this particular item, you may want to add the number of parents who responded "agree," "strongly agree," or "very strongly agree," as shown below.

$$\text{Indicator B8 Percentage} = \frac{\text{\# of parents who responded "very strongly agree" + "strongly agree" + "agree"}}{\text{\# of parents who responded to the item}} \text{ x } 100$$

$$\text{Indicator B8 Percentage} = \frac{150 + 125 + 100}{525} \text{ x } 100 = 71.4\%$$

You can do the same types of calculations for negatively worded items (e.g., "My child's school does not promote parent involvement"). To calculate the Indicator B8 percentage in this case, you would do the calculations using the responses that indicate disagreement with the item (i.e., "disagree," "strongly disagree," and "very strongly disagree").

You can also generate "frequencies" using a statistical software package to quickly obtain the same result. Consult a statistician, or your IDC State Liaison for assistance.

As a reminder, we strongly urge you to use data from more than one survey item to calculate your Indicator B8 percentage.

Calculate a percentage from multiple Likert-scale items

If you are using multiple Likert scale items to collect data for Indicator B8, one method to calculate the percentage involves averaging the survey responses for each parent and then comparing the average to a predetermined cut-point score that indicates a positiv2e response. You may choose to include in the average all of the items in the survey or a subset of items for Indicator B8. Then, report the percentage of surveys (or parents) that meet or exceed the cut-point score. To use this procedure, follow these steps:

1. Assign each Likert category (e.g., "very strongly disagree" to "very strongly agree") a numeric value (for example, 1 to 6) with the numerical values ascending. (See the section on coding data for important information about how to correctly code your quantitative survey data).
2. Set a cut-point score, or the score at which your state feels that a school meets the threshold for facilitating parent involvement.
   a. It is important that you select an appropriate cut-point score based on how you have worded your items and defined your categories.
   b. You may wish to convene a group of stakeholders and subject-matter experts to determine an appropriate cut-point score.
3. Add the responses across all the items you are using for Indicator B8 to get the total score.

$$\text{Total score} = \text{Item 1} + \text{Item 2} + \text{Item 3} + \text{Item N}$$

4. Divide by the total number of items to get the average.

$$\text{Average} = \frac{\text{Total score}}{\text{Total \# of items}}$$

What States Are Doing

Some states using a 6-point Likert scale use a cut-point score of 4.0, the numeric value that generally corresponds with a rating of "agree."

5. Add the number of surveys that meet or exceed the cut-point score, divide that number by the total number of parent surveys, and multiply by 100 to get a percentage that you can report for Indicator B8.

$$\text{Indicator B8 Percentage} = \frac{\text{\# of surveys that meet or exceed the cut-point score}}{\text{\# of parents who responded to the survey}} \text{ x } 100$$

Table 15 contains hypothetical survey data from one parent for four items. In this example, the state has set a cut-point score of 4.0, which corresponds to the response of "agree" on the 6-point Likert scale.

Item 1 [INDICATE YOUR LEVEL OF AGREEMENT WITH THIS STATEMENT]: Over the past year, my child's school facilitated parent involvement as a means of improving services and results for my child receiving special education services.

Table 15. Fictional survey data: Parent 1 responses to multiple Likert scale items

	Responses and their assigned values						
Item	Very strongly disagree 1	Strongly disagree 2	Disagree 3	Agree 4	Strongly agree 5	Very strongly agree 6	Item Score
Item 1						✓	**6**
Item 2				✓			**4**
Item 3					✓		**5**
Item 4			✓				**3**
						Total Score	**18**
						Average	**4.5**

Follow these steps to calculate the Indicator B8 percentage for this example:

1. Assign numerical values to all of the responses to Items 1 through 4 for Parent 1.
2. Calculate the total score for all four items.

$$\text{Total score} = 6 + 4 + 5 + 3 = 18$$

3. Next, divide the total score by total number of items to get the average.

$$\text{Average} = \frac{18}{4} = 4.5$$

4. Following this same procedure for every survey you receive (n=500), you determine that 350 out of 500 met or exceeded the cut-point score of 4.0.
5. To calculate the Indicator B8 percentage, add the number of surveys that met or exceeded the cut-point score, divide that number by the total number of parent surveys, and multiply by 100.

$$\text{Indicator B8 Percentage} = \frac{350}{500} \text{ x } 100 = 70\%$$

Now that you have calculated your Indicator B8 percentage, you can move on to thinking about other ways to explore your parent involvement data. In the next sections you will see how you might use different analytic techniques to explore and get the most out of your data.

Generate descriptive statistics to explore your data

In addition to calculating the Indicator B8 percentage, you can explore your quantitative parent involvement data by generating descriptive statistics. Descriptive statistics provide information about the overall trends and distribution of the data. This includes reporting percentages or frequency distributions (also called "frequencies") for nominal and ordinal data, as well as reporting summary statistics of interval and ratio data (see the section on coding quantitative data for more information about the different types of data).

Click on the topics below to learn more.

- Percentages
- Frequencies
- Summary statistics

Percentages. You may want to calculate the percentage of parents who provided responses to questions related to parent involvement beyond those questions directly related to Indicator B8. Remember, **when sharing the percentages (internally or with stakeholders), be sure to also include the total number of people included in the calculation** (e.g., the number of parents who responded to a certain category and the total number of parents who responded to the item). If you sampled, you may consider calculating the percentage of the sample that the responders represent; otherwise, calculate the percentage of the total population that the responders represent. **Table 16** illustrates one way to do this for a fictional parent survey administered to a sample of 799 parents by State A.

Table 16. Percentage of parents expressing agreement to items on the parent involvement survey in State A (Sample = 799)

Item	Number of parents who responded to item	Item response rate	Number (and percent) of responders who agree/ strongly agree/very strongly agree
The teacher communicates with me regularly about my child's progress	764	96%	647 (85%)
My relationship with the school staff has a positive effect on my child's education	741	93%	679 (92%)
Teachers are available to discuss my questions or concerns	763	95%	594 (78%)
The school explains what options I have if I disagree with the decision of the IEP team	746	93%	640 (86%)
I work together with the IEP team as an equal partner to develop my child's IEP	767	96%	421 (55%)
IEP meetings are scheduled at times that are convenient to me	784	98%	323 (41%)

As you examine the data presented in **Table 16**, there are a number of things that stand out:

- The item response rate is extremely high, which indicates that State A did a very good job designing its survey and making it clear to understand and easy for participants to respond to the questions
- Even though the item response rates were very high overall, they were lower for certain questions, which may indicate a reluctance to respond to those particular questions
- The percentage of parents who agreed somewhat (i.e., responded agree/strongly agree/very strongly agree) differed considerably based on the question.

Presenting additional information about the percentage of parents responding to items that go beyond Indicator B8 gives a fuller picture of the nature and extent of parent involvement in the state, including highlighting areas where improvements might be needed.

Reflect on the Data: Based on the results in Table 16, what changes could State A make to improve parent involvement in the state?

Frequencies. It can also be helpful to look at the frequency distribution of responses to survey items. The distribution is the range of values for an item. This provides a complete picture of the variation in responses to the item and can help you understand the data better. A simple way to create a distribution is to list every value (or response) of an item and the number of parents who provided each response, as shown in **Table 17**. Analysis software such as SPSS and SAS can easily generate tables like this one. You could also include information about the percentage of the total responses that each answer represents to give a better idea of where the responses fall.

Table 17. Frequency distribution of responses to the parent involvement survey in State A (Sample = 799)

Item	Very strongly disagree	Strongly disagree	Disagree	Agree	Strongly Agree	Very strongly agree	# of parents who responded to item	Item response rate
The teacher communicates with me regularly about my child's progress	15	44	58	457	152	38	764	96%
My relationship with the school staff has a positive effect on my child's education	5	23	34	436	198	45	741	93%
Teachers are available to discuss my questions or concerns	35	60	74	436	150	8	763	95%
The school explains what options I have if I disagree with the decision of the IEP team	18	32	56	415	120	105	746	93%
I work together with the IEP team as an equal partner to develop my child's IEP	12	55	279	346	75	0	767	96%
IEP meetings are scheduled at times that are convenient to me	72	155	234	232	91	0	784	98%

Reflect on the Data: What do the results in Table 17 tell you about how strongly parents responding to the survey feel about the efforts their school is making to facilitate parent involvement?

Summary statistics. Summary statistics are useful for providing additional descriptive information about your data. You can calculate summary statistics for interval or ratio data, and for ordinal data (if, as discussed in the section on coding quantitative data, you are treating ordinal survey responses as interval data for your quantitative analyses). It is easy to calculate summary statistics using software such as Microsoft Excel or statistical software such as SPSS, STATA, R, or SAS—as long as you have all of the survey responses entered into your data file correctly (see the section on creating a data file for more information).

Summary statistics you might consider include

- **Minimum and maximum scores**, to show where the responses fall (e.g., from 1-4 or 1-6)
- **Measures of central tendency**, which provide an idea of where the majority of scores are located in a distribution; these include
  - Mean: the arithmetic average of a set of scores
  - Median: the score above and below which 50 percent of scores fall
  - Mode: the most frequently occurring score in the distribution
- **Measures of variability**, which indicate the spread of the scores in a distribution; three measures of variability include
  - Range: the distance between the highest and lowest score in a distribution
  - Variance: a measure of how far the scores in the distribution are spread out around the mean
  - Standard deviation: the average distance of scores from the mean (the square root of the variance)

Table 18 presents these summary statistics for the parent involvement survey administered by State A.

Table 18. Summary statistics for the State A parent involvement survey

	N	Minimum	Maximum	Mean	Median	Mode	Range	Variance	Std. Deviation
The teacher communicates with me regularly about my child's progress	764	1	6	4.05	4	4	5	0.880	0.938
My relationship with the school staff has a positive effect on my child's education	741	1	6	4.26	4	4	5	0.674	0.821
Teachers are available to discuss my questions or concerns	763	1	6	3.83	4	4	5	1.034	1.017
The school explains what options I have if I disagree with the decision of the IEP team	746	1	6	4.21	4	4	5	1.145	1.070
I work together with the IEP team as an equal partner to develop my child's IEP	767	1	5	3.54	4	4	4	0.682	0.826
IEP meetings are scheduled at times that are convenient to me	784	1	5	3.15	3	3	4	1.305	1.143

Reflect on the Data: What do the results in Table 18 tell you about the variation in the way parents responded to the survey? What do the mean scores tell you? What about the variance and standard deviation? Do their responses tend to group together around the mean or are they spread out?

For some of the questions about parent involvement your state would like answered (e.g., To what extent do parents report satisfaction with their level of involvement in making decisions about their child's education?), descriptive statistics such as percentages, frequencies and summary statistics may be sufficient to get the answers you need. However, for more complex questions—such as "Is there a statistically significant difference in the level of parent involvement in District A compared to the level of involvement in District B?"—you will likely need to conduct more advanced analyses, such as inferential statistical analyses, which we briefly discuss in the next section.

Test hypotheses with inferential statistical analyses

As you think about parent involvement in your state, you may want to answer questions that go beyond what you can learn from descriptive statistics. Inferential statistical analyses give you more options for learning about your data and for testing hypotheses about the nature and level of parent involvement in your state and across districts.

Table 19 outlines some types of inferential analyses you may want to do with the parent involvement data you collect.

Table 19. Types of inferential analyses

Type of analysis	Sample questions	Keep in mind…
Test group differences	• Is there a statistically significant difference in the level of parent involvement in District A compared to the level of involvement in District B? • Do parents in District C and District D report equal rates of parent involvement?	• Work with a statistician or an experienced quantitative analyst to ensure that you are using the correct statistical test to answer your question.
Perform subgroup analyses	• Is there a statistically significant difference in the level of involvement among African American parents compared to the level of involvement of Asian parents? • Is there a difference between the level of involvement of parents of students with autism compared to parents of students with all other disabilities?	• What groups do you want to examine? Are you interested in looking at results by type of disability, demographic characteristics of parents or students, or school district? • Small cell sizes potentially affect your ability to report your results.
Document changes over time	• Have there been changes in parent involvement over time in the state overall or in specific districts?	If you have been using the same survey with the same items, you can examine the percentage change overall for Indicator B8 or the percentage of districts that have had increases or decreases in parent involvement.
Explain (or predict) outcomes	• Does school staff participation in workshops on improving parent involvement lead to changes in the level of involvement reported by parents?	These questions involve regression analysis, which is based on a number of statistical assumptions about your data. Work with a statistician or experienced researcher to check if your data meet the assumptions.

It is beyond the scope of this toolkit to go into detail about these and other types of inferential statistical analyses; for more information, consult a statistician or an individual skilled in quantitative analysis. If you are interested in learning a bit more, Hinkle, Wiersma, and Jurs (2003) and Dimitrov (2010) are good reference books and Rice University, the University of Houston Clear Lake, and Tufts University have developed an online statistics book that is free and available to the public. You also can find information about statistical analysis online at the Web Center for Social Research Methods.

Gain a more nuanced understanding using qualitative analysis

One way to gain a better understanding of parent involvement in your state is to collect qualitative data, which are non-numeric data often collected through

- **Open-ended survey items**, such as "How does your school encourage you to get involved?," that ask parents to respond in their own words or to provide comments
- **Interviews or focus groups**, which are designed to gather in-depth information from parents, teachers, or other key stakeholders about the nature and level of parent involvement in a given school or district
- **Observations**, which might include visits to school parent nights or professional development workshops designed to help teachers facilitate parent involvement

Qualitative data and qualitative analyses can add richness and depth to your study of parent involvement by, for example, allowing you to

- Understand the level of and factors associated with parent involvement in your state
- Explore parent perceptions of and reactions to schools' efforts to facilitate involvement
- Explore the extent of change in parent involvement as a result of specific programs or practices
- More thoroughly investigate differences between various strategies to facilitate involvement
- Establish or confirm facilitators or barriers to achieving greater parent involvement
- Put findings from quantitative analyses into context, or triangulate quantitative findings

A Note on Including Qualitative Data in Your Study of Parent Involvement

It is important to keep in mind that including many open-ended items in your survey, and conducting interviews and focus groups or observations, can produce large amounts of qualitative data that you will then need to analyze. And when done correctly, qualitative analysis can be quite time-intensive. States interested in including a number of open-ended items in their survey, or in collecting qualitative data through another method, should plan for additional resources to enlist the support of a skilled qualitative analyst and allow plenty of time to complete analysis before sharing the data or reporting the results.

Be sure, though, that you will actually DO something with the qualitative data you collect! If you are not willing to invest the time and resources into analyzing and using the qualitative responses to your survey, you might as well not include the items in the first place.

In this section you will learn one way to analyze small amounts of qualitative data produced through open-ended survey items. If you have collected extensive qualitative data, you should consult with an expert qualitative analyst for guidance and support. You can also reference resources available on the OSEP IDEAs That Work website, such as the two-part webinar series on planning and conducting high-quality interviews and the Evaluating Special Education Programs: Resource Toolkit, both of which offer additional guidance and resources.

Read the sections on Cleaning and Coding Quantitative Data and Preparing Qualitative Data to learn some important tips related to getting your data ready for analysis. Once the data are prepared and in your data file, you can begin your analysis. There are many different ways to conduct qualitative analysis depending on which qualitative framework you want to use. It is beyond the scope of this toolkit to go into detail about qualitative analysis, but here is one way you can analyze qualitative data produced through open-ended survey items:

1. **Read through all of the data to get a broad, overall sense of the responses and to begin trying to understand them.**
2. **After reading through all of the data, go back and methodologically group, or *code*, responses into similar categories, also known as *themes*.** For example, depending on the questions you have asked, parents may share similar concerns, suggestions, or thoughts about the way their schools are trying to facilitate parent involvement.

   Consider the following example: Your survey includes a 6-point Likert-scale item that asks parents whether IEP meetings are scheduled at times that are convenient to them (response options range from "very strongly disagree" to "very strongly agree"). The survey also provides space for parents to add written comments related to their answer to that question.

   - Then group responses in different categories/themes based on similarity, as illustrated in Table 20.

You can conduct your qualitative analysis using spreadsheet software such as Microsoft Excel, or you can invest in qualitative data analysis software such as NVivo, ATLAS.ti, Dedoose, or Ethnograph. There are also free, open-source programs such as Coding Analysis Toolkit. Qualitative data analysis software partly automates coding and helps identify themes in the data. Using specialized software will allow you to analyze your data in less time than it may take to do the same work through spreadsheet software, although it still may take a significant amount of time to set up the program and learn how to use it.

Table 20. Qualitative analysis example 1a

Category 1	Category 2	Category 3
It's really hard to get to meetings during the workday. I can't take time off.	I would like to have options for meeting times, rather than just being told when it is!	No childcare offered at school – what should I do with my younger daughter during the meeting?
I wish they wouldn't hold meetings during rush hour – it takes me an hour just to get there!	Teachers don't give us enough time to plan to attend – one week's notice isn't enough.	Aftercare doesn't cover meeting times, so if I can't bring my other child with me, I can't go to the meetings.
The bus schedule doesn't allow me to get to the meetings on time.		
Buses don't run that route at meeting times.		

- **Or you might break the categories down even more, as shown in Table 21.**

Table 21. Qualitative analysis example 1b

Category 1	Category 2	Category 3	Category 4
It's really hard to get to meetings during the workday. I can't take time off.	Bus schedule doesn't allow me to get to the meetings on time.	I would like to have options for meeting times, rather than just being told when it is!	No childcare offered at school – what should I do with my younger daughter during the meeting?
I wish they wouldn't hold meetings during rush hour – it takes me an hour just to get there!	Buses don't run that route at meeting times	Teachers don't give us enough time to plan to attend – one week's notice isn't enough.	Aftercare doesn't cover meeting times, so if I can't bring my other child with me, I can't go to the meetings.

3. **Create names or labels for categories/themes.** As you group, you will usually start to see common themes emerge (assuming you have enough responses), so you can create names or labels to describe or explain what the data are telling you.

In the example presented in **Table 20**, the labels for the themes might be

- Category 1: difficulty getting to meetings
- Category 2: issues with not being consulted about the date or time of the meetings
- Category 3: lack of childcare options for siblings during meeting times

In the example presented in **Table 21**, the labels for the themes might be

- Category 1: difficulty getting to meetings during the workday/rush hour
- Category 2: issues obtaining transportation to the meetings
- Category 3: issues with not being consulted about the date or time of the meetings
- Category 4: lack of childcare options for siblings during meeting times

4. **Identify associations and relationships within the themes or across open-ended questions.** This step will depend on the amount of qualitative data that you have and the variety of responses that you receive.

Returning to our example, suppose that your survey also asks parents to provide additional comments related to the item "Teachers are available to discuss my questions or concerns." You obtain the responses presented in **Table 22**.

Table 22. Qualitative analysis example 2

Category 1	Category 2
I really appreciate how much teachers work to make themselves available.	Teachers don't give us any choice in the IEP meeting dates or times, and I can't take off work during the day, so I don't have many opportunities to talk with my son's teacher.
It is great that my son's school gives us options in the scheduling of IEP meetings. They give us three dates and times and allow us to choose one. That makes it really easy for me to go to the meetings and have time to talk with his teacher.	My daughter's teacher only holds IEP meetings during the day or right after school, so I can never get there. If he could hold meetings in the evening, it would be a lot easier to talk with him about her issues.

In **Table 22**, you can see that the comments included in category 1 contrast with the comments presented in category 2. In addition, the responses here raise similar issues to those that were raised in the responses to the question about the scheduling of IEP meetings (presented in **Table 20** and **Table 21**).

With the help of a good qualitative analyst, you can explore your qualitative data further to identify other such relationships and linkages to gain a better understanding of the nuances of your data.

5. **Take a step back to consider what the analyzed data mean and to assess how they relate to the evaluation questions under study.** You might also ask if the patterns in your qualitative data are similar to or different from your quantitative findings.
6. **Return to the data, groupings, and labels as often as necessary until you feel confident that the groupings accurately reflect the major patterns of the comments and that your coding scheme captures most of the comments.** Even when you feel your coding process is complete, review the data once more for patterns, trends, and common themes that emerge.

Box 5 presents some resources for analyzing qualitative data that you might find useful.

A Note on Analyzing Open-Ended Survey Items

Research suggests that open-ended items will generally take more effort for parents to complete, so parents with strong opinions about an item are most likely to complete these open-ended items (Leeuw, Hox, and Dillman 2008[33]). This is important because your qualitative data may not actually reflect the experience of all parents, but are more likely to reflect the views of parents who have higher levels of either positive or negative attitudes.

Box 5. Selected resources for analyzing qualitative data

Berkowitz, S. (1997). Analyzing Qualitative Data. In J. Frechtling & L. Sharpe (Eds.), *User-friendly Handbook for Mixed Method Evaluations*. Arlington, VA: National Science Foundation.

Maxwell, J.A. (2005). *Qualitative Research Design: An Interactive Approach* (2nd ed.). Applied Social Research Methods Series, Vol. 41. Thousand Oaks, CA: Sage.

Suter, W.N. (2012). Qualitative Data, Analysis, and Design. In *Introduction to Educational Research: A Critical Thinking Approach* (2nd ed.) (pp. 342-386). Thousand Oaks, CA: Sage.

Combine quantitative and qualitative findings to enhance learning

One of the benefits of including both quantitative and qualitative methods in your study of parent involvement is that you can get a more in-depth understanding of the nature and extent of parent involvement in your state.

- Quantitative data can quickly show the level of parent involvement in your state and, if your data collection and analysis activities are designed for this purpose, can even show patterns of differences across districts, schools, demographic characteristics, etc.
- Qualitative data provide richness and depth that can enhance your understanding of the efforts to encourage parent involvement across your state and identify facilitators and barriers to such involvement.

When you present your quantitative findings (e.g., tables/graphs with percentages or frequencies), for instance, you could supplement those findings with any findings that emerged from your qualitative analysis of open-ended survey items to provide additional information and add context to the findings.

For example, **Table 16** presented the results of a fictional parent involvement survey in State A. In that table, one item in particular stood out from the rest because, while most parents agreed with the other items, the majority of parents did not agree with that item. Specifically, 59 percent of parents did not agree that IEP meetings were scheduled at times that are convenient to them. But, since State A asked parents to provide comments related to their response to the item and several parents did so (as illustrated in **Table 20** and **Table 21**), State A has additional qualitative data that can help to explain the quantitative results. Qualitative analysis identified four themes associated with why parents do not feel IEP meetings are scheduled at convenient times:

- Difficulty getting to meetings during the workday/rush hour
- Issues obtaining transportation to the meetings
- Issues with not being consulted about the date or time of the meetings
- Lack of childcare options for siblings during meeting times

[33] *Leeuw et al. 2008.*

By gathering both quantitative and qualitative data, State A now has a better understanding of why parents do not think that IEP meetings are scheduled at convenient times, as well as information about additional barriers affecting parents' ability to attend the meetings. This understanding may encourage State A to talk with local districts and schools to see if they can find ways to make it easier for parents to attend.

Now that you have learned about ways you can conduct high-quality analyses to gain a better understanding of your state's data, you are ready to think about what the data mean and how you can use it to improve results for students. Then you can share the results with key stakeholders. The next section, REACH, will show you how you can make meaning of the findings and effectively communicate with different audiences to encourage improvements in programs and processes.

REACH: How can we make the most of our parent involvement data?

There are many reasons for your state to collect and analyze parent involvement data that go beyond the federally mandated requirement to report on Indicator B8. **Table 23** presents some ways that states can use parent involvement data to ensure that they are meeting the needs of students with disabilities and their families.

Table 23. Ways states can use parent involvement data

Possible use	Reason
Ensure high-quality services are provided	Communicating parent involvement data can help to ensure that the services provided to encourage parent involvement are high quality, relevant, and useful. States can use the data to monitor and manage implementation of parent involvement initiatives and provide feedback to inform improvements, with the ultimate goal of improving services and results for students with disabilities.
Promote accountability	Keeping key stakeholders (such as OSEP, district and school leaders, advocacy groups, school staff, and parents) aware of how well states and districts are doing in their efforts to encourage parent involvement in the education of students with disabilities can serve as a mechanism for accountability. When results show that parent involvement is low, such information can serve as a stimulus to improve.
Provide important information about what works (and doesn't work)	Communications about successes and lessons learned through parent involvement data can be valuable to others doing similar work and to a wider audience of individuals interested in learning about the results of investments to increase parent involvement.
Generate support for services	Communications about how involved parents feel can help generate interest in, and support for, projects to support parent involvement. Conversely, the impact or reach of efforts to encourage parent involvement can be limited if states and districts fail to effectively communicate about achievements and results of their investments.

In this section you will learn how your state can

- Report the correct information related to Indicator B8 to OSEP
- Go beyond reporting only on Indicator B8 to make meaning of the broader parent involvement data you collect
- Use results of data analyses to spur improvements to programs and services for students with disabilities and their families and inform action

How Can Stakeholders Help?

Ask stakeholders to review the results of your data analyses and participate in a larger decisionmaking process around overall program improvement and priorities.

Report the correct information to OSEP and the public

OSEP is one of the primary audiences for the results of states' Indicator B8 data collection and analysis activities. As part of their State Performance Plan/Annual Performance Report (SPP/APR) submission to OSEP, states are required to

- Set annual targets for Indicator B8, as defined with stakeholder input, and report on the state's progress toward meeting those targets
- Report on the APR results for Indicator B8 from the previous years

- Describe any changes to the Indicator B8 data collection process, including the survey (or other method if applicable) being used to collect data
  - If using a new survey, states must submit the new survey along with the APR
- Explain how the state ensured that data collected are valid and reliable
- Describe how well parents who participated in data collection represent all parents of students with disabilities in the state (see the section on ensuring data are representative for more information)
  - If certain groups of parents were less likely to respond to the survey than other parents were, states should include which groups were under- and overrepresented and how they addressed issues with representativeness, such as weighting the data or implementing strategies for increasing response rates.

States are also required under IDEA to report annually to the public on the performance of each local education agency (LEA) located in the state on the targets in the state's performance plan (Section 616(b)(2)(C)(ii)(I)). When LEAs are not represented in the survey (or other type of data collection) for a particular year because the state draws a sample of LEAs each year or because no parents in the LEA responded, states should report the most recently available result for the LEA and the date the data were obtained.[34]

In addition to posting the APR on the state website for public access, you should consider posting additional information regarding Indicator B8 directly on the state website, such as response rates, comparison of results to state and LEA targets, and any identified trends.

Go beyond reporting on Indicator B8 to make meaning of the data

While it is essential to report on Indicator B8, states should also consider taking a deeper look at the parent involvement data they collect and examining it to make meaning. There are a number of ways you might do this, including

- Linking back to questions you want answered
- Looking for patterns in the data
- Examining or comparing performance statewide
- Exploring hypotheses
- Drawing conclusions from the data

Link back to questions you wanted to answer. When examining your data, it is usually good practice to start by returning to the questions that you were trying to answer in the first place. Think about what your state was trying to learn through its data collection activities and look at the data through that lens.

- Did the state focus solely on gathering data related to Indicator B8?
  - Is the state meeting its targets related to parent involvement?
  - Are some groups of parents more involved than others?
- Did the state gather other types of data that can be used to inform state and local activities to encourage parent involvement?
  - What do those data say about the nature and extent of parent involvement in the state?
  - Are some types of activities more effective than others?

What States Are Doing

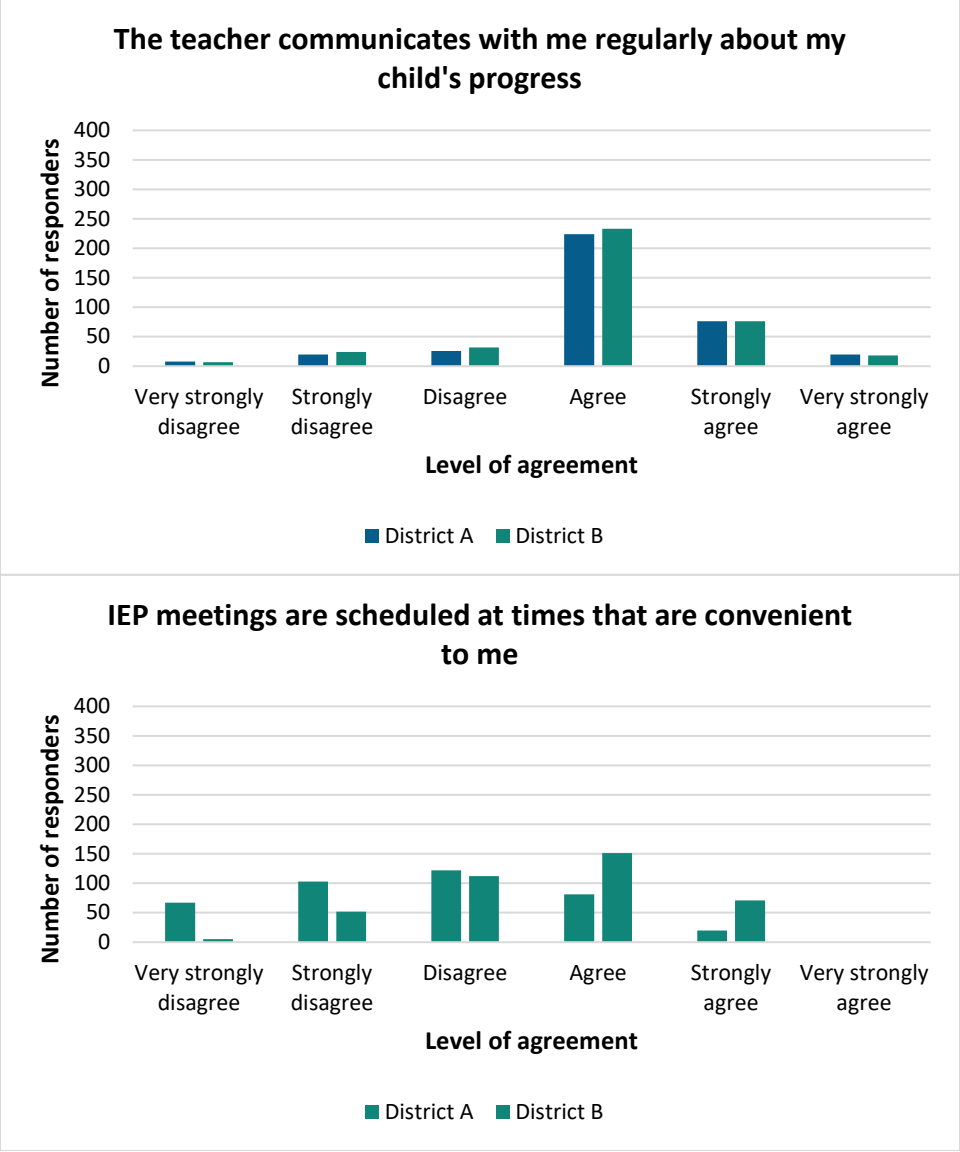
Several states have created resource guides or similar documents to assist LEAs in understanding the data and improving results. Some states' resource guides include strategies for improving results for every question in that state's survey, such as links to articles or briefs with strategies for encouraging parent participation in IEP meetings or templates related to survey items about parent input and participation that can be used for recording parent input during an IEP meeting. States have also developed lists of probing questions for LEAs to use when reviewing their data to focus on the strengths, challenges, and reasons results may vary by group.

[34] U.S. Department of Education 2017.

  - What factors are barriers or facilitators of parent involvement?
- If your state involved other individuals, besides parents, in its data collection (e.g., teachers, school staff), what did you learn from the other participants?
  - How well do the perceptions of parents about their level of involvement align with the perceptions of the other participants?

Look for patterns. As you work to answer your initial questions, you may also wish to look for patterns in the data that you may (or may not) have anticipated. One way to do this is to graph your quantitative data or arrange your qualitative data in a matrix, as sometimes visual representations of the data can reveal features that are otherwise difficult to identify.[35] Consider the example presented in **Figure 9**, which shows a graph of the responses to two items on State A's parent involvement survey in District A and District B.

Figure 9. Graphs of parent responses to two questions on State A's parent involvement survey



[35] National Forum on Education Statistics 2016.

In **Figure 9** you can see that parents in Districts A and B responded in basically the same way to the item "The teacher communicates with me regularly about my child's progress." That is, most parents agreed or strongly agreed with the item. However, you can also see that the responses to the item "IEP meetings are scheduled at times that are convenient to me" differed considerably. Specifically, parents in District A overwhelmingly disagreed with the item, while parents in District B had mixed responses to the item, with some disagreeing and some agreeing.

Now look at the example of a qualitative data matrix presented in **Table 24**.

Table 24. Data matrix comparing qualitative responses to State A's parent involvement survey in three districts

Participants' views of activities to encourage parent involvement in three districts			
Respondent group	**Activities named**	**Which are most effective?**	**Why?**
District A	• Newsletters • Community Events • Workshops • Presentations	• Workshops • Presentations	• Provided practical tips and helped develop skills • Concise way of communicating information
District B	• Workshops • Parent Information Packets • Newsletters	• Workshops • Parent Information Packets	• Provided practical tips and helped develop skills • Provided individualized information
District C	• Workshops • Referrals • Resource Fairs • Newsletters • Community Events	• Workshops • Referrals	• Provided practical tips and helped develop skills • Increased awareness of services

SOURCE: Adapted from Berkowitz 1997.

As seen in **Table 24**, the data show that all parents consistently rated workshops as the most effective activity districts offered to encourage parent involvement. In this example, however, the reasons parents gave for why they felt the workshops were the most effective differed across districts. Arranging the data in this way can allow for the emergence of patterns in the data that you might not have found if you had simply repeated the data in narrative form.

Reflect on the Data: What are the advantages/disadvantages of presenting quantitative and qualitative findings such as those presented in Figure 9and Table 24? What different types of information can you learn?

As you examine your other data related to parent involvement across districts or schools, you may see patterns emerge that provide insight into areas of success or areas where improvements may be needed.

Examine or compare performance. Another way to use your parent involvement data is to examine or compare performance relative to certain standards or across groups. This might involve looking at parent involvement data across districts and schools to see if your state is achieving targets overall, or investigating how one district compares to another. Sometimes you might think you see clear differences in performance just by looking at graphs of the data, but in many instances it is a good idea to perform inferential statistical analyses to see whether those differences are actually statistically significant. For example, look at **Figure 10** and **Figure 11**. Statistical analyses confirm that there is no difference in performance between Districts A and B in Figure 10, and they also show that there *is* a difference between their performances in Figure 11.

Figure 10. Comparing parents' responses in Districts A and B

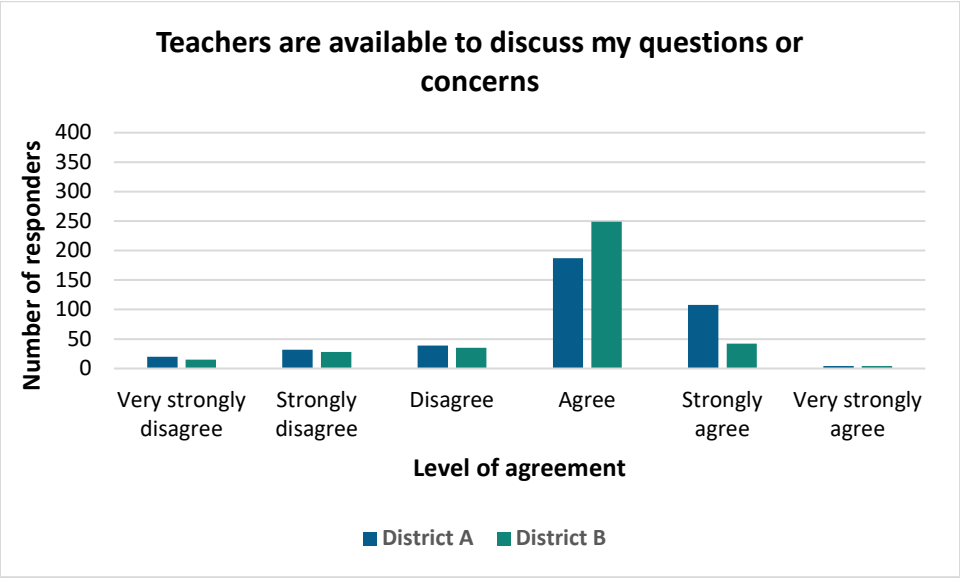
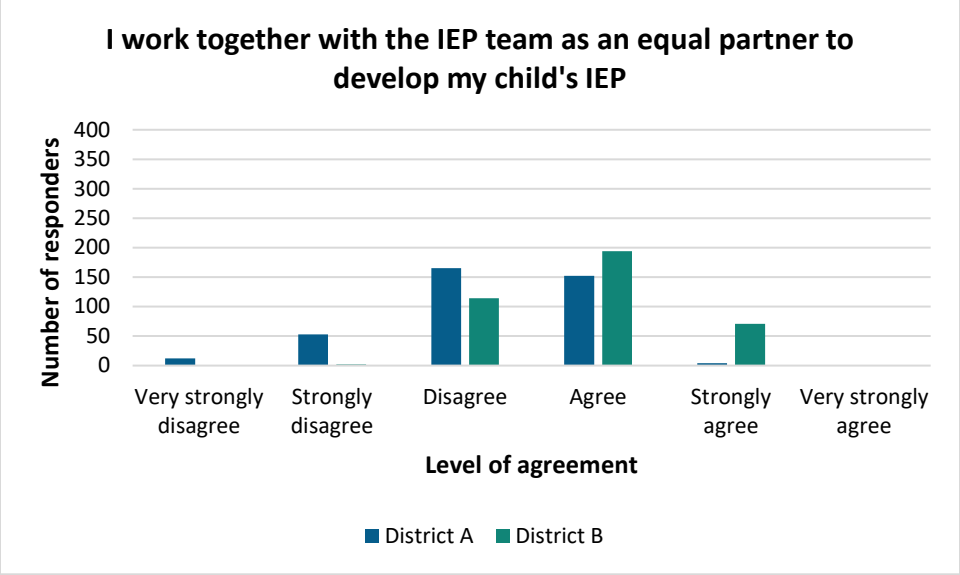


Figure 11. Comparing parents' responses in Districts A and B



Of course, using statistical analyses when a difference in performance is not clear from just looking at a graph is not the only reason to do such analyses. Other reasons include

- Providing stronger evidence of an actual difference in performance to support requests for new or continued funding
- Demonstrating the efficacy of particular strategies or activities to improve parent involvement
- Getting a better understanding of the magnitude of differences in performance

Explore hypotheses. Similarly, you can explore hypotheses with your data, such as looking at whether one group of parents is more involved than others, or whether certain types of activities are associated with higher levels of parent involvement. See the section on exploring hypotheses with inferential statistics for more information about using your quantitative data in this way.

Some researchers advocate using qualitative methods to explore hypotheses and investigate causal processes (e.g., Donmoyer 2012a, 2012b; Maxwell 2004a, 2004b, 2011, 2012). Specifically, they say that qualitative researchers can draw and support causal conclusions by focusing on the causal processes that result in particular outcomes. You may want to consider integrating case studies to investigate notable examples of success (or failure) encouraging parent involvement that come out of your data analyses to see what lessons you can learn and apply to different settings.

Draw conclusions. After you have taken a close look at your data in order to answer your original questions, identify patterns, examine performance, and explore hypotheses, you can draw conclusions about what it all means. When drawing conclusions about your data, it is important to keep in mind the quality of the data and any limitations associated `with the data, such as whether or not they are representative.[36] Think about the implications of what you learned for policy and practice and consider how you will share the data with key stakeholders to spur improvements (if needed) and inform action.

How Can Stakeholders Help?

Sharing results with stakeholders can help you to draw conclusions. Stakeholders might quickly identify patterns or understand the meaning behind certain findings. In this way, making meaning from your data can be an iterative process where you explore different hypotheses through graphing or conversations with stakeholders until you feel confident that you understand the true meaning of your data.

Use results to spur improvements and inform action

Arguably, the most important reason to collect parent involvement data is to gather information that can lead to improvements in the delivery of services and supports to students with disabilities and their families. But collecting (and analyzing) data is not enough—you must apply (and share) what you learn if you want to make the most of your efforts and, ultimately, effect change. Here are some specific ways that you might use your parent involvement results:

- To inform monitoring and the annual determination process
- To identify and prioritize needs for strategic and improvement planning
- To create and support family engagement initiatives

Inform monitoring and the annual determination process. States can use parent involvement data to inform special education monitoring priorities, and they may include the data as part of the annual determination process for each district, with a focus toward improving outcomes for students with disabilities. As part of the monitoring or determination process, consider

What States Are Doing

In the context of monitoring, states have created guiding questions to help districts as they conduct a review or self-assessment of their parent involvement data.

- Reviewing parent involvement data disaggregated by student characteristics, such as age, gender, disability, and race/ethnicity, to see if parents of some groups of students are reporting higher or lower levels of engagement
- Examining parent involvement data by district (or by region in states with small districts) to identify specific issues or areas of need

This information can help to identify possible ways to target professional development or create activities targeted at improving involvement among certain groups of parents and students.

[36] National Forum on Education Statistics 2016.

Identify and prioritize needs for strategic and improvement planning. States can also use parent involvement results to identify and prioritize needs as part of their strategic planning and improvement processes. For example, you can use your parent involvement results to

- Identify areas throughout the state where additional technical assistance (TA) or professional development (PD) may be needed—and develop a plan to support districts as they implement the recommendations
- Inform the choice of strategies or evidence-based practices that schools can use to improve their relationships with families

What States Are Doing

Many states reviewed their parent involvement results when they developed their State Systemic Improvement Plan (SSIP) and used the data to inform the strategies and evidence-based practices they planned to implement.

Create and support family engagement initiatives. You can also use the parent involvement data to support any ongoing family engagement initiatives in your state or to create new initiatives. Here are some ways you might use parent involvement findings to inform and support your state's overall family engagement activities:

- Apply what you learn to develop family engagement teams and frameworks with districts and at the regional level
- Include family engagement as a priority for any discretionary grants your state sponsors so that districts have a vehicle for funding PD to improve family engagement
- Inform development and/or use of curriculum modules on building family and school partnerships
- Consider examining the Indicator B8 parent involvement data in conjunction with the data collected from parents to measure family engagement as required by Title I,[37] and use the results to report on the strengths and areas in need of improvement more broadly

What States Are Doing

Georgia's statewide Parent Mentor Partnership program (http://www.parentmentors.org/), funded under the Georgia Department of Education's IDEA grant and local funds, is a network of over 100 parent mentors who partner with special education directors in over 90 school districts to embed family engagement into school and district initiatives. The program uses the results of the parent involvement survey to develop annual priorities specific to the parent mentor program and to local programs as well. Participating districts and the districts' parent mentors receive a detailed analysis of their district's parent involvement data. Parent mentors collaborate with district special education directors to develop, based on the results of the survey, goals and initiatives for enhancing family engagement and outreach activities toward improving outcomes for parents and families of students with disabilities. The state provides guidance to all parent mentors regarding the use of the results of the survey, and parent mentors collaborate with state staff to share ideas and strategies to increase positive results.

Pennsylvania's verification process for preschool special education programs, by the Bureau of Early Intervention Services, Office of Child Development and Early Learning, includes not only compliance indicators but quality indicators which lead to a continuous improvement process. As part of this work, the state has strengthened their focus on family engagement. Specifically, local programs are required to review their family survey data and, if there are concerns, address them in their Quality Enhancement Plan (QEP), which focuses on specific programmatic changes or outcomes and includes information on how change will be measured. State early intervention advisors and Early Intervention Technical Assistance staff provide technical assistance and support for this process.

Box 6 presents some additional resources that might help your state to make improvements based on its parent involvement data.

[37] To meet the parent involvement provisions of Title I, states, districts, and schools are required to implement family engagement activities and frequently collect data from parents to measure family engagement.

Box 6. Additional resources to help states use parent involvement data to make improvements

Wisconsin's Indicator 8 Family Survey – School-Aged Strategies and Resources for IEP Teams to Engage Families contains strategies and resources to assist IEP teams with engaging families to improve results for Indicator B8.
https://drive.google.com/file/d/0B7tictHsg-E8bXMwNmRZQlZ6T2c/view

The Pennsylvania Training and Technical Assistance Network (PaTTAN), an initiative of Pennsylvania Department of Education's Bureau of Special Education (BSE), works in partnership with families and LEAs to support programs and services to improve student learning and achievement. PaTTAN's website offers a number of resources for parents and LEAs related to using Indicator B8 data.
http://www.pattan.net/category/Educational%20Initiatives/Family%20Engagement

The National Center for Special Education Accountability and Monitoring (NCSEAM) developed seven modules based on evidence-based practices to help schools improve performance on Indicator B8. The modules correspond to items on the NCSEAM survey and include General Communication Strategies, Parent Friendly IEP Practices, Home School Note, Behavior Strategies, Reading Strategies, Mathematics Strategies, and Homework Strategies.
http://cyfs.unl.edu/futures/ncseam_guidelines.html

These are just a few of the ways you might use the data you collect to inform your state's efforts to facilitate parent involvement. Remember, stakeholders can serve as important resources during this time. Your state's Parent Training and Information Center (PTI) and Community Parent Resource Center (CPRC) can be particularly helpful in identifying ways to apply what you learned from your analyses to improve or develop new strategies to increase parent involvement throughout your state.

In the next section you will learn some strategies you can use to increase the likelihood that the results of your efforts reach your intended audiences and can be used by them.

REACH: What is the best way to communicate findings to key audiences?

To make the most of your parent involvement data collection and analysis activities, you must effectively communicate your findings. There are many ways to communicate your results, such as

- Communicating internally among staff who are responsible for (or overseeing) data collection, analysis, and reporting to help them improve activities going forward
- Reporting your Indicator B8 percentage to OSEP
- Highlighting successes or challenges for local district or school staff, or for staff at your state's PTI and CPRC
- Telling parents about how being more involved can help improve their child's educational outcomes

It is beyond the scope of this toolkit to go into detail about communicating findings, so here we will briefly talk about two steps that you can take:

- Develop a communication plan
- Tailor your communications to meet audience needs

For more information, tools, and strategies to help you effectively communicate your findings, check out *Effectively Communicating Evaluation Findings*, which was developed by the Center to Improve Project Performance (CIPP) and is available on the OSEP IDEAs That Work website along with a number of other resources related to evaluation.

5 Tips for Effectively Communicating Parent Involvement Findings

1. Consider what your audiences most want to know about parent involvement, in addition to the data and information you most want to share.
2. Create your data collection/ analysis and communication plans early so that each can inform the other.
3. Be succinct.
4. Plan to use multiple modes or techniques for communication. Rarely is one technique or tool enough to fully reach your audiences.
5. Investigate cost-effective means of communicating such as social media and web-based platforms.

Develop a communication plan

A communication plan can help you to think through

- What you need (or want) to share
- Who to share it with
- Which formats you will use to communicate information to your different audiences
- How frequently you will share it

One of the first steps in developing an effective communication plan is to identify the audiences. Audiences can include, among others,

- OSEP
- State or other (e.g., third-party contractor) staff who are working on the parent involvement data collection and analysis activities
- State staff providing services to students with disabilities and their families
- District and school staff
- Parents who are participating in the data collection activities or who might be asked to participate in the future

- Individuals or organizations that support and promote parent involvement activities and initiatives (e.g., parent advisory groups, PTIs, CPRCs)
- Parents and families who need or want to learn more about how to increase their involvement in their children's education
- State advisory panels or state boards of education

As you plan to communicate your findings, it's useful to answer three questions for each audience:

1. What does the audience need (or want) to know?
2. How will the audience use the information?
3. What is the best way to communicate information (in terms of timing and format)?

Once you have obtained information about your audiences, their needs, and how they will use the data, you can start to develop a comprehensive communication plan. You can create one overarching plan or a plan tailored to each audience. Here are some factors to consider when creating your plan:

- What types of data or information are most compelling to each audience?
- How much data are needed for each audience?
- What is the best time to communicate your findings to different audiences?
- What specific method of communication (e.g., infographic, webinar or other presentation) is best for clearly and accurately communicating with different audiences?
- What are the cost considerations associated with collecting data to address the specific needs of different audiences and using different methods to communicate with these audiences?
- What is the best way to ensure that your target audience will receive and understand your intended message?

Ideally, you should conduct this process of going through and identifying potential audiences and their needs for data related to parent involvement when you are planning your parent involvement data collection activities. If you start early, you can ensure that your parent involvement data will answer questions that are meaningful to the identified audiences and contain the types of data they find convincing.

Tailor communications to audience needs

As you learned in the section on developing a communication plan, it's important to think about audience needs and tailor your communications accordingly. Here are some questions to help you think through how to do this:

- What might a particular audience need or want to know about parent involvement in your state?
- How will they likely use the information?
- What data presentation format(s) might they find convincing?
- What tools are typically used to communicate with them?
- What is the typical frequency of communications?

Using the questions listed above as a guide, **Table 25** gives an example of a strategy sheet you can create to tailor your communications to a particular audience, in this case district or school staff. As you think about your audience, you can check the boxes that correspond to the needs and preferences of that particular audience.

Table 25. Strategy sheet for tailoring communications to target audiences

Target audience	What might they need or want to know? (Check all that apply)	How will they likely use the information? (Check all that apply)	Compelling data presentation formats (Check all that apply)	Method of communication (Check all that apply)	Frequency (Check all that apply)
District or school staff	□ Levels of parent involvement ○ statewide ○ by district ○ by school ○ by subgroup (e.g., race/ethnicity, disability category) □ Parent perceptions of their level of involvement, facilitators/ barriers to involvement □ Parent reactions to district/local efforts to increase involvement □ Other:	□ Maintain efforts to encourage parent involvement □ Increase efforts to encourage parent involvement □ Suggest changes to or use new parent involvement strategies □ Other:	□ Tables or graphs of quantitative data □ Visual tools such as GIS maps showing involvement by geographic area □ Qualitative analysis of parent perception data □ Staff/parent vignettes □ Other:	□ Infographic □ Executive summary/ synopsis □ Presentation or webinar □ Journal article □ Interim/final report □ Technical report □ Other:	□ Weekly □ Monthly □ Semi-annually □ Annually □ Other:

You can create a similar strategy sheet for each of your audiences. When thinking about how to tailor your communications, consider what data you have (or will have) available after data collection is complete. You might consider including the data source(s) in your communication plan to show which data will be used to communicate which findings or to which audience(s).

Here are some things to consider when sharing your findings:

- For each audience, think through exactly what data are the most useful and meaningful to that group, as well as what data will elicit insight from the group, leading to a greater understanding of the results.
- Select the key elements that you want to communicate, such as a few critical items that convey a key message or tell a relevant story, and focus primarily on them.
- Present the data in a visually appealing format—following data visualization principles and techniques to help each group understand the results without overwhelming them.
- Present any limitations or data quality issues. For example, if the response rate is low, note that the results only represent the opinions of some portion of all parents of children with disabilities.

Additionally, here are some important considerations when sharing findings with two key stakeholder groups: parents/families and educators.

What States Are Doing

States have used different approaches to report on the progress of each LEA toward meeting the state targets in their SPP/APR (Section 616(b)(2)(C)(ii)(I)).

- Most states post LEA annual reports on the state's public website.
- Some states create a "report card" or dashboard for each LEA that displays results for each APR indicator, including Indicator B8. Report cards typically contain information about the state target and the current year of data for the state and the LEA. Sometimes the report cards also have the previous year of data to present any progress or slippage.
- Other formats for LEA reports include PDF reports organized by indicator and then by LEA.

Parents/families

- It is good to provide results of the parent involvement survey as part of presentations or resources available during planned meetings, regional trainings, and other events for parents of students with disabilities hosted by the state, districts, or Parent Centers.
    - For example, districts or Parent Centers may include results in newsletters that are posted on the districts' or Parent Centers' websites, distribute the results at events and activities via presentations or brief summaries, or email the survey results to families who are part of a listserv.
- Communications should focus on results most relevant to parents, such as parents' level of satisfaction with their children's progress and services, involvement in the process, any changes in parents' attitudes over time, and plans for addressing areas in need of improvement.
- Communications should be accessible, both in terms of Section 508 compliance and in the language used in the communications. For example, if sharing results with parents who do not speak English, develop materials in their primary language and have interpreters available during meetings. Use "parent-friendly" language, avoiding jargon and acronyms, and keeping in mind the average reader is at a sixth- to eighth-grade reading level.[38]

Educators, such as teachers, related service providers, administrators, and family engagement specialists

- Include results of the parent involvement data collection activities as part of regular communications with educators, such as newsletters or emails.
- Share results with district committees including the Parent Teacher Association, data teams, or parent engagement groups.
    - Consider the group's needs in the presentation of results. Some groups, such as data teams, may benefit from obtaining the complete results, while other groups may benefit more from seeing results related to high-level areas of need that are the focus of the state's or district's improvement efforts.
- Consider developing internal (nonpublic) local dashboards for each district or school to share the district or school results for Indicator B8 as well as the data collection instruments used.
    - Consider presenting the results disaggregated by demographic characteristics (e.g., child's disability, gender, and race/ethnicity) and include a comparison of the district/school results with the district/state-level findings, as well as the number and percentage of surveys received.
- Have districts with improved or high-quality parent involvement data share successful strategies at statewide meetings of districts.

Box 7 presents additional resources you can use to learn more about effectively communicating your findings with stakeholders.

[38] DuBay 2004.

Box 7. Additional resources about communicating findings

The **Center to Improve Program and Project Performance (CIPP)** created the tool *Effectively Communicating Evaluation Findings*, which is available on the OSEP IDEAs That Work website. It offers more information, tools, and strategies to help you effectively communicate your findings, with a focus on identifying key audiences, specifying their needs, and creating a communication plan tailored specifically to each audience.

The **Center for IDEA Early Childhood Data Systems (DaSy)** developed a data visualization toolkit to help state staff effectively create and present data visuals. The toolkit includes design principles, data considerations, accessibility tips, general how-tos, examples, and sample tools related to a number of topics such as dashboards, charts, presentations, and data tables, and is located at http://dasycenter.org/data-visualization-Toolkit/.

The **Center for Parent Information and Resources (CPIR)** offers a variety of resources for parents of students with disabilities, including a collection of resources that share lessons learned about effective dissemination. Resources include a dissemination self-inventory tool to assess and improve dissemination plans, a tip sheet for writing in plain language, and steps for crafting content and disseminating information through various media. http://www.parentcenterhub.org/dissemination/

As you can see, collecting high-quality parent involvement data and reporting it correctly and effectively to OSEP and other key stakeholders requires planning, coordination, and collaboration. In this toolkit we have walked you through the process of getting Ready to conduct your data collection, given you strategies to help ensure that your data collection Runs smoothly, pointed out important considerations to help you Reflect on and analyze your data, and offered suggestions for how you can communicate your findings to Reach important audiences for your data. We have offered links to other resources that may be helpful and presented examples of what is happening across the states.

In the Deeper Dive that follows, you will learn about how to work with third-party contractors; involve stakeholders in your parent involvement data collection, analysis, and reporting activities; and modify or develop a new survey. Additional Resources offer important information about sampling and about the NCSEAM scale. Finally, in the online toolkit, we offer two examples of surveys that illustrate principles of good survey design.

DEEPER DIVE: What should we do if we want to work with a third-party contractor?

If you or your staff do not have the expertise or time to collect, analyze, and report your state's parent involvement data, you may consider engaging third-party contractors—such as external evaluators, universities, federally funded Parent Training and Information Centers (herein referred to as Parent Centers), or consultants—who have the knowledge and skills to assist. You can engage contractors in a single aspect or in multiple aspects of the work.

If you want a Parent Center to take an active role in your parent involvement data collection activities, you may need a contract because the work may go beyond their typical IDEA-funded grant activities.

In this section you will learn about how you can

- Determine how the third-party contractor can help with your parent involvement data collection, analysis, and reporting activities
- Be deliberate as you go about finding and hiring a contractor
- Take steps to ensure that the working relationship will be successful

Determine how the third-party contractor can help

If you are considering engaging a third-party contractor, begin by asking yourself (or others on your team), "What aspects of the work would benefit by bringing in an external professional?"

Here are some important questions to get you started thinking about what kind of help you might need:

- Does our staff have knowledge and skills in instrument design, sampling, item development, data collection, data analysis, data use, and reporting?
- Do the staff with the necessary skills have time for planning and conducting data collection and analysis, or are they assigned to other activities?
- Do we have available support personnel for stuffing envelopes, doing and tracking mailings, programming web surveys, and following up with nonresponders?
- How much of a third-party contractor's time will our budget support?[39]

Keep in mind that timing is important when working with third-party contractors. Contractors brought on when the state team is planning for data collection can provide input and guidance early on in the process, which will result in better data collection and analysis and, ultimately, better results. So, be sure to think about involving third-party contractors as early as possible to ensure they can provide you the help you need!

Be deliberate about finding and hiring a third-party contractor

There are a number of steps to take once you have decided to hire a third-party contractor. First, depending on your state's specific requirements, you may need to develop a Request for Proposals (RFP) that includes

- A description of the data collection instruments and methods
- The scope of the contractor's work

[39] Carlson, E., and D'Agostino, A. (2015, July 22). Three-Part Webinar Series on Customer Survey Development. [Online Webinar.] Retrieved from https://www.osepideasthatwork.org/webinar-series/three-part-webinar-series-customer-survey-development.

- A list of all reports and other products the contractor will deliver and deadlines for those deliverables
- Proposal requirements
- Proposal evaluation criteria
- The RFP timeline (including deadlines for submitting questions, submitting proposals, and making award decisions)[40]

Or your state may already have an RFP template you can use or modify.

After you have your RFP, you should distribute the RFP to professional organizations, research and consulting firms, and local colleges and universities, as well as through relevant websites and listservs.

After receiving proposals, assess each contractor's qualifications and experience related to the scope of work and be sure to check references. Select the most qualified and experienced contractor, taking into account the budget, and prepare a contract that specifies the expected responsibilities of the contractor. For specific information about finding and hiring third-party evaluators, see the *Guidelines for Working with Third-Party Evaluators* available on OSEP's IDEAs That Work website.

Important questions to ask…

- What roles and responsibilities will state staff have in the data collection and analysis process (if any)?
- What, if any, types of instrumentation or forms need to be identified or developed? Who will create and pilot test the new instruments?
- How will data collectors and data entry staff be trained? What materials, if any, need to be developed? Have all data collectors and data entry staff received training in the protection of human subjects?
- What is the timeline for data collection?
- How will staff enter data into a database and verify it for accuracy? Where will data be stored?
- What security protocols will staff develop to maintain data confidentiality? Who will have access to the data after they have been entered?
- Who are the proposed staff (with full-time equivalent and qualifications)?
- At what points along the way will the contractor provide updates to the state and share the data?
- When will the contractor deliver the final Indicator B8 data? How will the state ensure data are available in time to report in the annual SPP/APR?

A Note on Working With Third-Party Contractors

There are a number of benefits and limitations to working with a third-party contractor. Third-party contractors bring in technical expertise, credibility, and objectivity. They also take on the responsibility of completing key tasks, allowing state and district staff to focus on other priorities. However, using third-party contractors may mean additional costs. Also, even when third-party contractors have a substantial role in data collection, you will have important decisions to make about defining their scope of work and monitoring and managing the process.

Take steps to develop a strong working relationship

While it is important for the third-party contractor to maintain objectivity, the state and the contractor can develop a strong working relationship that facilitates completion of key tasks. The working relationship may be especially important when or if challenges arise.

Two strategies for establishing a strong working relationship with third-party contractors are

- Setting reasonable goals and expectations
- Defining decisionmaking roles and responsibilities[41]

It is important to recognize that hiring a third-party contractor does not eliminate the need for internal staff to spend time on collecting and reporting parent involvement data! Someone in the agency will need to maintain regular communication with the contractor and track the contractor's progress to ensure they are completing necessary events and tasks on schedule and to expectations.

Remember that ultimate responsibility for reporting high-quality parent involvement data still rests with the state.

[40] Heinemeier et al. 2014.

[41] Heinemeier et al. 2014.

DEEPER DIVE: How can my state involve stakeholders to improve the quality and usefulness of our parent involvement data?

Many states seek input, recommendations, and assistance from a variety of stakeholders on the collection and reporting of their parent involvement data.

Involving stakeholders is critical for

- Ensuring the data collection activities are relevant to and understandable by parents
- Gaining parents' buy-in and trust during data collection
- Ensuring accurate interpretation of data
- Building positive relationships to get parent buy-in

In the context of Indicator B8, stakeholders can include parents and family members, OSEP-funded Parent Training and Information Centers (PTIs) or Community Parent Resource Centers (CPRCs)—referred to as Parent Centers—parent support or advocacy organizations, state advisory panel members, Parent Teacher Association members, and local school district personnel.

Determine which stakeholders to include

When deciding to engage stakeholders, first think about which stakeholders to include. Depending on what you might want them to do, consider including parents and family members, parent support or advocacy and resource organizations, state advisory panel members, Parent Teacher Association (PTA) representatives, and local school district personnel.

IDEA-funded Parent Centers are crucial resources for states to include throughout all phases of the process!

- Parent Centers provide information, training, and support to parents, families, and guardians about their child's disability; early intervention for babies and toddlers; school services for school-aged children; therapy; information on local policies; transportation; and much more.
- Parent Centers are also key stakeholders in states' program improvement efforts.
- Many Parent Centers have staff who are experienced with data collection and outreach to diverse families and underserved populations, and who understand the importance of establishing trusting relationships with parents.

Collaboration between states and Parent Centers is, therefore, critical to obtaining an accurate picture of a state's level of parental involvement. Importantly, by working with Parent Centers, states can avoid possible barriers and facilitate collection of valuable parent data.

Be clear about stakeholders' roles and make it easy for them to contribute

When engaging stakeholders, decide whether the group will have decisionmaking authority or will function in more of an advisory capacity, and be clear with them about their expected role.

Keep in mind that many stakeholders may not be able to participate in person during regular school hours. Take steps to facilitate their participation, such as

- Planning events or activities adjusted to the needs of parents who may not be able to participate in person or who cannot make an ongoing commitment
- Holding online forums to request input and ideas on planned data collections or to get reactions to the results

- Developing briefs or holding and recording webinars related to the B8 data and then posting them on the state website

Get stakeholder input on instrument selection and design

Whether your state is using existing data collection instruments (such as surveys with or without modifications) or developing new ones, you should give stakeholders an opportunity to provide input. To ensure you will get accurate data that you can use to answer questions of interest to agency staff and key stakeholders, ask stakeholders to

- Provide input on how to define parent involvement
- Choose which language(s) to use to administer the survey
- Give feedback on the overall content and on individual items to ensure the survey is easily understood, can be interpreted as intended by parents, and includes appropriate questions given the particular state context
- Review the survey periodically (e.g., annually) to make recommendations for changes that are needed immediately or that may be helpful for future data collections

Involve stakeholders in collecting data

Stakeholders can also provide valuable support to data collection activities. For example,

- Local districts can develop their own procedures to distribute the survey (within state guidelines), and send reminders to parents to complete the survey
- Parent Centers, parent advocacy groups, and parent resource organizations can
  - Directly distribute surveys (e.g., by providing access through the Parent Center websites or mailing out the surveys) and include their branding on the materials
  - Encourage parent participation through their regular communications during meetings and events, email reminders, or messages about the survey posted on the Parent Center website and in social media outlets (e.g., Facebook, Twitter)

What States Are Doing

Oklahoma partners with the state's Parent Center to administer the Part B Parent Survey. The survey is available online, on the Parent Center's website, but parents can complete the survey by paper or by phone if needed. Parents and districts can contact the Parent Center to access those alternative methods. The website also hosts additional materials for parent and district use, including a survey brochure, frequently asked questions, and contact information if parents have questions. The Parent Center distributes hundreds of brochures to every district annually for IEP teams to share with parents at meetings. These brochures detail all the ways in which parents can respond to the survey. Special Education Services' state personnel and the Parent Center developed the brochures.

Engage stakeholders as you reflect on the data collected

Just as with the data collection, engaging stakeholders in data analysis is essential. Different stakeholder groups will bring unique perspectives to understanding the findings, so it is a good idea to include a variety of different stakeholder groups. The stakeholders involved during data analysis may be the same, or similar to, those engaged in collecting data, and stakeholders should be involved throughout the data analysis process.

Here are some ways stakeholders can help as you reflect on your data:

- In the beginning stages of data analysis—when you are doing initial calculations of response rates and checks for representativeness—stakeholders may be able to identify if parents in a particular geographic region or parents of students from certain subgroups need to be targeted to encourage them to participate in ongoing data collection activities
- Once initial survey results are available, states can engage stakeholders in discussions that will
  - Promote the exchange of ideas
  - Increase or improve partnerships with stakeholders
  - Provide a more nuanced look at the data
- As data analysis proceeds, stakeholders can provide feedback to prompt further analysis that may help you better understand what the survey results mean
- Stakeholders also may be able to help explain possible patterns of results and suggest strategies to address areas of concern
- Stakeholder input on improving survey distribution in future years can be helpful to ensuring that ongoing data collection activities are successful

Involving your state's PTI and CPRC during data analysis can be particularly valuable! PTIs and CPRCs (Parent Centers) have a comprehensive picture of statewide, regional, and national parent and family needs across disability types. As part of a nationwide network, PTIs and CPRCs have access to a wealth of knowledge and resources that can be of benefit during analysis.

Get help from stakeholders on how to best use and share findings

Getting stakeholders involved in data dissemination and use goes beyond just having them review and discuss results of data collection activities. For example, stakeholder feedback on parent survey data may contribute to a larger decisionmaking process around overall program improvement and priorities. Allowing them to provide suggestions for how to use the results of the data collection to inform decisionmaking can lead to improvements in current and future programs.

Stakeholder involvement in the dissemination and use of parent involvement data is key to improving services and results for students with disabilities and their parents. Involving stakeholders in this way can

- Offer state agencies additional expertise and guidance to identify and address issues with parent involvement
- Encourage families, communities, and schools to share important ideas for strategies to further improve parent involvement
- Build positive relationships between the state, districts, schools, families, and communities

What States Are Doing

New Hampshire (NH) Connections was a project of the Parent Information Center and funded by the New Hampshire Department of Education, Bureau of Special Education, to build the capacity of families of children with disabilities and school staff to work together in partnership. The *2013-14 New Hampshire Parent Involvement Survey in Special Education Statewide Summary* (https://www.education.nh.gov/instruction/special_ed/documents/2013_2014_nh_parent_involvement_survey_in_sped.pdf) describes specific ways in which NH Connections assisted districts in using data from the parent involvement survey to improve family-school partnerships in special education and outcomes for students with disabilities.

- Make more people aware of the nature and extent of parent involvement in the education of children with disabilities

Box 8 presents some resources that you can use to engage and work with stakeholders.

Box 8. Resources for engaging and working with stakeholders

Project Forum, a federally funded project at the National Association of State Directors of Special Education (NASDSE), conducted an analysis to identify features of successful collaborative partnerships between states and OSEP-funded PTIs to improve outcomes for Indicator B8. The policy brief describes specific examples of collaboration between four states and the PTIs in the areas of professional development and technical assistance, development of training and/or guidance materials, dissemination of information, parent outreach, and dispute resolution (http://nasdse.org/DesktopModules/DNNspot-Store/ProductFiles/21_c9ec21a1-3101-4d8f-bc7e-de63e88225df.pdf).

Serving on Groups is a guidebook to support families in serving on decisionmaking groups, but the information and structure of the guidebook can support anyone who is currently serving, or wants to serve, on a decisionmaking group. Section 6, Understanding Data as Information, focuses on using and understanding data. http://www.servingongroups.org/

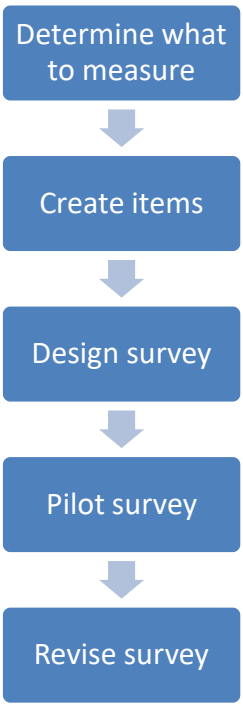
Leading by Convening is a framework for creating learning partnerships across stakeholders. It includes steps for coalescing around issues, ensuring relevant participation among group members and effectively working together as a group. http://www.ideapartnership.org/documents/NovUploads/Blueprint%20USB/NASDSE%20Leading%20by%20Convening%20Book.pdf.

The **Center for Parent Information and Resources (CPIR)** offers a variety of resources for parents of students with disabilities. One webinar that may be of particular interest is *Using Data for Collaboration and Advocacy*. http://www.parentcenterhub.org/webinar-using-data-for-collaboration-and-advocacy/

The **PACER Center** offers assistance to families, workshops, materials for parents and professionals, and leadership in securing a free and appropriate public education for all children. http://www.pacer.org/

DEEPER DIVE: How do I develop a new survey or modify an existing one?

Currently, all states are conducting surveys to gather their Indicator B8 data. Approximately 40 percent of states have reported using a state-developed survey, and an additional 11 percent have reported using a modified version of the National Center for Special Education Accountability Monitoring (NCSEAM) scale[42] or the Early Childhood Outcomes (ECO) survey.[43] Given the widespread interest among states to use either their own state-developed survey or to modify an existing survey, it is essential that state staff and other individuals who are involved with developing or modifying and administering states' parent involvement surveys are aware of important principles of survey design.



Correctly developing or modifying a survey can be a complex and lengthy process. There are several important steps involved and, at each step, there are multiple decisions that require careful consideration if you want to ensure that your state's survey produces high-quality parent involvement data. Rather than presenting an extensive discussion of survey methodology, in this section, we highlight some important recommendations to follow when creating a new survey.

- Determine what you will measure
- Create survey items
- Design the survey to maximize responses
- Pilot the survey
- Revise the survey based on the pilot

The principles are generally the same for modifying an existing survey. There are many good books about the process of developing surveys[44] and there are webinars related to customer surveys available on the Office of Special Educations Programs (OSEP) IDEAs That Work website. We urge you to review these for more detailed information about survey development. You can also consult your IDC State Liaison for more information.

[42] *"Schools' Efforts to Partner with Parents Scale" (SEPPS) was developed by the National Center for Special Education Accountability Monitoring (NCSEAM) specifically to meet the requirements of Indicator B8. The scale is commonly referred to as the "NCSEAM."*

[43] The Family Outcomes Survey was developed by the Early Childhood Outcomes (ECO) Center. This survey is commonly referred to as the "ECO."

[44] For example, Czaja and Blair, 2005; Dillman, Smyth, and Christian, 2009; Groves, Flower, Couper, et al., 2004; and Harkness, Braun, Edwards, et al., 2010.

Determine what you will measure through your survey

The first step in designing a high-quality survey is to determine what it is you want to measure. Indicator B8 asks states to report the "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))." There are two important concepts included in this indicator:

- What "parent involvement" is
- What it means for schools to "facilitate parent involvement as a means of improving services and results for children with disabilities"

To be able to collect information on these concepts, you must develop a state-specific definition to "operationalize" parent involvement. (Note: We will only focus on the concept of "parent involvement" in this section, but the process of defining and operationalizing other key concepts for your survey is virtually the same.)

Define parent involvement

As you think about what you want to measure through your survey, you must decide how to define parent involvement, thinking carefully and identifying the factors that indicate whether and to what degree a parent could be considered to be *involved*. For example, does parent involvement include only attending individualized education program (IEP) meetings, or does it also require working with school staff to develop their child's IEP? Is there a certain level of involvement that your state is looking for?

Defining key concepts and terms is one of the most important tasks when developing or modifying a survey because your definitions will determine what you are trying to measure, endorse a common understanding among all individuals involved in the data collection process, and provide an organizing structure to help guide your efforts.

How Can Stakeholders Help?

Engaging stakeholders—including parents, Parent Center staff, state advisory panel members, community representatives, district and school staff, state staff, and individuals representing other agencies and organizations that are engaged with parents—in the process of defining parent involvement can ensure that your definition of parent involvement is appropriate given your state's unique context, priorities, and activities, and that the results of the survey will ultimately be relevant to stakeholders.

As you work, you may want to engage stakeholders and investigate models of parent involvement to see if any resonate with your state's context. Keep in mind that you can modify existing models to fit your state's own characteristics and needs (see Box 9 for examples of parent involvement frameworks). It is important, however, that you ensure that your state's definition is consistent with the intent of Indicator B8.

Box 9. Examples of parent involvement frameworks

IES's Toolkit of Resources for Engaging Families and the Community as Partners in Education: This toolkit provides resources to help educators build relationships with families and community members, support family well-being and relationships, and foster students' learning and development. The toolkit is broken into four parts: 1) building an understanding of family and community engagement, 2) building a cultural bridge, 3) building trusting relationships with families and community through effective communication, and 4) engaging families and community members in data conversations.

The Dual Capacity-Building Framework for Family-School Partnerships: This framework supports families, schools, districts, and states in building capacity for student achievement and school improvement. The framework outlines a process that schools and districts can use to build the type of effective family engagement that will make schools the centers of their communities.

The Head Start Parent, Family, and Community Engagement Framework: This framework helps providers assess and track progress across key indicators of effective family engagement to support children's learning and development.

Family Engagement Framework: This framework, developed for districts in California, describes expectations and implementation strategies for integrated family engagement within state educational programs and provides guidance for planning, implementing, and evaluating strategies for effective family engagement to support student achievement.

Epstein's Framework for Six Types of Involvement: This framework includes sample practices, challenges, and results for six types of parent involvement: 1) parenting, 2) communicating, 3) volunteering, 4) learning at home, 5) decision making, and 6) collaborating with community.

Operationalize parent involvement

Once your state has defined parent involvement, you will need to operationalize the definition, which means providing additional detail about your definition so that it is specific and can be measured. For example, say your definition of parent involvement includes parents working with school staff to develop their child's IEP and attending IEP meetings. To operationalize the definition, you need to specify:

- How many IEP meetings parents should attend
  - *Any*?
  - *All*?
  - *A specific percentage (e.g., 80%)*?
  - Other: _____?
- What it means for parents to "work with school staff to develop their child's IEP"
  - Discussing plans for the IEP with school staff?
  - Reviewing the draft IEP and providing feedback?
  - Co-creating the IEP along with the school staff?
  - Other: _____?

You should operationalize all key concepts (such as "facilitating parent involvement as a means of improving services and results for children with disabilities") that your state is measuring through your parent involvement survey. This will help you create survey items that align with your operational definition.

Here are some questions you might ask when thinking about how to operationalize parent involvement:

- What does parent involvement mean in the context of my state?
- What does parent involvement look like in practice?
- Does parent involvement include elements of quantity (e.g., the number of times parents attend meetings) as well as quality (e.g., the extent to which parents participate during those meetings)?
- How will we know whether parent involvement is happening? (i.e., what indicators can we use to measure parent involvement?)

One way to operationalize your definition is to work to make it "SMART":[45]

- Specific and clearly stated
- Measurable and based on data
- Attainable
- Realistic/relevant
- Time-bound

A key part of the process of operationalizing your definition is determining which indicators of parent involvement you can actually measure. It might be possible to devise a very specific operational definition, but if you cannot feasibly measure that indicator through your survey or other data collections, then the definition will not be helpful.

Develop a framework for the survey

Another important part of determining what you will measure is developing a framework for the survey that includes

- The item topics (i.e., what you will ask)
- The target population of interest (i.e., who you will ask)
- The mode of administration (e.g., how you will ask them)

Item Topics. In the REACH section of this toolkit, we discussed how you can go beyond Indicator B8 to make the most of your parent involvement data. You should include items in your survey that will enable you to answer the different questions your state has about parent involvement. However, while it may be tempting to have your survey cover all possible aspects of parent involvement, we strongly recommend that you focus on those questions that are the most important to your state. Focusing your survey on a smaller number of important questions will help you to conserve resources (e.g., it will save time if your team does not have to analyze extensive amounts of data), reduce respondent burden, and potentially increase your response rates. Further, if you plan to do additional data collection activities (e.g., observations or interviews), you can focus the activities on gathering more in-depth data, as needed.

Target Population. As we discussed in the section on selecting the group who will participate in data collection, you need to decide if you want to focus your parent involvement data collection activities only on obtaining data from parents, or if you want to include additional stakeholders (e.g., district or school staff) as well. Think about who you want to survey and determine how you will select the survey sample. Keep in mind that if you are using more than one method to collect data (e.g., surveys and interviews), you might have different samples for each method. For more information on sampling, see the additional resources on sampling.

Mode of Administration. In the section on creating data collection procedures and tools, we talked about two basic modes of survey administration: online surveys and paper surveys. See that section for important considerations related to the survey mode.

[45] *This acronym was coined by George Doran for management purposes but has since been adapted and used by multiple authors in varied ways.*

Create survey items

Once you have operationalized parent involvement and created a framework for your survey, you need to create the items you will include in your survey. When creating survey items, always keep in mind the original purpose for your parent involvement data collection activities: What questions do you want to answer?

When developing new survey or modifying existing survey items, be sure to follow these important principles:

- Use clear and simple language to facilitate understanding
- Select the correct item format to get the data you desire
- Offer good response options to help respondents give accurate answers

Use clear and simple language

Use clear and simple language when writing survey items to increase the likelihood that the people completing your survey will understand how to answer each question. Figure 12 illustrates the process respondents follow when answering a survey question, and shows that if respondents cannot understand the question, or if the answer respondents want to give is not one of the response options, they will not be able to respond accurately. (Or they may not even try to answer at all!)[46]

Figure 12. The process of answering a survey question

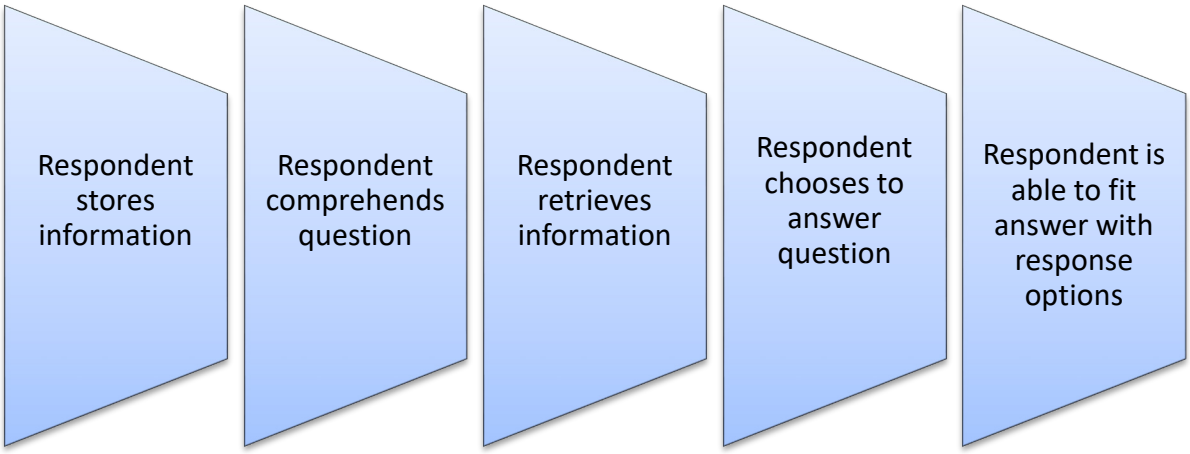


Table 26 presents some characteristics of a good survey item, with examples of questions that ensure that the items are written in a way that facilitates (or does not facilitate) understanding.

[46] Fiore et al. 2012.

Table 26. Characteristics of a good survey item, with examples of not good and good items

Characteristic	Example: Not good	Example: Good
Uses clear terminology and plain language	How has your active engagement enhanced your child's academic or social-emotional performance?	In what ways does your involvement help your child succeed in school?
Only asks one question at a time (avoids double-barreled questions)	To what extent do you think the afterschool workshops and Parent Nights have increased your access to information about how to be more involved in your child's education?	• To what extent do you think the afterschool workshops have increased your access to information about how to be more involved in your child's education? • To what extent do you think the Parent Nights have increased your access to information about how to be more involved in your child's education?
Contains a clear threshold for answering "yes"	Have you met with your child's teacher?	Have you met with your child's teacher to discuss your child's progress achieving his or her IEP goals?
Provides a timeframe	How often do you receive information from the Parent Information Center?	How many times in the past month have you received information from the Parent Information Center?
Provides a timeframe appropriate to the topic	How many times did you attend IEP meetings?	How many times did you attend IEP meetings last year?
Gives exhaustive and mutually exclusive response options	In which situations are you given opportunities to provide input on your child's education? • During meetings with school staff • During informal communications with school staff	In what situations are you given opportunities to provide input on your child's education? • During IEP meetings • During other regular in-person meetings with your child's teacher • During other meetings with related services providers assigned to work with your child • Through emails or other written communications with your child's teacher or related services providers • Through regularly scheduled phone calls • Through unscheduled phone calls imitated by you or by staff • Through informal communications with staff, such as chats before school
Avoid double-negative questions	It is not an insignificant burden for me to attend IEP/IFSP meetings.	Please indicate the degree to which you agree with this statement: It is a significant burden for me to attend my child's IEP/ISFP meeting.

Other ways you can work to use clear and simple language include

- Keeping questions brief
- Ensuring that the items are written using language no higher than an eighth grade reading level
- Avoiding potentially unfamiliar terms and abbreviations whenever possible
- Defining any unfamiliar terms or abbreviations

Select the correct item format and type

Another part of creating a good survey item is to select the correct item format. Table 27 presents three types of item formats.[47]

Table 27. Item formats

Item format	Works well when	Example
Closed, or structured, items – Provide predetermined response options	• You have many respondents. • You have (or can create) a list of possible response options. • You want to expend fewer resources collecting and analyzing data. • You need to calculate reliability of the data. • You would like to conduct quantitative analyses of the data.	In the past year, how many times have you met with your child's teacher about your child's academic progress? (Select one) a. Never b. 1-3 times c. 4-6 times d. 7-9 times e. 10 or more times
Open, or unstructured, items – Allow respondents to provide answers in their own words	• You have a limited number of respondents (or you have extensive resources and staff to collect and analyze the data). • You do not have (or do not know how you would create) a list of possible response options. • You would like unthought-of categories to emerge. • You want spontaneous, or in-depth, responses. • You are exploring response options for future surveys. • You have skilled qualitative analysts who have time to analyze the data.	Over the past year, what would you say has been the most important thing your child's school has done to facilitate your involvement in your child's education? (Write your answer) _____ _____ _____ _____
Mixed format items – Combine elements of closed and open formats	• You would like to have the advantages of a closed format question (e.g., having the respondent pick from specific response options, minimizing costs) while giving respondents an opportunity to either enter their own response or elaborate on their answer.	In the past year, in what ways has your child's school made it easier for you to participate in your child's education? (Select all that apply) a. Communicated with you regularly about your child's progress on IEP goals. b. Given you choices about the services provided to meet your child's needs. c. Offered you a variety of ways to communicate with teachers/school staff. d. Provided information on the options you have if you disagree with a decision of the school. e. Other, specify _____

[47] Carlson and D'Agostino, 2015.

Additionally, you can choose from a number of types of closed items, as shown in Table 28.

Table 28. Types of Closed Survey Items

Item Type	Description	Example
Dichotomous	Respondents choose one of two response options	Has your child received special education services during the current school year? (Select one) 1. Yes 2. No
Categorical	Respondents choose one response from among multiple categories [Note: These are treated as nominal (or categorical) data in analyses].	What grade is your child in? (Select one) 1. under K-2 2. 3-5 3. 6-8 4. 9-12
Forced choice: Single response	Respondents choose one of several response options	I receive communications from my child's school… (Select one) 1. Not often enough 2. Often enough 3. Too often
Forced choice: Multiple response	Respondents choose more than one of several response options	How do you communicate with your child's service providers? (Select all that apply) 1. In-person 2. Phone 3. Email 4. Other [Note: The "Other" response could also include a space for respondents to write in their answer, making it a mixed format item, as shown below.]
Ranking	Respondents rank items in a list in order of preference or importance.	Please rank the following methods of communication from most effective to least effective, with a 1 = least effective and 5 = most effective _____In-person meeting _____Phone call _____Text message _____Email _____Other (Specify): _____
Rating	Respondents select a single rating along a continuum.	Please indicate your level of agreement with the following: I feel involved in my child's special education services. Strongly disagree ☐ Disagree ☐ Agree ☐ Strongly agree ☐ [Note: This item does not offer respondents an option to enter a "neutral" response. This might be beneficial when you want to force respondents to give an opinion about a topic. However, it might discourage respondents who really do not have an opinion from responding to the question.]

Grid Questions. If you have a number of items that share a common set of response options (e.g., Yes/No, Strongly Agree to Strongly Disagree), you can group them into a grid or matrix, as illustrated in Table 29 and 30.

Table 29. Grid question example 1

For each of the questions below, please check the box that corresponds to your answer.	Yes	No	Unsure
1. A support network for parents of students with disabilities is available to me through my school district or other sources.	☐	☐	☐
2. I am involved in a support network for parents of students with disabilities available through my school district or other sources.	☐	☐	☐

Table 30. Grid questions example 2

Please check the box that indicates to what extent you agree or disagree with <u>each</u> of the following statements. **My child's school:**	Strongly Disgree	Disagree	Agree	Strongly Agree
1. Communicates with me regularly about my child's progress on IEP goals.	☐	☐	☐	☐
2. Gives me choices about the services the school provided to meet my child's needs.	☐	☐	☐	☐
3. Offers me a variety of ways to communicate with teachers/school staff.	☐	☐	☐	☐
4. Provides information on the options I have if I disagree with a decision of the school.	☐	☐	☐	☐

Grid questions can reduce the amount of time it takes for respondents to complete a set of items.[48,49] However, it is important to structure these items well and make clear how you want respondents to complete the questions. Consider these two examples:

- In Table 29, the response option "Unsure" was not offered for item 2, because the survey designers decided that parents should know whether or not they are involved in a support network for parents of students with disabilities. If the "Unsure" response option had been available for item 2, then the data the state obtained from that item might have been unclear, since the state would not have known if the parents were responding "Unsure" because they weren't involved in a network or if they were unsure if the network was "available through my school district or other sources."
- In Table 30, the instructions tell respondents to check the box that indicates to what extent they "agree or disagree with <u>each</u> of the following statements." If the word <u>each</u> had not been included in the instructions, then parents might have thought they did not have to respond to each of the items. Similar instructions were included in Table 29 (i.e., "For each of the questions below") to ensure that parents answered both items.

[48] Couper, Traugott, and Lamias, 2001.

[49] Tourangeau, Couper, and Conrad, 2004.

When using grid questions, keep in mind the following suggestions:

- Keep grid questions simple
- Minimize the number of items in the grid
- Provide direct instructions as well as visual clues to guide parents on how to respond
- Repeat headers of grid questions on any new pages

Since different item formats and types work best to gather different types of data, when choosing item formats and types, think carefully about

- The questions you want to answer
- The resources you have available to design and administer the survey and collect and analyze the data
- The analyses you want to conduct

This will help you choose the right format/type to obtain the data you need. Talk with an experienced survey developer, with your evaluator, or with your IDC State Liaison if you have questions.

Offer good response options

It is important to carefully consider how you will present response options for closed (and mixed format) items because the types of options available will affect respondents' willingness to respond to the item and shape the conclusions you can draw from your data. For example, if respondents have a "neutral" opinion about some experience but do not see "neutral/no opinion/neither agree nor disagree" as a response option, they may skip the survey item.

When developing response options for your parent involvement survey, it may be a good idea to talk with key stakeholders to get their input. They are in a good position to know what possible responses might be appropriate for a particular question, given the state context.

How Can Stakeholders Help?

Stakeholders can be a good source of information during survey development! As you think about possible survey items and corresponding response options, ask stakeholders to offer suggestions and give feedback to ensure respondents will be able to understand and interpret survey items as intended and the survey includes appropriate questions and response options given the particular state context.

Here are some important general tips to remember when creating your response options:

- **Link response options back to the questions your state wants to answer.** Be sure that the response options you provide will actually produce the data you are trying to collect. Consider this example:
  - Your state wants to know whether schools are actually using a specific strategy to facilitate parent involvement that was taught in a statewide professional development workshop. The strategy is providing families with a planning guide for IEP meetings to facilitate two-way planning and communication. Look at the two examples for Question 1 that follow and think about which is more likely to produce the data your state needs to answer this question and why.

Question 1, Example A
In what ways does your school facilitate your involvement in your child's education? Please write your response:

Question 1, Example B
Please indicate whether your school uses any of the following strategies to facilitate your involvement in your child's education:

a. Provide you with a planning guide for IEP meetings.
b. Communicate with you regularly about your child's progress on IEP goals.
c. Give you choices about the services the school provides to meet your child's needs.
d. Offer you a variety of ways to communicate with teachers/school staff.
e. Provide information on the options you have if you disagree with a decision of the school.

Example B has clear advantages because it specifically lists the strategies for increasing parent involvement taught in the state PD workshop. This ensures that parents provide responses related to the use of those specific strategies. In contrast, Example A allows parents to decide what to talk about in their response, which may or may not provide data related to what the state would like to know.

- **Make sure response options are clear and mutually exclusive.** Do not offer response options that overlap or that different respondents might interpret differently. Consider the three examples for Question 2 that follow. Which of the examples offers clear and mutually exclusive response options?

Question 2, Example A
How often do you communicate with your child's teacher about your child's IEP progress and goals?

a. Sometimes
b. Often
c. Frequently

Question 2, Example B
How often do you communicate with your child's teacher about your child's IEP progress and goals?

a. 1-2 times a year
b. 3-4 times a year
c. 4 or more times a year

Question 2, Example C
How often do you communicate with your child's teacher about your child's IEP progress and goals?

a. 1-2 times a year
b. 3-4 times a year
c. 5 or more times a year

Example A is vague and response options b and c are overlapping terms. Example B provides clearer response options, but choices b and c overlap. Example C responses are clear and mutually exclusive.

- **List all of the potential answers to a particular question in your response options.** When writing questions, be sure to include the full range of responses that might be possible. For example, if you are asking parents to report on their ethnicity, use all of the federal racial/ethnic group categories. See the two examples for Question 3 that follow. Which is the better choice and why?

Question 3, Example A
Which method do you most prefer that your child's school use to notify you about upcoming IEP meetings?

a. Mail
b. Phone call
c. Email

Question 3, Example B
Which method do you most prefer that your child's school use to notify you about upcoming IEP meetings?

a. Mail
b. Phone call
c. Email
d. Text message
e. School website
f. Other (Specify):_____

Example B is the better choice. Example A gives parents very few response options—what happens if parents prefer another type of communication? Example B provides more response options and also includes an "Other (Specify):" option with a space for parents to write-in a response. This gives parents even more ways to tell the state how they prefer to receive communications. However, be careful when including the "Other (Specify):" option, or you will end up with large amounts of qualitative data that you will then need to analyze.

Finally, for questions that might not apply to all respondents, you may want to include a "not applicable" response option. Be careful when offering a "not applicable" response, however, because it might encourage parents to choose that response to avoid having to provide an answer to the question.

- **Use fully labeled scales.**[50] Labelling all of the points on the scale helps to ensure that everyone has a similar understanding of the response options. For example, you should label every point along the scale rather than labeling only certain points of the scale (e.g., the endpoints) and using numbers or dashes to represent the other points on the scale. Consider the examples presented that follow. How might parents' responses differ depending on which response scale was provided? How should the state interpret the different responses for Question 4, Example A?

Question 4, Example A	Very Unsatisfied ☐	1 ☐	2 ☐	3 ☐	4 ☐	Very Satisfied ☐
Question 4, Example B	Very Unsatisfied ☐	Somewhat Unsatisfied ☐	A Little Unsatisfied ☐	A Little Satisfied ☐	Somewhat Satisfied ☐	Very Satisfied ☐

- **Present response options in the order that respondents would generally expect.** Consider the two examples for Question 5 that follow. Since many parents only meet annually with their child's IEP team, it might make more sense to present the response options as shown in Example B.

Question 5, Example A
How often do you meet with the IEP team to plan and discuss your child's educational progress?

a. 5 or more times a year
b. 3-4 times a year
c. 1-2 times a year

Question 5, Example B
How often do you meet with the IEP team to plan and discuss your child's educational progress?

a. 1-2 times a year
b. 3-4 times a year
c. 5 or more times a year

- Additionally, whenever possible, we recommend that you present scales horizontally, moving from left to right, as shown in the scale that follows.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
☐	☐	☐	☐	☐

[50] Toepoel and Dillman, 2008.

Design the survey to maximize responses

While it is essential that you have good survey items that actually measure the concepts you are trying to measure, it is equally important that you pay attention to the overall design of your survey to maximize the overall response rate and the item response rates. The way you design your survey greatly influences whether respondents are willing and able to complete all of the items in a way that gives complete and accurate data. For this reason, you must be purposeful when designing your survey.

In the section on creating data collection procedures and tools to facilitate participation and track responses, we discussed how the data collection mode or delivery method can affect both data quality and response rate. We also pointed out several issues associated with using online and paper surveys. Check out that section if you haven't already done so. Here, we point out some important considerations for designing online and paper surveys. Additionally, keep the general tips in Table 31 in mind as you create your survey!

Table 31. General Tips for Designing Surveys

Survey introduction
✓ Include a title that respondents and others can easily understand and that describes the survey content.
✓ Explain who you are and the purpose of the survey.
✓ Mention the time commitment up front.
✓ Provide contact information, in case respondents have questions or feedback.
Survey layout
✓ Keep your survey as short as possible.
✓ Keep the survey instrument simple and uncluttered.
✓ Number survey items and pages.
✓ Provide enough space for people to write responses or comments to open-ended questions.
Item order
✓ Start with an easy or interesting question.
✓ Place the most important questions near the beginning of the survey, and the most difficult or sensitive items toward the end.
✓ Order items in a logical way and number them sequentially.
✓ Group items by topic and introduce each change in the topic covered.
✓ Use *italics* for instructions and **bold** or underline for emphasis. Apply the use of these text styles consistently throughout the survey, so respondents can learn the meaning associated with each text style.

Special considerations for designing online surveys

If you are planning to use an online survey, keep in mind these design recommendations.

- **Use a paging design.** There are two primary designs for displaying items in an online survey: scrolling and paging. With the scrolling design, the survey presents all of the questions in a single scrolling web page and data are not saved until the end of the survey. With the paging design, the survey presents each question on its own page and data are saved as each page is completed. We recommend using paging designs because they are associated with fewer missing items and shorter completion times.

- **Include "Next" and "Previous" buttons on the bottom of each page.** These buttons allow users to navigate to the various pages, as desired.
- **Consider whether to use progress monitors.** Progress monitors are displays showing what percent of the survey has been completed at a given point. There is debate around whether to use progress monitors in paging designs. Many users find such progress monitors helpful, while others may get discouraged if they have completed many items and still are seeing that they have completed only a small part of the survey. By keeping the survey short, you can use progress monitors and avoid the risk of discouraging responses.
- **Use a neutral background color.** The colors you choose will affect readability. Use a neutral background that is free of graphics that may be distracting.
- **Use a typeface and font size that permit comfortable reading.** The typeface should be easily readable, and the font size should be large enough to permit comfortable reading.
- **Use headers and place important information at the top of the page.** A header on each page of the survey can facilitate completion. Place the most important information at the top left section of the page.
- **Left-justify question text.** Left-justifying question text can help responders identify the beginning of each question more easily.
- **Use a survey program compatible with Section 508 compliance.** Be sure that your online survey program has the capability to create surveys that are Section 508 compliant.

Many online survey tools have the design features described previously built-in, so they make it relatively easy to create online surveys. Additionally, many online tools offer survey templates that you can start with, rather than having to begin from scratch.

Another benefit of using online surveys is that they offer many advanced design features that are not available with paper surveys, such as

- Automatic skip patterns (e.g., "rules" built into the survey that automatically move from one question to another question based upon how respondents answer)
- Edit checks (e.g., automatic checking for out-of-range answers, such as when a parent enters the number 45 as a response to a question asking the age of his or her child)
- Automatic "fills" or "prepopulation" of answers (e.g., automatically inserting information from prior answers into subsequent questions)

When planning your survey, consider whether you would like to use design features such as those listed previously and start thinking about how you should structure your survey to make the most of those features. Box 10 lists some online survey tools that may be of interest to you. Please note that inclusion of this list does not indicate endorsement of any particular online survey tool by IDC or OSEP.

Box 10. Selected online survey tools

Here are some online survey tools that your state might use. Some of these offer a variety of free options (usually with some sort of registration), while others require payment. Those that offer free options may have restrictions on the number of surveys that you may send out through the free service. Be sure to thoroughly investigate the different options to find an online tool that will work best for your state. In some cases, it might be best to hire a third-party contractor to develop and program an online survey for your state.

- Zoho Survey
- SurveyGizmo
- Checkbox Survey
- FluidSurveys
- SurveyMonkey
- WorldApp KeySurvey
- GetFeedback
- Outside Software eSurveysPro
- SoGoSurvey
- SurveyPlanet

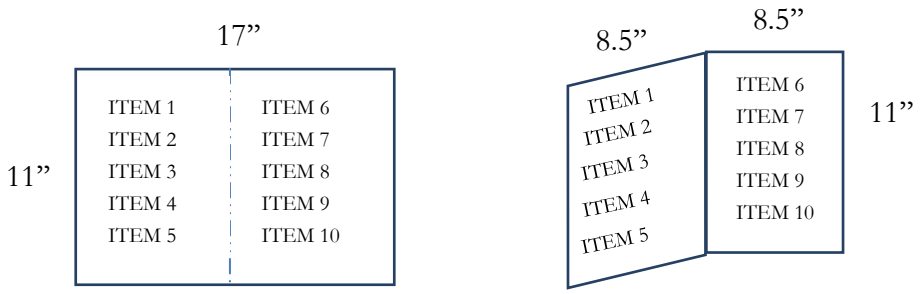
Special considerations for designing paper surveys

If you are designing a paper survey, here are some tips to increase the likelihood that respondents will be willing and able to complete the survey and provide accurate responses. See the sample surveys in the Resources section of this toolkit for examples of how to put these tips into practice.

- **Design survey covers that look interesting and appeal to respondents.** Front covers should include a clear title and sponsorship information. Back covers should thank respondents for their time and effort in responding, provide a place for them to add any additional comments, and provide a return address.
- **Present the survey in booklet format.** You can create booklets of four 8.5” × 11” pages by printing your survey on 11” × 17” paper as shown in Figure 13. When folded, the booklets will fit into 9” × 12” envelopes for mailing.[51] When using booklets, add or delete pages in units of four (i.e., a sheet of folded paper).

[51] Adapted from Dillman, Smyth, and Christian (2014)

Figure 13. Example of how to create a booklet using 11'' × 17'' paper



- **Consider aligning questions in more than one column.** Depending on how many questions you have and how complex your survey is, you may want to present your questions in one or two columns on the page. A single-column format, such as the example that follows, works better for longer or more complex questions.

For each of the questions below, please check the box that corresponds to your answer.	Yes	No	Unsure
1. A support network for parents of students with disabilities is available to me through my school district or other sources.	☐	☐	☐
2. I am involved in a support network for parents of students with disabilities available through my school district or other sources.	☐	☐	☐

The two-column format that follows works well for relatively short questions.

2. IEP meetings are scheduled at times that are convenient for me. Would you say…

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

3. I work together with the IEP team as an equal partner to develop my child's IEP. Would you say…

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

7. All special education services identified in my child's IEP have been provided. Would you say…

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

8. I am comfortable asking questions and expressing concerns about my child to school staff. Would you say…

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

Additionally, try to group related questions on one page or on two facing pages (if using a booklet format).

- **Provide clear instructions for completing the survey, including instructions for how to follow skip patterns.** Skip patterns are rules that tell respondents how to complete the survey items. Based on the way respondents answer particular items, skip patterns tell respondents to skip certain questions that they do not need to answer or continue with follow-up questions, as appropriate. There are several branching designs that can be used to present skip patterns, but one that works especially well is the "reverse and indentation method."[52]

[52] *Ibid.*

In the reverse and indentation method, the response category that will lead to a follow-up question is listed second so arrows can be placed to the right of response categories. The follow-up questions are visually set apart from the main pathway to create a hierarchy in the questions (see following example). This helps reduce skip errors.[53]

Q10. Is there a support network for parents of students with disabilities available through your school district or other sources?

☐ No → Go to Question 12.

☐ Yes

Q11. Are you involved in the support network for parents of students with disabilities?

☐ No

☐ Yes

Q12. Does your child's school provide information on the options you have if you disagree with a decision of the school?

☐ No

☐ Yes

[53] Gohring and Smyth 2013; Redline et al. 2003.

Box 11 provides some tips related to using web links in written communications about your data collection activities.

Box 11. Using links to online surveys in printed communications

Some states mail, or ask districts and schools to give to parents, printed communications inviting parents to complete an online survey with a web link to access the survey. These communications might be survey invitations or reminders such as letters, flyers, or postcards. While this can be a good strategy when states or districts do not have good email addresses for parents, you should follow these tips to ensure that parents can use the link to access your survey.

- Make sure the link is readily visible in the materials (e.g., use a large font and clear instructions such as "Enter this URL into your web browser to access the survey: http://www.StateAParentInvolvementSurvey.com")
- Make sure the link is clear and easily reproducible by parents. To do this, you will likely need to adjust the link that is automatically generated through your online survey program. Some survey programs allow you to make these adjustments from within the program, but with other programs, you may have to convert the link to a shorter link, for example, by using sites such as TinyUrl (https://tinyurl.com/) or Bitly (https://bitly.com/).
    - Keep links as short as possible.
    - Use a link that will make sense to parents rather than a random combination of letters and numbers.
    - Avoid hidden and unintended characters in the links.
        - Hidden characters include underscores (_), which may appear to be a space, rather than a character, if the link is underlined
        - Unintended characters include periods when the web link is at the end of the sentence, because parents may mistake them for part of the web link.

A review of several states' paper surveys that included a printed web link revealed that the length of the links varied between 16 and 68 characters, and some included potentially hidden or unintended characters, as well as combinations of letters and numbers without meaning. Consider this fictional example of a difficult original online survey link, representative of what many states use:

Original link: http://www.sunnyvale_SpecialEd.com/476?=Parent.htm

Simplified link: www.SUSDParentSurvey.com

The second simplified link is 26 characters shorter than the first; includes no hidden characters; and is clear, meaningful, and easily reproducible by parents.

Pilot the survey

After you have developed your survey, you should pre-test, or pilot, it. Piloting the survey is a critical step to ensure development of a high-quality survey instrument. During the pilot, you should ask experts to review the survey, and you should administer your survey to a sample of potential respondent parents to gather information about the appropriateness of the survey's elements. These elements include

- Survey items, including content, wording, and response options
- Survey organization, including length, format, and layout
- Survey functionality (e.g., to test skip patterns for paper and online surveys, to ensure that any special design features work in online surveys)
- Survey administration procedures

There are several methods you can use to pilot a survey. You may want to use more than one, as each method will provide you with different feedback.

- **Expert review.** There are two types of experts that you may want to consult: survey experts and content experts. A survey expert is someone who has expertise in survey design and administration. Survey experts can review your survey to ensure that it is technically sound. Content experts have expertise related to parent involvement or other topics included in your survey. Content experts can review your survey to ensure it covers the most important aspects of parent involvement and that the questions are worded in a way that will make sense to respondents. You might have both types of experts on your team, or you may want to consult a third-party contractor or stakeholders such as Parent Center staff.
- **Cognitive interviews.** Cognitive interviews can be very useful to determine how respondents interpret questions and whether the appropriate response options are provided. During a cognitive interview, an interviewer sits with one or a small group of potential respondents, such as parents, and asks for their feedback as they complete the survey in-person with the interviewer. The interviewer either asks parents specific questions as they take the survey, or the interviewer asks parents to talk through their thought process as they answer the questions.
- **Field testing.** Field testing your survey means administering it to a sample of potential respondents to make sure that
  - They are able to answer your survey questions
  - The available response options are appropriate
  - The length and format of your survey works well
  - For online surveys, the survey functions as you intended[54]

  During your field test, you should administer your survey under the same conditions that you plan to administer your actual survey (like a "dress rehearsal"). Once you receive the surveys back, double-check to see if you need to make any tweaks.

  - Analyze the data to examine whether respondents skipped some items more frequently than others (and therefore, you may need to reword these items)
  - Calculate the overall response rate and identify where you might need to focus your follow-up efforts when you administer the actual survey
  - Determine how well your data tracking system is working

[54] Carlson and D'Agostino, 2015.

Field testing also can include follow-up interviews with some respondents to get their opinions about the survey and any items they might have found to be confusing or problematic.

Because piloting your survey is so important, be sure to include adequate time in your overall timeline to ensure that you have time to pilot and revise as needed before you actually administer your survey.

Revise the survey based on the pilot

After you pilot your survey and analyze the data, you likely will need to revise some of the survey items and perhaps reorganize the survey in some way. In addition, you can use what you learned to improve and refine your processes and procedures for survey administration and data tracking. For example, consider these questions:

- Were you able to track all of the surveys that you sent out and received?
- Were you able to match parents who responded to the survey with their child's demographic information?
- Were you able to appropriately follow-up with parents who did not respond?

You will want to think about whether any steps were difficult and fine-tune your processes so things run more smoothly when you administer your survey for the actual data collection.

For more information or support with your survey, contact your IDC State Liaison.

Resources

Important Information About Sampling

Sampling is an area where you will need staff—or a third-party contractor—with specific training, expertise, or experience. If you are not currently working with an individual with expertise in sampling, we recommend that you contact your IDC State Liaison to connect you with resources and individuals with expertise related to sampling procedures. Additionally, Box 12 lists several resources you can use to learn more about sampling.

Box 12. Resources on sampling

Blair, E., and Blair, J. (2014). *Applied Survey Sampling*. Washington, DC: Sage Publications.

Fowler, F.J., Jr. (2013). *Survey Research Methods*. Washington, DC: Sage Publications.

Kalton, G. (1983). *Quantitative Applications in the Social Sciences: Introduction to Survey Sampling*. Washington, DC: Sage Publications.

It is beyond the scope of this toolkit to go into detail about sampling, so here we will touch on two important steps you should take when using sampling as part of your parent involvement data collection:

- Develop a sampling plan
- Periodically adjust the sampling plan

Develop a sampling plan

The first step in sampling is to develop a sampling plan that details the steps that you will take. In fact, states that are planning to use sampling for Indicator B8 must submit their sampling plan to the Office of Special Education Programs (OSEP) for approval. Your sampling plan should specify your intended sample size and the type of sampling procedures you plan to use.

Selected types of sampling procedures. There are many different types of sampling procedures. Random sampling refers to samples that are drawn completely at random. Random sampling is often preferred because, in theory, random samples should be representative. Random sampling can be difficult to do, though, and sometimes random sampling might not result in a representative sample (a phenomenon known as “unhappy randomization”). To reduce the risk of this, you can use probability sampling procedures. Probability sampling involves random selection at some point. A probability sample is a sample in which every unit in the population (e.g., parent) has a known, greater-than-zero chance of being selected in the sample and this probability can be accurately determined. The combination of these traits makes it possible to produce unbiased estimates of population totals by weighting sampled units according to their probability of selection. One sampling technique that is not appropriate in the context of Indicator B8 data collection is purposeful sampling. Purposeful sampling is when you do not randomly select participants at any point and therefore you cannot assess the extent to which the sample is representative. Below, we briefly describe some random sampling and probability sampling procedures that might be appropriate for your Indicator B8 data collection. Again, we suggest working with someone with specific training in sampling.

- ***Simple random sampling*** is a sampling procedure where all parents in the target population have the same probability of being selected to participate in the survey, regardless of the other parents that are selected. You can accomplish simple random sampling using computer programs or drawing out of a hat.
- ***Systematic random sampling*** is generally easy to do and, under certain circumstances, can be more precise than simple random sampling. First, develop a numbered list of parents in random order. Then, depending on the sample size you have chosen, determine an interval size (e.g., every 25th parent) and select parents from the list

at this interval until the sample is the desired size. Use a random number table (or random number generator) to determine which parent to start with on the list. For this to work correctly, you must list parents in random order with respect to the specific characteristics you are measuring.

- ***Stratified random sampling*** can be used to ensure that specific groups of parents are adequately represented in your sample. This procedure involves dividing the entire population of parents into groups based on selected variables (e.g., their child's disability category or race/ethnicity), and then selecting a simple random sample or systematic random sample from within each group.
- ***Cluster sampling*** is similar to stratified sampling, but instead of sampling subgroups within a target population, you are dividing the population into clusters (e.g., schools or districts), from which a sample of clusters is randomly selected. In one-stage cluster sampling, all parents within the sampled clusters would be selected. In two-stage cluster sampling, simple random sampling is used to select parents within each cluster. The numbers of parents selected from different clusters are not necessarily equal.

With these sampling procedures in mind, determine whether you will establish your sample by sampling parents of students with disabilities, by sampling districts within the state, or a combination of both.

Sample size. An important aspect of a sampling plan is to determine the sample size necessary for Indicator B8. Should you survey 10 percent of your target parents? 20 percent? The answer is complicated and depends on many factors, including the goals of the data collection, the size of the target population, how precise you want your results to be in comparison to the true population value, the response rate that you expect to obtain, and the sampling strategy you are using. If you are using simple random sampling, you can use one of the many sample size calculators that are available online. However, regardless of the sampling procedure you are using, we recommend that you obtain assistance from individuals with expertise related to sampling procedures.

Box 13 presents important information about OSEP's requirements for sampling for Indicator B8.

Box 13. OSEP requirements related to sampling for Indicator B8

OSEP Requirements for Sampling for Indicator B8
OSEP has specific requirements that states must follow when conducting sampling to ensure that the sample is representative. Specifically,

- Samples within a district must be representative of that specific district, with respect to the unique distribution of variables, such as disability category, age, race, and gender, within each district
- If your state chooses to sample districts,
  - You must include districts with average daily memberships of more than 50,000 in the sample every year
  - You can use sampling within some districts and use a census (i.e., obtaining data from the total targeted population of parents of students with disabilities) in other districts
  - You must include each district at least once over the course of the State Performance Plan (SPP) period
  - You must collect data from a representative sample of districts each year

OSEP Requirements for Reporting on Sampling for Indicator B8
In addition to fulfilling the requirements related to *how to sample*, states must report to OSEP some important information related to their sampling procedures:

- The sampling procedures you followed (e.g., random/stratified, forms validation)
- Similarities or differences of the sample to the population of families with children with disabilities (e.g., how the sample will represent all aspects of the population, such as disability category, race, age, gender, etc.) at the state level
- Similarities or differences of the sample to the population of families with children with disabilities (e.g., how the sample will represent all aspects of the population, such as disability category, race, age, gender, etc.) at the district level
  - NOTE: When collecting data from small districts, do not report any information on performance that would result in the disclosure of personally identifiable information about individual children or where the available numbers are too small to yield statistically reliable information.

Source: U.S. Department of Education 2017. 2018 Part B SPP/APR Instructions.

Periodically adjust the sampling plan

Once you develop a sampling plan, you will need to adjust it periodically, especially if the demographics across your state shifted since you determined your sampling plan. Changing demographics across or within certain districts could mean you need to examine your sampling strategy to ensure the representativeness of the sample. For example,

- Across and within districts, have there been changes, additions, deletions, or redefinitions?
- Are there extremely large districts or small districts that did not exist before?
- Have the sizes of districts changed?

You may also need to adjust your sampling plan if your necessary sample size changes or if your response rates have changed over the years.

What States Are Doing

- Several states use sampling plans where all districts participate in the Indicator B8 data collection process every other year instead of every 5 years. This approach allows each district within the state to receive results on its parent involvement in a timely manner, which enables districts and states to better determine whether and how improvement activities they implement are affecting parent involvement.
- Several states use stratified random sampling, stratifying districts by student enrollment, region, race/ethnicity, and socioeconomic level to ensure the results are representative of the state as a whole.
- One state uses cluster sampling with a two-stage process, whereby the state samples districts and then randomly selects parents within those sampled districts. This state also adjusted its sampling plan to reflect the current demographics in the most recent Child Count data.

Additional Information About the NCSEAM Scale

The NCSEAM Scale

The NCSEAM scale measures schools' efforts to facilitate parent involvement and is recognized as a high-quality tool for collecting data related to Indicator B8.[55] The items and the cut-point scores used for the calculation of state performance on Indicator B8 were developed with input from families of children with disabilities. The scale meets rigorous measurement and scoring standards, and the developers piloted the items with a nationally representative sample of parents of students with disabilities in six states.[56] High scores on the scale indicate that parents perceive schools as effectively promoting parent involvement.

Rasch Analysis and the NCSEAM Scale

The NCSEAM scale was developed through the Rasch measurement framework, which is an approach to measure development that is designed to create a valid measure of a given construct with unidimensional scales whose metrics are true interval data. In the case of Indicator B8, the construct is schools' facilitation of parent involvement, as perceived by parents. With interval data, scoring units are consistent, such that the difference between a score of 500 and 600, for example, is the same as the difference between a score of 600 and 700.[57]

Rasch analysis yields a value for each item that estimates its location on the measurement scale, corresponding to its empirically estimated agreeability. An item's location is also referred to as its calibration value. Items located lower on the scale are items that parents consistently agree with more, while items located higher on the scale are those that parents tend to agree with less. The relative location of items on the scale does not change depending on the particular parents who respond to the survey. Moreover, a parent who agrees with an item has a high likelihood of agreeing even more strongly with the items below it on the scale. The Data Accountability Center provides the following example to illustrate how this works: A person taking a math test will find that some items are easier than others. For example, regardless of how well this person does on the math test, he or she is more likely to get the easier items correct (for example, addition) than the difficult ones (for example, calculus). This would likely hold true for anyone taking the test. Elbaum (2012, p. 3) explains the model as follows:

> *Data are analyzed in such a way that there is a well-defined relationship between item locations (referred to as item calibrations) and person locations (referred to as person measures). Items located higher on the scale require more of the attribute being measured to be successfully completed as indicated by a correct response to an item or a high agreement with a survey item.*[58]

The NCSEAM Item Bank

Most states use a 25-item version of the scale that NCSEAM recommended in 2006, although there are 78 items that were calibrated and states can select items from this "item bank."[59] The use of the items in the item bank is based on the Rasch framework. As mentioned above, Rasch analysis yields a value for each item that estimates its location on the measurement scale (calibration value). From a measurement perspective, items with similar locations (calibration values) are basically interchangeable.[60] Therefore, you can start with the 25-item version of the survey and substitute an item from that version with an item from the item bank with a similar location. However, the developers recommend

[55] Elbaum 2014.

[56] Elbaum et al. 2011.

[57] Data Accountability Center 2008.

[58] Elbaum 2012, p. 3.

[59] Elbaum 2014.

[60] Data Accountability Center 2008.

that you use at least 25 items and only substitute items with similar locations. Ideally, the selected items will reflect the whole range of the scale, from the most agreeable to the least agreeable items.

The NCSEAM Cut-Point Score

To determine what score on the NCSEAM scale would reflect parents who felt that their child's school was adequately facilitating parent involvement, NCSEAM convened a group of nationally representative stakeholders, including parents of children with disabilities, state directors of special education, state early intervention coordinators, district and program personnel, advocates, attorneys, and community representatives.[61] This group addressed the question of how high a score had to be to "count" as a positive result for Indicator B8. The stakeholder team recommended using a measure of 600 as the standard for a positive response. This score corresponds to the item calibration for the item, "The school explains what options parents have if they disagree with a decision of the school." A score of 600 would mean that the parent had a .95 likelihood of responding "agree," "strongly agree," or "very strongly agree" to that item.

What States Are Doing

Hawaii explained in their 2014 APR that they selected items from the NCSEAM item bank. They determined that a reliability of .90 or above could be achieved with the 25 items that they selected. The item with the highest location (or calibration value) Hawaii chose was, "In preparation for my child's transition planning meeting I was given information about the options my child will have after high school." If a parent agreed with this item, there was a high likelihood that the same parent would agree with the other 24 items with lower calibrations. The item with the lowest location (or calibration value) that Hawaii chose was, "At the IEP meeting, we discussed accommodations and modifications my child would need." Items at the bottom of the scale such as this one are items that parents more likely tend to agree with. Hawaii used Rasch analysis to score the NCSEAM, which resulted in a score for each parent who responded to the survey. Each parent's score is then compared to the cut-point score of 600.

[61] Ibid.

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