Digital Transformation on education

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Digital Advisor
## Trends and drivers

Technology is changing education

<table>
<thead>
<tr>
<th>50B</th>
<th>$1.7T</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated number of connected devices worldwide by 2020&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Total worldwide spending on IoT devices and services by 2020&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Percentage of total US smartphone owners using device for online classes or educational access in 2015&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>$51B</th>
<th>$12.2B</th>
<th>98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worldwide self-paced e-learning market forecast for 2016&lt;sup&gt;4&lt;/sup&gt;</td>
<td>The estimated worldwide market for mobile learning products and services by 2017&lt;sup&gt;5&lt;/sup&gt;</td>
<td>Forecast percentage of people using blended in-class/online curricula in 2020&lt;sup&gt;6&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

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1 Cisco Internet Business Solutions Group, 2011
2 IDC, Explosive Internet of Things Spending to Reach $1.7 Trillion in 2020, 2015
3 PEW Research, U.S. Smartphone Use in 2015
4 Docebo, 2015 Elearning Forecast
5 Education Week, Technology in Education: An Overview, May 2016
6 Knewton Infographics, The State of Digital Education Infographic
Digitalization is in the center of improving teaching and learning

Empower your students
Empower your educators
Optimize your operations
Transform learning
Digital transformation

Microsoft is focused on empowering every individual and every organization to achieve more through digital transformation.

<table>
<thead>
<tr>
<th>Engage your students</th>
<th>Empower your educators</th>
<th>Optimize your operations</th>
<th>Transform learning</th>
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<tr>
<td>Building better, stronger student engagements by harnessing data representing a complete view of your students, then drawing actionable intelligence, predictive insights that can deliver personalization at scale.</td>
<td>Empowering educators with tools that fuel collaboration and productivity, while mitigating the risks that come with providing freedom and space to employees.</td>
<td>Optimizing operations to reshape customer relationships and service models by gathering data across a wide, dispersed set of endpoints, and drawing insights through advanced analytics that can be used to introduce improvements on a continuous, real time basis.</td>
<td>Reinventing learning, services and business models using digital content to capitalize on emerging revenue opportunities.</td>
</tr>
</tbody>
</table>
Enablers for Digital Transformation

Data

Analytics

Cloud
Digital transformation

What if technology could help you...

- Use data to proactively identify and accommodate students with individual learning needs?
- Effectively recruit, enroll, engage, and retain students with powerful CRM tools?
- Reduce the cost and complexity of educational IT environments by utilizing hybrid cloud?
- Enable dynamic, personalized, anytime learning—in and out of the classroom?
- Focus on student performance and drive better outcomes across the education continuum?
Traditional IT vs. New world of IT

Traditional IT

- Infrastructure
- Platform
- Data
- Application

New World of IT

Business Value

IT Budget
Digital Transformation is about cultural shift

<table>
<thead>
<tr>
<th>Traditional IT</th>
<th>New world of IT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focused on silos</td>
<td>Focus on customers and customer experience</td>
</tr>
<tr>
<td>Buyers controls offering with their needs</td>
<td>Constantly improving and developing offering</td>
</tr>
<tr>
<td>Individual heroes</td>
<td>Group and organizational success</td>
</tr>
<tr>
<td>Hierarchical structure, very predictable</td>
<td>Try fast, fail fast -culture</td>
</tr>
</tbody>
</table>
Solid infrastructure is a good ground for digitalization
Identities live in too many places

VS.

Hybrid identity

- Microsoft Azure Active Directory
- User identities from multiple repositories
- LDAP
- Windows PowerShell
- Web services (SOAP, Java, REST)

Windows Server Active Directory

- Student management system
- Windows Server
- Active Directory
- Moodle
- Fronter
Target state for identity management

On-premises

Microsoft Azure Active Directory

Self-service

Single sign-on

Simple connection

Public cloud

Azure

SaaS

Cloud

Student management system

Office 365

Student management system

On-premises

Microsoft Azure Active Directory

Simple connection

Self-service

Single sign-on

Public cloud

Azure

SaaS

Cloud
Benefits from identity target state

**Single sign-on**
- Easy connection to existing assets
- Unified experience across student and teacher devices

**Manage everything**
- Dynamic groups
- Provisioning
- B2B collaboration

**Self-service capabilities**
- Password reset
- Group membership
- MyApps portal
Infrastructure target state – alternative view
Characteristics of target state

- Personal and school purchased mobile devices are trusted devices
- Single sign-on experience for the provided services
- Office 365 identity will be main identity to access services and applications
- Access from anywhere, with any device
- School mobile devices are included in asset management
- Security risks (identity thefts, DoS attacks etc.) are reduced
- Technology is based on Office 365, Azure AD and Microsoft Intune
Microsoft education solution platform
Our aim is to solve the many challenges of technology in the classroom

**Schools**
- Integrate with existing compute environments
- Fit within budget constraints
- Meet privacy & regulatory concerns

**Students**
- Work in groups or individually
- Collaborate easily with other students and teachers
- Use the newest tools and technologies
- Explore & get things done across all devices

**Teachers**
- Help teachers improve learning outcomes
- Inspire students and save time
- Teach kids across a wide range of learning abilities
- Less time “tech-ing,” more time teaching
- Use a variety of teaching styles to reach all students
Education needs are unique, but have shared needs

**Immersive Education Experiences**

**Cloud Productivity Platform**

**Intelligent Cloud & Infrastructure**

**OS and Devices**
The Microsoft Education Solution Platform

Immersive Education Experiences

- OneNote Class Notebook
- Learning Tools
- Skype
- Minecraft: Education Edition
- Microsoft Classroom
- Sway
- Bing
- Kodu
- Microsoft Edge
- Touch Develop
- HoloLens
- Visual Studio

One school identity for students and teachers

Cloud Productivity Platform

- Windows Store
- ID and Single Sign on
- Windows 10

Intelligent Cloud & Infrastructure

- Azure Active Directory
- Compliance
- Collaboration
- Compatibility
- Identity

Management and Security

Device Management
The Microsoft Education Solution Platform

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OS and Devices

Windows Store

ID and Single Sign on

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Management and Security

Device Management
Easy to get started, no limit to how far you can grow

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**Cloud Productivity Platform**

**Azure Active Directory**
- Compliance
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**Intelligent Cloud & Infrastructure**
- SDS
- AAD Connect SSO
- Connect to existing infrastructure or partner solutions
- Microsoft Intune and Systems Center
- Dynamics CRM Online
- Enterprise Mobility Suite
- Azure
- Analytics

**Windows**
- Windows Store
- ID and Single Sign on
- Windows 10

**Management and Security**

**Device Management**