Technology Committee (TECH) Meeting Summary
Tuesday, July 12, 2022

TECH Committee Kick-off

TECH Chair Dawn Gessel, Putnam County Schools (WV), and TECH Vice Chair Chandra Haislet, Maryland State Department of Education, welcomed members to the meeting and led the group in introductions. Dawn briefly reviewed major activities and discussions from the 2021 TECH virtual meeting and reviewed the 2022 meeting agenda.

Opening Session Follow-up: Cybersecurity

Members used a word cloud displaying members' top takeaways to begin a follow-up discussion about the cybersecurity presentation by Steven Hernandez, U.S. Department of Education (ED). Members shared that Steven's presentations and the useful federal resources highlighted in these presentations have improved their agencies' cybersecurity posture. Key takeaways include the following:

- Cybersecurity threats affect all agencies.
- Agency data are only as secure as the security practices of staff, partners, and vendors.
- Trust, but verify, that all vendors are held accountable for fulfilling their contractual requirements.

Members shared cybersecurity strategies for state and local education agencies (SEAs and LEAs):

- Start by adopting a component of zero-trust architecture, then continue to work towards a complete zero-trust model.
- Enable security default settings so users do not have to enable them.
- Unique passwords, multi-factor authentication (MFA), and security tokens are necessary.
- Only allow authenticated users to join the network.
- Follow the rule of least privilege for all users and accounts.
- Disable accounts as people leave the agency.
- Disable email addresses that send phishing or spoofing emails.
- Leadership buy-in and support are essential.
- Guidance and communications from SEAs must be coupled with the same from LEAs.
- SEAs can procure statewide resources (such as training or insurance) for LEAs.
- Back up data regularly.
- Destroy data that are no longer needed.
- Use resources developed by ED Student Privacy Policy Office (SPPO) (https://studentprivacy.ed.gov/).
- Provide cybersecurity training to all end-users of information and data systems. Strategies include
    - repeating training for all LEA staff that use SEA data systems;
    - offering a course in the agency learning management system (LMS).
    - developing specialized training tailored to staff roles and technical knowledge;
    - recording training sessions for future references; and
    - assigning required training.

Wednesday, July 13, 2022

Systems and Technology

Members responded to a poll about what types of technologies and systems their agencies adopted or updated in the past year. Data dashboards and visualizations was the most common response. Dawn then led a discussion about system and technology modernization and innovation at the state and local levels.

Modern Technologies for Data Management, Integration, and Reporting

- Any data system will need to be assessed and modernized periodically, as data security requirements and technology advance. For example, password managers and single sign-on (SSO) applications are both being deployed to strengthen security.
- Several agencies are looking to modernize their rostering processes and systems.
- Important questions to consider when deciding whether and when to modernize a data system include the following:
    - What is the business case?
    - What is the current system not doing that you need it to do?
    - What do users need in the next system lifecycle?
    - What resources, funding, and support are available?
    - Will the modernized system be agency-built or vendor-provided? Staff sustainability, costs, and documentation all play a role here.

Kelly Worthington, Barbara Timm, and Ross Santy, National Center for Education Statistics (NCES), delivered a presentation to the Forum earlier in the year about the modernization of ED*Facts* that is currently underway.

- TECH SEAs are particularly eager for ED*Facts*' streamlined and enhanced pre-submission data quality checks, which will allow SEAs to respond to business rule failures before submission rather than after.
- Several SEAs shared that they use Generate, (https://ciidta.communities.ed.gov/#program/generate), with some states further along in the adoption process than others. Generate is a free software application that improves data quality and automates reporting for SEAs through standardization. Generate uses the Common Education Data Standards (CEDS) (https://ceds.ed.gov) data model and its elements, definitions, and option sets as standardized data definitions for the purpose of transforming unit record data into the aggregate data sets required for ED*Facts* reporting (https://ceds.ed.gov/generateInfo.aspx#).

K–12 Innovation and Emerging Technologies

- Assessments:
    - Assessments at the start, mid-point, and end of the school year are an appealing option for some agencies, as are adaptive assessments.
    - Norm-referenced assessments can be used for school improvement planning, teacher professional learning communities (PLCs), and Multi-Tiered System of Supports (MTSS).

    - Regularly updated assessment data reports provide teachers with near real-time data that can be used to improve teaching and learning, but this timeliness comes with the trade-off of sharing data before all quality checks have been made.
    - One SEA's assessment office worked with the state's assessment vendor to create videos that would explain to parents how to interpret their student's performance on summative assessments.
- LMSs, student information systems (SISs), grade books, and other data systems need to work together. System standardization, interoperability, and common data standards can support data movement between assessment systems and other agency data systems. Alignment with state academic standards is also needed to improve data use.
- Several agencies have created separate virtual districts or schools to meet the needs of students and families.
- Parents typically appreciate it when LEAs seek to maximize the benefits of education technology, but they also need to be provided with support and resources to help their students use that technology at home.
- Virtual parent-teacher conferences have been well-received, and many agencies have continued this method when schools opened for in-person learning.
- Using the same virtual learning technology and tools can help students, parents, teachers, and information technology (IT) staff but some variation may be necessary. For example, teachers with the time and skill to prepare all instructional materials in advance could use an LMS, while a less-robust, simpler tool could be used by teachers focused on providing real-time instruction.

Members noted that their discussions on modernization and innovation best practices relate to their discussions earlier this year on LMSs, statewide longitudinal data systems (SLDSs), and artificial intelligence and machine learning (AI+ML). Technology innovation can provide users with many new benefits but requires them to adapt to a new way of doing things. Standardization, interoperability, and resources that expand the range of available educational materials are all essential to this work.

Changing Workforce Uses of Technology

- Some agencies adopted online recruitment and hiring processes during the pandemic, while others have used online processes for many years.
- New staff technologies have advantages such as streamlined data entry and credential verification.
- Data security, integration with other agency systems, and equitable access for those who do not have a computer or internet are important considerations.
- Different strategies for keeping personally identifiable information (PII) private and secure include using ID numbers instead of Social Security numbers and limiting collections to only collect required data.

Future Evolutions and Looking Ahead

- Many agencies expanded their digital equity efforts and end-user technology support during the pandemic; demand for these projects is expected to continue.

- Financial and human capital must be invested for sustainability. Focusing on core services, one-time system updates, and planning for minimum staffing and budgetary allocations long-term can help ensure time-limited funding is used wisely.
- Leadership buy-in and stakeholder engagement are key to project implementation. This also helps establish a shared vision for making changes. An effective approach for one LEA has been to listen to stakeholders through multiple channels (surveys, forums, tours), develop a response, then communicate back to stakeholders what they shared and how the agency will respond. Other engagement methods cited by members include communications software and parent portals.
- Engaging with stakeholders virtually can be challenging. Strategies that can improve virtual and hybrid engagement include skilled facilitators, small group discussions focused on tangible questions, and shorter, more frequent meetings.
- Breaking up the implementation process into smaller steps, beta-testing, and introducing a new system in increments can make it easier for users to adjust to a new system.
- Challenges to modernization efforts include resistance to change and negative experiences in the past influencing future decision-making.

Forum Working Groups

Civil Rights Data Collection (CRDC) Reporting Focused Working Group Update

Georgia Hughes-Webb, West Virginia Department of Education, provided an update on the CRDC Reporting Focused Working Group. In 2018, the Forum released the *Forum Guide to Reporting Civil Rights Data* (https://nces.ed.gov/forum/pub_2017168.asp), which presents a variety of effective methods through which LEAs report civil rights data to ED's Office for Civil Rights. The guide includes an overview of the CRDC, a discussion of the challenges and opportunities in reporting civil rights data, an explanation of the CRDC reporting process, and six case studies that examine how education agencies report civil rights data. Since the publication of the 2018 guide, more SEAs have begun supporting LEAs with CRDC reporting, including reporting CRDC data for their LEAs. The Forum determined that a supplement to the original document was needed and convened the CRDC Reporting Focused Working Group to develop a supplement that will identify best practices and include several detailed case studies from states that report the CRDC for their LEAs.

Data Quality Discussion

The Forum recently convened a new working group to update the *Forum Guide to Building a Culture of Quality Data: A School and District Resource* (https://nces.ed.gov/forum/pub_2005801.asp). Members noted that data technology and IT staff can promote data quality, with key points from the discussion summarized as follows:

- Automated, nightly data checks help ensure quality. It is also less burdensome to correct data routinely throughout the year than to wait until the end of the school year.
- Technology tools are not a standalone solution. Frequent communication, habitual training, and resources are just as important.
- Tools and reports such as dashboards, visualizations, data drills, and error reports encourage staff to take ownership of the data.

Dawn led a discussion on how technology influences the key characteristics of a culture of quality data:

- *Accuracy.* Front-end quality checks, such as field validation, are more efficient than back-end checks.
- *Specificity.* Technology-enabled data processes result in higher-quality data when IT staff work with data staff to plan out the needs, purpose, and use of the data.
- *Security and Privacy.* Overarching system controls can ensure data privacy and security.
- *Utility.* Implement data minimization practices so systems only contain needed data.
- *Timeliness.* Automated processes make it easier to update data and push out the most current information.

TECH Election

Chandra Haislet was nominated as the 2022–23 TECH Chair and Andrew Swickheimer, Noblesville Schools (IN), was nominated as the 2022–23 TECH Vice Chair.

Thursday, July 14, 2022

Digital Equity Working Group Update

Chandra provided an update on the Digital Equity Working Group. The Forum convened the Digital Equity Working Group following the Forum's discussions at the summer 2021 meeting. Digital inequity has been a long-standing issue in the education community, and the coronavirus disease (COVID-19) pandemic further exacerbated the already broad gap between those who have adequate access to computing devices and the Internet and those who do not. The working group developed the *Forum Guide to Digital Equity* (https://nces.ed.gov/forum/pub_2022098.asp) to help education agencies close digital equity gaps by collecting comparable data, using those data to provide devices and sufficient access to the Internet to students, and collaborating with stakeholders. The resource defines digital equity, explains the importance of having comparable, high-quality digital equity data, and discusses how those data can be used to identify issues, prioritize action, and create new programs or sustain existing efforts to address digital inequities.

Topics from the Floor

Dawn opened the floor for members to discuss topics of interest that were not addressed during planned conversations. Members discussed the following topics:

- *Federal student aid application data.* States use different approaches to share application submission and completion data, including providing directory information to the state's postsecondary education agency, providing lists of students who have not completed an application, and sharing the data with LEAs in the statewide SIS. Federal guidance on the use of financial aid information for program evaluation and research is available at https://studentprivacy.ed.gov/resources/guidance-use-financial-aid-information-program-evaluation-and-research.
- *Geographical information system (GIS) data.* SEAs and LEAs are at different points in the process of using GIS data, with some successfully integrating this information into their data systems, and others considering the most effective way to do so. Potential uses include estimating poverty levels, distributing benefits to households, creating bus routes, and analyzing internet capabilities. Major challenges include rural areas, apartment buildings, multiple addresses, and address validation. Chandra offered to provide an update to TECH next year on her agency's progress toward developing a neighborhood

indicator of poverty: https://marylandpublicschools.org/Blueprint/Documents/Reports122021/InterimReportOnNeighborhoodIndicatorsOfPoverty.pdf.

- *Education technology apps.* Best practices for protecting student data privacy and PII include developing a policy for reviewing service and app agreements, implementing procedures on the use of agency-approved apps in the classroom, training staff to follow privacy policies and procedures, leveraging the work of other agencies that have vetted apps and negotiated privacy agreements, and being transparent with parents and students. ED SPPO has related resources on apps at https://studentprivacy.ed.gov/Security.
- *Assessment data.* SEAs and LEAs need high-quality, timely assessment data to provide students with the support necessary to improve learning and achievement. SEAs discussed the need for assessment vendors to adopt data standards to allow assessment data to connect with other data more easily in the state. Actions that could help improve assessment data quality and timeliness include
    - the use of innovative and formative assessments throughout the school year;
    - agreement between assessment, accountability, and IT teams; and
    - leveraged procurement and contract processes.

TECH Committee Business

Steering Committee Business/Report

Dawn reported that the Steering Committee discussed the joint sessions and meetings of the Forum's three standing committees. The Steering Committee approved a slate of nominated Forum and Committee officers, which will be voted upon by the full Forum during the Closing Session.

Meeting Review/Future Planning

Dawn thanked members for their participation and led a review of the meeting and a discussion of plans for future TECH meetings.

Members shared the following suggestions for future meeting plans:

- TECH appreciated the ample time devoted to topics from the floor.
- Members benefit from sharing links to resources in the chat during virtual meetings and would like the ability to do so during in-person meetings (for example, allowing members to use a collaborative document to share links).
- While members appreciate the opportunity to meet virtually, they were in consensus that in-person summer Forum meetings are preferable to virtual meetings.
- TECH expressed interest in a winter virtual meeting. The meeting would include time for standing committee discussion and allow members to provide input on agenda topics for a streamlined summer Forum meeting.

Members shared the following topics for future TECH meetings:

- assessment data;
- ED*Facts* modernization, specifically around technical changes; and
- poverty data, including alternative measures of socioeconomic status (SES), Community Eligibility Provision (CEP) data, and free or reduced-price lunch (FRPL).