Bring Your Own Device

BYOD: a district approach

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BYOD: a long & winding road

• Rockman Report in 1997
  – Pilot laptop program “anytime, anywhere” learning with Microsoft & Toshiba.
  – 53 schools with no experience to most technologically advanced.
  – More than 400 teachers participated in the evaluation process.
  – With program underway, problems were forgotten and the potential to improve teaching and learning became the focus.
BYOD: a long & winding road

• Project Red- 2010 research from 1000 schools
  – First & only national study of ed tech to focus on student achievement and financial implications.
  – Discovered a replicable design for introducing tech in the classroom that leads to improved student performance and cost benefits.
  – Taking the next step to achieve second-order, transformational change in schools.
Three pathways to travel

• Change your attitude toward the learner; begin making decisions that are learner centric.
• Retrain the instructors; a paradigm shift must occur and professional development is key.
• Build a robust infrastructure; systemic, sustainable, and capable of future growth.
The learner has changed...

International learners rely on clear instructions since their first language is not English. Brief, jargon-free text and images works best for them.

Digital pros have been computer experts for years. They grew up reading short messages such as Twitter and text messages. Brief text and video works well for this group of learners.

Gen-Xers have adopted technology over the course of their lifetime. Users in this group vary from novice to pro. They are comfortable with verbose text and images as examples.

Pre-digital users may or may not be comfortable in the digital world. Provide content to these learners that mimics their natural learning style.
Change your attitude about learners

• The learner has changed
  – Starbucks Generation
  – Pervasive mindset of personalization

• Expectations for data has changed
  – Parents want specific results
  – Legislators demand extensive data input

• Personalized learning is finally possible
  – Digital learning allows for mastery
  – Broadband changed everything
• Have it your way…

• Personalization of clothing, communication devices, and food has become expected in the marketplace.

• …so why not in our schools?

• This demands BYOD.
Learning starts with the learner

- Diagnose the student then create multiple strategies to meet their unique learning style.
- The secret to personalized learning is that the learner owns their learning.
- The learner becomes a vital and willing participant in the instructional process.
Expectations for data

- Accountability of the institution.
- Accountability of the staff.
- Proliferation of assessment techniques and reportable data (Yelp, Amazon, etc.)
- Crowdsourcing works its way into schools.
Expectations for accountability

- State and federal legislation demand accountability of schools and staff.
- New standards engage technology in the classroom and in the data center.
- Feedback and reporting systems are expected to be instantaneous.
Life in the 21st Century Fast Lane

- The difference is the speed of the change...
- Learning, rather than efficiency, should be our new goal.
- First time in human history that we have the ability to produce mass learning.
Broadband changed everything

- Google’s Chairman Eric Schmidt “…the Internet will soon be so pervasive in every facet of our lives that it will effectively disappear from our conscious lives.“
- 1990’s gave us the ability to simultaneously transport multiple data signals and traffic types.
- Internet access that is always on and faster than the traditional dial-up access...
Wireless everything

- Pervasive wireless networks include multiple connections to a secure, single virtual network
- Cordless expectations for all devices
- Energy transfer is the next big thing
Device agnostic attitude

- User-friendly environment includes handling any device and any operating system.
- All services and all resources are virtual and readily available via any browser or portal.
- Applications are virtual and operate with any device including mobile.
Open Educational Resources

- OER is the new norm for curriculum, resources, and classroom materials.
- Freely available for use, reuse, adaptation, and sharing.
- E-book formats
Innovation in schools is not about the technology — it’s how learning is structured so that the students are the leaders of their learning.

Technology plays a role, but the critical factors include how classes are structured, how students take charge of their learning, and how teachers and administrators release control of the learning to students.
The hardest shift to embrace

Teachers are not the only owners of the content anymore.
Everything has changed

- Content
- Assessments
- Funding formula
- Accountability
- Supporting all learners
Content

- Common Core State Standards
  - ELA and mathematics
- Next Generation Science Standards
- National Arts Standards
- College, Career, and Civic Life (C3) Standards
- Support for English Learners
  - Assessments
  - Instructional strategies
Assessments

- All computer-based
  - Smarter Balanced Assessment and PARCC
  - NWEA Measures of Academic Progress
- Keyboarding and embedded tech tools
- Systems knowledge
- Real-time data
- Parent education
4 Cs and digital literacy

- Communication
- Collaboration
- Critical Thinking
- Creativity
- Partnership for 21st Century Skills framework
Multi-Tiered Systems of Support

- No more “bulk teaching”
- Access to content for all
- Learning strengths and challenges
- Show what you know in different ways
- Mastery-based learning for all
- Tiered support and use of resources
So that means...

Change is the new normal...
Growth Mindset

- Personalized Education Plans for all students
- Personalized Education Plans for all staff
Resources

• New adoption timelines put instructional materials last
• Instructional materials definition and laws have loosened up
• Open Educational Resources
  – Teachers are now designing textbooks & writing curriculum
PD and time to create

- Professional Development– how do we make meaning of it all
  - District
  - School Site
  - Department/Grade Level
  - Individual Teachers

- Time and pay for teachers to create new content
Change instructional practice for increased learning

• Limit workshops; least influence on change
  – Visitation, coaching, research, and peer observation
  – Time for PD, then 20x more time for implementation
  – Coaching/mentoring most effective

• PD occurs over time and is ongoing
  – Context in the teacher’s subject area

• Establish PLCs
  – Professional learning communities
Role of the principal

- Instructional leader and site manager
- Evaluation of all staff
- Alignment and consistency within school site
- Alignment and consistency within the district & departments
What else do our educators need to know?

- Be the learner first in order to understand the student experience
- Know the basics of BYOD
  - Devices
  - Every online assessment & instructional resource
  - Every system is different
  - Infrastructure
- Support comes from TRTs
  - Technology Resource Specialists
Build a robust infrastructure...
What does it take from IT?

• IT Team = Infrastructure Operations Team
  – Leaders are architects with cross-domain expertise
    • Broad skills across networks, servers, and middleware
    • Break down barriers between design and build

• IT under pressure to become increasingly agile
What does it take from IT?

- Key is to bury the paradigms and become device agnostic and OS agnostic
- Shift from managing individual devices to managing online domains
Build it to Maintain it

• Scalability for fluctuation of system & users
  – Functional:
    • Ability to enhance the system by adding new functionality at minimal effort
  – Generational:
    • System can use next generation hardware
  – Heterogeneous:
    • Use components from different vendors
Virtual Environment

- Virtual for future growth & sustainability
  - Virtual infrastructure for server environment
  - In-house servers are limiting & inefficient
  - Gets schools back to the business of teaching
Automation for Immediate Access

- **Student Information System is King**
  - All data entered at one entry point
- **Active Directory and SIS**
  - Select software that automates account creation via Active Directory or SIS
Anytime, Anywhere, Any Device

- Device and OS Agnostic
- Web Based Management Applications
  - SIS, Attendance, Payroll...
- Web Based Learning Software
  - KEY: Team up with Curriculum Director
  - No more software requiring installation
BYOD and Devices

- **BYOD is about Personalization**
- District Owned Devices
  - Low Maintenance and Mobile
    - Carts
    - Chromebooks
    - Rollback on Windows Machines
Learn from us…

- **Access Points**
  - Plan for MORE
- **Bandwidth**
  - Pay attention to streaming
  - Monitor and plan for increases
  - Application Shaping
  - SSIDs
- **Refresh Cycle**
  - Track EOL (End of Life)
- **Staff want BYOD too – be prepared**
- **Prep for the Return from Winter Break!**