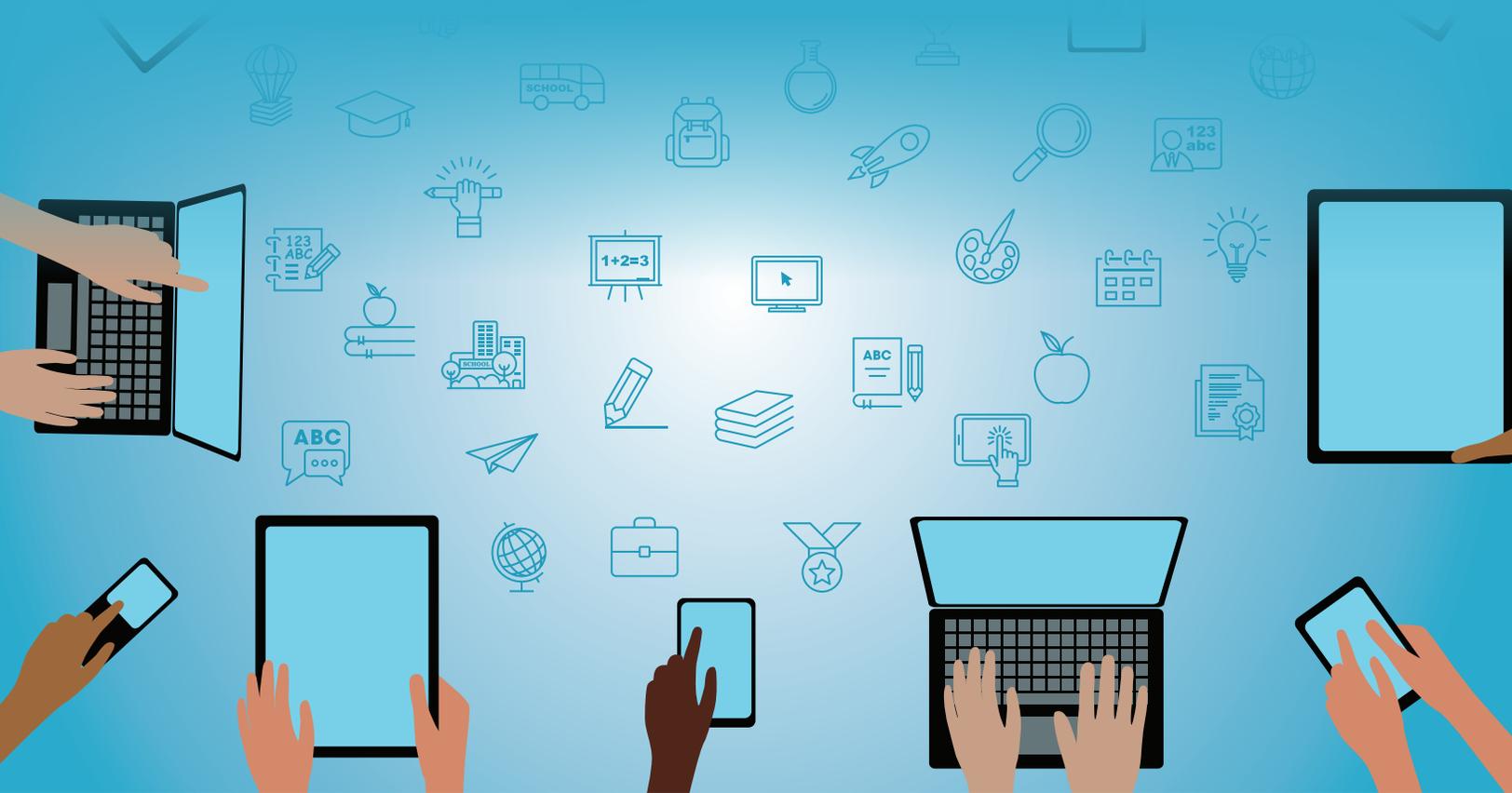


SINGLE SIGN-ON: A Buyer's Guide for Your District

School districts can now offer instant access to extensive libraries of educational applications through updated single sign-on technology. Here's how to analyze and choose the right SSO solution for your district.



SINGLE SIGN-ON:

A Buyer's Guide for Your District

By Bridget McCrea

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Introduction

Nothing brings out our most colorful language like the experience of repeatedly failing at logging in with a username and password. Whether it's paying monthly bills at home, updating our favorite music and video services, or trying to prepare for the following week's lessons, the stress that comes from being stymied by too many log-ins is real. That stress is amplified many times over in the classroom.

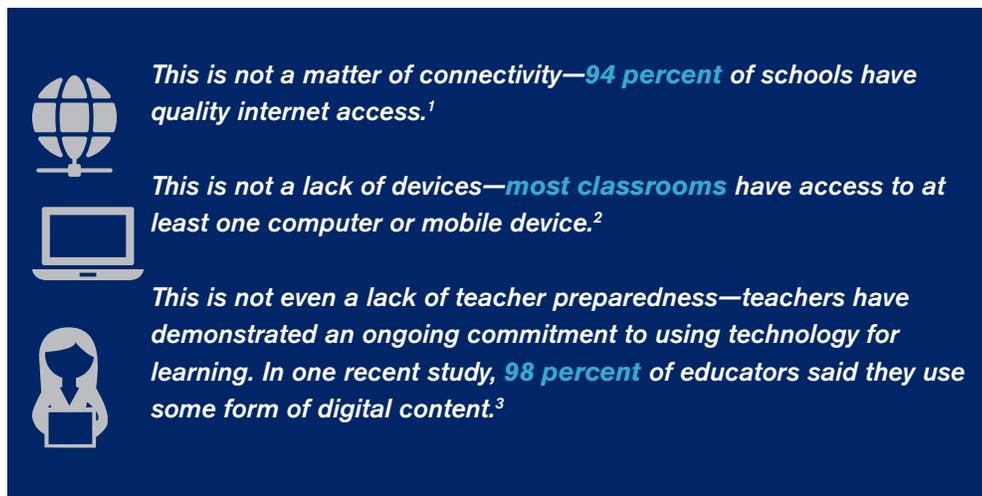
Most teachers can relate ... the bell has rung and the kids are settled in. The teacher has prepared a thoughtful, engaging lesson using her favorite learning resources—resources her school has carefully evaluated and strategically invested in. Imagine her frustration when students cannot log in, or her stress when she can't help them navigate quickly and efficiently between resources.

Between the lost instructional time, distractions, and increased anxieties, it's all a teacher can do to avoid using that same colorful language she used at home the night before. And it's no surprise that this teacher would ask, "Isn't there a better way to access digital learning?"

There is. It's called single sign-on (SSO), and it's time we explore this important development in education technology to help you make an informed decision.

With the rise of digital learning in the classroom comes the promise of interactive, highly engaging resources that can transform teaching and learning. That promise remains unfulfilled in too many classrooms, however—simply because it's too difficult, frustrating, and time-consuming for teachers and students to access these resources.

With so many applications, devices, and distinct user requirements, the need for fast, equitable access to digital learning has moved beyond the tech team's to-do list and become a strategic imperative for technology, instruction, and district leadership.



This is not a matter of connectivity—94 percent of schools have quality internet access.¹

This is not a lack of devices—most classrooms have access to at least one computer or mobile device.²

This is not even a lack of teacher preparedness—teachers have demonstrated an ongoing commitment to using technology for learning. In one recent study, 98 percent of educators said they use some form of digital content.³

What's happening in too many classrooms is that teachers and students simply can't remember all the websites and log-ins to the resources they need. At Galena Park ISD in Texas, Darlene Lovinggood, senior director of technology, says the inability to find and log in to materials quickly was a major impediment to using those resources. "Our resources were all over the place. We had them on our district page, our technology page, curriculum page, campus page, or it may have been an icon saved on the computer," Lovinggood says. "It resembled playing a hunting game any time you wanted to find a resource."

Enter SSO, an important step that many schools are taking to help them fulfill the promise of digital learning. "We were getting to a point where parents, students, and staff were juggling a tremendous number of passwords, and having to keep up with and remember them created challenges and was also in conflict with our data governance policy," says Donna Williamson, technology director at Mountain Brook Schools in Alabama. "A teacher's primary job is to teach, a student's primary job is to learn, and a parent's primary job is to parent. None of them should be worried about network security or struggling to maintain and retrieve passwords."

1 <https://www.educationsuperhighway.org/>, "2017 State of the States."

2 "To Prepare Kids for Their Futures, Incorporate Technology Into Core Curriculum," <https://www.edsurge.com/news/2017-09-11-to-prepare-kids-for-their-futures-incorporate-technology-into-core-curriculum>

3. Houghton Mifflin Harcourt, "2017 Educator Confidence Report," <http://learn.hmhco.com/ECR2017> (accessed 10/12/17).

When there are a large number of websites and log-ins to remember, all three user groups are prevented from unlocking the full potential of learning and productivity resources because they don't have easy, reliable access. Websites, reference sites, learning games, streaming video, source materials, files, presentations, management systems ... the list of helpful resources expands with every new school year. Each individual resource requires a username and password. Keeping track of all of these is a lot to ask of people who want to spend time teaching and learning, not entering usernames and passwords.

In this buyer's guide, we explore the current need for high-quality single sign-on (SSO) in K–12 districts, discuss the importance of security and rostering in our digital educational world, and provide useful tips for selecting the best SSO solution for your district.

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—Donna Williamson,
Technology Director,
Mountain Brook Schools,
Alabama



It wasn't long ago that school computers were few in number, housed in computer labs, and stored software programs that ran only on those individual machines. Once the sole domain of floppy disks, applications and files are now spread across hard drives, network shares, and cloud services. Classroom technology has proliferated such that classrooms now use more devices and access more digital resources than ever.

The number of laptops, tablets, netbooks, and Chromebooks shipped annually to K–12 schools in the US grew by 363 percent over the past seven years, from just over three million devices in 2010 to almost 14 million in 2016, according to the Education Week Research Center. And the percentage of both fourth- and eighth-grade students who report using a computer in math class at least once every few weeks has increased steadily over the past decade.⁴

While the accelerated adoption of technology has been transforming education for the better, it has also increased the complexity of managing access to resources. Typically, students and teachers must memorize dozens of websites and passwords to log in to resources and applications. Unfortunately, this has overwhelmed them to the point of frustration.

⁴ Education Week Research Center, *Data Dive: Devices and Software Flooding Into Classrooms*, <http://www.edweek.org/ew/tc/2017/data-dive-devices-and-software-flooding-into-schools.html?intc=EW-TC17-TOC> (accessed 9/30/17)

And this frustration increases when teachers are trying to support users with limited literacy, special learning needs, or physical disabilities.

With so many applications, devices, and distinct user needs, the challenge to provide fast, equitable access to digital learning has moved beyond the tech team's to-do list and become a strategic imperative for technology, instruction, and district leadership.



For many districts, the solution to this problem lies in single sign-on (SSO), an approach that allows students and teachers to use one log-in credential—usually a name and password—to access multiple applications. One-click SSO, for example, puts users in touch with everything they need to access anywhere, with just one password.

Accessible from any device, one-click SSO ensures the success of a 1:1 computer or BYOD (bring your own device) initiative in an educational environment where “knowledge workers” (i.e., students, teachers, IT teams) interact with myriad resources, applications, programs, and devices on a daily basis. If your district isn't making access to these resources really easy, students won't be able to benefit from or will not be able to realize or will not be able to maximize the full potential of those resources. Instead of experiencing all that digital learning resources can offer, they'll spend their time struggling to remember and physically type in usernames and passwords. This is more than frustrating at the individual level, and it's a barrier to organization-wide adoption of digital learning—a barrier that SSO can, and should, eliminate.





ADDRESSING CYBERSECURITY ISSUES

According to Pew Research Group, roughly two-thirds (65%) of Internet users say that memorization is the main or only way they keep track of their online passwords—and another 18 percent rely primarily on writing their passwords down on a piece of paper. In other words, fully 84 percent of respondents rely primarily on memorization or pen and paper as their main (or only) approach to password management.⁵

Keeping K–12 users secure in the evolving IT environment is a major challenge. And as districts continue to embrace more Web-based applications, the problem will only get worse. In many cases, poor password selection, the large and ever-changing student user base, and the need for extensive user management on the part of a district's IT team can all create cybersecurity issues. When students struggle to come up with and remember strong passwords, for example, the burden usually falls on the IT team to manage an overwhelming number of password reset and log-in problems.

Cybersecurity has many faces, from user behaviors to architecture, management, and hosting Web-based applications. There are generally accepted standards for security today, and these standards help build credibility and confidence. The International Organization for Standardization (ISO) is dedicated to developing, publishing, and advocating international standards in a wide range of areas. The “gold standard” across many areas of technology and business, ISO has more than 19,000 published standards. The ISO 27001 certification is among the most widely referenced standards for information security in a datacenter. ClassLink, for example, an educational SSO company, uses Amazon and Rackspace datacenters to host and deliver its cloud software; both providers have robust security measures in place and adhere to ISO 27001.

Kate Anastario, ClassLink's VP of Educational Success, says security is a key concern in the educational environment, and that it impacts everyone—from the individual student to the district as a whole and the federal government. Yet ironically, she points out,

The ClassLink OneClick library offers over 5,000 SSO apps and instant access to file folders at school, on Google Drive, Office 365, and Dropbox cloud drives. The platform delivers class rosters securely to any publisher that's using open technology standards.

⁵ Kenneth Olmstead, “Americans and Cybersecurity,” Pew Research Group, January 26, 2017, <http://www.pewinternet.org/2017/01/26/americans-and-cybersecurity/> (accessed 9/23/17).

users continue to store their usernames and passwords in their Internet browsers—often without giving it a second thought. “When you show someone how to look in their Google Chrome settings and view which passwords they’re saving, they’re usually shocked,” says Anastario.

At Mountain Brook Schools, Williamson says the need for improved security drove the decision to invest in a Web-based SSO solution. The district previously used a non-SSO portal-type solution to access resources. “Our previous solution made it very cumbersome to set up new applications and was no longer meeting our needs,” says Williamson. “We knew we needed a new portal for security reasons and to give users 24/7 access, which is what they’ve become accustomed to with everything else in life.”

Using ClassLink’s OneClick SSO with federated log-in, students and teachers need only sign in once to access multiple applications and resources. Not only is this better than “browser-stored” passwords, but it also allows the IT department to manage and control users’ digital identities across a wide range of resources.

“When districts have a clear strategy in place for identity management,” says Anastario, “the ability to establish and orchestrate a secure environment for students is much more attainable. By pulling users out of browser dependency—which they may not even be aware of—and allowing them to use one secure log-in, the cybersecurity vulnerabilities are significantly reduced.”

“Too often, we see districts buying technology that they don’t really need, or that doesn’t get used. Using the analytics functionality of your SSO platform, you can readily see the ROI for the platform, see who is and isn’t using it, and then use those metrics to drive further professional development and training.”

— George Perreault,
Chief Academic Officer,
Classlink



BRIDGING THE GAPS: FILE ACCESS

Students and staff keep files in many places. Some still save their work on the school network, while most others now store it on the cloud (e.g., Google Drive, Dropbox, Office 365, and OneDrive). Just as it’s essential to use SSO to achieve instant access to all digital resources, it’s also becoming essential to use SSO to bring together various cloud drives and school network folders. ClassLink MyFiles gives students and faculty one-click access to all their files, regardless of where they’re stored. And they can share and edit them from any device. Being able to access, edit, and store files and folders on any cloud drive or school network—from any device—is a critical piece of the SSO puzzle.



USAGE ANALYTICS

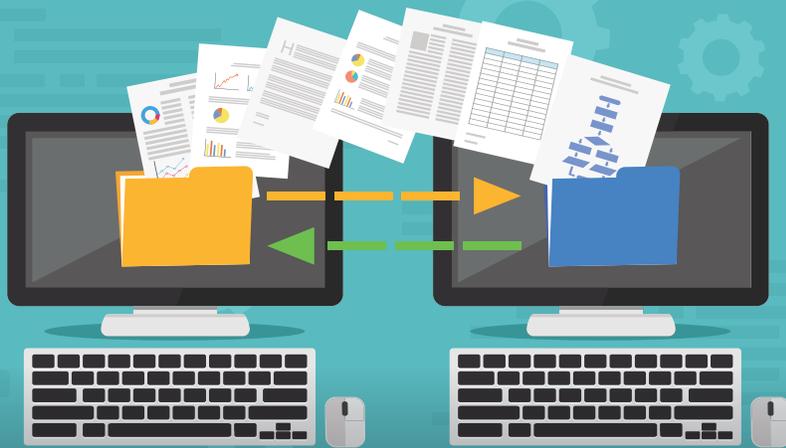
It's not news to anyone that schools today have a rapidly growing investment in digital resources. Sometimes the investment is in purchased materials. Sometimes it's in training and professional development. Other times it's in the form of "hope"—"hope for improved learning outcomes." And sometimes it's in all of the above. It's fortunate that today's digital resources are creating a growing gold mine of usage analytics to help guide school leaders in these investments.

"Too often, we see districts buying technology that they don't use as planned," says George Perreault, ClassLink's Chief Academic Officer. "With analytics, you can see 'truth.' A true picture of how much usage, when, where, and who ... then use those metrics to guide further professional development and training."

The ClassLink SSO platform incorporates analytic capabilities that can help districts understand whether, how, and how frequently their learning and productivity resources are being used. The platform also provides details including who is logging in and what applications are being used. Other easy-to-read charts include "Log-Ins Outside of School Hours," "Top Applications," "Device Types," and more. Analytics is also available from a mobile app called ClassLink Analytics, which tracks and reports data in real time.

Anna Baldwin, director of e-learning and integration at Anderson (SC) School District Five, says ClassLink Analytics helps the district assess the applications and software that it has purchased to see how those investments are being used. "We can look within our SSO platform and instantly get data that tells us whether students and teachers are using the products we bought. With a click we can summarize the charts on a daily, weekly, monthly, or whole-year basis to determine if there are schools that have less usage," Baldwin says. "That data helps us really get the full bang for our buck across all of our software purchases."

It's no longer "just an IT thing." Single sign-on in education has evolved from a fringe topic discussed only by technology folks to a need that curriculum and instructional leaders are now understanding.



ROSTERING, DATA STANDARDS, AND STUDENT DATA PRIVACY

The process of sending student class roster data to activate digital resources can be tricky for districts, especially during back-to-school season. Historically, school technology departments have spent the months of July and August extracting class roster data from their student information systems and then creating unique data files for each digital resource. In most cases, the resource providers require essentially the same data. Unfortunately, they often require this data in unique formats, usually in the form of different spreadsheets and CSV files. The fact that providers require common data in different proprietary formats places an unfair burden on technology teams. They have to spend time formatting roster data files that would be better spent focusing on strategic issues.

Over the last decade, the rapid growth in online resources has greatly increased the workload on school district technology teams to produce these roster data files. What started with pockets of people who were frustrated with entering school data has become an industry-wide outcry. Schools want a better way to deliver roster data. A group of committed school technology leaders and major education publishers came together, through the IMS Global Learning Consortium, and developed a new data standard called OneRoster[®]. This data standard is a common file format for those roster data files. Using OneRoster[®], school data teams create one data file—and that same file is accepted by all publishers. What used to be a laborious, time-intensive, and repetitive exercise is now a streamlined process that benefits schools and the providers that serve them.

The OneRoster[®] certified server that is included with ClassLink's SSO helps districts securely store and automate the delivery of class rosters to any learning resource company. Using that server, school data staff can save time and allocate resources to more important tasks.

"Nearly all schools struggle with the process of delivering roster data from their student information systems (SIS) to their learning resource providers, especially at the start of the school year," says Perreault, ClassLink's Chief Academic Officer. Using the IMS Global standard, ClassLink created a system that does enterprise-level SSO and is certified for rostering. Through a simple user interface, schools can validate, filter, and securely deliver rosters to each vendor.

In the wake of so many recent Internet data breaches at big companies and in the government, policy makers at all levels are ratcheting up student data privacy regulations to ensure everyone is doing all they can to mitigate risk. When protecting student data, a good place for schools to start is to make access as difficult as possible for hackers. As the story goes, when two hikers were being chased by a bear, one hiker shouted, "How can we outrun that bear?" The other hiker turned and said, "I don't have to outrun the bear, I just have to outrun you!"

The parallel is that schools should make their data difficult to catch by keeping it off the Web where possible. Share it securely with only those who need it, and don't create an attractive target by unnecessarily combining your data with the data of every other school out there.

School districts have choices with the ClassLink Roster Server. It can be installed on the internal network or securely in the cloud. Even when in the cloud, it contains only that one district's class rosters. ClassLink does not commingle or combine data from different schools on these roster servers.



LOOKING AHEAD: THE EVOLUTION OF SSO

It's no longer "just an IT thing." Single sign-on in education has evolved from a fringe topic discussed only by technology folks to a need that curriculum and instructional leaders are now understanding. With the skyrocketing growth of digital resources, easy one-click access is essential. Without it, there's an unacceptable loss of classroom learning time and a troubling lack of resource awareness. Without single sign-on, our schools are complicit with an unfair disadvantage of productivity by new staff members and students who struggle with remembering websites and passwords. One day, like Internet access, all schools will have a single sign-on system. Our desire for equity of access and the need to derive the full value potential of digital resources will require it. Fortunately for those schools that are just now considering, or reconsidering, SSO options, the road has been paved by many school districts that have come before you. Below are questions to ask potential vendors. As always, ask your peers from other districts what their experiences have been as well.

12 QUESTIONS TO ASK YOUR SSO VENDORS

Deciding which SSO solution will be the best fit for your school district doesn't have to be frustrating. Like any technology implementation at the K–12 level, starting with a good checklist of questions and asking for references can save lots of headaches down the road. The ultimate goal for any SSO solution should be to help teachers work more efficiently and students achieve their educational goals.

Here are 12 important questions you can include in your RFPs or purchasing contracts or ask your SSO vendors in order to gain a better understanding of their products, capabilities, and track records:

Checklist for Evaluating SSO Providers



1 How strong is your track record in K–12 and can you scale to handle all the simultaneous student log-ins? There are major differences between business SSO solutions and those that are specifically tailored to the K–12 educational environment. Make sure your SSO provider has a solid track record of success with districts or schools that are similar to yours; ask for references. Your SSO provider should have at least five to ten years of experience in K–12. Beyond a helpdesk, they should have teams dedicated to “educational success” that focus on implementation and support. They should offer in-depth training programs supported with high-quality documentation for site administrators and end users. Overall system reliability and scalability are crucial. Ask about the number of daily log-ins they support, hours of operation for their telephone helpdesk, their service level agreements, and their cloud infrastructure.

2 How big is your library of SSOs? Your SSO provider should start the day with a large library of “already developed” SSO connections. They should also have a proven track record of connecting with major publishers and platforms. They should be able to demonstrate true partnerships with your most important education content and management system companies (e.g., Pearson, Houghton Mifflin, McGraw Hill, Discovery, etc.). Your SSO provider's library of applications should be large and customizable and should offer plenty of method-of-authentication options (more on that below).

3 Does the SSO platform support multiple sign-in options? Most districts rely on Microsoft Active Directory or Google for student network log-ins. Other methods of network sign in may include SAML and ADFS. Your SSO provider should give you maximum flexibility in these sign-in options. They should also offer options you don't currently have, such as signing in using student ID cards, facial recognition, and multi-factor authentication (MFA). The key here is choice. Your SSO provider should give you the ability to turn these options on and off selectively for different groups of users, (e.g., simple ID card sign in for little ones and special needs students).

4 Does the SSO platform allow a wide range of method-of-authentication options? There are many authentication standards available today, including SAML, OAuth, LTI, OpenID, Google, Microsoft Active Directory,

LDAP, and more. Having an SSO provider that accepts the widest possible range of these authentication methods means you can have confidence that almost any online resource you want will work with your SSO provider's capabilities. The ideal SSO provider will accommodate not only a wide range of authentication methods but will also provide custom-developed integrations where needed. Your SSO provider should not limit your instructional options—only you and your teachers should do that. Also, an SSO provider that doesn't charge extra for all these authentication options is good for the budget!

5 Does the SSO provider offer SSO access to files? A comprehensive SSO platform should provide more than sign in to apps. With the proliferation of file storage options and cloud drives like Google Drive, Office 365, Dropbox, and so on, students and teachers are putting files in more and more places. Easy access to cloud drives is as important as easy access to apps. Your SSO provider should give you easy access to all of these file locations and the flexibility to add new ones. And there's more. The use of cloud drives is increasing everywhere, yet many schools still have some users who continue to store files on the school network. Remote access to these network folders usually requires complicated VPNs, which are generally not available from Chromebooks, tablets, or mobile phones. A good SSO provider will include easy access to your school network folders right alongside your cloud drives, giving you the flexibility to drag and drop files between these locations and from any device. You should be able to open and edit school network files too. This was particularly important for Mountain Brook Schools. "I like that I can provide them access to network files in a safe and secure manner," Williamson says.

6 Can we use the platform to manage our rostering requirements? The rapidly growing number of online resources has increased the burden on schools to prepare and send unique class roster files to each of these resource companies. The new OneRoster® data standard from IMS Global promises to fix this by establishing a single format to the roster files for all to accept. You should select an IMS Global Certified SSO platform that includes this open standards approach to sending rosters. For FERPA and data security reasons, you should expect the option to host your own roster server in-house or in the cloud. If it's cloud hosted, your data should be separate from the data of any other school and the SSO provider should definitely not be selling it to anyone!

7 Does it work on multiple devices? No longer relegated to the classroom environment, instruction now takes place anytime, anywhere, and on any device. Make sure that your SSO platform supports this reality and that it works seamlessly on a mobile phone, tablet, or computer.

8 Will the SSO platform provide the analytics we need to make good decisions? There's more opportunity today than ever before for curriculum leaders to make better informed decisions. Usage analytics is a key contributor to making better resource decisions. Your SSO provider should offer easy-to-access reports that show usage of all learning resources and productivity tools by building, grade level, and individual—along with custom reports for lots of other things. Reports should be real-time and easy to access from any device. Ask for a dedicated mobile app for analytics

Like any technology implementation at the K–12 level, starting with a good checklist of questions and asking for references can save lots of headaches down the road. The ultimate goal for any SSO solution should be to help teachers work more efficiently and students achieve their educational goals.

data too. The analytics feature should help you make informed curriculum and professional development decisions (e.g., by pointing out areas where more teacher training is needed, based on low usage).

9 What about SSO for parents? Just as students and teachers are using many different online resources for learning, it seems parents are also dealing with remembering websites and log-ins for multiple school-related apps. Between the attendance and grading website, the lunch money website, the homework website, the school calendar page, and all the curriculum websites designed for engaging the household, parents are experiencing log-in fatigue too. If your SSO provider can meet the needs of students and teachers, ask about how they can meet the needs of parents too.

10 Can we customize the system to match our school's mission, brand, graphics, colors, etc.? Williamson says these small details made a big difference when rolling out their district's new SSO platform. "We really liked how we could customize our splash page and make it look like a Mountain Brook interface," she explains. "We wanted the graphics and screen elements to connect to our school identity." The whole system should work from all devices (laptops, desktops, tablets, and phones), operating systems, and browsers. To reinforce the school vision and brand, ask about customized mobile apps for the Apple App Store, Google Play Store, and Microsoft Store.

11 Does the platform accommodate personalization of settings and of the screen's look and feel for ADA compliance? Look for a platform that lets you, or your individual students and teachers, personalize their screens. An SSO system that passes Section 508 of the Rehabilitation Act and Section 255 of the Communications Act is a must—especially when letters arrive in the mail questioning if your school is meeting "online access to learning materials" guidelines for all learners.

12 How about student data privacy/security and other tools for the technology team? Review the data privacy statement from your SSO provider and make sure they are a signatory on the StudentPrivacyPledge.org website. Ensure the provider's privacy policy statement contains the following terms: 1) Data Ownership, 2) Purpose of Data, 3) Type of Data Maintained, 4) Protection of Data, 5) Disposal of Data, 6) Correction of Data, 7) Discovery of a Security Breach, and 8) Financial Protections. Additionally, get assurances from the SSO provider that they comply with your home state's privacy requirements. Your technology team will also have a wish list, and helping them work more efficiently helps everyone. Among the tools to find in your SSO platform is an account sync between the network directory and the SIS database. Also ask about self-service for forgotten passwords.

"We wanted the graphics and screen elements to connect to our school identity."

— Donna Williamson,
Technology Director,
Mountain Brook
Schools, Alabama

CUSTOMER SUCCESS STORY



Anderson School District Five

After completing a successful bring-your-own-device (BYOD) pilot a few years ago, Anderson School District Five decided that it really wanted to push out a 1:1 program for all grades. After getting approval to purchase Chromebooks for pupils in fifth through twelfth grades, the Anderson, South Carolina district also realized that it needed a more streamlined way to manage log-ins and passwords.

“We wanted students and teachers to know what their resources were, and to be able to access them in a quick manner,” says Anna Baldwin, director of e-learning and integration. “The idea was to take the burden off the teacher, particularly when it came to getting new pupils registered to use digital resources.” Baldwin says the district also wanted a centralized place where new teachers could see what grade-appropriate resources were available and then use those tools to support lesson planning.

After piloting the ClassLink SSO solution, Anderson School District Five solicited feedback from the handful of schools that tested it out. Key “must haves” on the district’s list were ease of use, a smooth implementation process, and easy onboarding of users and resources.

Baldwin says that making ClassLink the browser homepage and having instructional leaders use it during teacher training are helping to achieve her goal of reaching 100 percent SSO usage across the twenty-one-building district. Once teachers see how easy the platform is to use, and how quickly they can get students engaged in digital resources, the solution speaks for itself. “In a 25-student classroom, even just a few pupils who are having a hard time logging in can consume a lot of instructional time.”

“Are we going to have to upload data to the platform every night or will it just sync with the systems that we already have in place?” Baldwin asks. “These are some of the points we cover with every new technology implementation, and the positive teacher/student feedback reassured us that ClassLink would best meet our district’s needs.”

Baldwin also utilizes the solution’s analytics functionality to monitor usage and determine which apps are being used the most. “Because we’re getting some really good data on a daily basis,” she says, “we can talk to teachers about apps that they may not even be aware of and help them integrate those resources into their instruction.”



Use this chart when evaluating SSO providers, with the goal of finding one that can confidently answer “yes” to all of these questions:

WHO WANTS WHAT? AN SSO GUIDE FOR INSTRUCTION VERSUS IT

	Yes	No	Maybe
Do you have a strong track record in K–12 and can you scale to tens of thousands of simultaneous student log-ins?			
Do you have an extensive library of SSO?			
Does the SSO platform support multiple network sign-in options?			
Does the SSO platform allow a wide range of authentication methods?			
Does the SSO provider offer SSO access to files?			
Can we use the platform to manage our rostering requirements?			
Does the platform work on multiple devices?			
Will the SSO platform provide the analytics we need to make good decisions?			
Does the platform provide SSO for parents?			
Can we customize the system to match our school's mission, brand, graphics, colors, etc.?			
Does the platform accommodate personalization of settings and the screen's look and feel for ADA compliance?			
Does the platform provide options for student data privacy/security and other tools for the technology team?			

"When teachers don't have to take class instruction time to say, 'Now click here, enter your log-in, enter your password, save it,' they're able to get students into the digital content much faster and with much less frustration," says Williamson. "From the IT perspective, using SSO has resulted in a tremendous decrease in the number of calls we get about students or teachers being 'locked out' of their accounts because of passwords. We also no longer spend so much time uploading the codes, log-ins, and/or passwords needed to get pupils into their digital textbooks."

When selecting an SSO platform, **teachers and instructional leaders** want to be able to do the following:

- Maximize limited instructional time
- Put all teaching and learning resources in one place
- Fully leverage the many digital resources in which the district has invested
- Allow log-in from anywhere and on any device
- Give students and teachers a single username and password to remember
- Have easy access to a large library of different educational resources
- Access usage analytics to make better curriculum resource decisions
- Set up easily
- Access an easy and accurate rostering process
- Allow students with long last names, dexterity issues, or other challenges to log in and start working quickly

When selecting an SSO platform, **technology leaders** want the following:

- Everything the educators want, and ...
- Cybersecurity and student data privacy
- Reduced time spent on log-in problems and password recovery
- Integration with the school network directory (typically Microsoft, Google, or both)
- To be able to accommodate multiple authentication methods
- 99.9% uptime and reliability
- To eliminate the need for browser-based password storage
- Live phone support with knowledgeable, on-shore support staff
- A cloud-based platform
- A solution that requires as little bandwidth as possible
- Usage analytics to make better technology resource decisions

"After implementing our SSO solution, I started getting comments from every one of my customer groups, who told me that, 'This is the greatest thing you've ever done for us,'" Williamson says. "It's funny, because for years they had a portal where they could access network files, but they had no way to look up all of their G Suite and Office 365 files in one place, and via a single password. Now they have that and more."

CONCLUSION

Every year, schools waste thousands of hours of instructional time by asking students and teachers to remember and sign in to an ever increasing number of websites. As the number of digital educational resources proliferates, the problem grows exponentially. Couple that with growing data security concerns and rostering requirements, and the picture looks challenging for students and teachers who want to get the most out of all their online tools.

"Remembering websites and log-ins has become a barrier to learning ... and that was never the intention," says Berj Akian, CEO at ClassLink. "Log-ins are supposed to be about security, not about preventing or frustrating users from accessing learning resources. With single sign-on, students and teachers get instant one-click access to everything they need from a personalized experience on any device. That's not only what students and teachers need, it's what all humans need."

For districts that are currently evaluating SSO solutions, Williamson says, "When it comes to these types of investments, you can either work on the front end or pay on the back end." In other words, districts should take the time to research, ask questions, see demos, and check references. "Map out your key district issues and exactly what you want the solution to those problems to look like," Williamson says. "Then, use that criteria and research to choose the best product."

SSO breaks down the barriers to learning by putting users in touch with learning resources in a seamless instant manner, the same way they experience so many other technology tools in life today. "When we bring ClassLink into a district that's never seen it before, it's a jaw-dropping moment," says Anastario. "Teachers just can't believe it, and almost don't know what they're going to do with all the time that they used to spend grappling with usernames, passwords, and onboarding new students. It literally changes the classroom dynamic." ■

ABOUT THE AUTHOR

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About ClassLink

ClassLink empowers students and teachers around the world with instant access to their learning resources. ClassLink® OneClick® includes a library of over 5,000 single sign-on apps and instant links to file folders at school and on Google, Office 365, and Dropbox cloud drives. ClassLink Roster Server easily and securely delivers class rosters to any publisher using open technology standards. ClassLink Analytics gives decision makers the usage data they need. Accessible from any computer, tablet, or smartphone, ClassLink is ideal for 1:1 and bring-your-own-device (BYOD) initiatives.

As recognized through many awards, ClassLink's primary benefit is instant log-in to any Web app through OneClick® technology. With dozens of programs and applications for each student to access during the school year, management of usernames and passwords becomes a time-consuming, frustrating task for staff.

ClassLink Roster Server simplifies the rostering process with publishers, ensuring students and teachers have instant access to the digital learning resources they need to improve learning outcomes. Students are able to spend less time logging in and more time learning. ClassLink® is now the preferred single sign-on platform for thousands of schools and districts around the world.



ClassLink

More time learning. Less Time Logging in.