



## Texas school district builds differentiated learning with cloud-based identities

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Troy Neal, Director of Technology, YES Prep



Being a teacher today is tougher than ever. With a growing realization that each child learns differently, there's a push for differentiated instruction, which takes time and data to craft. To create differentiated learning plans, teachers have to pull data from 30 to 40 different applications—and manage passwords for each. YES Prep, a charter school system in Houston, Texas, set out to relieve teachers of the onerous administrative work involved in juggling myriad IT systems so they could focus on delivering a great education to students.

## Juggling IT systems— an enormous waste of teacher time

“When you really get down to it, we’re in the identity business,” says Richard Charlesworth, Chief Information Officer at YES Prep, which runs 16 schools that serve 11,600 students in Houston’s most underserved communities. “All the key IT processes that add value to our end product—student success—revolve around identities. And identity solutions have been very immature in education compared to other industries.”

To provide what’s known in the field as differentiated instruction, teachers have to assess where each student is academically and how that student learns best. To do that, they must pull data from dozens of school applications: grading systems, curriculum and assessment applications, behavioral data, socioeconomic data, and so forth. They put together learning plans for groups of similarly accomplished students and then must recalculate those groupings and plans throughout the year.

Each educational system has a password that must be remembered. If a teacher forgets a password, he or she must submit a password-change request to the IT department and is locked out of the system until help is received.

“As education has become more dependent on all kinds of digital systems, teachers have become increasingly hamstrung by managing them,” says Troy Neal, Director of Technology at

YES Prep. “They spend hours each week struggling with computer systems rather than teaching. It’s an enormous waste of teacher time.”

Then there’s the worry about securing student data that’s scattered across dozens of applications and thousands of devices. Public school districts in the US have to comply with student privacy standards set forth in the Family Educational Rights and Privacy Act of 1974 (FERPA), but most districts are cash-strapped and challenged to understand and implement FERPA requirements.

## Getting all student and staff identities in the cloud

YES Prep called in Oxford Computer Group (OCG) to help it create an elegant identity access and management solution that would give teachers single-sign-on (SSO) access to all applications, both on-premises and cloud-based. OCG had helped Charlesworth create a similar solution at a previous employer.

“All the other vendors we talked to said it would cost millions of dollars and be nearly impossible,” Charlesworth says. “But OCG grasped exactly what we were trying to do and provided a cost-effective path to get there using Microsoft Azure.”

Specifically, OCG recommended using [Microsoft Enterprise Mobility + Security](#), a suite of products for managing identity, mobile devices, and security from the cloud. YES Prep already used Active Directory on-premises to manage

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Richard Charlesworth, Chief Information Officer, YES Prep



**Customer Name:** YES Prep  
**Industry:** Education—K–12  
**Country or Region:** United States  
**Customer Website:** [www.yesprep.org](http://www.yesprep.org)  
**Employee Size:** 1,000 employees  
**Partner Name:** Oxford Computer Group  
**GEP:** Enterprise Mobility

**Customer Profile:**  
YES Prep is a public charter school system serving students in grades 6–12 in Houston’s most underserved communities. With 16 schools and 11,600 students, YES Prep is proof that different outcomes are possible when students from low-income communities are given access to high-quality educational opportunities.



identities for its 1,000 faculty and staff members and 11,600 students.

By moving identities to the cloud, YES Prep could reduce costs, increase application access flexibility and scalability, and give users a far richer set of identity management features. For example, [Azure Active Directory Premium](#) gives teachers, staff, and students single sign-on to dozens of district applications, which tremendously simplifies their lives. They can also reset their own passwords without asking IT for help, another huge timesaver. In addition, multifactor authentication better defends the district network and data. And password write-back ensures that a change made in Azure Active Directory is automatically written back to the on-premises Active Directory, so the two directories stay in sync.

While it still has its on-premises Active Directory infrastructure, YES Prep is transitioning to a 100 percent cloud-based identity management solution. [Microsoft Identity Manager 2016](#) provides a bridge for hybrid consumption of cloud and on-premises applications until the transition is complete. "Very few school districts can suddenly unplug their on-premises identity management solutions, and Microsoft is uniquely positioned to provide a hybrid solution," says Steve Brugger, President of Oxford Computer Group. "The Microsoft hybrid solution enabled YES Prep to deliver on its vision of getting all student and staff identities into the cloud. That allows the school system to take full advantage of the identity

security features in Azure. It is nearly impossible for a small IT department to allocate resources to proactively protect identities and data against the constantly evolving threat landscape. Azure does it for you and automatically takes steps to minimize threats and alert IT staff."

To simplify the management of 6,000 district-issued and personal devices—desktop PCs, laptops, tablet computers, and smartphones—YES Prep uses [Microsoft Intune](#), another part of Microsoft Enterprise Mobility + Security. Intune is a cloud-based mobile device and application management service that IT staff can use to better secure and manage devices and applications regardless of their location.

## More time for teaching

While it was putting its new identity system in place, YES Prep was also working to build its master student profile dashboard, which aggregates data from many applications and gives teachers a simpler view of the student data they use to create differentiated learning plans. The district has an initial version of this dashboard up and running, but much more remains to be done.

"With single sign-on, teachers can pull data from dozens of applications and quickly assess where a student is," Neal says. "Our Microsoft-based identity system is the foundation for our student profile dashboard. With SSO in place, we can let teachers use any applications they

want to advance their curriculum, without concern that their lives and ours will become exponentially more complicated with application management issues.”

YES Prep uses many applications from the [Ed-Fi Alliance](#), an education consortium that provides open-source applications and a standard for exchanging data between applications. “Microsoft Enterprise Mobility + Security fits perfectly with open-source tools. It’s focused on interoperability in every direction,” says Charlesworth.

Charlesworth estimates that the new identity management system and student profile dashboard save teachers as much as 100 hours of planning time each semester. “Teachers were previously spending between 50 and 80 hours each semester to create differentiated learning plans, plus another 15 to 20 hours a week to keep the plans current,” says Charlesworth. “This goes to zero with our new student profile dashboard. Teachers can put that time right back into students—by providing more individual instruction or tutoring, by spending time with parents, or through professional development.”

The IT staff, too, save time by eliminating hours of password reset chores each week. “We have far more time to focus on helping teachers implement new curricula and getting onto other projects,” Neal says. “Plus, when we eliminate our on-premises Active Directory environment, we won’t have that to manage.”

## Better protection for student data and identities

With cloud-based management of both student and staff identities, YES Prep is able to take full advantage of the identity security features included in Azure, which gives it better security for its data and makes regulatory compliance easier. Charlesworth can point auditors to the district’s Azure Active Directory Premium records to confirm compliance.

“Not only is our data more secure, but it’s more accessible,” Charlesworth says. “With a cloud-centric identity model, teachers can access applications from any device and with far less hassle. There’s no need to set up a virtual private network or, worse, to copy student data onto thumb drives if they want to work on it at home. With easy access from the cloud, they can securely get to the data they need anytime, anywhere, using any device.”

Charlesworth continues, “Education is changing rapidly, and we want our teachers focused on delivering the very best education to each student. Our Microsoft-based identity management system is a critical enabler for doing that.”

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## Software

- [Microsoft Enterprise Mobility + Security](#)
  - [Microsoft Azure Active Directory Premium](#)
  - [Microsoft Intune](#)
- [Microsoft Identity Manager 2016](#)