Technology Committee (TECH) Meeting Summary

Monday, August 7, 2023
Morning Session

TECH Committee Kickoff

TECH Chair Chandra Haislet, Maryland State Department of Education, and TECH Vice Chair Andrew Swickheimer, Noblesville Schools (IN), welcomed members to the meeting and led the group in introductions. Chandra briefly reviewed major activities and discussions from the 2022 TECH virtual meeting and reviewed the 2023 meeting agenda.

Opening Session Follow-up: Forum Working Groups Panel Discussion

Chandra led a discussion following the Forum Working Group opening session panel, which included updates on three Forum working groups: Data Literacy, Technology for Teaching and Learning, and Student Learning Data During Pandemic School Closures and Beyond, presented by Allen Miedema, Northshore School District (WA), Cheryl L. VanNoy, Saint Louis Public Schools (MO), and Jon Wiens, Oregon Department of Education.

TECH members compared the presentation themes with their own agencies' experiences, primarily focusing on data literacy in the follow-up discussion. Members shared that responding to requests for data is a complex process and discussed the data literacy-related challenges state and local education agencies (SEAs and LEAs) encounter in fulfilling these requests. They also outlined strategies their agencies employ for sharing data with internal and external stakeholders. Key takeaways include the following:

- Requests for data should include a clear question so that SEAs and LEAs can decide which data are appropriate to share in response to the question being posed. Agencies may implement formal data request processes to help clarify requests.
- Levels of data literacy vary among SEA and LEA staff and stakeholders. Agencies aim to achieve a balance when sharing data with internal and external stakeholders, considering how much detail is necessary to provide context without potentially overwhelming recipients with information.
- Agencies may find it useful to implement systems for tracking data requests and data use.
- SEAs and LEAs vary in their policies and culture around data sharing, including how often requests are granted or declined, as well as what data are posted publicly.
    - Some agencies have predetermined criteria that define when data should be shared externally, such as parameters around eligible research projects.
    - Agencies may take cost and other resources into consideration to determine their capacity for fulfilling requests.
    - States may have defined research agendas that help guide agencies in establishing which data requests to prioritize based on how well they align with the research agenda.
- Data sharing agreements often include a requirement to submit proof of destruction of data when the data are no longer in use.

- Some agencies use online training resources for staff who work with data, including the Forum's Data Ethics Course (https://nces.ed.gov/forum/dataethics_course.asp) and the U.S. Department of Education (ED) Family Educational Rights and Privacy ACT (FERPA) training modules, FERPA 101: For Local Education Agencies (https://studentprivacy.ed.gov/training/ferpa-101-local-education-agencies) and FERPA 201: Data Sharing Under FERPA (https://studentprivacy.ed.gov/training/ferpa-201-data-sharing-under-ferpa).

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Afternoon Session

Joint Session Follow-up: Cybersecurity in State and Local Education Agencies

Chandra led a follow-up discussion about the cybersecurity presentation by Steven Hernandez, U.S. Department of Education. Members expressed appreciation for Steven's presentation and the federal cybersecurity resources he highlighted. TECH members shared their key takeaways and how the presentation related to their own agencies' experiences. Some SEAs and LEAs are working toward zero-trust architecture, although members described this goal as an ongoing process without a definitive finish line. Cybersecurity strategies that some agencies have implemented include

- assigning unique staff IDs instead of tying accounts to staff Social Security numbers;
- removing staff email addresses from agency websites;
- requiring multi-factor authentication for access to agency accounts; and
- using automated systems to delete employee accounts that no longer are in use.

Members discussed strategies for LEAs that have fewer resources to allocate to cybersecurity efforts and learned about work some SEAs are doing to support their LEAs, such as providing a statewide firewall or scanning services for viruses, facilitating training workshops, and funding technology and cybersecurity-related staff positions. Members shared their knowledge of, and experiences with, federal resources such as Risk and Vulnerability Assessments (https://www.cisa.gov/resources-tools/resources/risk-and-vulnerability-assessments) conducted by the Cybersecurity and Infrastructure Security Agency (CISA) and tabletop exercises facilitated by ED's Privacy Technical Assistance Center (PTAC) (https://tech.ed.gov/privacy/). They discussed the importance of including broader categories of agency employees, in addition to information technology (IT) staff, in cybersecurity training exercises.

Members reviewed the lessons from Steven's presentation they planned to bring back to their agencies, including the following:

- Education now is the top sector targeted for cybersecurity incidents. Education agencies should be aware of this new reality.
- Funding and resources are available to support preventative cybersecurity measures for SEAs and LEAs, such as tabletop exercise workshops and risk assessments.
- SEA and LEA leadership should be aware of the types of data their agencies maintain, the potential consequences of those data being lost or stolen, and the time, cost, and steps involved in recovering from a data breach. Investment in IT should go beyond the purchase of devices to include maintenance, support, and security measures.

Online Learning

Chandra led a discussion about online learning and how states are approaching digital citizenship, equity and inclusion related to digital resources, online learning design, and virtual professional development.

- **Digital Citizenship**—SEAs and LEAs foster digital citizenship among students, parents, and teachers through various strategies. TECH members noted that artificial intelligence (AI) is a growing area of interest and use, and discussed that students need training to learn to use AI tools responsibly. SEAs and LEAs may have requirements for students to complete digital citizenship-specific coursework, or digital citizenship may be integrated throughout the curriculum more generally. Agencies have created learning resources geared toward the youngest students to introduce basic digital citizenship concepts early. Some states have received grant funding to support these efforts.
- **Equity and Inclusion Related to Digital Resources**—Members discussed strategies for voluntary data collections on equity and inclusion issues. State staff responsible for collecting equity and inclusion-related data have had success partnering with community or school events to meet with parents and families and connect them to the agency's digital tools. Members noted that multilingual in-person support and translations of email and school forms can help ensure that all families can access school resources and submit important household information. SEAs and LEAs have employed various methods to equip households with internet connectivity, including engaging in community partnerships, undertaking Geographic Information Systems (GIS) mapping and data analysis projects, and applying for grant funding to increase resources to support households.
- **Integrating Social-Emotional Learning (SEL) Into Online Learning**—TECH members shared their approaches to SEL and online learning, such as incorporating SEL curricula into their learning management systems (LMSs). In one LEA, the K-5 SEL curriculum and a middle school SEL assessment have been added to the LMS so that agency leaders can see which schools are using it, and building leaders can see who is engaging with the curriculum and access some SEL data for analysis. An SEA associate shared that their agency includes SEL surveys for parents as a part of online registration processes. In some agencies, many metrics rely on SEL data, while other agencies no longer administer SEL surveys.
- **Online Learning Design—**Members discussed that online instructional design is a challenge, noting that not all teachers have training or experience in this area. Some LEAs have created templates, model lessons, and other resources to support educators, with positive results. Many schools use online tools to support in-person teaching and learning. Some SEAs and LEAs invested in setting up online platforms during coronavirus disease (COVID-19) pandemic school closures but have scaled back their use since schools reopened. Conversely, some states and districts have seen select students switch to virtual learning permanently following the pandemic. Finally, some LEAs offer hybrid models that provide students the flexibility to engage in both face-to-face and virtual learning.
- **Virtual Professional Development**—Professional development for educators and staff often includes virtual elements. TECH members shared that some SEAs and LEAs have

created online portals for required training sessions. Compliance-related training may be available in an LMS, as well as face-to-face. In communities where home internet connectivity remains inaccessible to many staff, professional development opportunities must be offered in person.

Postsecondary Electronic Standards Council (PESC) Data Summit Report

DeDe Conner, Kentucky Department of Education, attended the PESC Data Summit on behalf of the Forum. DeDe shared that PESC focuses primarily on postsecondary data standards. PESC is moving toward a focus on the full learner lifecycle, considering not only the traditional school experience and value of the academic transcript but also

- formal and informal training (non-credited);
- the portability of data (data wallet);
- how to quantify performance, progression, potential, passion, and purpose; and
- adding job skills tags to courses.

DeDe also shared that changes are coming to the Free Application for Federal Student Aid (FAFSA) in the 2024-25 school year.[1]

Tuesday, August 8, 2023
Morning Session

Data Innovations and Education

Chandra led a discussion about data innovation topics of interest and how states are dealing with AI, data science, data mining, and learning analytics.

- **AI—**Most TECH members' agencies do not have formal policies around the use of AI, and members discussed that AI is incorporated into many tools that SEAs and LEAs already use. While AI-powered tools can increase agencies' capacity and productivity, they also require oversight. A member provided an example of an AI tool that can enable staff to search through all organizational files unless the files are tagged proactively with levels of security. Some agencies are working with educators on positive ways to use AI to support teaching and learning, such as generating drafts of lesson plans; other beneficial uses discussed include language translations and online homework help. Members discussed the intersection of AI and equity, noting that over time, there may be a growing gap between the quality of free and paid AI services. Members referenced the Office of Educational Technology's (ED) new policy report, *Artificial Intelligence and the Future of Teaching and Learning: Insights and Recommendations* (https://tech.ed.gov/ai-future-of-teaching-and-learning/), and expressed interest in the TECH standing committee further exploring this topic.

[1] More information is in the U.S. Department of Education's Office of Postsecondary Education Dear Colleagues Letter, *Free Application for Federal Student Aid (FASFA) Simplification Act Changes for Implementation in 2024-25*: https://fsapartners.ed.gov/knowledge-center/library/dear-colleague-letters/2023-08-04/fafsa-simplification-act-changes-implementation-2024-25.

- **Data Science and Data Mining—**Members discussed the distinction between data collection and reporting versus data analysis and research, noting that SEAs and LEAs may collect large quantities of data but have limited staff resources to review trends and longitudinal data. Members discussed the role of data scientists as encompassing both computer science and math, exploring AI, and closely reviewing the outliers in agency data. Members discussed the challenges of filling data science staff positions in the public sector, as well as brainstormed solutions, such as leveraging vendors' capacity to do this work or participating in collaborations with local higher education institutions, between LEAs and SEAs, or among agency specialists. The discussion returned to AI, as members noted that AI tools increasingly are able to predict outcomes based on prior data.
- **Learning Analytics—**Members defined learning analytics as analytics that support the instructional side of learning. They shared that multi-tiered systems of support (MTSS) are a powerful use of AI to help personalize learning for students. Education agencies aim to achieve a balance in the use of technology in schools, noting that parents may prefer that students spend less time on a computer while recognizing that technology can help identify which students need more support or enrichment. Members discussed the variation in resources among small, medium, and large LEAs to support research and data analytics. Some SEAs have taken on the responsibility of providing learning analytics tools to LEAs statewide.

Educator Workforce Data

The Forum is convening a new working group on the topic of educator workforce data. Chandra led a discussion about the types of challenges LEAs and SEAs face in collecting and aligning data on the courses that teachers are qualified, or endorsed, to teach and the courses they are assigned to teach.

While an SEA may have a robust licensure system, tracking vacancies at the local level can be a challenge, and the types of information tracked by agencies vary. Some LEAs and SEAs track exit reasons when educators leave positions but find that they are receiving requests for greater levels of detail from leadership in response to teacher shortages. Members also raised the question of what exit information can be shared legally. They noted a disconnect between human resources or credential systems and SISs and agreed that education agencies would benefit from better interoperability between those staff data systems. Some agencies have adequate systems for tracking certified staff but lack centralized systems for non-certified staff.

Members discussed solutions their agencies have developed to address workforce data-related challenges, such as managing teacher supply and demand or ensuring that vacancies can be quickly and effectively filled, and shared lessons learned in collecting, analyzing, or implementing the related data. Increasingly, agencies prefer to maintain data in one repository and several members noted that their SISs collect staff information. Some members would like to see an educator certification system that tracks professional development integrated within an SIS.

Members addressed how their agencies use proxy measures to estimate the number of vacant positions. Some states track long-term substitute teachers as a barometer of vacancies. Members raised the question of how teacher vacancies are defined, and whether vacancies refer to open job

listings or include classes taught by educators who are not qualified to teach their assigned courses. Creative solutions to educator shortages, such as employing one teacher to move between two schools, or offering online learning where an in-person instructor is not available, can add further complexity to quantifying vacancies. TECH members agreed that a standardized, nationally recognized definition for educator vacancies would help clarify discussions about educator workforce shortages.

Tuesday, August 8, 2023
Afternoon Session

ED*Facts* Modernization Update

Chandra welcomed Kelly Worthington and Barbara Timm, National Center for Education Statistics (NCES), who delivered a presentation on ED*Facts* modernization efforts and the original recommendations the Forum provided ED*Facts*. The team has made strides forward on all the Forum recommendations on file due dates, modernization of the system, post-submission edits, and Common Education Data Standards (CEDS) connections. Forum members voiced support for the changes they have seen in the ED*Facts* system this year, including the decentralization of SEA reporting roles, the way data notes can be provided, and the system itself. Members asked if the system could be opened earlier and prompted ED to consider using data visualizations to review data quality.

Data Systems Breakout Discussions

TECH had small group breakout discussions about aging data systems and working with IT partners. Members agreed that most agencies have some aging systems in place, and a key consideration for agencies is whether to buy or build new systems. Members noted that not all LEAs employ IT professionals, especially in rural areas. Hiring contractors to fill IT roles with short-term funds offers a temporary solution to these gaps. Working with vendors on data systems brings new opportunities and challenges, some of which have evolved since the COVID-19 pandemic. Members discussed the importance of including sunset language in contracts, as well as standard language specifying that the agency, rather than the vendor, owns the data.

Joint Session Follow-up: Data Privacy

Chandra led a discussion following the data privacy presentation by the PTAC Team. The "Anatomy of a Hack" demonstration provided insight into how hackers target data in education agencies' systems. TECH members shared thoughts and reactions to the presentation and key lessons to take back to their agencies.

Members expressed interest in connecting their agencies with systemwide audits or bootcamps to address cybersecurity practices, noting that cybersecurity may not be a top priority for leadership who are less involved with agency data or who may lack training on the ramifications of sharing data without proper systems and security protocols in place. They discussed points of infiltration for cybersecurity incidents, including aging systems and machines, vendor data breach incidents, user error, and the vulnerabilities in the internet of things (IoT). They explored ways SEAs can support LEAs in cybersecurity efforts, such as running scans of statewide networks and offering

incident support. One SEA facilitates working groups of IT directors, who are paired with their counterparts in similar sized districts.

TECH members felt the PTAC presentation complemented Steven Hernandez's cybersecurity joint session presentation, demonstrating a real-world example of how easily hackers can exploit a vulnerability within an agency. They expressed appreciation for PTAC and ED resources that support LEA and SEA efforts to ensure student data privacy. PTAC is available to provide online or on-site technical assistance and presentations on privacy-related topics free of charge to requesting organizations. More information about requesting training and technical assistance is available at https://studentprivacy.ed.gov/request-ptac-training-or-technical-assistance. Members discussed that federal training resources could be useful for researchers who work with agency data, in addition to agency staff.

TECH Election

Andrew Swickheimer was nominated as the 2023-24 TECH Chair, and Scott Gausland, Rhode Island Department of Elementary and Secondary Education, was nominated as the 2023-24 TECH Vice Chair.

Wednesday, August 9, 2023
Morning Session

Topics from the Floor

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

- **Returning to traditional schooling after the COVID-19 pandemic**—members shared that their agencies continue to experience effects from the pandemic, noting that attendance data and school lunch data have not returned to pre-pandemic data patterns and norms. They discussed the long-term changes in free and reduced-price school lunch data with newer programs such as the Community Eligibility Provision (CEP), noting that school lunch data no longer can serve as a good proxy for estimating socioeconomic status in schools. The *Forum Guide to Alternative Measures of Socioeconomic Status in Education Data Systems* (https://nces.ed.gov/forum/pub_2015158.asp) provides "encyclopedia-type" entries for eight plausible alternative measures of socioeconomic status (SES). This resource helps readers better understand the implications of collecting and interpreting a range of SES-related data in education agencies.
- **Race/ethnicity data**—Members discussed a 2023 Office of Management and Budget (OMB) Federal Register notice proposing revisions to the collection of race/ethnicity data, which would affect all federal agencies. As guidance is developed, Forum members may be able to attend listening sessions to learn more.
- **Forum resources**—Forum member responsibilities include disseminating Forum products to colleagues and subject matter experts within the member's home state through relevant state and local activities, networks, and professional meetings. TECH members brainstormed formats for future Forum resources to support dissemination efforts, such as developing new courses, writing white papers, creating videos to

highlight case studies and vignettes, hosting interactive workshops, and preparing modifiable slide deck presentations that could be used for training purposes within SEAs and LEAs. They also discussed options to highlight key takeaways from Forum guides and to search for and locate content more easily across existing Forum publications. Finally, they reviewed the possibilities for methods of dissemination, such as blogs, webinars, newsletters, and social media.

TECH Committee Business

Steering Committee Business/Report

Chandra 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

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

Members shared the following suggestions for future meeting plans:

- Balance large group discussions with smaller breakouts.
- Focus on developing actionable items out of meeting discussions.
- Include presentations from TECH members to the standing committee.
- Add additional presentations and updates from ED within committees or at joint sessions.

Members shared the following topics for future TECH meetings, including updates from other standing committees on applicable topics:

- Privacy of staff data
- AI
- SCED

Members expressed appreciation for the chance to meet in person for the first time since the pandemic. They shared that they enjoyed the quality of the conversations and hearing different member perspectives.