Technology (TECH) Committee Meeting Summary

Monday, July 12, 2021

TECH Committee Kickoff

TECH Chair DeDe Conner (Kentucky Department of Education) and TECH Vice Chair Dawn Gessel (Putnam County Schools, West Virginia) welcomed members to the meeting. TECH participants introduced themselves, noted their agency/organization, how long they have been attending Forum meetings, and a recent success in their professional or personal life. DeDe briefly reviewed major activities and discussions from the 2020 TECH virtual meeting and reviewed the 2021 meeting agenda.

TECH Committee Business

Postsecondary Electronic Standards Council (PESC) 2021 Report

DeDe Conner attended the PESC Data Summit on behalf of the Forum. The Data Summit featured presentations on data systems and standards; technology; data privacy, quality, management, collection, and reporting; and mobility and interoperability. Although PESC has a postsecondary and international emphasis, DeDe noted that many of the sessions overlap with the Forum's interests, including the importance of data standards and the advances and continuous improvements in data management practices. Sessions also addressed how to expand transcripts beyond paper records of course performance to digital records that include relevant non-coursework experience that students gain in and out of the classroom and bring with them into the workforce. Michael Sessa (PESC) thanked the Forum for its participation.

International Society for Technology in Education (ISTE) 2021 Report

Andrew Swickheimer (Noblesville Schools, Indiana) attended the 2021 ISTE meeting on behalf of the Forum. ISTE 2021 presentations focused on equality and inclusion; instructional design and delivery; distance, online, and blended learning; artificial intelligence (AI); storytelling and digital media; maker culture and gamification; and many more. The theme of the conference was designing a new learning landscape, an apt theme given the coronavirus disease (COVID-19) pandemic. The opening keynote address featured Miguel Cardona, Secretary of the U.S. Department of Education. The Secretary highlighted the Safer Schools and Campuses Best Practices Clearinghouse (https://bestpracticesclearinghouse.ed.gov/), which provides collections of lessons learned from the field as schools, early childhood programs, and campuses continue to reopen following closures due to the COVID-19 pandemic.

COVID-19: Technology Lessons Learned and Best Practices

DeDe Conner and Dawn Gessel led a discussion on technology best practices and lessons learned during the COVID-19 pandemic.

Providing Technology to Students and Staff

TECH members shared the following challenges to providing technology to their students and staff during remote schooling:

- Local education agencies (LEAs) that provided devices or new systems for the first time (1:1 program, learning management system [LMS], etc.) found that some parents and students were overwhelmed.
- Agencies that did not have devices on hand had to wait months for orders to be fulfilled.

- 1:1 programs are high-cost and may not be financially sustainable without additional funding.

TECH members shared the following strategies for providing devices and associated resources:

- The Universal Service Fund Schools and Libraries Program (commonly called E-Rate) provides discounts to assist U.S. schools and libraries in obtaining affordable telecommunications and internet access: https://www.usac.org/e-rate/.
- Engage in cost-saving best practices, such as
    - bond initiatives;
    - recycling, repurposing, or selling older devices;
    - phasing out computer labs and classroom lab carts that are no longer needed; and
    - switching to collaboratively developed curricula, open education resources (OER), or online textbooks.
- Have a plan to refresh student devices periodically (for example, issue new devices in 1st, 5th, and 9th grade).
- Set up a 24/7 help desk to assist parents, students, and teachers.
    - Create a form to capture information as users call in, then report the information back to schools so they address common challenges.
    - Provide opportunities for students to work the help desk in a limited capacity.
    - Consider continuing help desk support after school and in the evenings.

Digital Equity

TECH members shared the following challenges to digital equity while supporting students remote learning:

- Students need access to devices and internet service to participate in remote learning—one without the other is not sufficient.
- "Adequate" access is a nebulous definition.
- It was difficult for some agencies to identify students who do not have adequate access.
- Cell towers and hotspots sometimes do not work in rural areas.
- Connectivity can be a bigger issue than devices and cannot be fully addressed through 1:1 programs.
- Lessons learned regarding the homework gap have moved to the backburner as students return to schools, but the gap still exists.

TECH members shared the following strategies for digital equity:

- Thinking of internet connectivity as infrastructure (roads and bridges) can generate support for better, and more consistent, internet access.
    - Review broadband access maps to identify gaps.
    - Satellite internet is helping to expand access.
- Government agencies, consortia, and cooperatives can work with local telecommunications services to push connections forward and expand coverage maps.
- State and local government can develop a broadband access plan, such as Maryland's: http://www.marylandpublicschools.org/stateboard/Documents/2021/0323/BroadbandAccessEfforts.pdf.
- School social workers and counselors can identify students in need of improved access and assist with collecting digital equity data.

Several states and localities implemented new data collections to better understand students' access to the Internet and technology devices. These data can be used to develop coverage maps, identify access gaps, and prioritize resource allocation.

- The West Virginia Department of Education received legislative approval to add the collection on home internet access and devices to its statewide system. The state education agency (SEA) helped LEAs with this data reporting.
- The Nebraska Department of Education surveyed teachers on whether they change their homework assignments based on student home internet access. They required LEAs to report digital equity data to receive Governor's Emergency Education Relief Fund (GEER Fund). The SEA is working with LEAs to embed the digital equity data elements into the fall registration process. Data are published on the SEA's website: https://nep.education.ne.gov/statedata.html#00-0000-000/districttech/20192020.
- The Kentucky Digital Readiness Survey provides a snapshot of technology infrastructures throughout Kentucky schools and districts: https://applications.education.ky.gov/TRS_Reports/#:~:text=Digital%20Readiness%20Reports%20The%20Kentucky%20Digital%20Readiness%20Survey,throughout%20Kentucky%20as%20of%20June%2030th%20each%20year.
- The Indiana Department of Education collects these data from LEAs through technology plan submission: https://drive.google.com/file/d/18m1u1raZcTYHpq0zVZUiPOGGEmXZ55nI/view?usp=sharing.
- Putnam County Schools, West Virginia conducted a technology survey: https://forms.office.com/r/JrE6XqLQYA.
- Hamilton County, Indiana conducted a broadband survey: https://www.surveymonkey.com/r/Preview/?sm=vpu8_2BpkmRHJ2RDlm_2B_2FCaoQ4KsNmMboImUnH2ZHAEMdJZWe0PRRxlXgWuSmZCrSuG.
- The Common Education Data Standards (CEDS) developed several new data elements to support digital equity reporting.
    - The Ed-Fi Alliance worked with several states to set up Application Programming Interface (API) endpoints for collecting CEDS aligned data elements via the student information system (SIS): https://techdocs.ed-fi.org/display/EFDSDRAFT/ED-FI+WORKING+DRAFT+3+-+DIGITAL+EQUITY+COLLECTION.

Using Technology While Working and Learning From Home

TECH members shared their agency's experiences with remote work:

- It was very challenging for some agencies to switch to remote work. Some agencies engaged in remote work before and did not need to establish new policies and processes, while others had never worked remotely.
- The move to remote working motivated some agencies to migrate to the cloud ahead of schedule. Remote work can also motivate agencies to improve their security posture through new policies.
- Many agencies will continue to allow some staff to work remotely in some capacity (either full- or part-time).
- Whereas staff might not have wanted to work remotely before, now many more do. Remote work has been helpful for staff retention and eliminates relocation issues.

- Different offices have different cultures about remote work (for example, whether to use cameras during virtual meetings).
- Managing a remote workforce requires more frequent communication and engagement. Expectations help staff understand what is acceptable behavior when working remotely.
- Some staff have become more productive and collaborative, while others have struggled with collaboration.
- Remote work forced staff to embrace technology and use communications and project management tools that would not have been used before.
- Forwarding office-based phone calls to personal phones was sometimes necessary.
- After-hours IT support for staff was helpful. IT support via phone is sometimes more effective than email.
- Staff that have switched to in-person work at their agencies have continued to meet virtually. This ensures social distancing, but can be taxing.
- Some agencies revisited their data-sharing practices related to school lunch program data, direct certification data, and missing children/child protective services data.
- The continued use of remote work has implications for agency office space.
- It can be helpful to simplify office supply ordering and reimbursement processes.

Tuesday, July 13, 2021

Cybersecurity, Data Privacy, and Data Security

DeDe Conner and Dawn Gessel led discussions on cybersecurity, data privacy, and data security, with an emphasis on protecting virtual environments.

Opening Session Follow-up: Cybersecurity

TECH members used a word cloud displaying members' top three key takeaways to begin a follow-up discussion about cybersecurity following the presentation from Steven Hernandez (U.S. Department of Education). Members noted that Steven's presentations on cybersecurity are practical, timely, and actionable. They are interested in learning more about zero-trust architecture and mindset, and several have already investigated some of the resources and tools featured in the presentation. Key takeaways include the following:

- Use strong passwords/passphrases and two-factor or multi-factor authentication (2FA or MFA).
- Look into cybersecurity liability insurance.
- Disable nonessential functions, like printing from servers.
- Never share your desktop during virtual meetings.
- Critical infrastructure and utilities, such as heating, ventilation, and air conditioning (HVAC), are vulnerable to attack.
- Student-level data are "clean" data that can be used by future identity thieves.

TECH members shared cybersecurity strategies that they use in their agencies:

- Have all staff and students complete security awareness training, such as phishing simulation.
- Install internet safety filters on all district-issued devices (on- and off-campus) and hotspots and consider limiting hotspot connections to school-provided devices.
- Allow primary students to authenticate with a badge instead of complex passwords.

- Limit students' ability to change their own passwords without authorization.
- Require 2FA, MFA, or single sign-on authentication.
- Only access secure systems from secure work devices.
- Purchase cybersecurity liability insurance.
- SEAs can support LEAs by providing free training, developing guidance, and providing flexibility in meeting security policies.

Protecting Virtual Learning and Working Environments

TECH members shared the following challenges to protecting virtual environments:

- Some stakeholders have a limited understanding of the Family Educational Rights and Privacy Act (FERPA) and how it applies to directory information and school official exceptions.
- Thinking that SEAs, LEAs, and schools are not at risk of a cybersecurity attack or data breach (believing "it won't happen to us").
- Staff who are privacy officers have many other job responsibilities and cannot give virtual learning protection the time it needs.
- Staff had limited time to participate in security and privacy training.
- Staff might be conscious of the need to protect email, but might not consider the risks associated with using apps.
- Staff with agency-issued laptops were able to easily switch to remote work, while those with only desktops needed to use a remote desktop or be issued an agency laptop.
- Parents might not understand why they need to meet agency security requirements when requesting information on their child. School officials can help by explaining to parents that they are protecting their child's information.

TECH members shared the following strategies for protecting virtual environments:

- Codify security and privacy policies and procedures.
- SEAs can support LEAs by providing grants, resources, and data access agreement templates.
- Adopt the National Institute of Standards and Technology Cybersecurity Framework: https://www.nist.gov/cyberframework.
- Include security and privacy in agency continuity of operations (COOP) planning.
- Have a committee or board vet apps for privacy and security.
    - Reviewing apps enables better control over what is being released.
    - Establish different criteria and processes based on the types of data that are collected by the app.
- Use a virtual private network (VPN) or virtual desktop infrastructure (VDI).
- Use built-in system security controls to restrict access, limit access by role, and limit administrator access to only those who need it.
- Limit who can back up data from an LMS and what data can be backed up.
- Use encrypted communication protocols to transfer data files.
- Push out software updates to all agency-issued devices and establish a policy that devices must be shut down at the end of the workday to ensure software updates are made.
- Purchase secure remote work tools (such as teleconferencing software and electronic agreement software) for agency use.

- Add an automated alert to email messages that are issued from outside of the agency.

TECH members shared the following training strategies and resources:

- Require routine security and privacy training for new and existing staff.
  - Embed training in team meetings.
  - Create short training videos.
  - If a staff member fails to complete the training, consider revoking access to secure systems until the training is completed.
- Provide training to parents and students.
  - Host training sessions on how to manage digital devices.
  - Offer training for parents on how they can join the LMS to help them feel more connected to and monitor their student's work.
  - Invite local law enforcement to talk to students about cybersecurity.
- Use cybersecurity software and security awareness training services.
- Hang-up posters about privacy and security.
- Routinely send newsletters on cyber topics and encourage recipients to disseminate the information broadly.
- Leverage resources created by education agencies, associations, and collaborative organizations.
  - Adopt cybersecurity curriculum standards, such as the North Dakota Computer Science and Cybersecurity Standards: https://www.nd.gov/dpi/sites/www/files/documents/Academic Support/CSCS2019.pdf.
  - The *Forum Guide to Cybersecurity: Safeguarding Your Data* (https://nces.ed.gov/forum/pub_2020137.asp) provides timely and useful best practice information to help education agencies proactively prepare for, appropriately mitigate, and responsibly recover from a cybersecurity incident.
  - The U.S. Department of Education's Student Privacy Policy Office (SPPO) and Privacy Technical Assistance Center (PTAC) have a wide variety of training materials on their website: https://studentprivacy.ed.gov/.
  - Student Data Privacy Consortium has resources for schools: https://privacy.a4l.org/resources/#schools.

TECH members reporting using Forum resources related to security and privacy:

- An LEA used the *Forum Guide to Cybersecurity: Safeguarding Your Data* (https://nces.ed.gov/forum/pub_2020137.asp) to formulate a response plan.
- Several agencies use the *Forum Guide to Education Data Privacy* (https://nces.ed.gov/forum/pub_2016096.asp) and the *Forum Guide to Cybersecurity: Safeguarding Your Data* (https://nces.ed.gov/forum/pub_2020137.asp) for staff training.
- Members share Forum publications with other agencies in their state or region.

Topics From the Floor

TECH members appreciated Chris Chapman's (National Center for Education Statistics [NCES]) presentation on the School Pulse Panel. They expressed interest in a full Forum webinar to learn more about the panel so that they can be good advocates for the survey in their states and

districts. Specifically, they would like to know how long the survey will take, what data are being collected, who will use the data, and how the data will be helpful.

Members also discussed how socioeconomic status (SES) data has been impacted by the U.S. Department of Agriculture's (USDA's) decision that all students were eligible for free meals during the COVID-19 pandemic.

- While the program is intended to reduce paperwork, parents may still need to complete forms to validate eligibility for other state programs. LEAs with a mix of Community Eligibility Provision (CEP) schools and non-CEP schools cannot use the same form because the USDA form can only be used for non-CEP schools; this can make it more difficult to fully automate using two separate electronic forms.
- This has been challenging for agencies that do not use a low SES proxy. In some cases, students who were receiving free meals were counted as low SES; once all student meals were free, the school was then counted as 100% low SES unless other provisions for collection were put in place.
- It is challenging to get parents to complete income eligibility forms. Incentives such as free Advanced Placement (AP) exams and transcripts can encourage completion.
- Maryland is developing an alternate form due to recent state legislation.
- Several SEAs are participating in a pilot test of a proposed school-level poverty measure that is part of the SLDS Grant Program. The measure uses census track data and geographic information system (GIS) mapping with home addresses.

Wednesday, July 14, 2021

Virtual Education

DeDe Conner and Dawn Gessel led discussions on virtual education during the COVID-19 pandemic. Topics addressed include attendance, data best practices, technology equity, assessments, learning loss and recovery, and the future of virtual education.

Joint Session Follow-up: Virtual Education and Attendance

TECH members used a word cloud displaying members' top three key takeaways to start a follow-up discussion about virtual education and attendance following the presentation from Forum members.

- Some agencies have considered different approaches to standard practices, such as attendance, grading scales, and penalizing late homework.
- The "new normal" is not being actualized everywhere, and some areas are not planning to retain any changes that were implemented during remote learning.
- Flexibility has been essential for continuity of learning and day-to-day operations during remote learning and will remain necessary as schools return to in-person learning.
- Communication protocols are important—stakeholders needed information to come from a few authoritative sources.

TECH members discussed attendance data:

- Attendance data quality during remote learning was poor, especially for the latter part of school year (SY) 2019-20 after schools closed in March 2020. The data are not comparable to previous years, and in some cases, are only suitable for understanding

attendance during the COVID-19 pandemic. Factors compromising attendance data quality include the following:
    - Asynchronous participation in remote settings is different from in-person attendance.
    - Attendance data definitions and collection processes were subject to confusing rules and changes at the SEA and LEA levels.
    - Attendance data collection was not prioritized.
    - Some agencies did not collect attendance data for SY 2019-20 after schools closed in March 2020.
- Approaches for attendance data reporting and use include
    - including disclaimers that the reported data are not comparable;
    - including health and safety checks in self-reported attendance checks;
    - using attendance data for day-to-day operations, rather than comparative purposes;
    - reaching out to absent students;
    - cross-checking attendance reports with online system log-ins and activity; and
    - using remote attendance data to determine if a student is allowed to switch from in-person to virtual schooling.
- The *Forum Guide to Attendance, Participation, and Engagement Data in Virtual and Hybrid Learning Models* (https://nces.ed.gov/forum/pub_2021058.asp) was developed as a companion publication to the 2018 *Forum Guide to Collecting and Using Attendance Data* (https://nces.ed.gov/forum/pub_2017007.asp), drawing upon the information included in that resource and incorporating lessons learned by SEAs and LEAs during the COVID-19 pandemic.

Best Practices for Virtual Education Data

TECH members identified key virtual education data elements, including

- data elements that distinguish between preapproved online curricula and curricula that are adapted to remote learning and have not been preapproved;
- attendance data (synchronous instruction resulted in comparable definitions and data, while asynchronous attendance differed in some areas, like tracking assignment completion);
- a missing assignment flag that can be used to measure engagement (if a student is flagged for missing or late assignments, school officials can reach out to parents);
- LMS data such as login time, time in course, and assignment completion; and
- digital equity data, participation data, and period-based data.

TECH members discussed tracking different learning models:

- Many SEAs and LEAs began tracking learning modality at the student, grade, or course level. Some agencies plan to continue collecting these data.
- There is interest in comparing student data based on learning modality.
- The Ed-Fi Alliance developed a resource to help agencies leverage standardization to better understand student modality, attendance, and engagement data: https://www.ed-fi.org/assets/2020/10/Student-Modality-and-Attendance-Data-for-School-Year-2020-21.pdf.

TECH members discussed virtual education data collection, management, and use:

- Data collection challenges were more common than use and availability challenges.
- Sometimes it is better to apply established data elements to new situations than create new codes.
- Data collectors and reporters must be on board with changes.
- It would be helpful to create placeholder virtual education codes that can be deployed in future scenarios.
- SIS vendors implemented refinements and updates, but these were not commonly utilized by SEAs and LEAs.
- One SEA is considering changing its attendance data submissions from an annual to a monthly basis.
- Parent portals received mixed results. Some parents were overwhelmed with notifications, while others appreciated knowing their student's performance.
- The Data Quality Campaign developed a resource to help build public trust in data: https://dataqualitycampaign.org/resource/consumers-guide-to-data/.

Conducting Assessments

TECH members discussed assessments during remote learning:

- In-person assessment requirements varied.
    - Some agencies required remote students to take assessments in person, others allowed remote assessments, and some did not assess remote students.
    - Some subject-specific assessments could be completed remotely, while others had to be taken in person.
    - Remote proctoring was not feasible for some agencies.
    - In some cases, students who chose not to take in-person assessments were not penalized.
- Seating arrangements for in-person testing needed to be adjusted for social distancing.
- Standardized assessment data and grades have many of the same data quality issues as attendance data.
    - "Do no harm" approaches meant that grades and assessment results from the end of SY 2019-20 could not be scored lower than in-person scores from the previous part of the SY.
    - Remote assessment results were not always reflective of student performance.
- Some agencies noted they will only share participation assessment rates on report cards.
- Researchers are investigating differences in assessment data by learning modality for diagnostic purposes. Assessment data could then be reported together or separated by learning modality. Noted limitations include security, validity, smaller sample sizes, and reduced reporting.
- NWEA researched the psychometric characteristics and indicators of test quality of fall 2020 tests administered remotely and in-person: https://www.nwea.org/research/publication/comparability-analysis-of-remote-and-in-person-map-growth-testing-in-fall-2020/.

TECH members discussed learning loss and recovery:

- Opportunity to learn is important to consider, given that some students did not have the same access to remote education as others.

- Assessment results have shown that student learning has been impacted.
- The Maryland State Department of Education researched virtual learning outcomes: http://marylandpublicschools.org/stateboard/Documents/2021/0622/DataResearchImpactVirtualLearning.pdf.
- Agencies are offering different learning recovery programs, including
    - credit recovery and accrual for secondary students;
    - learning enrichment for elementary students;
    - programs for rising students;
    - access to learning software for all students; and
    - next-level learning in place of remedial summer school.
- Scheduling and staffing learning recovery programs depend on local factors.

The Future of Virtual Education

TECH members discussed evolving interest in and future considerations for virtual education:

- Some summer camps have had to close due to COVID-19 infection rates. Agencies need to be prepared to resume remote education if schools need to close again.
- States and districts are interested in continuing to provide virtual education in some capacity for a limited number of students. Formats being considered include hybrid options, virtual options in collaboration with other LEAs in their region, or opening virtual course enrollment to students enrolled in other districts.
- New virtual schools, academies, and programs are being created to meet demand and minimize the loss of students to virtual providers. However, there is a concern about the sustainability of these virtual options due to declining interest amongst students and parents. Potential reasons for this decline include the return to in-person learning, higher vaccination rates, and the poor quality of remote learning.
- Some agencies have, will be, or are considering replacing inclement weather days with remote learning days for continuity of learning. This will not be possible if power outages occur, and some decisions have led to pushback from some stakeholders who want snow days.
- Some legislatures are setting new laws for virtual education or adjusting funding models for virtual education (such as basing membership on student contact hours instead of days of instruction so inclement weather days will not impact funding).
- A few places have considered year-round schooling.
- Barring remote students from participating in athletics motivated some to return to in-person learning.
- Certification for teachers in virtual education settings is being more closely considered.
- Resources for parents, caregivers, and community partners of students are needed.
    - Bismarck Public School District, North Dakota embedded a blended learning student hub in its LMS: https://learnbps.bismarckschools.org/course/view.php?id=8858.
    - Noblesville Schools, Indiana created a PreK-5 Remote Learning Handbook for caregivers, before and after school site leaders, and public library staff: https://docs.google.com/presentation/d/e/2PACX-1vTaBO5Cxc2Cz40YgmpQe-AYrhZ5x2gmcie1M7JWLQlTaoJOlJU6_FHCWdfUFhvkCXuyp_hN69jev4P1/pub?start=false&loop=false&delayms=3000&slide=id.p.

- The Ed-Fi Alliance is working on an LMS toolkit for instructional system data: https://techdocs.ed-fi.org/display/EDFITOOLS/LMS+Toolkit

TECH members identified data practices that are important for future virtual education decisions, including

- capturing dates when a student changes learning modality;
- using LMS metrics to measure attendance and engagement;
- processing virtual education data across multiple systems (SIS, LMS, etc.) into usable information or dashboards;
- advancing interoperability between systems and standardizing data elements;
- distinguishing between synchronous and asynchronous learning;
- capturing the learning record and metadata that exist around the learning process in a way that ensures student privacy;
- defining and collecting technology equity data elements;
- focusing on actionable data elements that can drive solutions to opportunities to learn;
- achieving consistency in learning activities; and
- using established rubrics to develop, evaluate, and improve online and blended courses, such as Quality Matters rubrics and standards (https://www.qualitymatters.org/qa-resources/rubric-standards).

TECH Committee Business
Dawn Gessel was nominated as the 2021-22 TECH chair and Chandra Haislet (Maryland State Department of Education) was nominated as the 2021-22 TECH vice chair.

Thursday, July 15, 2021
Federal, State, and Local Data
Joint Session Follow-up: ED*Facts* and the Civil Rights Data Collection (CRDC)
TECH members used a word cloud displaying members' top three key takeaways to open a follow-up discussion about ED*Facts* and the CRDC following the presentation from Kelly Worthington and Barbara Timm (NCES) and Stephanie Miller (Office for Civil Rights).

- SEA and LEA comments on federal data collection packages are important. All government agency rules, proposed rules, public notices, and comment requests are posted to the Federal Register (https://www.federalregister.gov/). Federal agencies must respond to public comments, and more weight is given to issues and concerns that are most prevalent in comments.
- Data from the COVID-19 pandemic will need to be flagged for future reference.
- It would be helpful if ED*Facts* and CRDC could use the same processes, staff, and data that are required in both collections.
- Adding updates to the end of the files instead of changing the entire file minimizes the need to reformat all files when requesting updated or corrected data.
- ED*Facts* testing data ahead of time is a welcome development.
- Members are interested in knowing if there is a way for Generate to help with CRDC reporting (such as incorporating aggregate data).

ED*Facts* Modernization Working Group Update

DeDe Conner provided an update on the ED*Facts* Modernization Working Group. The group was convened to provide feedback on the U.S. Department of Education's potential plans to modernize ED*Facts*, including guidance on how SEAs map their SISs to federal reporting requirements. The plan proposes moving data quality reviews to pre-submission, using CEDS mappings to show how unit-level elements can be aggregated into ED*Facts* data groups, categories, and permitted values, and allowing for states to comment as data are submitted. The working group met multiple times with federal staff and provided written feedback on the plans to modernize ED*Facts*. The feedback is meant to provide the information the U.S. Department of Education needs to move its modernization planning forward with input from the states. The feedback addresses file due dates, the ED*Facts* collection system, edits and comments, privacy and security, post-submission edits, SEA current system investments, and the process for determining CEDS mappings. While the modernization process is time-consuming at the onset, it can result in higher-quality data and reduce data burden. Several SEAs, including Kentucky, Nebraska, and West Virginia, shared that they use Generate, (https://ciidta.communities.ed.gov/#program/generate) which is a free software application that improves data quality and automates reporting for SEAs through standardization. Generate can be used for ED*Facts* reporting and can help users aggregate data for other reports.

Overcoming Data Collection Challenges

Dawn Gessel led TECH members in a discussion on best practices and solutions to address data collection challenges during the COVID-19 pandemic. TECH members shared the following:

- Some agencies continued all data collections, while others added or dropped certain collections. New collections included
    - Pandemic Electronic Benefit Transfer (P-EBT) submissions;
    - digital equity surveys (covering technology access and internet connectivity);
    - surveys to assist with COVID-19 vaccination clinic planning;
    - internal COVID-19 contact tracing; and
    - tracking learning mode.
- SEAs helped LEAs by
    - waiving or not requiring certain data collections;
    - changing data collection timeframes to not coincide with the return to school;
    - providing LEAs with flexible due dates, especially at the end of SY 2019-20;
    - providing survey templates; and
    - reporting P-EBT data on behalf of LEAs.
- Optional data collections sometimes resulted in more work.
- Agencies use a variety of commercial survey platforms and tools. In some cases, survey forms can be published in the SIS. Data collected this way is tied to the student ID; if needed, ID numbers can be hidden for privacy protection.
- Knowing what data are being collected on the front end and how it will be reported on the back end can help to identify the most effective data collection tool.
- Many populations experienced survey fatigue. Best practices for overcoming fatigue include
    - eliminating or limiting the number of survey questions;
    - scaling back the number of surveys or combining surveys where possible;
    - coordinating at the state level in sending surveys to LEAs;

    - using branching features; and
    - focusing on the motivation for or benefits of the survey (such as funding or eligibility).
- Several populations were difficult to reach. Strategies for contacting hard-to-reach populations include
    - using phone and mail, which increased the need for accurate mailing addresses;
    - having teachers, school counselors, or social workers reach out;
    - tasking bus drivers who delivered meals with getting information; and
    - asking nonrespondents to come to an in-person event.

TECH Committee Business

Steering Committee Business/Report

DeDe Conner reported that the Steering Committee discussed the joint sessions and meetings of the Forum's three standing committees.

Meeting Review/Future Planning

TECH members were in consensus that in-person summer Forum meetings are preferable to virtual meetings:

- While virtual meetings allow members to resume work before and after meetings and during breaks, some members were pulled away from the meeting to attend to work responsibilities. One member needed to receive special permission from their agency to work remotely for the Forum meeting so that they were not disturbed by co-workers in their office.
- Four days of virtual meetings were very tiring.
- Members missed the networking opportunities that take place during in-person meetings, as well as the opportunity to connect with other Forum members that were not in TECH.
- Some virtual meeting tools could be adapted for in-person meeting use, such as
    - sharing links to resources in a collaborative document;
    - using a polling tool that automatically generates a word cloud to kick-off discussions; and
    - holding breakout discussions.
- Virtual meetings are only effective if members are engaged and keep their cameras turned on.
- A half-day standing committee meeting between in-person summer Forum meetings might be worth considering.

TECH members shared the following suggestions for future meeting plans:

- TECH did not hold breakout discussions this year, but would like to resume doing so regardless of meeting format.
- Members appreciated that the meeting was focused on discussions topics that impacted everyone due to the COVID-19 pandemic.
- It can be overwhelming when lots of invited speakers come to TECH to discuss different topics. Members liked that speakers only presented during the joint sessions, and the standing committees had lots of time for follow-up discussion amongst Forum members.

- It is helpful for both SEAs and LEAs to be included in discussions. For example, the federal data collections joint session allowed members to understand how ED*Facts* and the CRDC impact agencies at different levels.
- TECH members noted that the standing committee meeting time could be made more actionable and contribute to the development of a tangible product. For example, the TECH Committee developed a short white paper as part of the summer 2019 Forum meeting, which formed the basis for the *Forum Guide to Cybersecurity: Safeguarding Your Data* (https://nces.ed.gov/forum/pub_2020137.asp).

TECH members shared the following topics for future meetings:

- LMS use
- ED*Facts* modernization
- Online hiring
- Opportunities for members to share the research or technology projects they are working on in their agencies
- How social-emotional data are being collected and used at the SEA and LEA levels

DeDe recognized Dawn for her leadership, thanked TECH members for their participation in the meeting, and congratulated Dean Folkers (Nebraska Department of Education) on his upcoming retirement from his agency. Dawn thanked DeDe for her mentorship.