

Data Drilldown Guide: Understanding and Using Early Childhood Outcome Data

Introduction

The Kansas State Department of Education Part B-619 Preschool Programs and the Kansas Department of Health and Environment, Part C Infant-Toddler Program, have developed a collaborative system for collecting and reporting early childhood outcome data as required by the U.S. Department of Education, Office of Special Education Programs (OSEP). Outcome data is used at the federal and state levels to examine the effectiveness of state programs serving young children with disabilities from birth through age five.

To determine child progress on the outcomes, information is collected at four points in time: 1) when a child first enters Part C Early Intervention Services, 2) when a child permanently exits Part C Early Intervention Services, 3) when a child first enters Part B Preschool Services, and 4) when a child permanently exits Part B Preschool Services. Assessment information is used in a rating process that is documented on the Child Outcomes Summary Form (COSF), adapted from the model developed by the Early Childhood Outcomes (ECO) Center (<https://ectacenter.org/outcomes.asp>). Information on how to complete the COSF can be found on the Kansas Inservice Training Center Website (<http://kskits.org/ks-eco-resources>)

Local *tiny-k* programs and LEAs submit child outcome information into a statewide data collection system administered through the Kansas State Department of Education called the Outcomes Web Based System (OWS). Information from the OWS is used to make determinations for both state and local programs on Annual Performance Report (APR)/State Performance Plan (SPP) Indicator 3 for Part C programs and Indicator 7 for Part B preschool programs. Information regarding the APR/SPP indicators can be found at <http://www.ksits.org/publications.htm> (Part C) and <https://www.ksde.org/Default.aspx?tabid=520> (Part B).

The Kansas State Department of Education and the Kansas Inservice Training System have developed this guide to support Part B-619 preschool programs in understanding their early childhood outcome data, evaluating their current early child outcome reporting process, and identifying patterns in their data that can lead to improved services for Kansas children and families.

Measuring Child Outcomes

In this age of accountability, policymakers are asking questions about the outcomes achieved by programs supported by public funds. The Office of Special Education Programs (OSEP) in the U.S. Department of Education requires states to report outcomes data for children (birth to five) served through Part C and Part B of the Individuals with Disabilities Education Act (IDEA) as part of their APR.

States must report the percent of infants and toddlers with IFSPs or preschool children with IEPs who demonstrate improved:

- A. Positive social-emotional skills (including social relationships)
- B. Acquisition and use of knowledge and skills (including early language/communication and early literacy)
- C. Use of appropriate behavior to meet needs

States are required to measure and report on the progress children (birth to five) make between the time they enter and exit Part C or B in each of the outcome areas, including the percentage of children who:

- a. Did not improve functioning
- b. Improved functioning, but not sufficiently to move nearer to functioning comparable to same-aged peers
- c. Improved functioning to a level nearer to same-aged peers but did not reach it
- d. Improved functioning to reach a level comparable to same-aged peers
- e. Maintained functioning at a level comparable to same-aged peers

The OSEP categories describe the types of progress children can make between entry and exit. Progress categories are determined based on three sources of data LEAs and local *tink-k* programs enter into the OWS: entry ratings (Part C or B), exit ratings (corresponding Part C or B) and the answer to the progress question on the exit rating. The ECO center has created a document, *Federal Reporting Categories for Child Outcome Data* (https://ectacenter.org/~pdfs/eco/Federal_reporting_categories.pdf), which outlines how OSEP progress categories are determined.

In each state's APR submitted to OSEP, states must set targets on two summary statements for each of the three outcomes:

- Summary Statement 1: Of those children who entered the program below age expectations in each Outcome, the percent who substantially increased their rate of growth by the time they exited the program $(c+d)/(a+b+c+d)$
- Summary Statement 2: The percent of children who were functioning within age expectations in each Outcome by the time they exited the program $(d+e)/(a+b+c+d+e)$

Kansas ECO Targets

	Outcome A	Outcome B	Outcome C
Summary Statement 1	Part C= 57.53%	Part C= 61.14%	Part C= 66.99%
	Part B= 86.00%	Part B= 86.50%	Part B= 86.74%
Summary Statement 2	Part C= 56.33%	Part C= 47.44%	Part C= 63.44%
	Part B= 66.00%	Part B= 64.00%	Part B= 77.93%

Table includes current year statewide targets Federal Fiscal Year 2011 (reported March 2013)

Local data are part of the Public Reporting Requirement in IDEA 2004: *“The State shall report annually to the public on the performance of each local educational agency located in the State on the targets in the State's performance plan. The State shall make the State's performance plan available through public means, including by posting on the website of the State educational agency, distribution to the media, and distribution through public agencies.”* Additional information regarding OSEP reporting, target setting, and local reporting can be found on the ECO Center website (<https://ectacenter.org/systems.asp>)

Early Childhood Outcome Data Drill Down

Valid and reliable child outcome data are essential for state agencies and local programs to use in improving services and supports for young children and their families. The following steps have been developed to assist local Part B preschool programs to examine the quality of their data reporting and to identify patterns in local data that can be used to improve program quality.

Data drill down procedures are presented in five sections, organized sequentially. It is anticipated that programs will start with Section A, identifying potential action steps that may need to be completed before moving on to the next section. Analyzing data is a complex task and anywhere along this process, technical assistance is available to local Part B Preschool programs from the Kansas Department of Education (KSDE) TASN at www.ksdetasn.org.

Section A: Examine Local Policies and Procedures for Data Reporting

The first step to ensuring LEA data submitted to the OWS is valid and reliable is to examine local policies and procedures as they relate to early childhood outcome reporting. *The Administrator Quality Rating Checklist* (<https://ectacenter.org/decrp/type-checklists.asp>) was developed for use by network and district administrators to ensure that there are procedures in place for reporting and using Early Childhood Outcomes data. This form outlines policies and procedures that are needed to monitor individual child COSF ratings and for training new direct service staff. It is recommended that the procedures be written and revisited annually.

Additional Quality Rating forms are also available for: Data Entry (<https://kskits.drupal.ku.edu/information-part-b-programs>), and Direct Service Providers. These quality rating forms are useful when training new staff in the COSF and OWS reporting process and monitoring implementation.

Questions to Guide the Review Process

As you examine your LEA's policies and procedures related to completing and entering COSF data. Use the following questions to guide your review and consider the evidence that supports your answers.

1. Are there procedures in place to ensure all new staff receive training in the COSF rating process and/or entering data into the OWS?
2. Are LEA procedures and policies implemented with fidelity?
3. Do team members follow publisher's instructions for administering the Curriculum-Based Assessment used for determining COSF ratings?
4. Do team members have a strong grounding in typical development?
5. Do team members follow COSF training guidelines?

6. Do staff know where to locate support resources when needed?
7. Are COSF records in the OWS periodically monitored to ensure training components are followed and to provide staff feedback for improvement?
8. Are COSFs complete?
 - Are all sections of the COSF complete? Demographics, dates, etc.?
 - Is information provided on all three outcome areas?
 - Is information provided to support ratings given to each outcome area?
 - When it is an exit COSF, is question b addressed?
9. How well does evidence address each outcome?
 - Does evidence correspond to the appropriate outcome area?
 - Does it cover the breadth of the outcome?
 - Is it functional?
10. Does evidence support ratings?
 - Is enough information provided to support the rating given?
 - Assuming that a reviewer knows age-expected child development, could the reviewer estimate, within one point in either direction, the rating based on the information provided?

Action Planning

Using the form in the appendix labeled “Section A: Policies and Procedures”, begin to develop an action plan based on your findings thus far. What have you learned, as you have examined local policies and procedures? What steps might you need to take to ensure policies and procedures are in place to support accurate and reliable data reporting?

Section B: Locating and Examining District APR Data

The State Performance Plan (SPP) has 20 indicators divided into two categories, Results Indicators and Compliance Indicators. Indicator 7: Early Childhood Outcomes, is a Results Indicator. All 20 Indicators have targets for which the state strives to meet annually. Some indicators have targets that vary from one year to the next. The target serves as a means of comparing whether an LEA met the criteria established for all LEAs within a fiscal year, and as a method for demonstrating whether or not the LEA has made improvement from previous years.

Indicator 7: Early Childhood Outcomes are reported in 6 categories corresponding to each Outcome and Summary Statement. Summary Statement 1 reflects the percentage of children who entered the program below age expectations in each Outcome and substantially increased their rate of growth by the time they exited the program; and Summary Statement 2 reflects the percentage of children who were functioning within age expectations in each Outcome by the time they exited the program

7A-1 – Summary Statement 1 for Positive Social –Emotional Skills

7A-2 – Summary Statement 2 for Positive Social –Emotional Skills

7B-1 – Summary Statement 1 for Acquiring and Using Knowledge and Skills

- 7B-2 – Summary Statement 2 for Acquiring and Using Knowledge and Skills
- 7C-1 – Summary Statement 1 for Taking Appropriate Action to Meet Needs
- 7C-2 – Summary Statement 2 for Taking Appropriate Action to Meet Needs

Summary Statement data are calculated and reported by LEA on individual SPP Public Reports, which are posted annually on the KSDE website (https://datacentral.ksde.org/sped_rpts.aspx). This information is publically reported each March and includes Indicator 7 data that was collected between July 1st and June 30th of the previous school year. Additionally, SPP draft Public Reports are sent to LEA Superintendents and Directors of Special Education for data verification between January and February of each year.

KSDE utilizes a two-stage process of determining if an LEA met a Results Indicator Target. The first stage involves the use of a simple comparison to determine whether the LEA's percentage is greater than or equal to the target. The second stage involves the use of the Binomial Test of Probability, which is a statistical measure of the likelihood that the percent was within an acceptable range from the target. Using this test helps address the comparisons when the number of data points are relatively small. If a target was not met using the Simple Comparison Method, the Binomial Test of Probability is calculated to determine the probability that the percent differs significantly ($p \leq .05$) from the target. If LEA percentages are not significantly different from the target then the target is considered met.

For an LEA to be rated on any one of the above indicator 7 targets there must be data from at least 10 students. When an LEA does not have 10 students in the data pool for any of the above indicator 7 determinations, a percentage is not calculated and a determination is not made.

Questions to Guide the Review Process

Download and examine the most current District Public Report(s) (https://datacentral.ksde.org/sped_rpts.aspx) for your LEA(s). Use the following questions to guide your review and consider the evidence that supports your answers.

1. Which indicator 7 targets have been rated as met? Not met?
2. How does data differ by Outcome? Summary Statement? Does one Outcome have significantly higher/lower progress ratings compared to other outcomes?
3. How does the LEA compare to state data?
4. Locate other District Public Reports for LEAs of a similar size. How do your summary statement percentages compare to other LEAs?
5. What are possible reasons your LEA has different patterns than similar LEAs?
6. Compare the most current year's data with the data reported for your LEA in previous years. How would you describe the trends in the data for the past few years? What changes do you see?

7. If you belong to a cooperative or interlocal, compare data between LEAs within your program. Are there differences between programs? Do you see any trends that need further investigation?
8. Are there problems with missing data?
9. What patterns or potential red flags have you identified?

Action Planning

Based on what you have learned, use the form in the appendix labeled “Section B: LEA Public Report Data” to continue the development of an action plan based on your findings. What steps might you need to take? What questions do you have regarding the data you have examined?

Section C: Locating and Examining Addendum Reports

In addition to the public reports that indicate whether or not targets have been met for the 20 SPP Indicators. LEAs also have access to additional addendum reports that can help them dig further into their indicator data. All Directors of Special Education have access to these reports through the KSDE APR website <http://ddesurvey.com/kansasAPR/login.aspx>. Directors of Special Education may provide other LEA staff with access to the data in the APR website, however it is up to each Director of Special Education to determine who may have access to the LEA data in the APR website. To complete this step it will be necessary to identify the individual(s) in your LEA who can download the addendum reports that will be helpful in examining Indicator 7 data. Reports can be found in the drop down menu on the APR website. Remember data is reported by LEA, therefore cooperatives and interlocals will want to gather data for all LEAs they represent and may find it helpful to combine the data across LEAs for the purposes of examination.

Progress or Slippage Reports

Progress or slippage is a means of comparing whether an LEA met the criteria established for all LEAs within a fiscal year. This method takes into account whether the target was met and whether improvement was made from the previous year. Progress or slippage is the combination of the year-to-year improvement and target met status. The Progress and Slippage, improvement from one year to the next and target-met status are three of the factors used by KSDE when determining the need for technical assistance. For example, an Indicator where improvement is not shown from one year to the next and the target is not met is demonstrating a trend that needs attention.

District State Performance Addendum Report

The District Addendum Report breaks indicator 7 data into each of the OSEP reporting categories:

- a. Did not improve functioning
- b. Improved functioning, but not sufficiently to move nearer to functioning comparable to same-aged peers

- c. Improved functioning to a level nearer to same-aged peers but did not reach it
- d. Improved functioning to reach a level comparable to same-aged peers
- e. Maintained functioning at a level comparable to same-aged peers

For each OSEP reporting category, the Addendum Report provides information for each of the three Outcomes regarding the number and percentage of LEA children who were reported in that category. This report also shows the numbers that were used to calculate the determinations by Summary Statement. By reviewing the LEA numbers according to OSEP progress categories, it is possible to identify patterns in the data that explain differences in Summary Statement reporting.

Questions to Guide the Review Process

Download and examine the most current District *Progress and Slippage* and *Addendum Report(s)* (https://datacentral.ksde.org/sped_rpts.aspx) for your LEA(s). Use the following questions to guide your review and consider the evidence that supports your answers.

1. How does the data for each OSEP reporting category compare to state data?
2. Are the number of children exiting in this data collection period reasonable for the number of children served? (A rough estimate would be approximately 1/3 of the total number of children served by a program).
3. The majority of the children should fall into the OSEP reporting categories *b*, *c* & *d*, with fewer in *a* and *e*. Is this pattern reflected in your LEA's data?
4. Are there differences in percentages by Outcome?
5. Compare the most current year's data with the data reported for your LEA in previous years. How would you describe the trends in the data for the past few years? What changes do you see?
6. If you belong to a cooperative or interlocal, compare data between LEAs within your program. Are there differences between programs? Do you see any trends that need further investigation?
7. Are there problems with missing data?
8. What patterns or potential red flags have you identified?

Action Planning

Based on what you have learned, use the form in the appendix labeled "Section C: LEA Addendum Report Data" to continue the development of an action plan based on your findings. What steps might you need to take? What questions do you have regarding the data you have examined?

Section D: Data Verification

Between July 1st to September 15th of each calendar year, LEAs are asked to work through a data verification process for their Early Childhood Outcome data submitted during the previous year (July 1st through June 30th). Information about data verification is sent to the Director of Special Education and the LEA's designated Early Childhood Contact, with the procedures necessary to complete the verification. Once verification reports are completed they are required to be kept on file at the district level.

Data verification reports provide information regarding the validity of the data submitted into the OWS. Without data reflecting the progress children in your program make, it is difficult to use the ECO data to make program improvements.

Questions to Guide the Review Process

Locate and examine the Data Verification Reports for the last three years. Remember, these reports are kept on file locally and not at KSDE. Use the following questions to guide your review and consider the evidence that supports your answers.

1. Who is responsible for the Data Verification Process and where are reports kept on file locally?
2. Do all children who have permanently exited your program have an entry and exit COSF in the OWS?
3. How many children have missing data?
4. How might this missing data impact your Indicator 7 determinations?
5. Of the children with missing data, are there patterns related to which children have missing data (e.g. children who are only receiving speech/language services are often the ones with missing data)?
6. Are there patterns across data verification years that need to be addressed?

Action Planning

Based on what you have learned, use the form in the appendix labeled "Section D: Data Verification Reports" to continue the development of an action plan based on your findings. What steps might you need to take? What questions do you have regarding the data you have examined?

Section E: Examining Child Level Data in the OWS

The Outcome Web System (OWS) allows LEAs to run a variety of reports, which can assist them in examining Early Childhood Outcome data at the individual child level. User access and login information can be found in the Outcome Web System User Guide (<https://www.ksde.org/Portals/0/SES/KIAS/indicators/Ind7-OWSguide.pdf>). Reports can be selected from the left-hand menu once an individual is logged in to the OWS.

At this point in the data drill down process, programs should have developed some hypothesis regarding the patterns and trends they are seeing in their data. Begin by selecting the reports below that can help you to verify your hypothesis. It may not be necessary to run all the reports available. There are some reports within the OWS Report Builder Function that are not yet working correctly, the reports listed below are accurate and can be used by districts to drill down into their data.

Parameterized Data Report – This report provides information for each individual child regarding rating entry and exit for all three outcomes.

No Permanent Exit – This provides information regarding all children who ever exited your program without a COSF rating. Keep in mind this will also include children who received organizational exits and a COSF rating was not required.

Permanent Exit Report – This report can provide information by year regarding which children have received permanent exits.

Summary Statement Report – This is the report of information included in the district APR by outcome.

ECO Report – This is similar to the addendum report. It provides the numbers and percentages by OSEP reporting category by year.

Questions to Guide the Review Process

Run and examine the reports in the OWS that will help you verify your hypothesis or form new hypotheses. It may be helpful to examine data across the last three years to compare patterns and trends. Use the following questions to guide your review and consider the evidence that supports your answers.

1. Is there a relationship across the three outcome areas for individual children?
2. Are there certain groups of children for whom you wouldn't expect to see a strong outcome-to-outcome relationship?
3. Do most children either hold their developmental trajectory or improve their trajectory from entry to exit?

4. How much improvement is reasonable? What are possible interpretations when there are huge gains?
5. Are entry and exit scores related to the nature of the child's disability?
6. Are ratings at entry related to ratings at exit (i.e. do children with higher functioning at entry in outcome areas have higher functioning at exit)?
7. How do children with longer lengths of service (24 to 36 months) compare on outcome progress data to those in the program less than one year?
8. If local areas are serving similar kinds of children, scores at entry should be similar. What might be reasons why one district within a cooperative/interlocal has different patterns than another?
9. If programs are equally effective, scores at exit should be similar. What might be reasons why one district within a cooperative/interlocal has different patterns than another?
10. What percentage of children who have Speech/Language as a primary disability score a 6 or 7 on entry and exit?
11. What percentage of children who have Speech/Language as their primary disability score a 6 or 7 at entry and below a 6 at exit?
12. What variables (e.g. race, ethnicity, gender) are associated with progress category ratings for each outcome?
13. Are the data reliable and valid enough to trust the findings?
14. Are there problems with missing data?
15. Do data seem stable enough to trust?
16. What potential red flags have you identified?
17. Do particular providers or programs demonstrate problems with data quality?
18. Are there unusual data patterns? What might be the reasons?
19. What percentage of children entered:
 - At age expectation in all 3 outcome areas?
 - At age expectation in 2 outcome areas?
 - At age expectation in 1 outcome area?
 - At age expectation in 0 outcome areas?

Action Planning

Based on what you have learned, use the form in the appendix labeled "Section E: Examining Child Level Data in the OWS" to continue the development of an action plan based on your findings. What steps might you need to take? What questions do you still have regarding the data you have examined?

References

KSDE/KITS (2010). *Investigative questions and action plans for early childhood outcomes*. Unpublished document, adapted from Early Childhood Outcomes Center (2009) *Checking outcome data for quality: Looking for patterns*. Downloaded March 25, 2010 from <https://ectacenter.org/sitemap.asp>

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