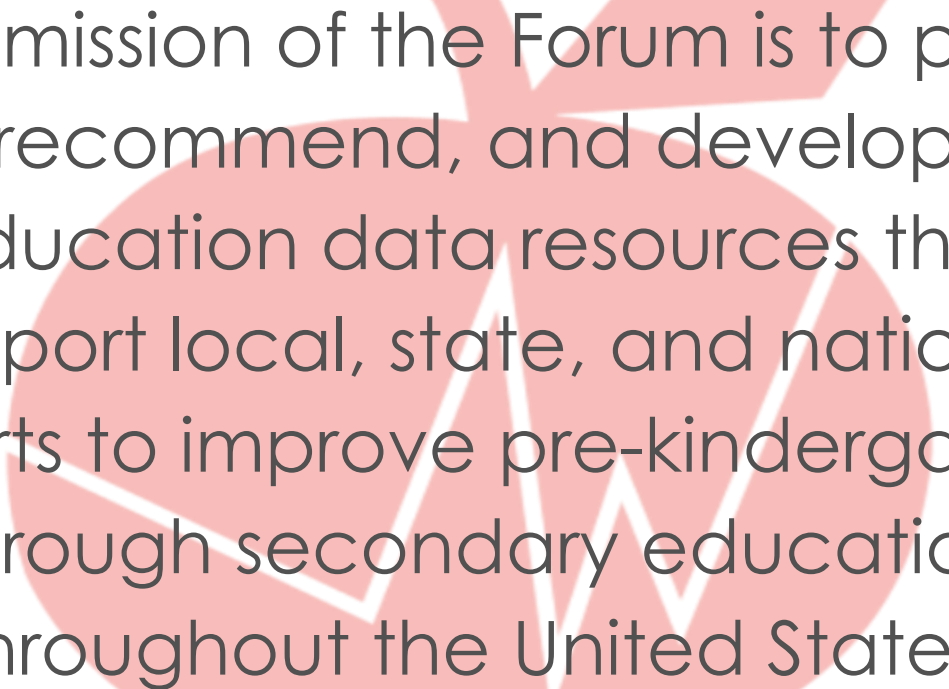# Forum Guide to Collecting and Using Data about the Educator Workforce
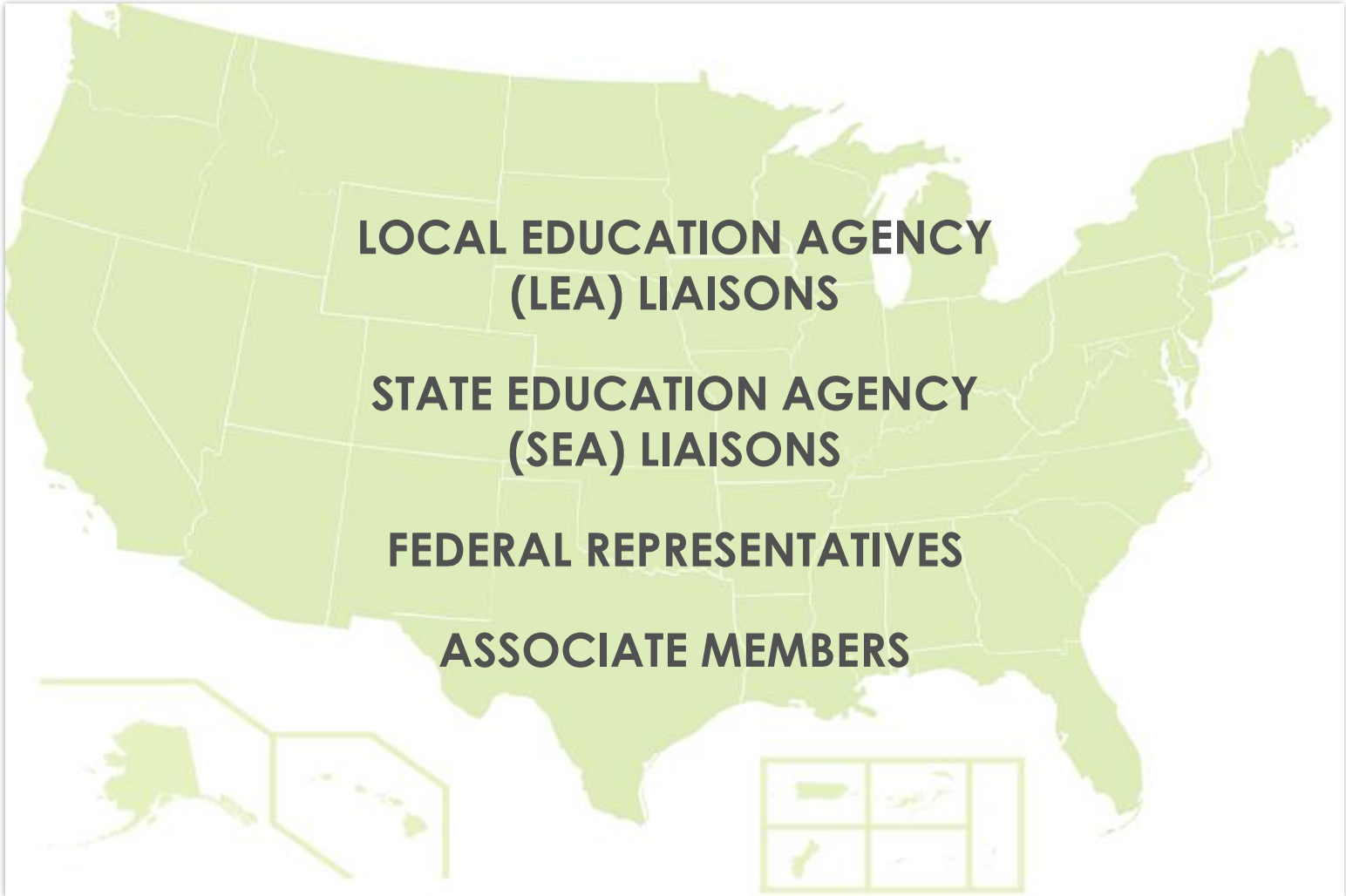
Susan Williams, Virginia Department of Education

National Forum on Education Statistics (Forum)

The mission of the Forum is to plan, recommend, and develop education data resources that support local, state, and national efforts to improve pre-kindergarten through secondary education throughout the United States.

Forum Members and Associates

LOCAL EDUCATION AGENCY (LEA) LIAISONS

STATE EDUCATION AGENCY (SEA) LIAISONS

FEDERAL REPRESENTATIVES

ASSOCIATE MEMBERS

Forum Resources

Forum resources are available on the Forum website: http://nces.ed.gov/forum/

- Best-practice publications

- Online courses

- Videos

- Newsletters

- Outreach materials

Intended Audience

- Local, state, and federal education agency staff

- Program staff

- Data staff

- Administrators

- Policymakers

Educator Workforce Data Working Group Motivation

- Education agencies need accurate, up-to-date information on the educator workforce to provide effective instruction.

- Data collected and used by education agencies to track the educator workforce vary and may not be sufficient to meet the needs of LEAs and SEAs, policymakers, and researchers.

- Workgroup goals:
  - identify the workforce data that are most useful for understanding teacher shortages and monitoring educator supply and demand; and
  - share best practices for collecting and using those data.

Purpose and Audience

This resource

- identifies common types of educator workforce data;

- describes how SEAs and LEAs communicate about educator shortages;

- discusses solutions to and lessons learned in addressing workforce data-related challenges; and

- provides case studies from districts and states.

Chapter 1: Introduction

- Educator workforce data are information about the qualifications, education, quality, experience of staff providing direct student instruction, and administrative and support services.

- Data include all potential indicators of the health and sustainability of the educator ecosystem, including those that indicate weaknesses or barriers in the staffing pipeline and system.

Educator Workforce Data

Various uses:

- disaggregated to provide a more accurate picture of the educator workforce

- create specific metrics that provide greater context to discussions about the teacher workforce

Chapter 2: How Education Agencies Collect and Use Educator Workforce Data

- Valid, high-quality, and timely national or state level data are crucial to decisions about programs, policies, and funding.

- **Leaders** need to understand:
  - how local results compare nationally/at the state level
  - how current data compare to those collected earlier or under different circumstances

- **Agencies** also consider how the information in each category of data influences or relates to all others.

Educator Workforce Data Collections

- Candidate Searches, Recruiting, and Hiring

- Educator Qualifications

- Diversity and Equity

- Placement and Assignment

- Attendance and Engagement

- Retention, Mobility, and Turnover

Chapter 3: Challenges and Strategies Related to Educator Workforce Data

- Differences between HR systems and other SEA and LEA data systems
- Questions about data definitions
  - How are terms like vacancy, quality, or mobility operationally defined?
  - Do definitions differ between an SEA and LEA, or among LEAs?
  - How accurately are these definitions aligned with data collection methods and analyses?

Challenges Arising in Key Data Categories

- **Candidate Searches, Recruiting, and Hiring:** require extensive data collection and agencies may be unable to acquire or effectively use these data

- **Educator Qualifications**: LEAs may struggle with the amount of data collected and how to distill the data into useful information

- **Diversity and Equity**: complications from variations in definition and categorization

Challenges Arising in Key Data Categories

- **Placement and Assignment**: data systems and sources of information

- **Attendance and Engagement**: inconsistent definitions of teacher attendance and variations in how engagement data are collected

- **Retention, Mobility, and Turnover**: how terms are defined and operationalized

16

Chapter 4: Case Studies from States and Districts

- **Mesa Public Schools (AZ):** targeted efforts toward increasing the efficacy of data related to the educator life cycle and improving data processes for hiring and onboarding.

- **Putnam County Schools (WV):** streamlined data from multiple systems, expanded applicant pools to identify the most qualified candidates, and tracked the effects of staffing incentives.

- **Pasco County Schools (FL):** looking at questions of opportunity for students related to teacher background.

Case Studies from States and Districts

- **Jefferson County Public Schools (KY):** district-wide teacher engagement survey that provides key information to principals.
- **Kentucky Department of Education:** Kentucky Educator Credentialing System streamlines user experiences and increases accuracy and efficiency across educator data processes.
- **Virginia Department of Education:** developed the Positions and Exits Collection to address more effectively critical staff shortages by position and geographic region.

18

PURPOSE OF THE COLLECTION

- Three JLARC recommendations
- Two new legislative requirements
- Streamline and modernize the IPAL Survey and Supply & Demand Report
  - Identify critical shortages of teachers and administrative personnel by endorsement (subject) area, geographic region, or school division
  - Collect information on the total number of full-time equivalent positions in administration and instruction and the number of unfilled positions
- Prevents the addition of a single purpose exit survey collection
- Required State and Federal Reporting
  - New public reports and state-level reporting
  - All legacy reporting

SAMPLE OF POSITION CODES

Position Code	Position Description	License Required	Position Type	Details or relevant SCED codes
1	Teacher, Early Childhood Pre-Kindergarten	Y	TCH	
2	Teacher, Kindergarten	Y	TCH	
3	Teacher, Elementary Education Grade 1	Y	TCH	
4	Teacher, Elementary Education Grade 2	Y	TCH	
5	Teacher, Elementary Education Grade 3	Y	TCH	
6	Teacher, Elementary Education Grade 4	Y	TCH	
7	Teacher, Elementary Education Grade 5	Y	TCH	
8	Teacher, Elementary Education Grade 6	Y	TCH	
9	Teacher, Comprehensive Language Arts	Y	TCH	1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1027, 1028, 1034, 1035, 1036
10	Teacher, Literature/Reading	Y	TCH	1047, 1048, 1053, 1055, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069
11	Teacher, Composition/Writing	Y	TCH	1101, 1102, 1103, 1104, 1105, 1136, 1137, 1138
12	Teacher, Speech and Communication	Y	TCH	1151, 1152, 1153, 1155, 1156, 1199
13	Teacher, Linguistics	Y	TCH	1201
14	Teacher, All Others in English Language and Literature	Y	TCH	1992, 1996

SAMPLE OF POSITION CODES

Position Code	Position Description	License Required	Position Type	Details or relevant SCED codes
15	Teacher, Foundation Mathematics	Y	TCH	2002, 2003, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2049
16	Teacher, Pure Mathematics	Y	TCH	2051, 2052, 2053, 2054, 2055, 2056, 2057, 2061, 2071, 2072, 2073, 2074, 2079, 2097, 2102, 2103, 2104, 2105, 2106, 2109, 2110, 2111, 2113, 2121, 2122, 2123, 2124, 2125, 2131, 2132, 2134, 2135, 2136, 2137, 2139, 2140, 2141, 2149
17	Teacher, Applied Mathematics	Y	TCH	2152, 2153, 2154, 2156, 2157
18	Teacher, Probability and Statistics	Y	TCH	2201, 2202, 2203, 2209
19	Teacher, All Others in Mathematics	Y	TCH	2900, 2901, 2902, 2903, 2904, 2905, 2906, 2908, 2909, 2910, 2991, 2994, 2996, 2997, 2999
20	Teacher, Earth Science	Y	TCH	3001, 3002, 3003, 3004, 3005, 3006, 3008, 3049
21	Teacher, Biology	Y	TCH	3051, 3052, 3053, 3056, 3057, 3058, 3059, 3060, 3063, 3065, 3094, 3099
22	Teacher, Chemistry	Y	TCH	3101, 3102, 3103, 3106, 3107, 3149
23	Teacher, Physics	Y	TCH	3151, 3152, 3153, 3155, 3156, 3157, 3158, 3159, 3160, 3161, 3163, 3164, 3165, 3166, 3199
24	Teacher, Integrated/Others in Life and Physical Sciences	Y	TCH	3201, 3203, 3206, 3207, 3208, 3210, 3212, 3213, 3214, 3229, 3230, 3231, 3232, 3233, 3234, 3235, 3236, 3237, 3238, 3239
25	Teacher, All Others in Science	Y	TCH	3900, 3901, 3902, 3903, 3904, 3905, 3906, 3907, 3990, 3995, 3996, 3999

SAMPLE OF POSITION CODES

Position Code	Position Description	License Required	Position Type	Details or relavent SCED codes
101	Principal - Elementary	Y	ADMIN	
102	Principal - Middle School	Y	ADMIN	
103	Principal - Secondary	Y	ADMIN	
104	Reading Specialist	Y	ADMIN	
105	School Psychologist	Y	OTHER	
106	School Social Worker	Y	OTHER	
107	Speech/Language Impairment Specialist	Y	OTHER	License Required By VA Board Of Audiology & Speech-Language Pathology
108	Superintendent	Y	ADMIN	
109	Deputy Superintendent	Y	ADMIN	
110	Assistant Superintendents	Y	ADMIN	
111	Central Office Administrators	N		Include: other persons with division-wide responsibilities; such as accountants, auditors, business managers, facilities managers, technology or information system administrators, or supervisors of transportation, food services, or security Exclude: supervisors of instructional coordinators, supervisors of counselors, and supervisors of student support staff. (These staff are reported under "student support services staff")

Staffing and Vacancy Report

- Teacher data categorizes by SCED Subject Code and SCED subsections
  - see SCED Finder for subsection names.

- Build-a-table format

- Shortage areas
  - Administration
  - Transportation
  - Non-licensed Personnel
  - Paraprofessionals

- https://p1pe.doe.virginia.gov/buildatable/positions_and_exits

Conclusion

Best practices for SEAs and LEAs

- Consider concept definitions and how this influences the nature of the data collected.

- Use data about educator qualifications and experience to forecast mentoring or professional development needs and opportunities.

- Use trends in vacancies and staffing data to inform and collaborate with teacher preparation programs.

- Consider how mandated data can improve conditions and keep teachers in the profession.

- Ensure the interoperability of multiple data systems.

Upcoming Forum Resources

- Artificial Intelligence (AI) in Education Working Group
  - The working group is developing a new resource that will help education agencies understand how AI works, recognize current and potential uses of AI in education, and consider key issues for its application.

- Student Mobility Data Working Group
  - The working group is developing a new resource to provide best practices that will help SEAs and LEAs manage data related to students who frequently change schools, with a focus on ensuring that data are transferred in a timely manner to minimize student learning disruptions and enable the provision of supports.

Upcoming Forum Resources

- College and Career Readiness (CCR) Data Working Group
    - The working group is developing a new resource that will help education agencies effectively collect, integrate, report, and use CCR data. The new guide will reflect developments in CCR data systems, requirements, and uses, and provide real-world examples from districts and states that have implemented successful CCR data practices.

- Race/Ethnicity Data Working Group
    - The working group is developing a new resource to assist SEAs and LEAs in their implementation of the revised *Statistical Policy Directive No. 15: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity* (SPD 15).

Forum Resources

For more information about the Forum, visit https://nces.ed.gov/forum/index.asp

For more questions about Forum Resources and publications, contact Ghedam Bairu at ghedam.bairu@ed.gov.

The information and opinions published are those of the Forum and do not necessarily represent the policy or views of the National Center for Education Statistics, the Institute of Education Sciences, or the U.S. Department of Education.