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Early Childhood Integrated Data Analytic Self-Assessment Rubric

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Authors

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Missy Coffey, Ph.D.
Director, Early Childhood Technical Assistance, SRI International

A national expert in early childhood integrated data systems, Missy Coffey has extensive technical assistance experience and specializes in research to understand how program and policy decisions are made to support children and their families. Coffey is the co-principal investigator for ECDataWorks, a national project supporting the development of data analytics for state administrators. She is also a technical assistance provider with the Center for IDEA Early Childhood Data Systems (DaSy Center), supporting states with integrating and using early intervention and early childhood special education data. Coffey is also leading the early childhood integrated data system readiness assessment and technical assistance for the state of California.

Philip M. Sirinides, Ph.D.
Director of the Institute of State and Regional Affairs (ISRA), Pennsylvania State University at Harrisburg

As Director of the Institute of State and Regional Affairs (ISRA) and an associate professor in the School of Behavioral Sciences and Education at the Pennsylvania State University at Harrisburg, Philip Sirinides' primary areas of expertise include mixed-methods in randomized experiments and quasi-experiments of social interventions and policies, and the development and use of integrated data systems for public sector planning and evaluation. He is the principal of ECDataWorks which provides innovative opportunities for collaborating states to improve the delivery and use of their early childhood data among state policymakers and practitioners.

Howard Morrison
Early Childhood Technical Assistance Specialist, SRI International

An early childhood technical assistance specialist with a focus on data integration and use, Howard Morrison specializes in inter-agency data integration efforts, which include data governance, data quality, data sharing agreements, and stakeholder engagement to identify key data elements for program improvement and collaboration. Howard supports the state engagement and facilitation strategies for the ECDataWorks collaborations.

Introduction

The ECIDS toolkit has seven components (e.g. Purpose and Vision, Planning and Management, Stakeholder Engagement, etc.) and is useful as a self-assessment tool and roadmap for improving ECIDS. ECDataWorks and partner states propose developing an ECIDS data analytic self-assessment tool for states that focuses on the process of translating ECIDS data to information to action. This process typically involves the design, development, and implementation of analytic tools. Designing, developing, and implementing analytic tools is challenging for several reasons:

- ↗ Analytic tools include a wide range of applications, formats, audiences, and uses

- ↗ The development process occurs in phases which require coordination of teams with different roles and expertise

- ↗ Analytics creation is much more than "making charts" in that useful analytics must be based on a sound foundation of theory and data quality

- ↗ Information needs evolve as priorities change and new questions emerge.

How the indicators were created

We convened a group of state ECIDS leads to provide input on the potential utility of an ECIDS analytic toolkit, the overall structure, and the indicators. Based on feedback, we have identified a few key considerations:

How to use the data analytics indicators:

This planning resource:

- ↗ The analytic toolkit could be used as a retrospective assessment of an existing analytic tool (summative evaluation)

- ↗ The analytic toolkit could be a reference in the developing of new analytic tools (formative evaluation)

- ↗ The analytic toolkit could be used as a self-assessment to identify broader agency capacity gaps for developing analytic tools (process evaluation)

Non-uses

- ↗ The analytic toolkit should not repeat the SLDS ECIDS toolkit (stay focused on the process of designing, developing, and implementing analytic tools).

- ↗ The analytic toolkit should not repeat the ECDC 10 fundamentals (for obvious reasons). The analytic toolkit is not intended to duplicate the ECIDS Self-Assessment or the ECDC 10 fundamentals, but to advance the conversation by focusing on assessing data use and analytics.

About the Indicators

Tool indicators

- ↗ It would be useful for the toolkit to include indicators that are tool-specific.

  For example, a state that has developed multiple analytic tools could assess each one separately.

- ↗ Because of the diversity of analytic tool applications, formats, audiences, and uses, not all indicators would necessarily be applicable for all tools – it's okay for some to be N/A.

- ↗ There are two types of tool indicators: things that describe the tool; and things that describe the process of designing developing, implementing, and evaluating the tool.

State indicators

- ↗ There are some indicators that are not tool-specific but refer to the overall capacity of an agency.

- ↗ These indicators might represent the current capacity which may be higher than what is reflected by analytic tools developed in the past.

- ↗ State indicators are separate from tool indicators although a state that has developed only one analytic tool for ECIDS may not have distinction.

Data analytics are always contextual. They are not data reports that with individual stands alone indicators, but data that are pulled together to be actionable); provides information that leads to a decision/action.

Data Analytic Evaluation Tool

Data analytic tool name	**Completed by** *(name and role)*	**Date completed** *(this is useful to track your changes over time, we encourage state teams to assess regularly)*	

To what extent does the data analytic tool articulate the intended use?

		Not at all	To some extent	To a great extent	Provide a rationale for why you selected your choice
Indicator 1	Have a clearly defined audience				
Indicator 2	Align to the articulated needs of the intended audience				
Indicator 3	Get used by the intended audience				

What would you like to do to improve the use of this specific tool?
To what extent does the data analytic tool's content align to articulated needs of the users?

		Not at all	To some extent	To a great extent	Rationale for selection
Indicator 4	Present data that would not be available through any other means				
Indicator 5	Convey information that directly responds to the information needs identified by the defined audience				
Indicator 6	Provide an introduction to the tool				
Indicator 7	State the intended use (e.g. strategic planning, accountability, continuous improvement)				
Indicator 8	State the type of information presented (e.g. descriptive, trends/longitudinal, causal)				
Indicator 9	Articulate the access level				

What would you like to do to improve the content of this specific tool?
To what extent does the data analytic tool establish long-term value?

		Not at all	To some extent	To a great extent	Rationale for selection
Indicator 10	Have an articulated plan (people and technology) for maintenance				
Indicator 11	Articulated alignment of the tool to a state priority				
Indicator 12	Have an articulated plan (people and technology) for enhancements				

How could you improve the likelihood of this specific tool being sustained over time?
To what extent is the design and use of the tool based on relevant research on the content presented?

		Not at all	To some extent	To a great extent	Rationale for selection
Indicator 13	Incorporate data based on research (e.g. what might influence school readiness or poverty)				
Indicator 14	Incorporate data based on practice knowledge				
Indicator 15	Reviewed by national experts on the topic presented in the tool				

What would you like to do to improve the evidence-base for this specific tool?

State Indicators

Which state agency(ies) were reviewed

Completed by
(name and role)

Date completed
(this is useful to track your changes over time, we encourage state teams to assess regularly)

To what extent does your state agency(ies) have the following:

		Not at all	To some extent	To a great extent	Rationale for selection
A	Organizational priority to use data to inform policy and practice				
B	Articulated data needs aligned to goals and priorities				
C	Articulated data needs aligned to state regulatory requirements				
D	A data governance body prioritizing data analytics				
E	An ongoing process for engaging stakeholders				
F	A process for modifying data analytics based on feedback				
G	Dedicated ECIDS Lead				
H	Dedicated Business Intelligence designers within state agency or contracted vendor				
I	Dedicated business analysts/IT support to design analytic requirements				
J	Business intelligence tools (e.g. Tableau, PowerBI)				
K	A process for user testing				
L	Website to present data analytics				
M	A process to verify and ensure quality data				
N	External evaluation of data analytics (including research partnerships)				