RESEARCH PRIORITY BRIEF

BEST PRACTICES FOR IMPLEMENTING FLEXIBLE INSTRUCTIONAL DAYS

Introduction

Pennsylvania recently passed a bill allowing districts to continue instruction remotely during school closures. The new law allows districts to allocate up to five flexible instructional days (FIDs) per academic year for remote instruction if schools close because of inclement weather, an emergency, or another unexpected or dangerous temporary condition.[1] In this brief, Hanover Research (Hanover) reviews current literature and best practices on FIDs to identify challenges that districts commonly face during FID implementation, as well as solutions and strategies to address these challenges.

Recommendations

Based on this research, Hanover recommends that districts:

- **Survey families** regarding their household's device and internet access to identify students that need additional supports and provide these students with hard copy assignments or technology assistance;
- **Provide mandatory professional development on effective digital instruction** in the fall so that teachers can provide quality instruction during FIDs with online tools (e.g., Google Classroom and Schoology);
- **Use multiple forms of communication** (e.g., automated phone calls, emails, texts, and online postings) to announce FIDs and ensure translated messages are communicated to non-English speaking households; and
- **Work with case managers and special education staff to establish plans for students with disabilities** and clarify how students will receive school-based and outside support services during FIDs.

Key Findings

- **Districts commonly face challenges related to technology access when implementing FIDs.** Not all students have device and internet access, which are necessary when districts and teachers choose to take attendance, provide instruction, post tasks, and collect assignments online. Districts overcome access challenges through multiple strategies, including loaning devices and Wi-Fi hotspots to students. However, this solution creates additional challenges in ensuring data privacy and proper use.
- **Teachers face challenges with maintaining quality instruction remotely and in alignment with employment contracts.** Planning for FIDs in advance allows districts and teachers to learn instructional approaches suited for FIDs (e.g., learning management system (LMS) navigation and flipped classroom instruction) through professional development and prepare lessons adapted to remote or digital learning. Conversations and negotiations with teacher unions in advance of FID implementation can also ensure that FID requirements are in alignment with employment contracts.
- **Ensuring that all students and families receive notification of FIDs can be challenging for districts and requires additional consideration of non-English-speaking households.** Districts can avoid communication gaps by using multiple forms of communication, such as automated calls, emails, social media posts, school website posts, and text alerts. For non-English speakers, districts can use translation services so that all households receive FID announcements.
- **Supporting students with disabilities or additional needs requires special education staff and case managers to create tailored plans before FIDs occur.** Special education staff should consider each student's needs and add FID-specific accommodations to individual education plans. Specific action steps depend on students' cognitive, developmental, and behavioral abilities, but may include making lessons iPad-compatible, assigning at-home therapy activities, or being readily available to students throughout the day.
- **Districts must determine a system for tracking student attendance during FIDs to comply with state mandates for daily instructional time.** This requirement presents a challenge to districts as a school day often necessitates five to six hours of instruction. Solutions include using LMSs with time tracking mechanisms, having students submit Google Forms by a designated time, and calling individual students once or twice during the FID.

Implementation Challenges and Solutions

The following section integrates best practices for FID implementation with FID challenges, appearing in orange with lock icons, and solutions, appearing in green with key icons. Spotlights and examples also appear throughout this document.

Hanover uses the term flexible instructional day (FID) throughout this brief; however, other terms used in the literature and across other states include e-learning days, virtual learning days, online learning days, and remote school days.

Monitoring Technology Access and Use

Districts commonly use technology to implement FIDs. Therefore, at-home access to a device and the internet is a key component of FID challenges, solutions, and best practices. Notably, however, Pennsylvania does not require schools to use technology during FIDs.[2]

Student Device and Internet Access

Districts often face challenges with ensuring all students have homework-compatible devices and internet access. Not all students have technology resources or internet connections at home to complete assignments remotely. Additionally, while many students have smartphones and devices with internet access, some may not be compatible with homework assignments or web-based learning tools.[3] The divide that separates students with and without at-home digital access, known as "the homework gap," prevents many students from completing technology-based school tasks outside of the classroom, particularly students from low-income families.[4]

A 2017 survey of Indiana school districts identified internet access as "the most significant problem" in establishing FIDs.[5] Indeed, about 15 percent of U.S. homes with school-age children do not have a high-speed internet connection, with students from lower-income families less likely to have broadband access.[6] According to the State Educational Technology Directors Association (SETDA), necessary connectivity for students at home includes broadband connections, "hardware, applications, digital age literacy and high-quality content."[7] The figure below shows the correlation between broadband access and income. There is a wide gap in internet access across all subgroups.

Share of U.S. Households with School-Age Children and No Broadband Access

Race	Annual income under $50,000	$50,000 or greater
All	31.4%	8.4%
White	24.6%	6.7%
Black	38.6%	13.0%
Hispanic	37.4%	12.8%
Asian	15.5%	4.0%

Source: Pew Research Center Analysis of 2013 American Community Survey (IPUMS)[8]

To overcome challenges regarding student device and internet access, schools implement a variety of strategies. The following bullet points summarize these solutions, upon which the following subsections expand:

- Survey families at the beginning of the school year, or during registration, on at-home device and internet access;
- Provide hard copies of tasks;
- Spread awareness of the importance of technology access;
- Form community partnerships for non-school access sites and informing families of these options;
- Set FID activity due dates one to two weeks after the FID;
- Open schools on the following Saturday to allow students to use the resources they need for tasks; and
- Provide each student with a hot-spot enabled device.

Family Surveys

Family surveys provide schools with data on each student's level of access to an at-home internet connection. Schools using this strategy may poll families sometime before an FID takes place or when initially registering a child for school.[9] By knowing which students cannot complete assignments online during FIDs, teachers can ensure that these students download materials onto a portable device at school the day before or prepare physical copies of assignments.[10] For example, Middlebury Community Schools (Middlebury) in Middlebury, Indiana, surveys families regarding at-home devices and internet access, specifically to determine digital access during FIDs. To access this survey, please see this PDF from Middlebury's website.[11]

Hard Copy Assignments

Schools with FIDs commonly print out physical copies of online assignments, referring to these homework packets by creative names including "blizzard bags," "Blizzard Folders," and "eBundles."[12] Through these take-home assignments, students complete the same tasks in a different format and submit them on the next regular school day.[13]

Communication of Technology Importance and Options

Schools may support students without device or internet access by spreading awareness of the importance of having technology in the home and ways to access it. To connect with families about technology, schools may use school meetings and take-home flyers. These formats allow schools and families to tell success stories of how digital access improves students' education. Furthermore, SETDA notes the importance of explaining to parents that learning does not end when the school day does, stating that:[14]

> *"…students need internet access outside of the school day to complete assignments, collaborate with their peers, and participate in extracurricular activities…"*

Along with explaining the importance of device and internet access, schools can provide options for how to obtain internet access, such as the examples in the following table.

Discounted Internet Opportunities

Provider	Description	Program Type
Access from AT&T	• Low-cost wired home internet service to homes with at least one resident who participates in SNAP • Service options range from $5-$10/month	Wired broadband at home
Comcast Internet Essentials	• Internet service for $9.95/month to households that have at least one child who qualifies for the National School Lunch Program	Wired broadband at home
Kajeet	• SmartSpot allows educators to provide students CIPA-compliant, 4G-LTE internet access outside the classroom to complete their required assignments and homework • SmartBus provides Wi-Fi internet access on the bus	Mobile education broadband for students
Mobile Beacon	• 4G LTE internet service to schools, libraries, and nonprofits • Unlimited data plans for $10/month • Schools can offer families without internet access the ability to sign up for $10/month service by becoming an i3 internet inclusion enrollment partner with Mobile Beacon and PCs for People	Mobile broadband for schools and nonprofits

Source: State Educational Technology Directors Association[15]

Local Partnerships

Schools can partner with local organizations, businesses, libraries, and community centers to support students without device or internet access at home.[16] Alternatively, districts can provide students with a list of public Wi-Fi locations if they have a device but lack at-home internet, as Muncie Community Schools does on their FID FAQ page.[17] However, outside partnerships and internet locations may be less helpful when schools close because of inclement weather and accessing these locations is not possible.[18]

Spotlight: Neenah Joint School District

Neenah Joint School District (Neenah) engaged with students and families through a survey and information distribution to ensure the district would meet students' FID internet access needs. A family survey showed that 93 percent of households had internet access. The district used this information to inform their efforts to partner with a digital hotspot provider, which allowed students to gain secure internet access outside of school. Additionally, before FIDs took place, Neenah practiced sending students home with devices "to better understand where hotspots were needed." Furthermore, the district distributed information to families on the Wisconsin Public Service Commission Internet Discount Finder. Through these efforts, Neenah met 100 percent of student internet access needs.[19]

Extended Deadlines

Districts may also set due dates for FID assignments one to two weeks after the FID to ensure that all students have an opportunity to complete online tasks. This strategy allows students without an at-home device or internet access to submit assignments without late penalties.[20] Extending deadlines also avoids challenges with online tasks when communities have power outages.[21] For example, teachers at Middlebury collect FID assignments on a regular school day and differentiate due dates by grade level. The following figure, from a local news source, illustrates how Middlebury students in Grades K-8 and Grades 9-12 submit completed assignments after FIDs, with expectations and timelines.

FID Assignment Deadlines by Grade Level

Grades K-8	Grades 9-12
• Students do not engage in FIDs • Students have a designated window to complete e-learning assignments • Teachers post assignments online by 5 p.m. on the Thursday of a week with a school cancellation • Students submit assignments on the Monday following a week with a school cancellation	• Students and staff engage in e-learning similar to a traditional school day • Teachers post tasks online by 9 a.m. • Teachers are available for questions during all normal school hours • Students submit assignments two days after receiving their task(s)

Source: Goshen News[22]

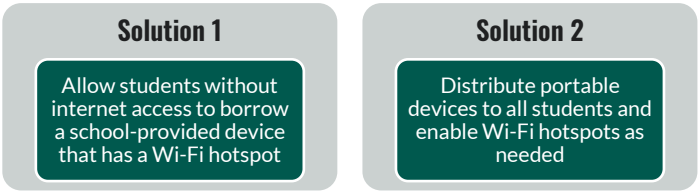
School Technology Access on a Saturday

Districts may also choose to support students without adequate technology access by opening school buildings on the Saturday following an FID.[23] This option allows students to access digital tools and schools to "make arrangements for individualized services required by the students."[24]

Hotspot from School Devices

Districts can provide students with portable devices and enable devices with Wi-Fi hotspots. This solution ensures access and compatibility between devices and learning tools. Schools can use hotspot solutions in two ways, as illustrated below.

Solutions for Distributing FID Devices



Source: Community High School District 128 and The Atlanta Journal-Constitution[25]

One-to-One Device Distribution

Schools may choose to distribute devices on a one-to-one basis to ensure that all students use secure devices with a sound internet connection. One-to-one districts with FIDs provide Chromebooks, iPads, or other similar devices to all students and use different methods for funding technology.[26] The figure below contains the number of states using four digital resource funding options. This distribution shows the variety of options that districts can use individually or jointly for obtaining digital resource funding.

States with Districts Using Diverse Funding Sources

Option	Number of States
Use Local Funds	45
Collaborate with Other Districts	34
Partner with Non-Profit	27
Leverage State Purchasing Contracts	19

Source: State Educational Technology Directors Association[27]

Spotlight: Evanston Township High School

At Evanston Township High School (ETHS) in Illinois, school leaders use multiple strategies to ensure digital access. The high school webpage for FID frequently asked questions and answers includes the following three technical support insights:[28]

- **What if my student doesn't have access to the internet?**
  ETHS has 50 district-issued Wi-Fi hotspots available for student checkout from the ChromeZone. Students also have access to a City of Evanston curated Free Wi-Fi Hotspots map. If students do not have access to the internet on an FID, they should submit an excused absence similar to existing school policies and will have two days to make up any missed work per The Pilot student handbook.
- **How does my student get Chromebook support?**
  With the launch of the 1:1 Digital Learning Initiative at ETHS, every current student receives a district-issued Chromebook.
- **What if my student doesn't have access to Chromebook?**
  If students do not have access to a Chromebook or other internet-connected device on an FID, they should submit an excused absence as outlined in school guidelines will have two school days to make up any missed work per The Pilot student handbook.

Data Privacy and Device Liability

Encouraging the use of personal devices or providing every student with a device for school assignments at home presents challenges regarding data privacy and liability. The privacy settings on personal devices may not adhere to school standards, which could result in poor data security and hacking.[29] Also, students using public Wi-Fi because they do not have internet access at home have less computer security and privacy during student-teacher interactions.[30] Furthermore, providing students with school-owned devices for at-home assignments may lead to technology theft, loss, and inappropriate use, such as cyberbullying and cheating.[31]

Technology Policy and Expectations

Policies and procedures should provide clear and comprehensive expectations that can help schools prevent and overcome data privacy and device liability challenges. These policies, compiled under an Acceptable/Responsible Use Policy (A/RUP), should clarify the following aspects of school-administered technology:[32]

- People involved (i.e., students, parents, and the district);
- Technical support;
- Security measures; and
- Student behavior and misuse repercussions.

Addressing Instructional Quality Concerns

Districts are responsible for ensuring the quality of students' technology-based learning experiences. Specifically, districts should "ensure all students are engaged with high-quality instruction by providing access to and experience with online platforms and digital learning tools for all teachers, caregivers, and students."[33]

Teacher Familiarity with Digital Learning

Districts may confront challenges because of teachers' adjustment to online learning platforms and remote instruction. Teachers often use LMS tools and programs such as Google Docs, Google Classroom, MyBigCampus, and Moodle. Some may already apply these tools to everyday instruction, therefore easing the transition to remote assignments. However, using LMSs on FIDs does not signify that teachers can teach remotely successfully, nor is providing students with online resources equivalent to students receiving instruction.[34]

Professional Development

Districts should train teachers through professional development (PD) on constructing "an online learning environment that provides students with the resources to independently create knowledge."[35] Community High School District 128 in Vernon Hills, Illinois, includes FID-specific training in its FID plan for the 2019-2020 academic year. The plan states that "teachers and support staff will be trained on

District 128 e-learning practices and procedures in before-school meetings during their regularly-scheduled 8-hour day."[36] Best practices literature states that teachers should have specific e-learning skills, such as:[37]

- Planning for asynchronous or other distant interaction;
- Organizing detailed tasks and instructions;
- Using presentation skills specific to e-learning environments;
- Using questioning strategies for different (often unseen) students;
- Involving students across different sites;
- Using student progress reports and learning analytics;
- Using connections to social media; and
- Keeping updated on technology.

Spotlight: Neenah Joint School District

Neenah uses Schoology, an LMS, during its FIDs after first implementing the system in the district multiple years ago. The LMS guides teachers through individual training on how to use the system, and staff members receive a certification badge upon completion of the course. The LMS training course includes the following topics:[38]

- Flipped learning;
- LMS navigation; and
- Additional 21st-century teaching skills.

Once teachers complete this course, they can continue learning how to use Schoology and provide digital instruction through three subsequent course levels. Additionally, Neenah employs full-time instructional coaches to support educators at the department, grade, and individual levels with digital instruction practices before FIDs take place. [39]

Staff Coverage

During FIDs, more teachers may choose to use a personal day because they need to care for their child(ren), clear snow, or attend to other weather-induced changes. This increase in teacher absences strains districts because it requires more substitute teachers or alternative staffing with little notice. Although teachers and district staff may receive PD for FIDs, substitute teachers may not have the same digital instruction knowledge or skill level. Substitute teachers may be unfamiliar with the digital tools used on FIDs. Therefore, districts should create a plan for teacher coverage before implementing FIDs.[40]

Parent-Provided Instruction

Districts may face challenges when parents feel unqualified to support student learning at home. Parents often raise concerns about their ability to help their child with assignments, capacity to teach a lesson after a full day of work, and responsibility "for monitoring students' work instead of teachers."[41]

Reinforcement, Not Introduction, of Content

Districts should encourage teachers to assign FID tasks that reinforce course material, rather than assign new content, to ease parental concerns about student learning. Additionally, districts may suggest that teachers post instructional videos, which promote teacher instruction rather than parent instruction.[42]

Communicating FID Decisions

Announcement Format and Timing

Notifying families of the decision to use an FID poses a challenge for districts both in format and timing. Districts must choose how and when to communicate FID updates and ensure that communication meets the needs of non-English speakers.[43]

Multiple Communication Platforms

Districts often use multiple communication mediums to ensure that the school community receives FID announcements. For example, districts often use a combination of the following methods to inform families of FIDs:[44]

- Automated phone calls;
- Radio;
- Television;
- School website;
- Facebook;
- Twitter;
- School phone main line recording; and
- School app.

Announcing the occurrence of an FID to non-English speakers adds another layer of communication to consider.[45] To ensure that all families receive notification of school day changes, schools may use a phone interpreting service to translate messages. For example, Robbinsdale Area Schools in Robbinsdale, Minnesota, uses Language Line, a phone interpreting service, so that non-English-speaking families receive the same information as English speakers.[46]

Providing Support Services

Students with Additional Needs

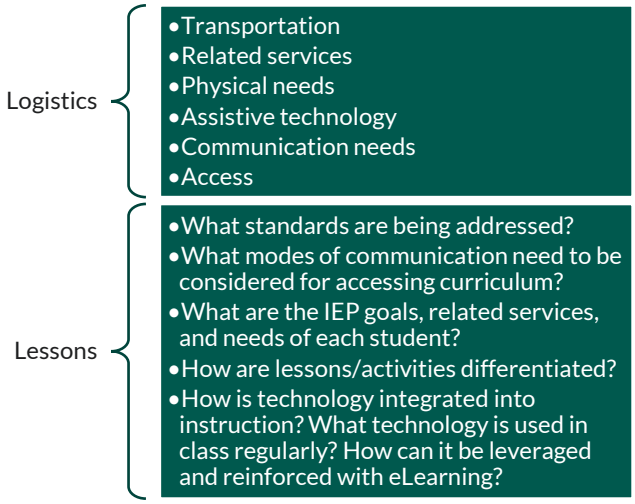
Because students must complete assignments and activities without in-school supports, districts face challenges with providing additional supports to eligible students. Districts must determine how they will arrange or account for support services during an FID, such as special education services, occupational therapy, speech therapy, physical therapy, and food services. Additionally, students may not "have the developmental, cognitive, or behavioral

capabilities to engage in virtual learning activities," and therefore are unable to complete tasks during an FID.[47]

Individual FID Plans

Under Senate Bill No. 440, which now allows Pennsylvania schools to apply for FIDs, schools must provide the state with "assurance of compliance with the Individuals with Disabilities Education Act."[48] Districts should prepare support plans before FIDs take place to support students with specific needs remotely. Special needs staff can use district-wide FID plans and teacher-specific instructional plans to accommodate students eligible for additional supports.[49] The figure below outlines logistical and instructional considerations for district staff to assess.

Logistical and Instructional Special Education Considerations



Source: Indiana Department of Education[50]

Spotlight: Community High School District 128

Community High School District 128 (District 128) outlines its general strategy for meeting the needs of all learners in its E-learning Plan for the 2019-2020 academic year.[51] In this plan, students in special education receive individual directions for confirming attendance, accessing materials, and completing activities. Case managers make all further adjustments and notify teachers on a student-by-student basis. Additionally, District 128 provides Chromebooks to all students, and the FID plan details that students with an IEP have access to additional support materials as needed. District 128 ensures that students receiving special education services have access to specific staff members between 10 a.m. and 3 p.m. on FIDs. Furthermore, non-staff service providers determine whether they can provide support during the FID or on the next regular school day.[52]

Spotlight: Marshall Public Schools

Marshall Public Schools in Marshall, Minnesota, highlights the importance of IEP planning teams in its FID plan. IEP and 504 teams work together to account for individual student needs and discuss how each student engages with technology, curricula, and outside supports during FIDs. The teams then provide a description outlining these decisions and add it to students' previously established plans. For an example of how IEP and 504 teams draft FID plans, please see Marshall Public Schools' "e-Learning Plan," here.[53]

Coordinating Teacher Logistics

Unions and Contracts

Districts may face logistical challenges when designing FIDs because of disagreements with unions and changes to teacher contracts. For example, teachers' unions may assert that "teachers should be present for all instruction."[54] Questions from unions on FIDs may include requirements for mandated synchronous hours, virtual office hours, and specified times or platforms for assignments.[55]

Plan Distribution to Unions and Education Boards

Districts should provide FID plans to union representatives and hold discussions early in the FID planning process to address questions and potential objections from unions. Clear and early communication allows a district and its teacher representatives to agree to terms before the district announces an FID.[56] Although supplying information to unions and managing contract negotiations in advance supports FID development, districts experience varying levels of success. The following figure illustrates two examples of FID deliberations.

District-Union Negotiations Regarding FIDs

Annandale Public Schools (Independent School District 876), Annandale, MN

In 2017, the Annandale School Board approved a new contract for the 2017-2018 and 2018-2019 school years between Annandale Public Schools and the Annandale Education Association. The parties agreed to package increases (i.e., salary, insurance, 403B, and other compensation increases) and the use of two "flex" days per year instead of sick days, but no other significant changes. Although the school board approved the contract, they "excluded a memorandum of understanding regarding e-learning and sent it back to the teachers."[57] The parties agreed to revisit FIDs during a later negotiations meeting because the school board preferred not to sign the memorandum without further plans for FIDs in place.[58]

South Bend Community School Corporation, South Bend, IN

The South Bend Community School Corporation Board of Trustees successfully moved forward with FID implementation after agreeing to an FID structure in June of 2019. The board unanimously approved a plan to enact FIDs with no indication of disputes. The board approved FIDs with five and six hours of remote lessons for elementary and secondary students, respectively. Additionally, the board agreed that teachers function as contracted workers and receive pay during FIDs and engage in specialized training to support FID instruction.[59]

Source: Annandale Advocate and WNDU[60]

Changing Lesson Plans

Late Announcements of FIDs

A considerable challenge that teachers face regarding FIDs is adjusting lesson plans after late FID announcements. Accurate weather forecasts may allow districts to announce an FID and give teachers time to plan for remote learning. However, last-minute announcements prevent teachers from adjusting lesson plans and preparing synchronous materials.[61] For example, if a teacher had planned a science experiment, test, group project, or hands-on activity, a late FID announcement would prevent teachers from thoughtfully adapting classwork into at-home instruction.[62] This challenge intensifies when districts require teachers to send students tasks by a certain time, as many schools require teachers to post assignments by 9:00 a.m. on an FID.[63]

Pre-Planned Lessons

Teachers can prepare FID lessons in advance to always have FID materials ready. Although this solution "does not offer the same level of integrated instruction as a planned sequence of content designed to develop understanding and reinforce concepts," pre-planned FID lessons prevent the loss of instructional time because of time constraints.[64] In Pennsylvania, teachers must plan FID lessons for English, mathematics, social studies, and science, but the Pennsylvania State Education Association (PSEA) Education Services Division recommends that schools pre-plan instructional materials for all subject areas.[65] When teachers prepare lessons in advance, they can review state testing data or previous assessments to decide what material to cover and reinforce. This strategy supports teachers by ensuring they capitalize on a nonsequential lesson.[66]

Tracking Attendance and Participation

Legal Attendance Mandates

Districts also confront challenges and policy considerations regarding tracking attendance and meeting state instructional time mandates.[67] Because teachers cannot take attendance through physical presence in a classroom, districts must plan for how they will track student engagement during an FID.

Traceable Submission Options

Online tools with timestamp capabilities, such as LMSs, allow teachers to track attendance because of their ability to record log-in and task-submission times.[68] Other solutions, which account for students with and without device or internet access, also include:[69]

- Email exchange/text exchange/phone call with the teacher;
- Parent verification through a documentation process;
- Activity in classes (e.g., discussion participation and formative assessments completed); and
- Work submitted during the FID.

Pilot Program Case Studies

The following section provides details from a three-year FID pilot program in Illinois. For this pilot program, the Illinois State Board of Education chose three districts to participate: West Chicago Community High School District 94 (West Chicago 94), Gurnee School District 56 (Gurnee 56), and Leyden High School District 212 (Leyden 212). Over the 2015-2018 program period, West Chicago 94 used two FIDs (December 16, 2016, and February 9, 2018), and the other two districts used one FID (February 9, 2018).[70] The table below summarizes points from each district's report and organizes findings by the sections in this brief.

Illinois Pilot Program Results

Research-Based Categories	West Chicago 94	Gurnee 56	Leyden 212
Technology Access and Use	The district notified students of the FID before the end of the day preceding the FID. The district had 100 hotspots that it could check out to students without internet access at home. Ninety-three percent of students were online during the first FID, and 96 percent were online during the second FID.	The district had a one-to-one iPad program for all students (Grades PreK-8) and loaned any student without at-home connectivity a portable Wi-Fi hotspot at the beginning of the school year. All students received a school email account that only students and staff can access.	The district had a one-to-one Chromebook program for students and partnered with the Sprint ConnectEd program to provide Wi-Fi hotspots to all students who do not have consistent internet at home. Teachers and students used familiar tools, such as Google Forms, email, and Schoology during the FID.
Instructional Quality Concerns	Teachers and staff received PD on FID procedures during institute days and department meetings. Students obtained instructions during class on FID procedures, including how to access work and expectations for work completion.	Teachers received PD in website creation, iBooks, and electronic classroom management systems during the previous two years. Also, teachers and students received instruction on accessing the online help desk system and chat mechanism, called Today's Meet, for tech help.	Schools provided training for both students and staff in previous years. Instructional coaches supported teachers in converting lessons to an e-learning format, and students viewed YouTube videos to understand the FID process.
Communicating FID Decisions	The district sent English and Spanish notices via an automated call, posted to the school website, and informed local media. The district also communicated FID expectations annually and posted them on the school website.	The district called, emailed, texted, posted to the school website, and sent mass calls the day before the FID.	The district sent automated phone calls in English and Spanish, posted to the school website, and notified the media.

Research-Based Categories	West Chicago 94	Gurnee 56	Leyden 212
Support Services	Special education students in general education courses followed procedures in place for additional support and received accommodations built into the given Google Classroom activity. Also, teachers could provide assistance and feedback through email. Special education students with severe and profound disabilities enrolled in the Developmental Learning Program and Transition Program received FID binders from their case manager/special education teacher. Staff specifically developed these binders with instructional materials appropriate for the student based on their needs and IEP. The activities allowed students to continue to work on their IEP goals during the FID.	Special education students used familiar iPad apps and Google products, and staff built all special education students' work or accommodations into the iPad. Students could access their case manager through Google Hangout, Classroom, or email. Special education staff required students to complete learning activities for core courses and any special services they would receive on a traditional school day. For example, if a student regularly received speech services on a Friday, then during a Friday FID, the speech-language pathologist would contact the student and require participation in speech activities. A nurse contacted students with medical needs, including special education, 504, or general education students, in person during the FID, and students could contact the nurse through Google Hangout or email.	Students with special needs and in BRIDGE programs received their assignments through Schoology like their general education peers. School staff reminded students on the day preceding the FID about FID procedures, which required that they check in through a Google Attendance form. Students with special needs also had access to their case managers and facilitators to report any issues during the FID. Students in the Life Skills and Transition Programs either received electronic assignments through their Gmail or took home hard copy assignments depending on their level of functioning and independence. Students checked in with their teachers via email, Google Attendance form, or their teacher's voicemail.
Teacher Logistics	The district's application for FIDs had documentation, including the sign-off from the union presidents.	The district's application for FIDs had documentation, including the sign-off from the union president.	Collective bargaining unions engaged in the FID process from the beginning and worked with the district to create timelines and processes.
Changes to Lesson Plans	The district announced the FID the day before it took place.	The district announced the FID the day before it took place.	The district announced the FID the night before it took place, and teachers had until 9 a.m. on the FID to post assignments.
Attendance and Participation	Logs from each app tracked login and submission times for each activity. The district used login and usage data from Google Classroom, Hangouts, and GoGuardian. Students had to check in to each class by 1 p.m. They had the flexibility to define their work schedule and could use time in the evening to complete assignments.	Each teacher developed a webpage with links to FID activities, and students had to complete activities as assigned by each teacher. Students had to submit work via email. Staff also called each student at least twice during the day to ensure engagement. Students that staff predicted may not fully engage in FID activities received additional monitoring (paraprofessionals) to provide additional supports. Work included either completed assignments or validation of work on a program via a report from that program.	Students had to open a unique Google Form and submit it to check in for attendance. The district verified students' participation using Google Forms and existing attendance processes. The district also used Schoology use logs. The district designed work to be asynchronous and made FID decisions by 8 p.m. on the preceding night. Teachers posted lessons later that evening or by 9 a.m. on the FID. Students had to check in by 1 p.m. and had several days to complete assignments.
Additional Pilot Program Findings	Teachers did not always post forms, forms did not include zero period, and multiple students thought they had more time to complete assignments. Multiple students felt that teachers assigned too much work.	The district decided to review the type of learning activities prescribed and their linkages to the previous days' learning activities, the amount of parent or guardian assistance received, and the ability of the youngest students to stay engaged for five consecutive hours.	The district sent surveys to students, teachers, and staff, which resulted in requests to change attendance submission times, shorten the period to complete assignments, and refine attendance collection procedures using Google Forms.

Source: Illinois State Board of Education[71]

Caveat

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Endnotes

[1] "Senate Bill No. 440." Pennsylvania General Assembly, June 19, 2019. pp. 4–5. https://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2019&sessInd=0&billBody=S&billTyp=B&billNbr=0440&pn=1029
[2] Ibid., p. 2.
[3] Swetlik, Z. et al. "Virtual Learning Strategies for Lost Instructional Time." *The CTE Journal*, 3:2, 2015. p. 21. https://www.thectejournal.com/uploads/1/0/6/8/10686931/swetlik.pdf
[4] [1] Fox, C., M. Cougan, and R. Little. "State Wi-Fi Leadership for Fostering Digital Learning Ready K-12 Schools: Extending the Broadband Imperative II." State Educational Technology Directors Association, September 2017. p. 11. http://www.setda.org/master/wp-content/uploads/2017/09/StateWiFiLeadership_Final_91917.pdf [2] Fox, C. and R. Jones. "The Broadband Imperative II: Equitable Access for Learning." State Educational Technology Directors Association, 2016. p. 23. http://www.setda.org/wp-content/uploads/2016/09/SETDA-Broadband-ImperativeII-Full-Document-Sept-8-2016.pdf [3] McLaughlin, C. "The Homework Gap: The 'Cruelest Part of the Digital Divide.'" NEA Today, April 20, 2016. http://neatoday.org/2016/04/20/the-homework-gap/
[5] Hua, D., C. Davidson, and S. Kaja. "Stakeholder Response to Virtual Learning Days in Public School Districts." *The CTE Journal*, 5:1, 2017. p. 31. Accessed via EBSCO Host.
[6] Anderson, M. and A. Perrin. "Nearly One-in-Five Teens Can't Always Finish Their Homework Because of the Digital Divide." Pew Research Center, October 26, 2018. https://www.pewresearch.org/fact-tank/2018/10/26/nearly-one-in-five-teens-cant-always-finish-their-homework-because-of-the-digital-divide/
[7] Fox and Jones, "The Broadband Imperative II: Equitable Access for Learning," Op. cit., p. 23.
[8] Figure reproduced verbatim from: Fox and Jones, "The Broadband Imperative II: Equitable Access for Learning," Op. cit., p. 24.
[9] [1] "Community High School District 128 E-Learning Plan 2019-20 School Year." Daily Herald. p. 1. https://www.dailyherald.com/assets/PDF/DA151245831.pdf [2] McLaughlin, Op. cit.
[10] Thompson, B. "Trading Snow Days for ELearning Days." Association for Middle Level Education, August 2016. https://www.amle.org/BrowsebyTopic/WhatsNew/WNDet/TabId/270/ArtMID/888/ArticleID/656/Trading-Snow-Days-for-eLearning-Days.aspx
[11] "Home Digital Access Questionnaire (Middlebury Schools)." Middlebury Community Schools. https://www.mcsin-k12.org/bulletins/files/docs/Google%20Form%20E-Learning%20Survey%20Hard%20Copy.pdf
[12] [1] Morones, A. "Snow Days Turn Into E-Learning Days for Some Schools." Education Week, January 31, 2014. https://www.edweek.org/ew/articles/2014/01/31/20snow.h33.html [2] Swetlik et al., Op. cit., p. 22. [3] Thompson, Op. cit.
[13] Swetlik et al., Op. cit., p. 22.
[14] Fox and Jones, "The Broadband Imperative II: Equitable Access for Learning," Op. cit., p. 26.
[15] Figure reproduced nearly verbatim from: Ibid., p. 27.
[16] Ibid.
[17] "E-Learning Day - Parent FAQs." Muncie Community Schools. http://www.muncie.k12.in.us/UserFiles/Servers/Server_109179/File/Students%20Parents/E-Learning/E-Learning%20Day%20parents%20FAQs%202019%20-%202020.pdf
[18] Swetlik et al., Op. cit., p. 21.
[19] "Virtual Learning Time for Public Schools." Wisconsin Department of Public Instruction, January 25, 2016. https://dpi.wi.gov/cal/innovation/virtual-learning-time
[20] Hua, Davidson, and Kaja, Op. cit., p. 31.
[21] Morones, Op. cit.
[22] Figure adapted from: Beabout, L. "Middlebury School Board Approves E-Learning Plan." Goshen News, June 5, 2018. https://www.goshennews.com/news/local_news/middlebury-school-board-approves-e-learning-plan/article_e99b79d3-e0b5-526a-9ac1-f6ecf281c312.html
[23] Hua, Davidson, and Kaja, Op. cit., p. 31.

[24] Swetlik et al., Op. cit., p. 21.
[25] Figure text adapted from: [1] "Community High School District 128 E-Learning Plan 2019-20 School Year," Op. cit., p. 1. [2] Davis, J. "School Systems Replacing Snow Days with Online Learning." The Atlanta Journal-Constitution, February 27, 2015. https://www.ajc.com/news/local-education/school-systems-replacing-snow-days-with-online-learning/18Iufr8PeFt05bwxdCwRHO/
[26] [1] Morones, Op. cit. [2] Fox, C. and R. Jones. "Navigating the Digital Shift 2018: Broadening Student Learning Opportunities." State Educational Technology Directors Association, 2018. p. 17. https://files.eric.ed.gov/fulltext/ED594415.pdf
[27] Figure reproduced verbatim from: Fox and Jones, "Navigating the Digital Shift 2018: Broadening Student Learning Opportunities," Op. cit., p. 17.
[28] Bulleted items taken verbatim with modifications from: "E-Learning Days at ETHS." Evanston Township High School District 202. https://www.eths.k12.il.us/Page/1511
[29] Swetlik et al., Op. cit., p. 18.
[30] "Flexible Instructional Days." Pennsylvania State Education Association, August 2019. p. 2. https://www.psea.org/globalassets/for-members/psea-advisories/flexible-instructional-days-final.pdf
[31] Swetlik et al., Op. cit., p. 18.
[32] Bulleted text adapted from: Swetlik et al., Op. cit., pp. 18–19.
[33] "Virtual Learning Time for Public Schools, " Op. cit.
[34] Swetlik et al., Op. cit., p. 22.
[35] Ibid.
[36] "Community High School District 128 E-Learning Plan 2019-20 School Year," Op. cit., p. 2.
[37] Bulleted text taken nearly verbatim from: Egbert, J. "Chapter 8 Supporting Student E-Learning." Pressbooks, 2017. https://opentext.wsu.edu/tchlrn445/chapter/chapter-8-supporting-student-e-learning/
[38] Bulleted items taken nearly verbatim from: "Virtual Learning Time for Public Schools," Op. cit.
[39] Ibid.
[40] "Flexible Instructional Days," Op. cit., p. 2.
[41] [1] Hua, Davidson, and Kaja, Op. cit., p. 28. [2] Lissau, R. "With E-Learning, Could the Snow Day Become a Thing of the Past in the Suburbs?" Daily Herald, August 31, 2019. https://www.dailyherald.com/news/20190831/with-e-learning-could-the-snow-day-become-a-thing-of-the-past-in-the-suburbs
[42] Hua, Davidson, and Kaja, Op. cit., p. 28.
[43] "Summer Newsletter." Joliet Township High School, 2019. https://resources.finalsite.net/images/v1563803270/jthsorg/janzh7yetq0vzqie4gaa/CentralNewsletter2019.pdf
[44] Bulleted text adapted from: [1] Campbell, M. "School Closing Information 19/20 SY." New Holland-Middletown School District, August 20, 2019. p. 1. http://www.nhm88.com/UserFiles/Servers/Server_84292/File/Parent.Information/NHM.Parent.Letter.School.Closing.19.20.pdf [2] "Emergency Alerts." Arlington Public Schools. https://www.apsva.us/emergency-alerts/ [3] "School Delays & Closings." Washington County Public Schools. http://wcpsmd.com/public-information/school-delays-closings
[45] [1] Gau, D. "E-Learning Could Ease Snow Day Woes for MPS." Independent, June 18, 2019. https://www.marshallindependent.com/news/local-news/2019/06/e-learning-could-ease-snow-day-woes-for-mps/ [2] "E-Learning Days." Robbinsdale Area Schools. https://www.rdale.org/depts_/curriculum/e-_learning_days [3] "Electronic-Learning Report: Final Report and Recommendations," Op. cit., p. 6.
[46] "E-Learning Days," Op. cit.
[47] Swetlik et al., Op. cit., pp. 21–24.
[48] "Senate Bill No. 440," Op. cit., p. 3.
[49] "ELearning Day Program Guidance for Students with Disabilities." Indiana Department of Education, 2019. p. 2. https://www.doe.in.gov/sites/default/files/specialed/elearning-day-program-guidance-students-disabilities-rev-052219.pdf
[50] Figure text taken verbatim with minor modification from: Ibid.
[51] "Community High School District 128 E-Learning Plan 2019-20 School Year," Op. cit.
[52] Ibid., pp. 1–2.
[53] "E-Learning Day Plan Marshall Public Schools." Marshall Public Schools. pp. 1–4. https://www.marshall.k12.mn.us/site/handlers/filedownload.ashx?moduleinstanceid=7703&dataid=10760&FileName=eLearning%20Plan.pdf
[54] Lissau, Op. cit.
[55] Duggan Schwartzbeck, T. "Replacing Snow Days with E-Learning Days." Alliance For Excellent Education, March 25, 2014. https://all4ed.org/replacing-snow-days-with-e-learning-days/
[56] [1] "Flexible Instructional Days," Op. cit., p. 3. [2] "Community High School District 128 E-Learning Plan 2019-20 School Year," Op. cit., p. 2.
[57] "School Board, Teachers Union Settle on Contract." Annandale Advocate, December 5, 2017. https://www.annandaleadvocate.com/uncategorized/2245/school-board-teachers-union-settle-on-contract
[58] Ibid.
[59] Smedley, M. "South Bend School Board Unanimously Approves E-Learning Days." WNDU - Channel 16, June 3, 2019. https://www.wndu.com/content/news/South-Bend-School-Board-unanimously-approves-E-Learning-days-510793451.html

[60] Figure adapted from: [1] "School Board, Teachers Union Settle on Contract," Op. cit. [2] Kahn, L. "Hopewell Valley Teachers Contract May Not Be Resolved until Spring." Central Jersey, February 1, 2019. https://centraljersey.com/2019/02/01/hopewell-valley-teachers-contract-may-not-be-resolved-until-spring/
[61] Hua, Davidson, and Kaja, Op. cit., p. 31.
[62] "Flexible Instructional Days," Op. cit., p. 1.
[63] [1] " ISD 728 Implements eLearning Days in 2019-2020." Independent School District 728. https://www.isd728.org/site/default.aspx?PageType=3&ModuleInstanceID=22149&ViewID=7b97f7ed-8e5e-4120-848f-a8b4987d588f&RenderLoc=0&FlexDataID=27576&PageID=4640 [2] "South Newton E-Learning Policies." South Newton School Corporation. https://www.newton.k12.in.us/index.php/elearning [3] "Community High School District 128 E-Learning Plan 2019-20 School Year," Op. cit., p. 1.
[64] "Flexible Instructional Days," Op. cit., p. 2.
[65] Ibid.
[66] Thompson, Op. cit.
[67] Hua, Davidson, and Kaja, Op. cit., pp. 22, 29.
[68] Swetlik et al., Op. cit., p. 24.
[69] Bulleted text taken nearly verbatim from: "March 2018 Memorandum: Program Plan for e-Learning Days." Minnesota Department of Education, March 15, 2018. p. 2. https://education.mn.gov/MDE/dse/online/
[70] "Electronic-Learning Report: Final Report and Recommendations," Op. cit., p. 3.
[71] Figure reproduced verbatim with modifications to grammar and transitions from: Ibid., pp. 4–6.