Information Technology

2014 Annual Report

Prepared for School Board Work Session

February 3, 2014

Introduction

This report provides detail on the following items:

- Technology Plan progress during the 2013-14 school year
- Progress on Annual Strategic Plan Measurements
- Technology projects related to potential future bond

Technology Plan Progress During the 2013-14 School Year

The Beaverton School District Information Technology Department is in year three of the Technology Plan 2011 – 2014 implementation. The Technology Plan 2011 – 2014 outlines the technology vision for the District with a focus on improving student learning through appropriate instructional and administrative uses of technology tools. The technology plan was presented to the School Board at the February 7, 2011 School Board meeting and the School Board is updated annually on progress. The list below provides detail on progress in select focus areas:

Communication, Collaboration, and Community

- Web Sites Redesign – New public web site launched September 3, 2014
- Mobile Apps – BSD Mobile app launched September 10, 2014
- School Sites – School web site templates created. Schools are in the conversion process. Schools have an improved content management system that is easier to use. Once complete, we will be able to automate content delivery between District and school sites.

Infrastructure

- Enterprise Wireless Network – Project complete. Additional network needs due to the upcoming Digital Conversion project will require at least a doubling of the wireless network and the District connection to the Internet.
- Messaging System Replacement – Staff move to Office365 in process with Spring 2014 targeted completion date.
- Library System Replacement – Library conversion to Destiny is underway and will be complete by September 2014.

Progress on Annual Strategic Plan Measurements

Strategic Plan technology measurements include the following:

- **Percentage of students reporting access to technology to support their learning**
  As this question was not included in the Annual Student Survey conducted in Spring 2013, data does not exist for this report. The District will develop questions for the Spring 2014 Annual Student Survey and will be able to report on this measure in the future.

- **Percentage of teachers reporting access to technology to support their instruction**
  This question was not asked of teachers in the Spring 2013 Staff Survey. The District will develop questions for the next staff survey to be able to report this data in the future.

  Although, we do not have survey data to report technology sufficiency for learning and instruction, the District asset management system provides the ability to analyze equipment in schools and this data can provide information regarding adequacy of computer equipment for staff and student use.

  The District has 15,526 computers used daily by staff and students. The following charts show that the majority of computers used in schools are of an age that limits their ability to provide a useful user experience.

Computer Age - District
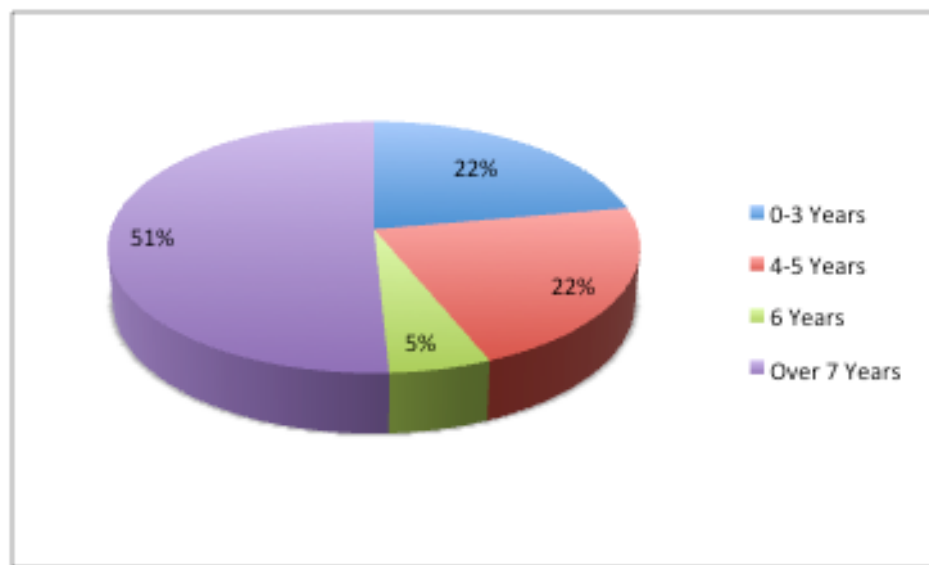
Computer Age – By Level
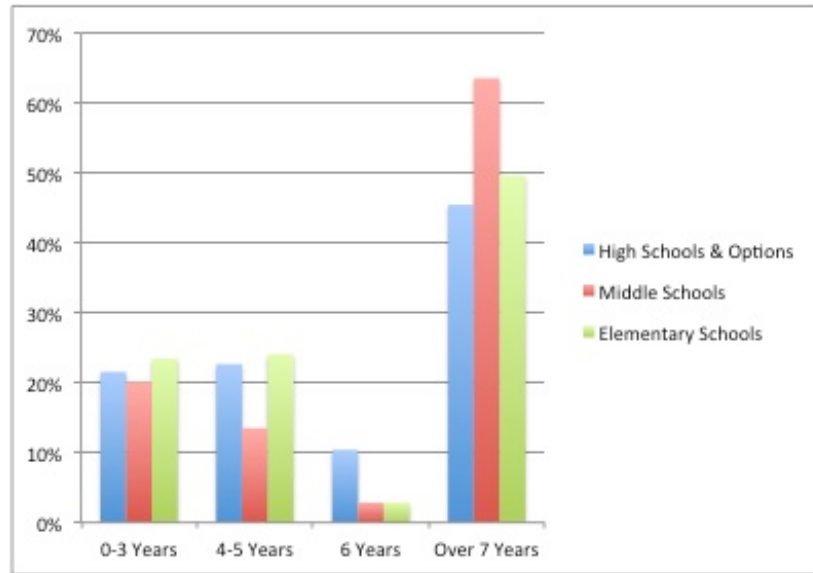
Technology Projects Related To Potential Future Bond

There are a number of technology projects connected to a future bond opportunity that would provide additional ability to support the organization. They include:

- Telecommunications replacement – Components of the existing system are over 20 years old with no ability to upgrade. System failures occur regularly at schools due to the age of the system.
- Data Center – The District needs a modern data center to provide continuous and secure access to enterprise applications including the student information system and the HR/Finance system.
- Digital Conversion at BSD – Digital Conversion describes the transformation of learning from paper-based resources to an environment that includes curriculum and instructional materials in digital formats. Teachers and students will have access to personal computing devices and the Internet for learning anytime and anywhere.

Technology – Digital Conversion

- Digital Conversion
  - The transformation of learning from a paper-based world to a primarily digital world, where all students & teachers have access to personal computing devices and the Internet for learning anytime & anywhere.

- What It Looks Like:
  - Students & Teachers learn with digital resources, as well as print.
  - Teacher ability to modify content & activities to best meet needs of all learners.
  - School provides real world opportunities for students to gain skills and information literacy to prepare them for work & life.

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Technology – Digital Conversion

- Phases:
  - Build
    - Infrastructure needs addressed (Ex. Wireless, Proxy)
    - Immediate School needs addressed (student computers)
    - Innovation Grants process for classrooms ready
  - Grow
    - Additional classrooms & schools
    - Teacher technology replaced
  - Scale
   - Digital Conversion moves to all schools & classrooms

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DIGITAL CONVERSION

— A Vision of Connected Learning —

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Overview

Digital conversion describes the transformation of learning from paper-based resources and how students demonstrate their learning to an environment that includes curriculum and instructional materials in digital formats. Teachers and students have access to computing devices and the Internet anytime and anywhere. This conversion is centered on how students and teachers work together around concepts and skills. While the software and hardware devices are important supports in this transformation, they are not the drivers. The critical factors in Beaverton's digital conversion are the changes in how teachers access and incorporate additional learning resources in their work, and how students use technology tools and devices to explore tools and content, process information, and demonstrate their learning.
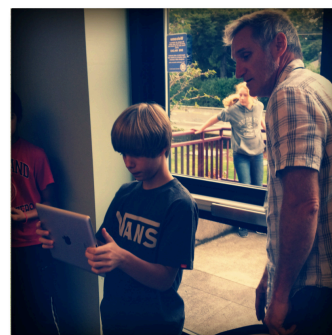
Connected To Our Goal

The Beaverton School District goal is for every student to graduate with many options and be prepared to:

Think:	Creatively and Critically
Know:	Master Content
Act:	Self-Direct and Collaborate
Go:	Navigate Locally and Globally

Transforming instruction with access to technology computing devices, software, and collaboration tools directly supports the Beaverton School District Goal. Using a wide variety of technology tools, students will have the ability to creatively direct and demonstrate their learning, access quality, real-time content, and collaborate with others. Students will graduate better prepared to successfully enter the world of higher

education, the job market, or other paths where technology use is a fundamental part of our world.

Connected To Our Pillars of Learning

To accomplish the District Goal, the Beaverton School District and community have committed to four Pillars of Learning. The Beaverton School District Digital Conversion is aligned to, and supports our Pillars of Learning.

We Expect Excellence		Teachers have access to the tools and resources needed to best serve students and inform student growth.
We Innovate		Innovative practices, and the ability to solve complex problems are aided by technology.
We Embrace Equity		All students deserve to be prepared for post-secondary success in a world where all paths require technology proficiency.
We Collaborate		Technology tools allow students to work together anytime and anywhere.

Our Vision for Digital Conversion

Learning must be dynamic, engaging and tailored to the unique needs of each student. Our students have unlimited potential as well as specific learning needs and interests. Now and in the future, they will be asked to think, create, innovate, communicate, and collaborate as engaged members of our global community. Learning shifts must occur in the classroom as students and teachers work together with the varied resources used in our daily lives to find, consume, evaluate, and contribute information. Our classrooms will mirror the world we are preparing our students to navigate and ultimately, lead.

Students need to be able to access information to work in collaboration with teachers, peers and experts on what and how they learn. Printed textbooks contain static information, without an easy way to update the information. The goal of pursuing digital content is to meet the unique learning needs of students so that learning is engaging

and efficient, available at any time, and steeped in authentic problem solving. Access to high quality, dynamic information for all students will help close the equity gap.

Teachers need the opportunity to access, modify, and customize curriculum to meet the unique needs of their learners. Teachers know their students well and also know the resources necessary to meet their learning needs. As curriculum transforms to a digital format accessed largely online, students and teachers need modern, mobile technology devices. A combination of district-owned and personally-owned devices will address the lack of available resources available throughout the district, making the initiative sustainable and equitable. In addition to meeting curriculum needs, our Digital Conversion will provide students with technology to support exploration and creation of content. Our vision is that every student and teacher has immediate access to technology and the Internet throughout the school and school day to support their learning.

Building A Foundation For Success

In 2010, a team of researchers studied one-to-one computing implementations from almost 1,000 schools nationally and published their results in *The Technology Factor: Nine Keys to Student Achievement and Cost-Effectiveness* (Greaves, 2010). The results of the study provide the keys to a successful implementation, including: Time for teacher learning and professional collaboration, staff training, and integration into both core and intervention classes. To achieve our vision of connected learning, we must also address other significant areas:

> "Our digital conversion effort aims to give all students, regardless of their socio-economic background or special needs, a chance to succeed in today's digital world."
> - Mark Edwards, *Every Child Every Day: A Digital Conversion Model For Student Achievement.*

Staff Development: Beaverton's Digital Conversion will result in a change of practice for teachers, and a change in the classroom environment as well. Studies have found that educators are more likely to incorporate technology into their instruction when they have access to collaborative teaching colleagues who employ technology into practice

(Strudler and Hearrington, 2009). Sustainable, just-in-time, job-embedded support will be necessary to ensure teachers are equipped to lead this change. The District's staff collaboration and professional development portal, TeacherSource, will be highly leveraged in providing resources and support for teachers.
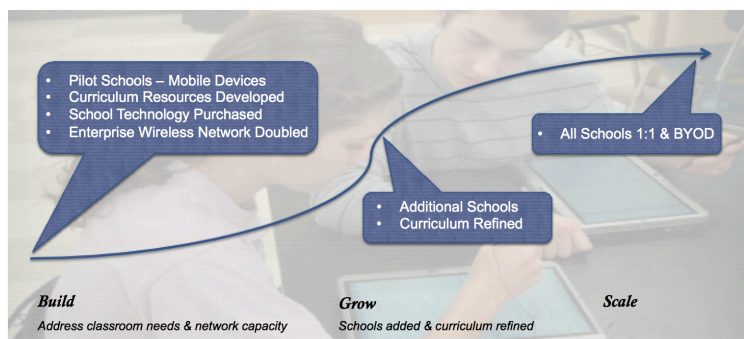
Wireless Networking and Connectivity: The wireless network at every school will be upgraded to meet the connectivity needs of district-owned and personally-owned devices. Open, robust networks will ensure students and teachers ability to access instructional resources. Data security will be IT's highest priority.

Learning Management System: A Learning Management System is an online space used to provide content, deliver assessments, and allow for teacher/learner exchange of documents and communication. The implementation of a Learning Management System will provide a workspace for students and teachers to interact through content and activities and assessments to be delivered and scored.

Immediate School and Classroom Technology Needs: District-wide, one-third of computers currently used by students are unable to be repaired due to the age of the equipment. Since the move to District-owned and personally-owned computing devices will take some time, it is important that we address critical and immediate school and classroom technology needs.

The Plan For Digital Conversion

Digital Conversion at the Beaverton School District will take a number of years. Our multi-phased plan allows us to start with schools and classrooms that are ready for the conversion. As we develop and refine curriculum resources and instructional practice, we will see growth as additional schools and

Build
Address classroom needs & network capacity

Grow
Schools added & curriculum refined

Scale

- Pilot Schools – Mobile Devices
- Curriculum Resources Developed
- School Technology Purchased
- Enterprise Wireless Network Doubled

- Additional Schools
- Curriculum Refined

All Schools 1:1 & BYOD

classrooms are added. This focused and intentional growth will allow us in time to successfully scale change throughout the District.

What It Will Look Like

Build: The first two years will be the Build Phase and will focus on adding the necessary infrastructure, wireless network, a Learning Management System, and ensuring that pilot schools and classrooms have the necessary staff supports. An Innovation Grant process will allow schools and classrooms to assess their readiness and will target staff development for teachers. Additionally, aging computers used by students will be replaced ensuring that students at all schools will have a better experience using technology for their learning in spite of their schools readiness, of lack thereof, in terms of digital conversion.

Grow: Informed with learning from the early adopters, we will be ready to expand the conversion to additional schools and classrooms in years 3 and 4. During this phase, it will be time to replace teacher technology in addition to increasing the number of schools and classrooms where there is a combination of district-owned and personally-owned computing devices.

Scale: As the majority of schools and classrooms have transformed, the next phase beginning in year 5, will be to scale the conversion throughout the district so that every student has access to rich instructional resources accessible anytime and anywhere.

Conclusion

The Beaverton School District Strategic Plan places students at the center of our collective vision and assumes responsibility for their individual achievement. Technology tools, applied appropriately, have the power to engage students, allow for individualized and personalized learning experiences, and foster innovation and creativity in each student's learning journey. Beaverton's Digital Conversion will create a system that supports individual student learning, provides students and teachers with the tools and information they need, and prepares students for success in their future endeavors.

References

Edwards, M. 2014. *Every Child, Every Day: A Digital Conversion Model For Student Achievement.* New Jersey: Pearson Education Inc.

Greaves, T.; Hayes, J.; Wilson, L.; Gielniak, M.; & Peterson, R., *The Technology Factor: Nine Keys to Student Achievement and Cost-Effectiveness*, MDR 2010.

Strudler, N. and D. Hearrington. 2009. Quality support for ICT in schools. In *International handbook of information technology in primary and secondary education*, ed. J. Voogt and G. Knezek, 579-596. New York: Springer