

Early Childhood Workforce Data: Collection Practices and Possibilities

This resource was prepared in cooperation with the Statewide Longitudinal Data Systems (SLDS) Grant Program to provide Race to the Top – Early Learning Challenge (RTT-ELC) States with the information they need about reliable data about their workforce. This information will help States make critical administrative, policy, and funding decisions about improving programs and services to children and families and to meet State and Federal reporting requirements.

Data systems development and enhancement is a focus in 16 of the 20 RTT-ELC grantee States. This brief provides an overview of current [early childhood workforce](#); discusses why [high-quality workforce data matter](#); describes [workforce data collection efforts](#); describes workforce data collection for five [State-level regulatory and quality initiatives](#); identifies [challenges](#) and promising examples of States' efforts to integrate and coordinate workforce data collections, and lists [resources](#) to support comprehensive workforce data collections.

The Early Childhood Workforce Is Diverse

Early childhood education is not a single profession with universal regulations limiting practice to those who are licensed or credentialed. The early childhood workforce spans a range of occupations, including lead teachers, assistant teachers, administrators, family child care staff, home visitors, special education staff, early interventionists, and related service personnel. In addition, early childhood education is a complex web of public and private programs and services, each with distinct professional requirements for staff.

Given the variability of requirements for the early childhood workforce, a comprehensive approach to data collection is necessary for State and local administrators so they can identify and support an adequate numbers of personnel with the education and professional development needed to work with young children and their families.

Although the Early Childhood Data Collaborative Survey of States¹ reports that every State collects some data about members of the workforce, significant data gaps exist. These gaps are due to (1) a lack of coordination across data collections, (2) limited participation in data collection efforts, (3) varying local and State data governance policies, and (4) fiscal constraints.

¹ Early Childhood Data Collaborative. *2013 State of States' Early Childhood Data Systems*. 2013. <http://www.ecedata.org/files/2013%20State%20of%20States'%20Early%20Childhood%20Data%20Systems.pdf>

High-Quality Workforce Data Matter

States need high-quality data about their early childhood education workforce in order to document improvements, meet the administrative needs of individual programs and larger early childhood systems, and inform policy decisions.

Workforce Data Are Needed For Administrative Purposes

Comprehensive workforce data collection in States creates opportunities for efficiencies such as eliminating duplication in data collection. It provides the data necessary to implement quality initiatives and regulatory efforts and to support planning for needed personnel in specific programs and geographic regions.

Below is a list of the most common consumers of workforce data within State early childhood systems.

State Child Care Licensing Systems: Licensing representatives use workforce data to review and approve applicants for director certification. They also use workforce data to monitor staff members' compliance with requirements for lead teachers, assistant teachers, and aides (where applicable) and annual professional development requirements.

*State Quality Rating and Improvement Systems (QRIS):*² QRIS administrators use workforce data to determine programs' scoring on staff qualifications and related QRIS requirements.

State Professional Development Systems: Agencies charged with approving trainers who will offer State-approved professional development use workforce data to ensure that the trainers meet the necessary requirements.

State Teacher/Administrator Scholarship Programs: Scholarship administrators use workforce data to make decisions about their selection of candidates for scholarship awards and to track candidates' progress.

State/Federal Programs Receiving Funds to Provide Early Childhood Services: State and local administrators use workforce data to track and monitor compliance with Federal and State workforce requirements (e.g., Head Start performance standards, IDEA Standards for personnel, etc.) and to identify personnel needs.

State and National Credentialing Programs: Credentialing administrators use workforce data to determine whether candidates meet credential requirements.

National Program Accreditation Systems: Accrediting entities use workforce data to determine whether program staff members meet the minimum requirements for the program to be accredited.

² For the RTT-ELC grant, a QRIS is referred to as a Tiered Quality Rating and Improvement System (TQRIS). This distinction highlights the importance of common standards and levels across all types of publicly funded early learning and development systems statewide and meaningful differences among the quality levels of a system.

Workforce Data Are Used To Inform Policy Decisions

State and national policymakers need a complete picture of the workforce, including reliable and accurate information about demographics, staff preparation, qualifications, professional development, and the environments in which they work. This information enables them to answer critical policy questions about workforce preparation, ongoing professional development, stability, and impact.

By answering key workforce related questions,³ State and national leaders can make more strategic decisions to support early childhood workforce issues and ultimately improve the quality of early childhood investments. Sample workforce related policy questions are included in figure 1.

More reliable and readily available data empower local early childhood program administrators and professional development organizations to assess the impact of their hiring requirements, staff pay, and professional development practices on workforce stability, program quality, and child outcomes.

Example Early Childhood Data Collaborative Workforce Related Policy Questions

How prepared is the early care and education workforce to provide effective education and care for all children?

What policies and investments lead to a skilled and stable early care and education workforce?

Figure 1. Example workforce related policy questions

The Data Landscape: A Review of Workforce Data Collection Efforts

The Early Childhood Data Collaborative's 10 Fundamentals⁴ of coordinated State early childhood education data systems highlights the importance of workforce data—specifying that coordinated data systems should contain early childhood workforce demographics, including educational attainment and professional development information.

Currently, no single authoritative source for early childhood workforce data exists in States or at the national level. Although the Bureau of Labor Statistics at the Department of Labor publishes national and State data on more than 800 occupations, it is difficult to glean an accurate picture of the early childhood education workforce. Professionals can be classified into several occupational categories, including child care worker, preschool and child care center director, preschool teacher, special education teacher, teacher assistant, or kindergarten and elementary school teacher. Additionally, these data are only available in aggregate form, so their use even in separate occupational categories is limited.

Workforce data collection occurs in a diverse range of programs and initiatives with a variety of funding sources supporting data collection, including publicly funded Federal, State, and local-level programs that serve children, as well as State-level regulatory and quality initiatives. If coordinated and/or linked, these collections could serve as a foundation for building a more complete picture of the workforce.

³ Early Childhood Data Collaborative. 2013.

⁴ Early Childhood Data Collaborative. *10 ECE Fundamentals*. 2011. <http://www.ecedata.org/the-10-ece-fundamentals/10-ece-fundamentals/>

Workforce Data Collection by Publicly Funded, Child-Serving Programs

Currently, Head Start and Early Head Start, State-funded preschool, IDEA Part B Section 619, and IDEA Part C are the largest publicly funded early childhood programs collecting workforce data in States and local communities. These programs are State funded and/or federally funded and have specific hiring and training requirements for staff. These programs collect varying levels of workforce data to meet program administration and reporting requirements. Staff in these programs often represent significant portions of the workforce in a given State and may or may not participate in larger State early childhood workforce data collection efforts.

Table 1 outlines the publically funded early childhood programs that collect workforce data about their staff, the entity collecting the data, the level and type of data typically collected, and the workforce reporting requirements.

Note: While the majority of the Federal and State reporting requirements use aggregated data, many of the data systems have record-level workforce data. However, this varies from State to State.

Overview of Workforce Data Collection by Publicly Funded Early Childhood Programs				
Child-Serving Program	Point of Data Collection	Level of Data Collection	Types of Data Collected	Workforce Reporting Requirements
Head Start/ Early Head Start	Local grantee	Individual employee	Demographic, education, training, and employment	Federal Annual Program Information Report
State-Funded Pre-K	Varies from State to State	Individual employee	Varies but may include demographic, education, and employment	No Federal requirements; State reporting requirements vary
IDEA Part C, Early Intervention	Local or State Part C program	Individual employee	Varies but may include demographics, certification/licensure, and employment	No Federal requirements; State reporting requirements vary
IDEA Part B, Section 619, Special Education	Local district	Individual employee	Includes certification/licensure and employment (for Federal requirements) other data vary	Federal IDEA 618 Table 2; State reporting requirements vary

Table 1. Overview of workforce data collection by publicly funded early childhood education programs

WORKFORCE DATA COLLECTION FOR STATE-LEVEL REGULATORY AND QUALITY INITIATIVES

Currently, there are five common regulatory- and quality-related data collection efforts operating within States. As shown in figure 2, these include some level of workforce data collection: State/regional workforce registries, QRIS, State teacher certification systems, State professional licensing boards/systems, and State child care licensing systems. These data collection efforts are supported by both public and private funds.

State/Regional Workforce Registries

State and regional workforce registries are comprehensive information systems that collect essential data on professionals working with early childhood and school-age children. According to the National Workforce Registry Alliance State of Registries Report, as of 2012 at least 38 States and additional counties or local areas are building, are implementing, or have implemented early childhood workforce registries.⁵ Nineteen of the 20 RTT-ELC States have or are developing a registry in 2015.

Registries are an integral part of the infrastructure for State professional development systems, serving as a hub for data collection, reporting, and analyses. Registries typically collect data on individual professionals (including practitioners, trainers, and technical assistance providers), early childhood and/or school-age programs, and professional development events.

While the scope of the data collection varies from State to State, most registries collect the following data: demographics, full education history, professional certification and licensure, employment, and professional development. Registries often are able to produce tracking reports for program directors and State-level reports about workforce trends for policymakers. Registries can also provide information and documentation, such as the Quality Performance Report, to support larger Federal reporting requirements.

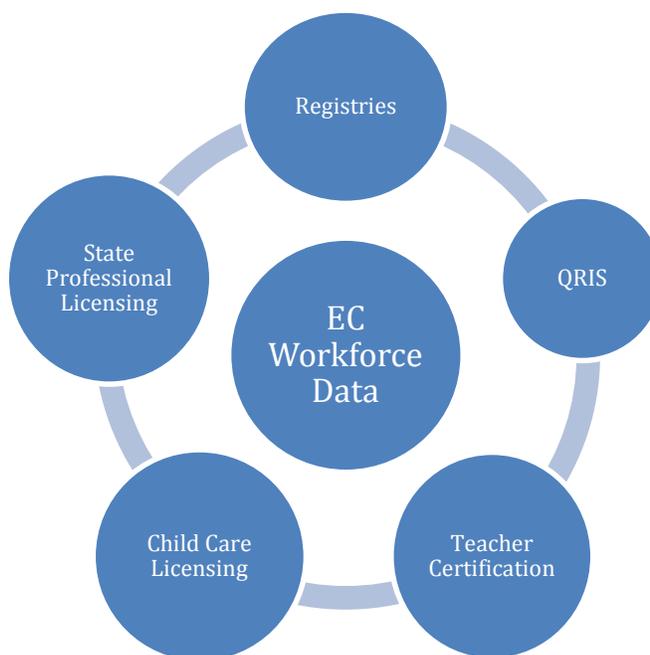


Figure 2. Five common regulatory- and quality-related data collection efforts operating within States

⁵ National Registry Alliance. State of Registries Survey 2012: A Survey of the Nation's Early Childhood and School-age Registries. 2013, <http://www.registryalliance.org/documents/alliance-resources/24-2012-state-of-registries-survey>

State/Regional Quality Rating and Improvement Systems (QRIS)

State and regional QRIS are an organized way to assess, improve, and communicate the quality of early childhood programs. In order to determine a rating, these systems collect data about many different aspects of the program's operation, including workforce data. According to the QRIS National Learning Network, in 2014, 39 States and the District of Columbia operated statewide QRIS, and nearly all other States were planning or piloting such systems.⁶ All 20 RTT-ELC States will have a QRIS in place in 2015.

QRIS typically collect data on individual professionals working directly with children or administering early childhood and/or school-age programs. While the scope of QRIS staff data collections vary from State to State, most QRIS collect educational attainment, professional certification and licensure, employment history, and professional development information related to the specific thresholds in the QRIS model. The information about individual staff may or may not be captured in the data system at the individual-record level.

Some States require staff working in programs seeking a QRIS rating to enroll in the workforce registry. The QRIS then receives data related to the staff requirements directly from the workforce registry. The National Workforce Registry Alliance reports that 21 registries have formal data partnerships with QRIS. Thirteen of these registries report that participation in the registry is mandatory for staff employed by programs seeking QRIS ratings.⁷

Examples of States Using TQRIS Workforce Data

The **Georgia** Quality Rated program receives data from the Professional Development Registry. In order for programs to earn points in Standard 1: Director and Teacher Qualifications, all administrators and instructional staff must register their education and training.⁸

The **Wisconsin** Young Star program receives data electronically from the State's Workforce Registry. In order for programs to earn 3 stars or higher in Young Stars, program staff must meet certain education levels. Education is only verified through the Registry: if a program and its staff are not a part of the Registry, it cannot earn points for training and education.⁹

State Teacher Certification Systems

Each State has its own teacher certification requirements and data collection processes. Many early childhood teachers working in programs linked to public school systems and/or special education and

⁶ QRIS National Learning Network. *Current Status of QRIS in States*. 2015.

http://www.qrisnetwork.org/sites/all/files/maps/QRIS%20Map%2C%20QRIS%20National%20Learning%20Network%2C%20www.qrisnetwork.org%20%5BRevised%20February%202015%5D_0.pdf

⁷ National Registry Alliance. *State of Registries Survey 2012: A Survey of the Nation's Early Childhood and School-Age Registries*. 2013. <http://www.registryalliance.org/documents/alliance-resources/24-2012-state-of-registries-survey>

⁸ Bright from the Start: Georgia Department of Early Care and Learning. *Quality Rated Program Manual: Last Effects for Georgia's Children, Families, and Economy*.

https://qualityrated.decal.ga.gov/Content/Documents/PM_ProgramManual.pdf

⁹ Wisconsin Department of Children and Families. *Apply to Youngstar*.

<http://dcf.wisconsin.gov/youngstar/how-to-apply.htm>

early intervention programs have earned certification in areas such as early childhood education, preschool education, and special education, or in some States, through a unified endorsement across early childhood and special education. Teachers who are employed in community-based early childhood programs may or may not be required to have teaching certificates. The data collected by State teacher certification systems vary; however, the data collection includes the basic educational and professional development information needed to award and renew certification.

State Professional Licensing Boards/Systems

Most States have departments or divisions assigned to oversee professional boards of registration or licensure. The regulated professions include, but are not limited to, social work, speech language pathology, occupational therapy, and physical therapy. Many of these licensed or registered professionals are employed within early childhood programs, providing direct care, education, or services to young children. The data collected by State licensing boards vary; however, the data collection includes the basic educational and professional development information needed to award and renew licensure.

State Child Care Licensing Systems

Every State regulates child care at some level. Many States collect and maintain workforce data about program directors to support the review and approval of directors who oversee child care facilities. Additionally, some States maintain records about the staff employed at a facility, as well as records of background checks on individuals.

Example of a State Using State Child Care Licensing Systems Workforce Data

The **Montana** Department of Public Health and Human Services Quality Assurance Division – Licensure Bureau – Child Care Licensing collects data on staff employed by child care facilities. Within 15 days of hire, Directors submit an employee cover sheet with associated documentation, including demographic information, CPR / First Aid certification, background screening information, and Safe Sleep training verification. These data are part of the Montana Child Care Under the Big Sky (CCUBS) licensing system. In turn, the CCUBS provides the Montana Registry with program IDs, facility demographics, and staff IDs and roles. The Montana Registry tracks staff completion of professional development activities. These data are made available to licensing staff for use in monitoring compliance with the annual training requirement.

TAKING STOCK: CHALLENGES AND KEY CONSIDERATIONS

As outlined, numerous programs and State initiatives include data collections on the early childhood workforce; however, significant coordination and planning are necessary in order to compile comprehensive and accurate data that can be used to support individual programs and State early childhood systems and to inform policy development at all levels.

As States take stock, they must address the issues of data quality, alignment of data elements, participation in data collection efforts, and designation of an authoritative source for certain data. Additionally, they must consider protection of the data and pay attention to data governance components for linking data to other robust program-level and child-level data systems.

Data Must Be of High Quality

High-quality data are necessary for making strategic programmatic and policy decisions at the local and State levels. Data must be verified and entered consistently to be of maximum use. For example, most registry, QRIS, and professional licensure and certification efforts verify educational attainment; however, the quality of the workforce data verification and entry processes vary across efforts and entities, and no national standards exist.

Data Elements Should Be Aligned Across Data Collections

There is increasing interest in developing common workforce data elements, such as the National Workforce Registry Alliance Core Data Elements and the Common Education Data Standards. Within or among early childhood programs and State-level projects, each program is able to independently define its data elements. As a result, although most programs report that demographic, educational attainment, training, and employment data are collected, there are no assurances that the data are collected or defined in a similar manner. Data collected in dissimilar ways may have little utility for national program and policy decision making. Additionally, not all efforts collect demographic data and full education history. Most States have not completed the necessary alignment activities to determine if there is comparability across the various workforce data collections within their State.

Workforce Data Collection Efforts Need to Include All Segments of the Workforce

Each of the workforce data collection efforts outlined in this brief serves an identified population. However, after accounting for all collections, many States still have significant gaps and are missing segments of the workforce.

Data collection for publicly funded child-serving programs tends to have high rates of participation by staff because data are collected as a function of employment for specific program and reporting purposes. While the participation rates are high, the data are limited to those staff working in programs that receive State and/or Federal funds.

Workforce registry participation is voluntary in most States, and when it is required, the requirement usually only extends to a segment of the population.

Participation rates in State-level regulatory and quality initiatives vary depending on the scope and requirements associated with the initiative. The initiative with the broadest scope for workforce data collection is often the registry, including staff from center-based child care, family-based child care, Head Start, State-funded preschools, and early childhood special education programs. However, registry participation is voluntary in most States, and when it is required, the requirement usually only extends to a segment of the population. This results in data that are not representative of all segments of the workforce or geographic areas within a State. A few States, such as Wisconsin and Oklahoma, have been able to achieve regulatory mandates for participation and are promising examples of the impact of broad-based requirements on participation rates.

Examples of States Using Workforce Data Collection to Include All Segments of the Workforce

The **Oklahoma** Professional Development Registry experienced a significant increase in staff seeking Professional Development Ladder placement after participation in the Registry was required for the Oklahoma QRIS, STARS. Data collected by the Registry is made available to STARS to inform program ratings. Including STARS as part of the regulatory process in Oklahoma ensures that staff working in a licensed program participate. Registry participation in State fiscal years 2011 and 2012 was relatively consistent at 1,200 to 1,500 participants each year (see figure 3). When the requirement took effect, there was a significant uptake in Registry participation from 1,189 in FY 2012 to 6,274 in FY2013.¹⁰

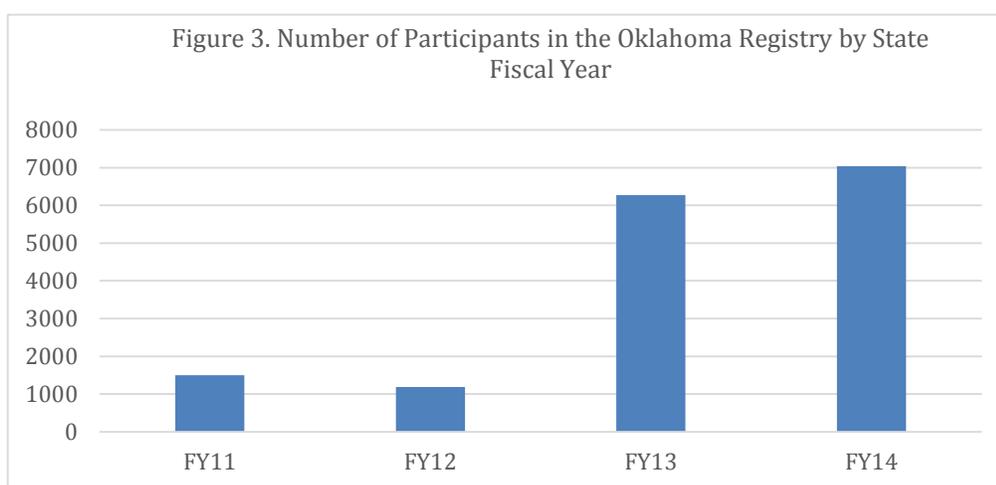


Figure 3. Number of participants in the Oklahoma Registry by State fiscal year

In Wisconsin, workforce registry participation is mandated for all staff in licensed programs. The registry provided data for 17,524 employed early childhood professionals for inclusion in the 2012 National Workforce Registry Alliance dataset. This constitutes an estimated 83 percent of the staff working in licensed child care programs in Wisconsin during the reporting time period.¹¹

QRIS initiatives often require data collections about key staff—such as directors and lead teachers—in order for a program to receive a rating. However, not all staff in a program are considered in the calculations for determining ratings, and often the only data gathered are those needed to calculate the rating. Additionally, requirements for programs to participate in the QRIS vary from State to State.

Participation rates in State licensing/certification systems are high because these systems track data for those professionals who meet the criteria for a given license (e.g., Licensed Clinical Social Worker,

¹⁰ Mayfield, Wayne. *2012 Workforce Dataset: A Review of Workforce Trends*. National Registry Alliance, 2012. <http://www.registryalliance.org/documents/alliance-resources/20-2012-workforce-data-set>

¹¹ Personal communication with Oklahoma Professional Development.

Licensed Occupational Therapist) or certification (e.g., P–3 Teacher Certification). However, data collection is limited to those individuals who meet the requirements for the license or certification and often do not include employment data.

In systems where child care licensing collections include workforce-related data, data often consist of only those staff who are required to be tracked by licensing.

Linking Workforce Data and the Designation of an Authoritative Source

Linking data across the disparate workforce data systems—let alone linking workforce data to program- and/or child-level data systems—represents a significant challenge for a number of reasons. These include

1. a lack of common identifiers across data systems for individuals, programs, and training events;
2. data collection formats that vary across systems; and
3. the lack of a clear definition of which system is the authoritative source for designated data elements.

The Early Childhood Data Collaborative’s 10 ECE Fundamentals¹² include two workforce-specific fundamentals that speak to these essential data linkages:

- Fundamental 5: Unique program site identifier with the ability to link with children and the ECE workforce
- Fundamental 7: Unique ECE workforce identifier with the ability to link with program sites and children

If States were to adopt these two fundamental policies, they would be better able to integrate workforce data across collection efforts.

Summary and Resources to Support States Working Toward Comprehensive Workforce Data Collections

In order to achieve more robust data about the workforce, States need to explore how to link data from existing efforts and/or streamline data collection processes to increase participation. The transition from a fragmented to a streamlined approach for workforce data collection will require collaboration by key stakeholders and consensus about the purpose and desired outcomes.

Although States are working under similar incentives, each State’s particular context will ultimately dictate its approach to collecting and integrating data on its early childhood workforce. However, States do not have to go about this work in isolation. A number of resources are available to support workforce data planning. Specifically, the ECIDS Toolkit informs integrated data planning efforts. The CEDS Align tool supports alignment of elements with CEDS and other workforce data systems in a state. The CEDS Connect tool supports identification of CEDS data elements needed to answer key policy questions and displays whether aligned data systems have the requisite elements. T Other

¹² Early Childhood Data Collaborative. 2011.

useful tools and resources include: The 10 ECE Fundamentals, the Workforce Data Planning and Implementation Guide, and several resources from the National Workforce Registry Alliance.

- **Early Childhood Integrated Data System Toolkit (ECIDS Toolkit)**
State Longitudinal Data Systems (SLDS) Grant Program
<https://slds.grads360.org/#program/ecids-toolkit>
This toolkit was designed for use by any State regardless of where it is in the process of developing an ECIDS. The toolkit has seven components: (1) Purpose and Vision, (2) Planning and Management, (3) Stakeholder Engagement, (4) Data Governance, (5) System Design, (6) Data Use, and (7) Sustainability. Each component has a set of key indicators that describe “what” is ideal for the specific component, and each indicator has elements that discuss “how” to accomplish what is outlined in the indicator.
- **CEDS Align**
<https://ceds.ed.gov/align.aspx>
CEDS Align is a tool to help illustrate how data dictionaries align with CEDS and other standards in the field.
- **CEDS Connect**
<https://ceds.ed.gov/connect.aspx>
CEDS Connect provides a selection of education data-related components and their alignment to the Common Education Data Standards (CEDS).
- **Early Childhood Data Collaborative’s 10 ECE Fundamentals**
<http://www.ecedata.org/the-10-ece-fundamentals/10-ece-fundamentals/>
The 10 Fundamentals allow stakeholders to better understand the relationships among child-level data, program site data, and early childhood education workforce characteristics over time.
- **Workforce Data Planning and Implementation Guide**
National Center on Child Care Professional Development Systems and Workforce Initiatives, a service of the Office of Child Care and Office of Head Start, Administration for Children and Families, U.S. Department of Health and Human Services, 2012
https://childcareta.acf.hhs.gov/sites/default/files/public/pdwcenter_wfd_guide.pdf
This resource is a planning and implementation guide for State/Territory teams as they develop and enhance workforce data systems. It includes a discussion of the foundational role that workforce data and data systems play in aligned State/Territory professional development systems, the status of workforce data, and guiding principles that have emerged as States/Territories move toward comprehensive workforce data systems. Considerations are provided for developing or advancing workforce data systems that build on a five-step readiness-for-change process framework. This framework focuses on (1) scanning existing data and systems, (2) goal/outcome development, (3) fit and feasibility and readiness for change, (4) implementation, and (5) monitoring.

- **National Workforce Registry Alliance**

<http://www.registryalliance.org/>

The National Workforce Registry Alliance, an organization of early childhood and school-age workforce registry and professional development leaders, promotes high-quality, coordinated, documented, and accessible State career development systems.

- *Core Data Elements for Early Childhood and School-Age Registries. 2013.*

<http://www.registryalliance.org/documents/alliance-resources/88-core-data-elements>

This publication provides guidance for registry staff members' consideration when building and/or enhancing registry systems. It captures current trends in registry data collection processes and advancements in data systems planning. The document is organized into three main sections: information on people, organizations, and events.

- *Partnership Eligibility Review Criteria for Practitioner Registries. [Webpage]*

<http://www.registryalliance.org/our-work/partnership-eligibility-review-per>

The Alliance devised the Partnership Eligibility Review (PER) to determine the level of "readiness" for participation in data-related projects at the national level that inform policy or support quality initiatives.

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