EAB

LMS Selection and Implementation

District Leadership Forum

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1) Executive Overview

Key Observations

To address difficulties related to syncing learning management systems (LMSs) with student information systems (SISs), use district technology staff with programming experience. Contacts across profiled districts express frustration or dissatisfaction with their LMSs' capacity to sync with their student information system (SIS) to transfer information such as grades and attendance records. Administrators at **District A** and **District B** consulted with technicians from their respective LMS vendors, SIS vendors, and shared-services cooperatives to sync the systems. However, contacts at District B report frustration with the quality of support from their vendor. Therefore, experienced technical staff at District B assumed responsibility for some programming work.

Use technology committees of parents, teachers, administrators, and technical staff to research and select LMSs. Administrators at **District A** and **District B** asked technology committees to coordinate LMS research and selection efforts, as both committees include administrators with technical expertise and teachers from multiple schools, grade levels, and subject areas. By allowing leaders from each department to evaluate LMS options, administrators increase the likelihood that selected LMSs will meet the needs of all stakeholders. At **District B**, the technology committee includes parent representatives and school principals. As parents and administrators frequently use LMSs to communicate, the committee can ensure that selected LMSs address communication needs.

When selecting an LMS vendor, consider how existing relationships with other districts could provide additional implementation support. Contacts at **District A** report that the technology committee selected Schoology instead of Canvas in part because districts they networked with during the selection phase use Schoology. Thus, when District A implemented Schoology, technical staff would be able to reach out to these districts for support if they uncovered problems. Similarly, teachers at **District D** advocated to implement Google Classroom instead of other LMSs because teachers in neighboring districts use it. Teachers wanted to be able to partner with Google Classroom users at these districts to uncover LMS best practices.

Begin LMS implementation with teacher pilot groups. Contacts at **District B** note that an LMS pilot program allowed technical staff to identify and resolve technical problems, which mitigated potential disruptions during full implementation. At **District E**, teachers in the pilot group assumed leadership roles during full implementation by presenting LMS best practices at workshops and working one-on-one with peers.

Administer teacher surveys to assess LMS implementation. These surveys ask teachers to report their comfort with LMS features, satisfaction with training, frequency of use, and technical and hardware difficulties. At **District A**, surveys also ask teachers to suggest training improvements and identify topics of interest for future trainings.

2) Researching and Selecting Vendors

LMS Uses

Profiled Districts Implemented Canvas, Google Classroom, Plato, Schoology, and/or Seesaw

Districts profiled in this report use five distinct Learning Management Systems (LMSs): Canvas, Google Classroom, Plato, Schoology, and Seesaw. **District A, District D**, and **District B** use only one LMS. All other profiled school districts use more than one LMS. Contacts at profiled districts that use multiple LMSs report that they do so to allow teachers flexibility. For example, elementary school teachers at **District E** use Seesaw instead of other LMS options at the district because its features align well with the needs of their students. The website for each LMS used at profiled districts, linked below, provides additional information about the system and its features.

LMSs Used at Profiled School Districts

LMS	Districts
Canvas	District F
Google Classroom	District C District D District E
Plato	District F
Schoology	District A District B District C District E
Seesaw	District E

Profiled Districts Implement LMSs to Streamline Communications, Improve Collaboration, and Encourage Blended Learning

LMSs at profiled districts allow teachers to share files with students, develop and disseminate short-term assessments, collect student work, and send announcements to students and parents. Contacts at **District A**, **District C**, and **District E** report that their district implemented an LMS in part to prepare for one-to-one technology programs, as LMSs allow instructors to send work and collect assignments from wireless student laptops. Beyond these basic functions, contacts at profiled districts cite the following major motivations behind LMS implementation.

Factors Motivating Profiled Districts to Implement LMSs

Streamlined Communication

Contacts at **District A**, **District B**, and **District C** use LMSs to create a "one-stop-shop" for parent and student communications. LMSs allow teachers to send assignment grades, direct messages, and announcements through one central platform.

Before LMS implementation, teachers at District B could use any free LMS, which resulted in parents and students switching across multiple platforms to receive communications. By requiring teachers to transition to one LMS, administrators eliminated communication redundancy.

Improved Collaboration

Contacts at **District A** and **District D** highlight the benefits that LMSs provide for student and teacher collaboration.

Many LMSs support collaborative document editing and sharing, which contacts report facilitates students' work remotely on group projects. Contacts at District D report that teachers can also use LMSs to provide feedback on student assignments quickly and easily, even outside of school hours. Lastly, contacts report that teachers across grade-levels, schools, and districts use LMS collaboration features to share teaching best practices and develop new assignments and assessments.

Blended Learning Implementation

Administrators at **District A** and **District E** ask teachers to use the LMS to provide personalized learning opportunities.

District A trains all teachers in blended learning instructional practices, in which teachers combine traditional classroom instruction with technology-mediated learning opportunities. For example, in a blended-learning classroom one group of students could engage in a discussion while another group completes an LMS-hosted science laboratory assignment.

Contacts at District E note that blended learning requires a substantial time investment to train teachers and support staff.

Selection Timeline

Research, Select, and Implement LMSs Over Multiple Years

Contacts at profiled districts report that administrators required at least three years to research and implement new LMSs. Administrators at profiled districts that researched and tested multiple LMSs (e.g., **District A, District B**) spent between six and eight months investigating options. Profiled districts that began LMS implementation with a pilot group of users spent between two months and two years in the pilot phase. Contacts at **District B** report that their district operated a shorter pilot program in part because many of their instructors had prior experience with Schoology.

LMS Research and Implementation Timelines at Profiled Districts

District A

- In 2014, the district launched a planning process.
- In 2015, the district launched a Schoology pilot program.
- In 2016, the district began a full implementation process that is scheduled to be complete by the end of 2021.

District B

- In 2015, the district launched a planning process.
- In 2016, administrators asked teachers to use Google Classroom or Schoology.
- In early 2018, the district conducted a two-month pilot of Schoology. They fully implemented Schoology by September 2018.

District C

- In 2014, the district launched a planning process.
- Contacts were not employed by the district during LMS implementation.

District D

- A Google Classroom pilot program began in 2014.
- The district began a full implementation process a few years later.
- The district reached 65 percent implementation by December 2018.

District E

- In 2014, the district launched a Google Classroom pilot program.
- In 2016, the district began full implementation.
- The district reached 50 percent implementation by December 2018.

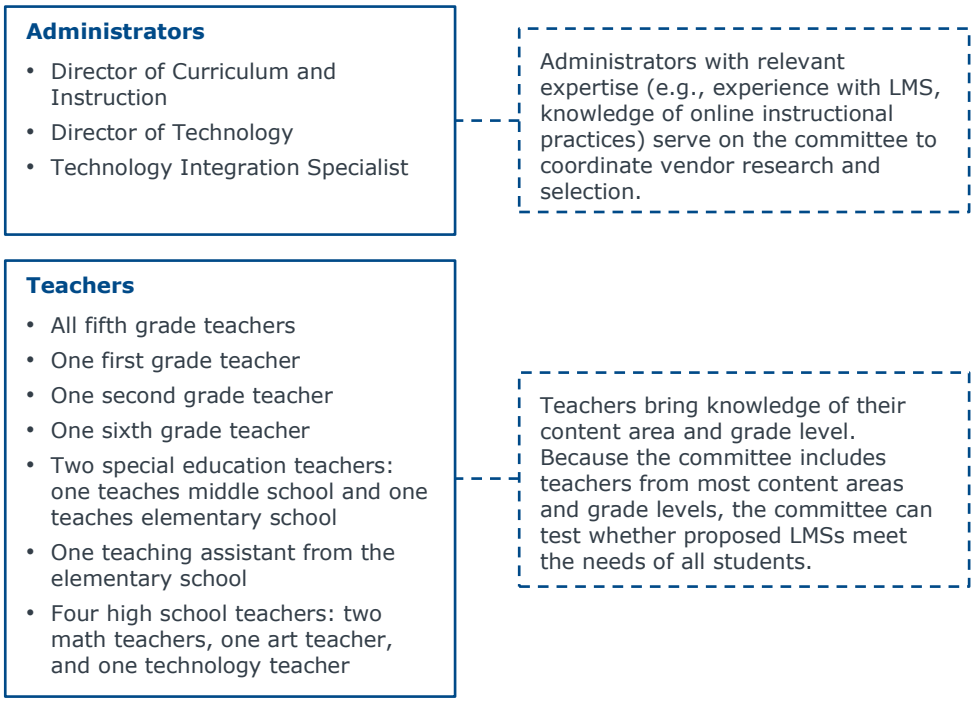
District F

- In 2014, the district launched a planning process.
- In late 2015, the district began to pilot Canvas but halted the program in 2017 due to problems with Wi-Fi and hardware.
- In 2015, the district implemented Plato to use with GED students.

Use District Technology Committees and Task Forces to Conduct LMS Research

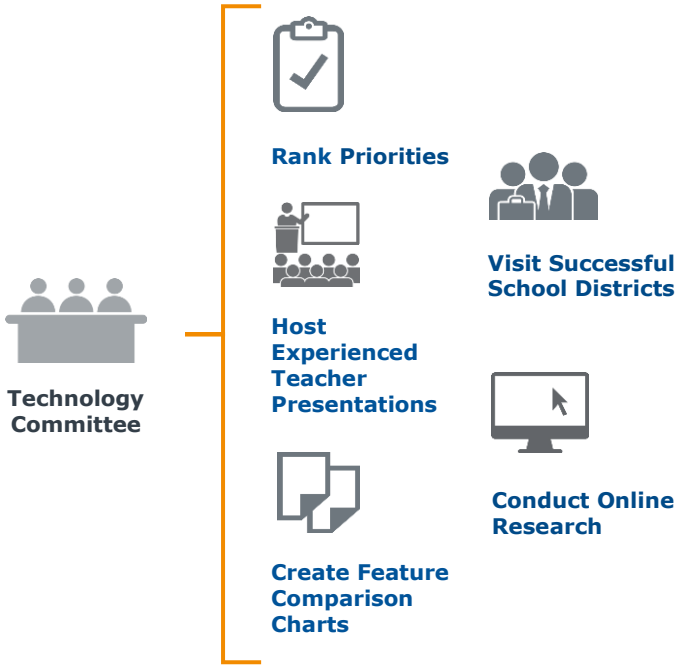
District A, **District B**, and **District C** used committees and/or task forces to research LMS options and features to inform LMS selection. Both District A and District B used existing technology committees. The committee at District A compiled a list of LMS priorities and desired functions. After composing this list, the committee formed a task force that included both technology committee members and teachers with previous LMS experience to select an LMS.

Technology Committee Membership at *District A*



District B's technology committee includes parent representatives and school principals in addition to administrators and teachers. By including parents and school-level administrators, the committee can secure buy-in from additional stakeholder groups. To engage non-committee members in the selection process, committee members asked teachers with prior experiences with different LMSs to present features, strengths, and weaknesses of the LMSs they were familiar with to the committee.

Tactics to Research and Select LMSs at Profiled Districts



District B's technology committee serves as an advisory committee to the district's cabinet of administrators, which possesses the authority to make the final decision regarding LMS selection. The administrative cabinet includes the director of technology, the director of athletics, the director of counseling, the director of business, the superintendent and assistant superintendents, and all principals and assistant principals. The administrative cabinet reviews the technology committee's proposal, suggests revisions, and approves the LMS purchase.

Contacts at **District D** report that they transitioned to Google Classroom due to teacher interest. Teachers approached the director of technology to ask for support implementing Google Classroom in their classrooms. Thus, District D did not develop a formal research or implementation committee, but rather allowed staff to engage with Google Classroom to the extent they deem appropriate. Contacts report that this approach gives teachers a sense of ownership over LMS training and implementation processes. Further, this approach empowers teachers to build their own knowledge of the LMS and develop new technical and pedagogical solutions.

That said, existing leadership committees at District D determine how to fund the LMS and update related district policies. When Google Classroom use spread from the pilot group to other teachers, the district technology team (i.e., superintendent, assistant superintendent, and director of technology) approached the Board of Education to adjust the district's technology plan to incorporate the LMS. They also asked the Board of Education to divert funds to Chromebook laptops to support increasing Google Classroom use.

Assess LMS Vendors Through Onsite Demonstrations, Technical Support Tests, and Call References

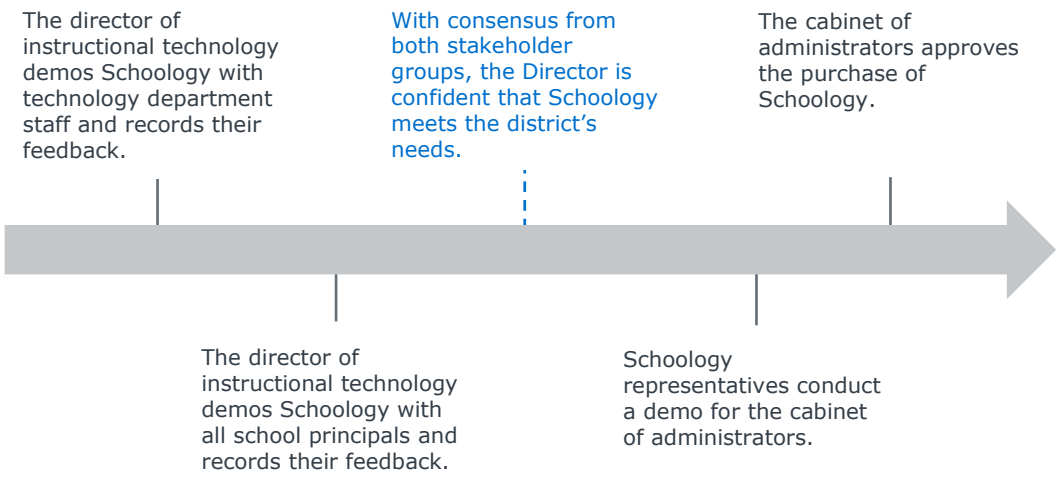
EAB's **Comprehensive Vendor RFI Toolkit** contains a Request for Information (RFI) template with over 192 potential questions. By creating a detailed, effective RFI, administrators can prevent security risks, license and functionality duplication, and bad contracts.

Members of the technology committee and/or task force at **District A** and **District B** asked LMS vendors to visit campus and demonstrate their system's capabilities. District A's implementation task force requested proposals from four vendors. Administrators selected the two vendors that responded promptly and with sufficient detail (i.e., Canvas, Schoology) to provide half-day demonstration sessions to the committee. Contacts report that these sessions focused on pricing information and key feature and capability demonstrations. Additionally, the director of curriculum and Instruction and other task force members at District A assessed the user interfaces of LMS options and conducted call references with vendor clients.

Administrators at District B asked the director of instructional technology to demonstrate Schoology to key stakeholder groups. Through multiple, team-specific demonstrations, the technology committee considered the benefits and drawbacks of Schoology from multiple perspectives to determine consensus among stakeholders on which LMS to select. After these demonstrations, the district hosted representatives from Schoology to conduct a formal demonstration for the cabinet of administrators. To hold in-house demonstrations, consider using the free version of the Schoology system.

Technology department staff at District B also tested Schoology technical support during the demo process. Staff called the Schoology help desk to test the availability and quality of support and submitted complex technical queries. Contacts report that staff could receive test technical support for the features available in Schoology's free platform, as Schoology reserves technical support resources for paying members. Thus, technology staff were unable to conduct a comprehensive test of Schoology's technical support as part of their research.

LMS Demonstration Process at *District B*



Leverage Networking During Vendor Selection to Secure Implementation Support

Contacts at **District A**, **District C**, **District D**, and **District E** report that they selected LMSs in part due to their use at neighboring districts and other districts they contacted as part of the research process. Contacts report that by selecting an LMS in use at other districts with whom they maintain relationships, administrators can contact individuals at those districts to ask for help resolving problems that arise during implementation. Contacts also note that shared LMSs allow teachers to communicate across districts to share LMS best practices. To establish collaborative relationships, administrators at District D asked teachers to visit neighboring schools and observe how teachers use LMSs in the classroom.

Further, contacts at District E report that selecting an LMS in use by other members of their shared-services cooperative (i.e., a group of districts that collaborate to meet educational needs through shared programs) allowed their district to approach agency staff for support during implementation. As part of their educational services agreement, school administrators at District E work with two technology coaches from their cooperative to coordinate LMS implementation. These coaches support multiple districts in the region, which exposes them to LMSs used at other districts. They can apply this knowledge of LMSs to streamline implementation in a district. Though cooperative staff do not coordinate implementation at District A, technology task force members consulted cooperative staff during vendor selection and implementation.

The vendor selection committee at District C consulted experts at a central administrative body that supports multiple cooperatives as part of their research on LMSs. Contacts report that this central administrative body has access to technological resources and expertise from other districts.

Select an LMS that Includes Features Aligned with District Goals

To select a vendor, contacts report that administrators should consider how LMS features align with district goals. For example, technology committee members at **District B** identified effective communication with students and parents as a key priority during their research process. When comparing Google Classroom and Schoology, committee members noticed that Schoology provides more communication features than Google Classroom. The committee considered these additional features when they selected Schoology over Google Classroom.

Contacts at District B note that Schoology's calendar feature was a significant factor in the selection process. Schoology automatically updates student calendars with personalized assignments, club meetings, and student group notifications, which allows parents to understand their child's workload quickly and cohesively. This calendar also allows teachers to set assignment and test dates that do not conflict with those set by other teachers in the district.

Communication Feature Comparison Chart at *District B*

Communication Features	Google Classroom	Schoology
• Announcements	✓	✓
• Commenting	✓	✓
• Calendar	✗	✓
• Workload Planning	✗	✓
• Direct Messaging	✗	✓

Profiled districts also considered how vendor options and LMS features aligned with the district's budgetary goals, previous technology purchases, and anticipated usage cases by grade level.

Sample Vendor Selection Factors at Profiled Districts

Desired Capability	Relevant LMS Feature
Administrators at **District C** wanted to conduct a long-term LMS test without committing a significant portion of their budget.	Administrators selected Schoology because the vendor allowed them to demo the LMS for one year at a reduced price.
Technology coaches at **District E** wanted to support visual and video content on shared tablets, as younger students lack the skills necessary to use typing-intensive LMSs.	Technology coaches implemented Seesaw because it was designed to support content aimed at younger students.
Administrators, teachers, and students at **District C** wanted to send district-wide announcements, such as leadership opportunities, play auditions, and bake sales.	Administrators selected Schoology because it includes a district-wide "news feed."
Administrators at **District B** wanted to integrate assessments and course content from other LMSs.	Administrators selected Schoology because it supports the integration of other learning technology products.

3) Implementation

Preparing to Implement

Test Implementation Processes with Teacher Pilot Programs

District A, **District B**, and **District E** tested LMSs through pilot programs that ranged in size from two to more than 17 teachers. Contacts at District E and District B report that pilot programs allow technology staff to identify and resolve problems related to technology, mechanics, and training with small teacher groups, which minimizes disruptions during full implementation.

Contacts at **District A** note that pilot programs should contain teachers from different grade levels and subject areas to simulate full implementation. Contacts also recommend that pilot groups include experienced, high-end users who can adapt quickly to technical problems.

Contacts at District E also note that a pilot program allowed teachers to uncover new and innovative ways to use the LMS (e.g., the Google Read and Write Extension supports literacy by helping students to proofread) and helped technology staff to develop LMS policies (e.g., students must transfer all Google files to personal accounts before graduation, when they lose access). Contacts also report that pilot programs can help increase teacher buy-in. As teachers in the pilot program share their findings with peers, they facilitate a teacher-led implementation process, rather than a top-down, administrator-led implementation process.

Techniques to Select Pilot Program Teachers at Profiled Districts

Technology Committee

The technology integration specialist at **District A** piloted the LMS with all teachers on the technology committee and vendor selection task force.

Technology Access

Technology coaches at **District E** piloted the LMS with teachers who had access to an in-classroom Chromebook through a previous grant.

Teacher Volunteers

The director of technology at **District D** piloted the LMS with teachers who approached them directly with interest.

Consider Surveying Teachers to Assess Readiness Before LMS Implementation

At **District F**, administrators developed surveys to assess teacher preparedness for LMS implementation. These pre-surveys measure teacher comfort with necessary hardware, the frequency at which teachers use technology in the classroom, and teacher awareness of support resources. The surveys also ask teachers to rate their readiness for LMS implementation.

Consider Implementing by Grade-Level to Ensure Students Introduced to the LMS Continue to Use It

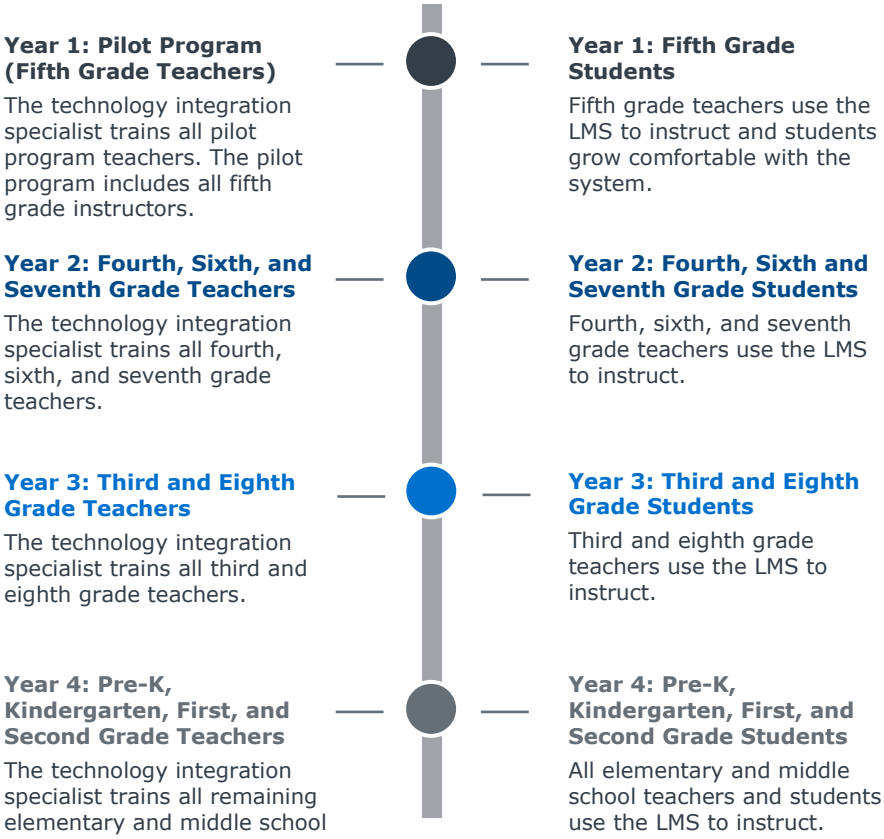
At **District D**, technology staff implement the LMS with teachers who express interest in using the system in their classroom. While this approach may increase teacher buy-in for the LMS, it hinders uniform implementation of the system: some teachers integrate the LMS into their classroom fully, while others do not use it at all. Thus, a student who used the system in fourth grade could move to fifth grade the next year and not use the LMS. To address this, **District A**'s technology committee created a four-year plan for full implementation.

Sample Grade-level LMS Implementation Plan[1]

Student Transition

When fifth grade students (year 1) matriculate to middle school (year 2), sixth grade teachers have already begun LMS training, so these students can continue to use the LMS.

Similarly, when seventh grade students (year 2) move on to eighth grade (year 3), eighth grade teachers have already begun LMS training, so these students can continue using the LMS.



Year 1: Pilot Program (Fifth Grade Teachers)

The technology integration specialist trains all pilot program teachers. The pilot program includes all fifth grade instructors.

Year 1: Fifth Grade Students

Fifth grade teachers use the LMS to instruct and students grow comfortable with the system.

Year 2: Fourth, Sixth, and Seventh Grade Teachers

The technology integration specialist trains all fourth, sixth, and seventh grade teachers.

Year 2: Fourth, Sixth and Seventh Grade Students

Fourth, sixth, and seventh grade teachers use the LMS to instruct.

Year 3: Third and Eighth Grade Teachers

The technology integration specialist trains all third and eighth grade teachers.

Year 3: Third and Eighth Grade Students

Third and eighth grade teachers use the LMS to instruct.

Year 4: Pre-K, Kindergarten, First, and Second Grade Teachers

The technology integration specialist trains all remaining elementary and middle school teachers.

Year 4: Pre-K, Kindergarten, First, and Second Grade Students

All elementary and middle school teachers and students use the LMS to instruct.

[1] Based on a four-year implementation plan provided by District A: "2017-2020 4 Year Plan," District A, Revised 11/15/18.

To Implement an LMS in High Schools, Consider Training Teachers by Subject Area

Because high school teachers at **District A** teach courses across multiple grade levels, the technology integration specialist could not lead trainings by grade level. Instead, the specialist trained teachers in groups comprised of at least one teacher who represented each high school subject in each of the first three years of implementation.

Professional Development

Offer Professional Development at Regular Intervals to Sustain Teacher Progress with LMS Use

Administrators at **District A** and **District B** schedule LMS trainings at regular intervals throughout the school year, which gives teachers time to apply content from the trainings between sessions and encourages consistent LMS use. Administrators at both districts train teachers in small groups, either by grade-level or by subject area, and secure substitutes to ensure all teachers can attend trainings.

At District A, teachers in the current phase of implementation receive 11 full days of professional development related to the LMS: eight days during the school year and three days during the summer. After the 11 days of professional development, teachers cannot attend additional full-day professional development session. However, contacts add that teachers can attend LMS workshops on superintendent conference days (i.e., school days where regular classes are canceled to provide staff with professional development). At District B, staff attend monthly training sessions that range in duration from 45 minutes to one hour and a half. The times of the sessions vary by month, though elementary school groups often meet before school due to a late start time (i.e., 8:15). Contacts anticipate that these trainings will continue for the next two years.

Sample Year-Long Training Schedule at *District A*

Year 3	
3rd Grade	8th Grade
Meeting Dates	**Meeting Dates**
Sep 20th	Oct 3rd
Oct 18th	Nov 9th
Nov 30th	Dec 20th
Jan 9th	Jan 24th
Feb 1st	Feb 28th
Mar 1st	Mar 8th
May 17th	May 9th
June 13th	June 6th

At District B, administrators also hold LMS sessions after school, which they incentivize teachers to sign up for and attend at their discretion. Teachers earn one credit for every two sessions they attend. Every 12 credits, teachers receive a pay increase. Teachers must attend each session for its full duration and provide evidence of active participation. This monetary incentive encourages teachers to engage with additional opportunities to practice using the LMS between monthly trainings.

To Meet Demand for Trainings, Consider Hiring Experienced Trainers from Other Districts

At **District A**, the technology integration specialist both designs the LMS training curriculum and leads all LMS trainings. At **District B**, internal trainers (i.e., experienced teachers on special assignment) lead trainings. However, to meet the demand for trainings training, the director of instructional technology both hired experienced trainers from outside the school district and delivers trainings herself. The director and her staff also developed online training courses for teachers who could not attend in-person training sessions.

Follow Up with Teachers after Trainings to Address Technical Problems and Pedagogical Questions

At **District D** and **District C,** administrators and staff educate teachers on the basics of the LMS, then follow up with each teacher a few days later to resolve mechanical and technical problems and answer questions. For example, at District C, the director of technology hosts a cohort of new teachers for an initial training, and then follows up with each teacher individually in the days following the session. By waiting a few days to follow up, staff give instructors time to identify technical concerns and determine how they intend to use the LMS. When they follow up with teachers, technology staff at both districts resolve technical problems themselves, but connect teachers with experienced LMS users to address pedagogical questions. These connections range from formal mentorship interactions to informal LMS conversations.

Process to Orient Teachers to the LMS at *District D*

1. A technology assistant meets with the teacher in their classroom to teach basic LMS components, features, and navigation techniques (e.g., how to create a class, how to share documents).
2. The assistant follows up with the teacher in a few days to resolve any technical or mechanical issues. The assistant also asks the teacher to identify their goals for how to apply the LMS in their classroom.
3. The technology assistant pairs the teacher with a mentor: an experienced teacher who already uses the LMS in a way that aligns with the new teacher's goals. This mentor answers pedagogical questions and provides in-class coaching as required.

Use Experienced Teachers to Facilitate Professional Development

At **District A** and **District D**, experienced teachers lead LMS presentations and workshops for other teachers on superintendent conference days. Experienced teachers at both districts also help train teachers. At District D, teachers provide one-on-one coaching in classrooms. At District A, teachers host training groups for classroom visits and facilitate LMS open laboratory sessions. These contributions from experienced teachers reduce the workload of technical staff and help foster collaborative learning among teachers.

Administrators at both districts encourage experienced teachers to seek external professional development opportunities and share what they learn from these trainings with other teachers in the district. To facilitate information sharing, the technology integration specialist at District A meets quarterly with teachers who participated in the pilot group quarterly to discuss LMS best practices. The specialist disseminates identified practices to other teachers through online communications, workshops, and coaching sessions.

Sources of External Professional Development

Vendor Tutorials, Webinars, and Instructional Videos

Collaboration with Teachers at Other School Districts

LMS Conferences

Online Trainings

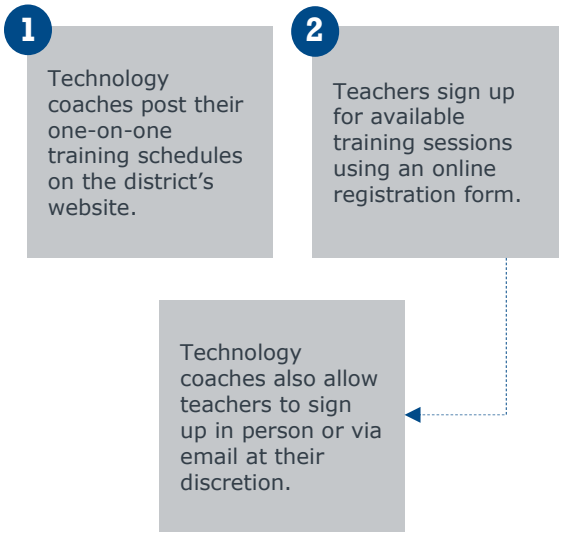
Offer One-On-One Technical and Pedagogical Support to Teachers Upon Request

At **District D**, technology staff ask experienced teachers to provide pedagogical, in-class coaching, so they can provide one-on-one support for technical and mechanical issues only.

District B, **District C**, **District D**, **and District E** offer one-on-one pedagogical coaching and technical support for teachers. One-on-one interactions allow staff to provide additional support to teachers struggling to use the LMS and assist teachers comfortable with the LMS to use complex pedagogy to teach.

Staff time investment in one-on-one support varies depending on size of the district. At District B, a larger district, the director of instructional technology, three instructional staff, and 11 technical staff provide individual and small group trainings upon request. Each staff member meets with an average of three teachers per day. At District E, a smaller district, two cooperative technical coaches provide one-on-one instructional coaching four days per week.

Process for Teachers to Request One-On-One Support at *District E*



Focus Early Trainings on Technology and Transition to Instructional Techniques as Teachers Gain Experience

Contacts at **District A**, **District B**, and **District E** focus early LMS trainings on basic technical skills before they introduce instructional techniques to mitigate overwhelming teachers. The 11-day training curriculum at **District A** reflects this. The first day of training focuses on specific LMS features (e.g., gradebook), and subsequent days of training cover pedagogical techniques (e.g., blended learning).

Sample Day 1 and Day 3 Training Agendas at *District A*

Day 1

Introduction

- 8am: Check-In/Establishing Norms
- 9am: Introduction to Schoology and Creating a Profile
- 12pm: Lunch
- 1pm: Resources and Organization (video tutorials, setting up homerooms, integrating applications)
- 2pm: Tests, Quizzes, and Assessments
- 3pm: Introducing Schoology to your Students
- 3:30pm: Check Out

Day 3

Applying Schoology to the Classroom

- 8am: Check-In/Get Settled
- 8:30am: Library Visit, Observe Schoology Pre-Teaching Assignment
- 8:50am: Discuss LMS Advice from Experienced Teachers
- 9:20 am: Advanced Functions (e.g., QR Codes)
- 10:00am: Classroom Visit
- 10:30am: Open Lab (Create your own instructional materials)
- 11:45am: Lunch
- 12:45pm: Classroom Visit
- 1:15pm: Open Lab
- 3:30pm: Check Out

At **District B**, each monthly training session focuses on one or two LMS functions, beginning with basic features. For example, the first training may focus on Schoology's calendar, and the second training teaches the basics of how to build online assignments. Contacts note that experienced teachers may find this training structure repetitive, but they stress it is more important to ensure that all teachers achieve LMS functional mastery.

Stakeholder Buy-In

Engage Reluctant Teachers with Targeted Technological and Administrative Support to Encourage LMS Use

All contacts report some teacher resistance to LMS implementation. Contacts at **District A** report that less confident teachers do not want to cede classroom control to students and thus rarely use the LMS to implement blended learning. At **District B**, contacts report that teachers resisted implementation because they feared that they would need to respond to student work late at night. Contacts also report that some teachers resisted Schoology implementation because they did not want to lose assignments and collaborative functions that they had developed in Google Classroom.

Strategies to Mitigate Teacher Pushback

Challenge	District Solution
 Less-confident teachers do not use the LMS in the classroom.	Technology staff offer to provide in-person support for the first three classroom sessions in which a teacher implements a new LMS strategy. Support staff gradually reduce their involvement in each session, until the teacher is comfortable alone.
 Teachers worried that LMS implementation would affect their work-life balance.	Administrators host meetings with concerned staff to discuss implementation work expectations and develop LMS policy.
 Teachers did not want to give up their prior LMSs.	Administrators allowed these teachers to transition over the course of a year and encouraged them to work closely with technical staff to build desired functions into the new LMS.

District D and **District E** do not require teachers to participate in LMS training or implementation. Contacts at District D report that teachers typically do not respond to top-down, mandated professional development. Teachers are more likely to embrace LMS training when they view it as a teacher-led movement. That said, contacts at District E note that teacher attendance at non-mandatory trainings can be unpredictable, as teachers often prioritize their daily tasks over optional professional development opportunities.

To Encourage Teachers to Adopt the LMS, Ask Administrators to Use the System to Communicate with Staff

Administrators at **District D** send communications (e.g., collaborative meeting agendas, policy documents) through Google Classroom. This communication demonstrates the collaborative function of the LMS, emphasizes the administration's commitment to the system, and increase teacher exposure to LMS features.

Profiled Districts Receive Little Backlash Against LMS Implementation from Parents and Students

Contacts at **District D** report that students express enthusiasm for Google Classroom. Contacts attribute this enthusiasm to students using Gmail for personal email accounts, which has given them previous experience with Google systems. Contacts add that they have received positive feedback from parents, who believe that LMS implementation helps their children to develop skills necessary to succeed in the twenty-first century workforce.

LMS Vendor Support

Consult Vendor-Provided Resources to Develop Initial Trainings

Staff at **District A**, **District B**, **District D**, and **District E** consulted vendor-provided resources (e.g., webinar series, online training resources, and presentations at vendor conferences) to develop training programs. For example, the technology integration specialist at District A reviewed eight hours of Schoology training webinars and attended a Schoology Next Conference. Schoology also provided a two-day training session for teachers in the pilot program at District A.

Yet contacts report that vendor-provided resources are not sufficient to develop complete training programs. Thus, administrators rely heavily on experienced teachers, online research, YouTube video tutorials, and testimony from contacts at other districts to design trainings.

To Supplement Vendor Trainings, Consider Hiring Experienced LMS Users from Other Districts

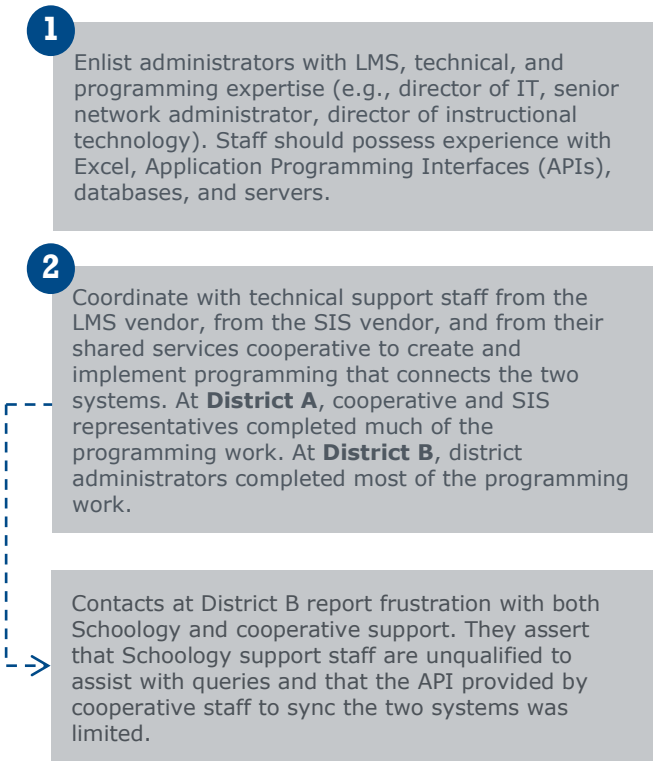
Contacts at **District B** express disappointment with the quality of Schoology's initial training. Schoology provided one dedicated trainer. Contacts report that the trainer offered little help and struggled to schedule trainings in advance. The director of instructional technology thus hired experienced teachers and Schoology users from other districts to serve as trainers.

Collaborate with Vendor Technical Support Staff to Sync LMS and Student Information System (SIS) Gradebooks and Rosters

District A, **District B**, **District C**, and **District E** attempted to implement automated syncing between their LMSs and the SIS in use at their district. Of these four districts, District A and District B succeeded in syncing these systems. Contacts at both districts report that syncing the two systems is difficult and time intensive. At District B, the director of instructional technology spent approximately 35 hours per week dedicated to this problem from January to April of 2018.

At profiled districts that do not operate synced systems, teachers manually update grades in both the LMS and in the SIS. Contacts at **District E** report that teachers complain about this redundancy.

Sample LMS and SIS Syncing Process



Resolving Implementation Obstacles

Update Hardware and Wi-Fi Systems Before LMS Implementation

Contacts at **District F** report that district computing resources were too old (i.e., between nine and 12 years old) to process many LMS functions. Both teachers and technology staff expressed frustration with existing hardware. The school district began 1:1 technology implementation in 2018 to address this problem.

At **District E**, contacts report that problems with Wi-Fi speed and access hindered LMS implementation. Buildings in the district did not contain a sufficient number of Wi-Fi access points for all students to access the LMS, and the Wi-Fi system was too slow for effective LMS use. To fix this problem, the school district committed resources to install additional Wi-Fi access points.

Implement Single Sign-On Access Control to Increase Student Access to the LMS

Contacts at **District D** report that students often forget their login credentials for Google Classroom, the SIS, and other online district resources and thus cannot sign in to complete classroom assignments. To combat this issue, the technology team granted password administrator rights to select teachers, librarians, and principals so that they could reset passwords that students forget. Unfortunately, these password administrators would often reset the incorrect password, which only increases confusion. Contacts note that single sign-on access control would mitigate this issue, as students could access all instructional resources through one login credential.

Assessment

Administer Surveys to Teachers to Assess LMS Implementation, Performance, and Use

District A, **District B**, **District D**, and **District E** use or plan to use surveys to assess their LMS. These surveys assess topics that include the availability of technology and future teacher professional development needs. To avoid survey fatigue, contacts at many profiled districts also collect feedback from staff at administrative meetings.

Example Survey Uses at Profiled Districts

Technology-Infused Lesson Reflection

At **District E**, technology coaches ask teachers to complete a survey after they implement blended learning techniques in the classroom. Teachers reflect on their lesson goals, lesson design, and assessment strategies.

Technology Access and Use

At **District E**, technology coaches ask both students and teachers to indicate via survey the availability of technology in their building/classroom, their comfort with technology (including the LMS), and the frequency at which they use technology to instruct.

Professional Development Needs

At **District D**, administrators plan to administer a survey to identify the future professional development needs of three groups of teachers: those who do not use the LMS, those who use the LMS and want to learn more, and those who use the LMS proficiently.

Training Effectiveness

At **District A**, teachers complete an exit ticket survey after each professional development session. The technology integration specialist uses this teacher feedback to adjust training content and structure for future cohorts.

Sample Exit Ticket Survey

- Rate your training overall (1-5 stars)
- What did you like about today's Schoology Session?
- What would you change about today's Schoology session?
- What questions or concerns do you still need follow-up on?
- Is there anything you would like to see change for the next session?
- About what are you most excited to learn?

Use Built-In LMS Analytics and Existing District Data to Assess Impact of the LMS

Contacts at profiled districts report that not enough time has elapsed since implementation to assess the impact of LMSs on district functions. At **District D**, contacts plan to compare student graduation rates and student test scores before and after LMS implementation to identify instructional benefits of the LMS. To conduct this analysis, contacts note that they will need several years of data post implementation. At District A, administrators ask teachers to complete a district-wide teacher efficacy survey every two years since before implementation. The director of curriculum and instruction plans to compare teacher efficacy ratings before and after LMS implementation to assess how LMS use changes teacher comfort in the classroom.

Additionally, Schoology's analytics function allows administrators to view statistics on teacher, student, and parent use. At **District A**, contacts note that their LMS usage rate statistic showed a large increase in LMS use across the implementation process.

4) Research Methodology

Project Challenge

Leadership at a member institution approached the Forum with the following questions:

- When did contact districts begin to develop a plan to select an LMS?
  - How long did contact districts take to develop their LMS-selection plan?
- How did contact districts identify their goals and priorities for an LMS?
- What did contact districts want their LMS to accomplish?
- How, if at all, did contacts involve teachers, parents, administrators, and students in the LMS planning process?
- How did contact districts select their LMS vendor?
  - How long did the selection process take?
- For what reasons did contact districts select their current LMS vendor?
- How did contact districts prepare to implement their current LMS?
  - How long did LMS implementation take?
  - What obstacles did districts encounter during implementation?
  - How did districts communicate with their LMS vendor during implementation?
- How did contact districts train and incentivize teachers to use the LMS?
  - How did teachers react to LMS implementation?
- How have LMSs impacted key functions at contact districts?
- How do contact districts assess whether their LMS meets the goals and priorities outlined during the planning process?

Project Sources

The Forum consulted the following sources for this report:

- EAB's internal and online research libraries (eab.com)
- National Center for Education Statistics (NCES) (http://nces.ed.gov/)
- LMS Vendor Websites
  - Canvas. "Overview." Accessed 1/13/2019. https://www.canvaslms.com/k-12/.
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  - Google. "Manage Teaching and Learning with Classroom." Accessed 1/13/2019. https://edu.google.com/products/classroom/?modal_active=none.
  - Schoology. "Advance What's Possible." Accessed 1/13/2019. https://www.schoology.com/.
  - Seesaw. "Seesaw." Accessed 1/13/2019. https://web.seesaw.me/.

Research Parameters

The Forum interviewed district administrators and technology and training staff at districts that recently implemented LMSs.

A Guide to Institutions Profiled in this Brief

Institution	Region	Approximate District Enrollment
District A	Northeast	1,000
District B	Northeast	4,500
District C	Northeast	500
District D	Northeast	3,000
District E	Northeast	1,000
District F	Northeast	4,000