Forum Working Group Panel Discussion

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Summer 2024 Forum Meeting
Monday, July 22, 2024

Forum Guide to Collecting and Using Data About the Educator Workforce

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Educator Workforce Data Working Group Motivation

- Education agencies need accurate, up-to-date information on the educator workforce in order to provide effective instruction to all students.
- Data collected and used by education agencies to track the educator workforce vary and may not be sufficient to meet the needs of state and local education agencies (SEAs and LEAs), policymakers, and researchers.
- This WG was convened to:
  - 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 is intended to:

- identify common types of educator workforce data;
- describe how SEAs and LEAs communicate about educator shortages;
- discuss solutions to and lessons learned in addressing workforce data-related challenges; and
- provide case studies from districts and states

Chapter 1: Introduction

- Educator workforce data are information about the qualifications, education, quality, and experience of staff providing direct student instruction, as well as administrative and support services in schools.
- Data needed include all potential indicators of the health and sustainability of the educator ecosystem, as well as those that indicate weaknesses or barriers in the staffing pipeline and system.

Educator Workforce Data

- After collecting these data, agencies analyze and use them in various ways.
- In many cases, data are disaggregated to provide a more accurate picture of the educator workforce in a given location.
- Some data are used to 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 or at the state level, as well as 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

- SEAs and LEAs face many challenges in collecting and reporting crucial data. These may arise from:
  - 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 these 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**: These processes 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**: Collecting and using data may be complicated by variations in definition and categorization.

Challenges Arising in Key Data Categories

- **Placement and Assignment**: Challenges in these areas tend to relate to data systems and sources of information.
- **Attendance and Engagement**: Agencies may struggle with inconsistent definitions of teacher attendance, as well as variations in how engagement data are collected.
- **Retention, Mobility, and Turnover**: Issues can arise based on how terms are defined and operationalized.

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):** working with a district-wide teacher engagement survey that provides key information to principals.
- **Virginia Department of Education:** developed the Positions and Exits Collection to more effectively address critical staff shortages by position and geographic region.
- **Kentucky Department of Education:** uses the Kentucky Educator Credentialing System (KECS) to streamline user experiences, decrease turnaround time, and increase accuracy and efficiency across educator data processes.

Conclusion

- The WG identified several best practices, including:
  - Consider how concepts are defined 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 be best utilized to improve conditions and keep teachers in the profession.
  - Ensure the interoperability of multiple data systems.

Introduction to Artificial Intelligence (AI): A Forum Guide for State and Local Education Agencies

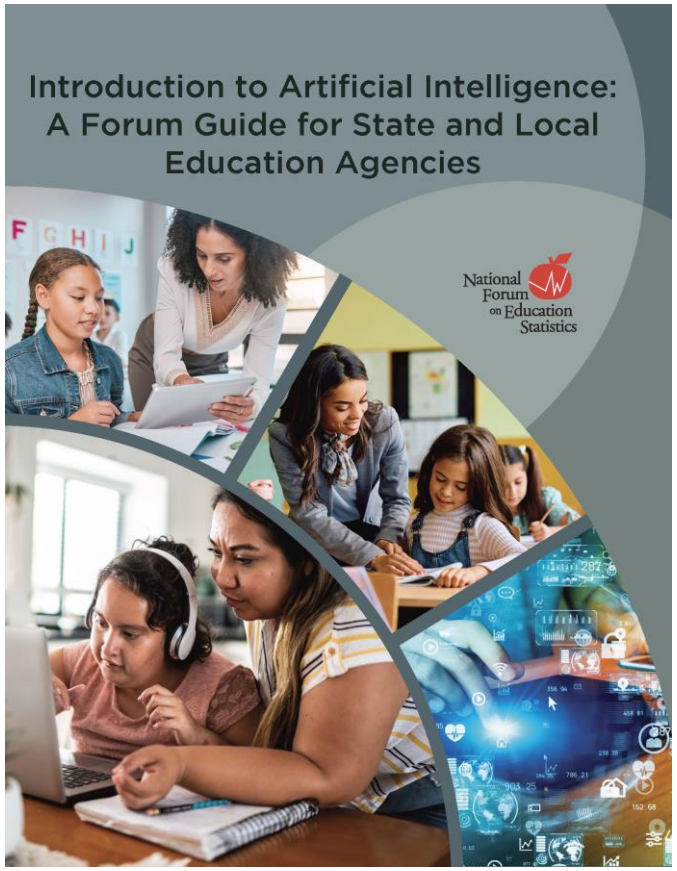
Will Goodman, Boise School District (ID)

AI in Education Working Group Motivation

- AI is an emerging key topic of consideration among SEAs and LEAs nationwide.
- Education agencies already employ tools that include AI-powered applications to support a variety of purposes.
- However, many SEAs and LEAs had not yet developed comprehensive policies to help guide their use of AI.

Purpose and Audience

- **Purpose:** To help SEAs and LEAs
  - understand AI;
  - recognize current and potential uses of AI in education; and
  - consider key issues for its application.
- **Audience:** LEA and SEA education agency staff and leaders who use or are considering using AI.



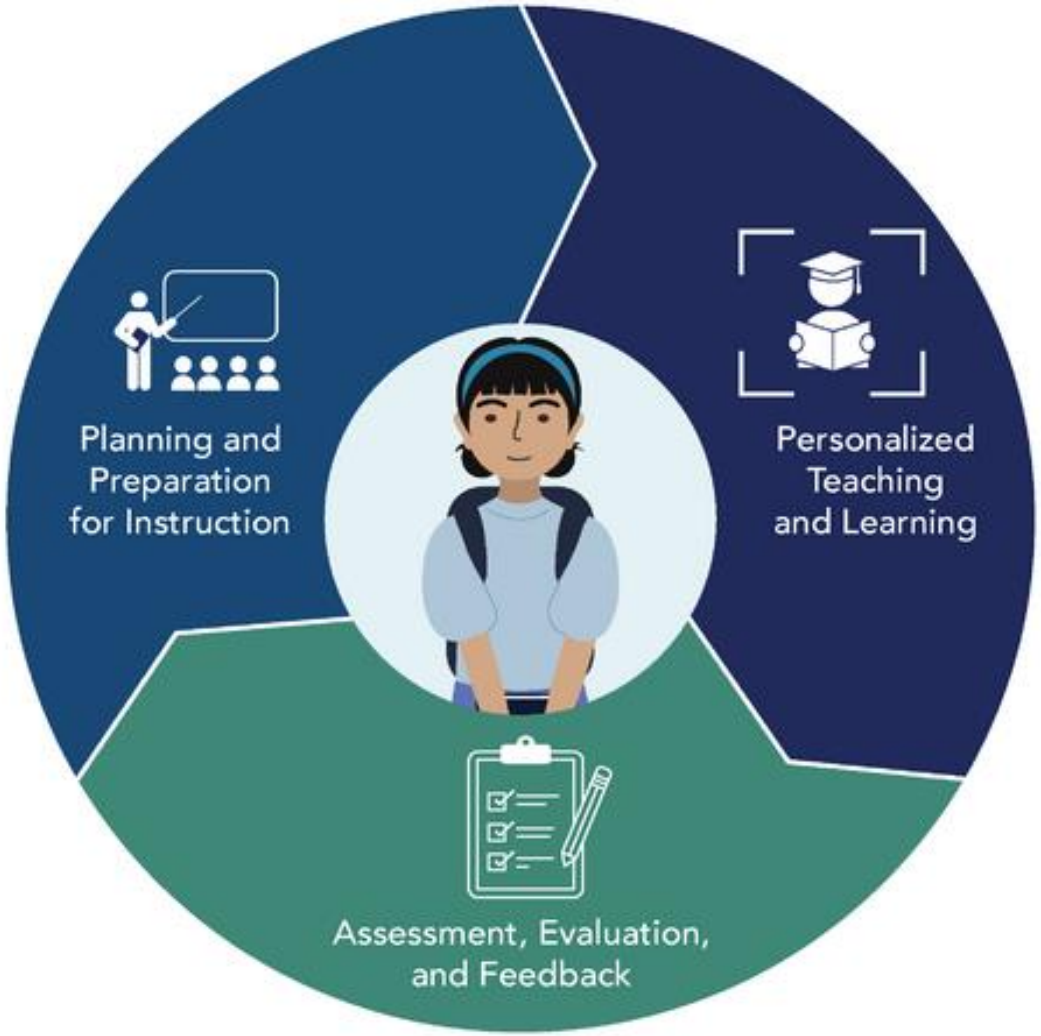
What is AI?

- Computer systems capable of performing tasks that normally require human intelligence and typically include the following components:
  - Vast amounts of ***data*** to learn and make predictions or decisions.
  - ***Algorithms*** that process data using rules.
  - ***Machine learning (ML) models*** trained on data.
  - Trained AI models that make ***predictions*** or ***decisions***.
  - ***Feedback loops*** that allow for continual learning and adaptation.

Benefits and Challenges of AI

- AI use can enable agencies to develop innovative solutions to longstanding challenges.
- SEA and LEA staff, teachers, and students who use AI ethically and effectively will be better prepared for the future labor market.
- There are inherent risks, opportunities, and challenges associated with the use of AI in education.

AI for Teaching and Learning



AI for Administration and Operations

- Clerical and Support
- Human Resources (HR)
- IT and Data
- Finance and Budgeting
- Administration
- Operations

Important Considerations for Education Agencies

- **Ethics:** An ethical framework for using AI and its outputs can ensure privacy, security, and equality.
- **Bias:** Understanding bias and steps that can be taken to minimize it is important because it can impact outcomes.
- **Equity of Access and Sustainability:** Financial, technological, and regulatory aspects need to be considered to ensure all students can access and benefit from AI.
- **Evidence-Based Practice:** AI outputs must be complemented by human interpretation and established learning principles.

Additional Important Considerations for Education Agencies

- **Data Quality:** Strong data governance structures and rigorous data validation processes can enhance the reliability and effectiveness of AI tools.
- **Data Privacy and Security:** Education agencies have a responsibility to rigorously verify and control third-party AI solutions and provide comprehensive end-user training to all staff.
- **Guidance, Policies, and Processes:** Comprehensive guidance, policies, and processes are needed to ensure ethical and responsible use.

Case Studies from Districts

- **Boise School District (ID):** An Equitable Approach to Prepare Students for an Artificial Intelligence (AI)-Enabled World
- **Bonner Springs/Edwardsville Unified School District 204 (KS):** Leveraging AI in the Classroom
- **Green Hills Area Education Agency (IA):** Transforming Human Resources (HR) with AI-Powered Platforms
- **Indiana:** Piloting an AI-Powered Platform

Case Studies from States

- **Delaware Department of Education and Brandywine School District (DE):** Using Machine Scoring to Improve Assessments
- **Georgia Department of Education:** Applying AI to Develop a Predictive Analytical Model
- **North Dakota Department of Public Instruction:** Using an Autoscoring Engine for Swift Information and Insights
- **Utah State Board of Education:** Prioritizing Privacy, Security, and Safety in AI Use

Appendix: Guiding Questions

Sample Questions:

- How is AI currently being used or being planned for?
- How can previous examples of technological development guide responses to AI?
- What guidance, policies, and structures are currently in place, or need to be created or modified, to ensure proper use and protect against inherent risks associated with technologies, including AI?

Conclusion

- AI may increase agency capacity and productivity but requires oversight by educators and administrators.
- AI can generate independent answers that may be inaccurate.
- AI users must be prepared to critically evaluate and effectively use AI-generated outputs.
- AI is a supplement that extends and enhances—not replaces—human capacity and judgement.

Forum Guide to Student Mobility

Raymond Martin, Connecticut State Department of Education

Student Mobility Working Group Motivation

- Forum members suggested convening a new working group to focus on SEA and LEA approaches to collecting data about highly mobile students, which includes:
  - students with status as a migratory child, homeless child or youth, or child in foster care, and students with a parent who is a member of the armed forces on active duty or who serves on full-time National Guard duty; and
  - students who experience mobility and changes schools, districts, or states for a variety of other reasons, including changes in family structures, new employment and economic prospects, a desire to pursue different educational opportunities, or natural disasters and crises.
- Accurate, timely data can help SEAs and LEAs better understand when and why students experience mobility and provide targeted support to ensure student success.

Purpose and Audience

- The primary audience for this publication includes SEA and LEA staff that collect or use data on student mobility, as well as educators and others working to ensure that disruptions to mobile students' education are minimized and targeted supports are provided to students and the schools that serve them. This resource aims to:
  - explain what student mobility is and why it matters to schools and students;
  - describe how student mobility is measured, collected, and used by SEAs and LEAs;
  - define actions that SEAs, LEAs, and schools can take to minimize learning disruptions caused by student mobility; and
  - provide best practices for measuring, collecting, and using mobility data, as well as minimizing the impact of student mobility on schools and students.

Chapter 1: Introduction

- **Chapter 1**
  - introduces student mobility;
  - discusses why mobility matters to SEAs and LEAs;
  - describes SEA, LEA, and student-level measures of student mobility; and
  - provides examples of how different mobility measures are defined and used in SEAs and LEAs.

Highlights from Chapter 1

- The focus is on mobility outside of the regular progression, such as mid-year transfer, that often is unexpected and undesirable for the student and the school when compared to the effects of change between school years or early in the term.
- There is no common definition of student mobility, so SEAs and LEAs develop measures of student mobility to meet their needs, resulting in variations in measures, factors, and outcomes across agencies.
  - Calculations may be at the state, district, and/or student level.

Highlights from Chapter 1

- Research suggests that even expected promotional moves produce a negative effect on student achievement; additional moves only compound that effect.
- SEAs and LEAs play an essential role in tracking, measuring, and addressing student mobility.
  - Access to accurate, timely data about student mobility at the SEA, LEA, and student levels is critical to making instructional and programmatic choices to provide targeted interventions to students and the schools that support them.
  - Such data might inform the design of interventions intended to address student mobility and, in turn, promote positive student outcomes and increased student achievement.

Chapter 2: How Student Mobility is Measured, Collected, and Used

- **Chapter 2**
  - discusses how student mobility is measured and collected; and
  - how these data are used at the SEA, LEA, and student levels along with best practice recommendations for doing so.

Highlights from Chapter 2

- Different types of mobility measures are defined and calculated at the SEA or LEA levels: churn, stability, mobility, etc.
- Data are used for specific needs, ranging from one of many sources of data to understand schools or districts, or in real time to provide context to school or student conditions.
- Recommendations for measuring, collecting, and using mobility data based on best practices.
  - Measuring, collecting, and using mobility data is not universal. As a result, definitions and factors included are specific to the SEA or LEA, which presents both opportunities and challenges.

Chapter 3: Minimizing the Impact of Student Mobility

- **Chapter 3** discusses:
  - policies and procedures to minimize the impact of student mobility from the SEA, LEA, and student levels;
  - structural supports that scaffold these efforts;
  - recommendations for best practices to minimizing the impact of student mobility on schools and students; and
  - checklists to be used to highlight considerations and actions associated with record transfers.

Highlights from Chapter 3

- While student mobility cannot be avoided, efforts should be in place to reduce its impact on students and schools.
  - Prompt records transfer
  - Credits transfer
- SEA-level supports for students to reduce learning disruptions and ensure student success, which may include policies, data, and information for LEAs. Several SEA-level examples are included.
- LEAs have implemented a variety of policy and practical solutions to reduce the impact of mobility on schools and students. LEA-level examples are included.
- Many of the supports for mobile students at the SEA and LEA levels are systemic initiatives, ultimately intended to minimize the impact of mobility on students, including specific student groups such as migratory and homeless students, students in foster care, and students associated with the juvenile justice system.

Highlights from Chapter 3

- Structural supports for students to reduce learning disruptions and ensure student success
  - FERPA
  - Data security considerations
  - Records transfer for specific mobile populations
- Recommendations for minimizing the impacts of student mobility based on best practices
- Checklists:
  - Intra-LEA Transfers
  - Within-State Transfers
  - Out of-State or Out-of-Country Transfers
    - Data Collection and Analysis
    - Data Practices and Records Transfer
    - Policies

Case Studies from States and Districts

- **California Department of Education:** developing the stability measure and using it to improve youth services.
- **Clayton County Public Schools (GA):** using Statewide Student Identifiers and Entrance and Exit Codes to Track Student Mobility
- **Loudoun County Public Schools (VA):** creating visualizations of student mobility.
- **Washington County Public Schools (MD):** supporting intra-LEA and out-of-state student mobility.

Conclusion

- The absence of a common definition of student mobility gives SEAs and LEAs the opportunity to define, measure, and calculate student mobility in a way that provides the best data to answer their questions about it.

Questions and Discussion

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.

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