Information Technology Annual Board Report

BEAVERTON
SCHOOL DISTRICT
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November 13, 2012

Introduction

The Beaverton School District Information Technology Department is in year two of the *Technology Plan 2011 – 2014* implementation. This report details the following:

- Progress on technology plan initiatives
- Synergy Student Information System update
- Collaboration tools used by teachers
- Innovative practices using technology to support student learning
- "Horizon" projects that will expand the ability of technology access in schools for students, staff, parents, and community members

Status of Technology Plan 2011-2014 Initiatives

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.

While progress on many of the activities detailed in the technology plan is underway, budget constraints prevent initiation of some of the projects in the technology plan.

The tables below provide a status report to date of the activities contained in the *Technology Plan 2011 – 2014*.

Teaching and Learning Environment

Activities	Funded	Status
Electronic Plan & Profile	✓	Version 1 of Elementary Plan & Profile Report is in use. Investigation of Synergy Student Information System capabilities to either partially or fully realize the Electronic Plan & Profile is progressing.
Online Education		Online computer science pilot at Aloha High School in collaboration with Oregon Virtual School District (ORVSD) using open-source Moodle platform.
Instructional Technology Specialists Model		
TeacherSource	✓	See below for TeacherSource update.
Technology Research, Development & Innovation	✓	Mobile devices and Mobile Device Management (MDM) solutions are under development. In addition to provisioning and support, key issues include security measures to protect data against loss or theft (remote wipe capabilities) and enterprise application licensing.

Communication, Collaboration, and Community

Activities	Funded	Status
Web sites redesign	Partial	Staff portal redesign is complete and in production. An inter-departmental team is working on automation of paper-based forms. Public website redesign dependent on future funding.
School site and teacher tools	✓	A pilot school website utilizing SharePoint portal to begin in Winter. This will offer improved Content Management System (CMS) tools. Google Sites for teacher web pages is in production and use.

Activities	Funded	Status
Student Collaboration Tools	✓	Student email migrated to Gmail. Students have access to Google Apps for Education applications.
Social Media Toolkit	✓	Administrative Regulations nearing completion. Informational web site is under development.
Learning Management System (LMS)		

Equity in Access

Activities	Funded	Status
21st Century Classrooms		
Site-based computer support		
After school community access		Possible community access as part of enterprise wireless project.
5 year computer replacement cycle	Partial	2,100 teacher laptops purchased Summer 2012.

Infrastructure

Activities	Funded	Status
Enterprise Wireless Network	Partial	See below for Enterprise Wireless update.
Telecommunications System		Request For Proposal completed and awaiting funding.
Integrated Financial and Administrative Solution (IFAS) improvements	✓	Inter-departmental team (HR/Business Office/ IT) implementing improvements to the HR/Financial system.
Messaging system replacement		Messaging system replacement evaluation in progress. Target implementation is for Spring 2013.
Student Information System Replacement	✓	See below for update on Student Information System replacement.
Library System Replacement		
Enterprise Site Licensing	✓	Apple and Microsoft Site Licensing secured.

Student Information System Replacement

Background

aal, the vendor for the eSIS Student Information System (SIS), was purchased by Pearson, who announced June 2012 as end-of-life for the eSIS product. Although subsequent negotiations with Pearson realized an additional year of possible fee-based support, we were unable to obtain any support for JavaTa, the gradebook module used by a significant number of secondary staff members. Additionally, we were not able to acquire the source code for JavaTa, which would have allowed IT staff to potentially provide a minimal level of support for the gradebook. After evaluating the risks of maintaining eSIS for an additional year with limited support options, the decision was made to implement the Synergy SIS from EduPoint Educational Systems, the awardee of the Oregon Student Information System Consortium Request For Proposal.

The School Board authorized the purchase and initiation of the project at the April 2, 2012 School Board meeting. The project officially and immediately started, with the intention of implementing Synergy for the Fall 2012 school year.

A SIS replacement is usually accomplished over a 12-month timeframe. As we did not have the time to complete the transition over a traditional timeframe, work was prioritized with the most essential modules of the SIS scheduled to be ready by the start of school, and additional modules, functionality, and data to be added throughout the 2012-13 school year.

During the evaluation phase of the project plan, it was determined that the age of teacher computers could pose a threat to a successful teacher user experience with Synergy. The last time the district purchased computers as part of a large-scale replacement project was in 2009. As a result, teacher computers throughout the district were not uniform. While some teachers had access to newer machines, other teachers were using very old machines that were not within the identified minimum specifications for Synergy use. To address this issue, 2,100 laptops were purchased as a part of the

2012 Budget to standardize teacher computers throughout the district. The machines were received in June, imaged in the month of July by our Field Tech team, and were distributed to all teachers as they returned in August.

Image 1 – Field Techs preparing teacher laptops

Current Status

Synergy officially entered "go-live" status on August 7, 2012, only 4 months and 5 days after the School Board authorization. At that time, eSIS was placed into "read-only" mode and all new work was done in the Synergy application. All certified and classified

Image 2 – One of many Synergy training sessions

staff received training during the months of August and September, with over 120 classes held centrally, and many more at school sites.

The month of September was challenging for staff as they adjusted to the new SIS in conjunction with all of the other environmental factors occurring at the start of this school year.

Realizing the importance of quickly supporting school and departmental staff with Synergy issues, IT created a dedicated telephone help desk line, which would connect staff experiencing a problem directly with a developer or support specialist within IT. The IT staff resource could then virtually connect to the staff computer and work with the staff member to quickly resolve their issue.

Generally and throughout the district, staff feedback on the Synergy interface has been mostly positive, with specific comments relating to the intuitiveness of the user interface.

One module that did not initially perform to expectations was TeacherVue, the teacher gradebook application. During the first few weeks of school, teachers began to

randomly experience data loss as they entered assignments and marks. This software issue caused frustration with teaching staff, already dealing with all of the other complexities surrounding the start of school. The troubleshooting process took weeks to track down the source of the problem. Once found, EduPoint engineers provided new software code to address the issue.

At this time, there are still a number of TeacherVue issues that need to be resolved. EduPoint continues to release software patches and updates to provide the functionality needed by teachers as they use the gradebook.

Synergy Enhancements For 2012-13

There are a number of additional Synergy modules that will be implemented during the 2012-13 school year. Here are three modules that will support parents, students, and teachers:

- **ParentVue**

  ParentVue is a web portal that allows parents/guardians to access and view a number of data elements to support student learning. Through a web portal or mobile device, parents will be able to see student calendar, schedule, gradebook, attendance, and other important data elements.

  Image 3 – Sample ParentVue screen showing Class Schedule

  Parents will also have the ability to change demographic data, saving both parent and office staff time. ParentVue will be activated at the beginning of the second semester, in February 2013.

7

- **StudentVue**

  StudentVue offers student access to many of the same data elements provided to parents through the ParentVue application. Through a web portal or mobile device, students will access gradebook, assignment, and class calendar information in addition to other data elements. StudentVue will be activated at the beginning of the second semester, in February 2013.

- **Streams**

  Streams is a module that provides a confidential and secure online collaboration space for teachers to work together with data in the Synergy SIS. A threaded discussion "wall" allows teachers a collaborative and secure environment to discuss instructional strategies and practices relevant to their students.
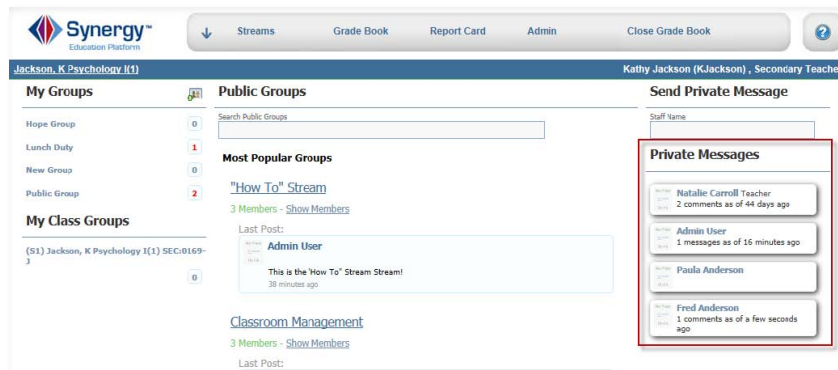

Image 4 – Sample of the Streams interface

  For example, teachers could create a stream to discuss and track effectiveness of specific interventions and/or extensions for students that are in their classes. Work on adding the Streams functionality will occur after the ParentVue and StudentVue portals are launched.

Tools Supporting Learning Teams

TeacherSource

TeacherSource is a web application supporting teachers by providing a online environment for teachers to create, share, and use lesson plans, prompts, and assessments. TeacherSource was conceived and developed in the Teaching and Learning Department, in collaboration with IT. The purpose of TeacherSource is to give

teachers access to high-quality instructional materials, an ability to collaborate with their colleagues, and additionally, a place to manage and organize instructional materials.

Status Update

TeacherSource continues to deliberately and methodically gain use and add value to teachers. Internal user analytics show dramatic increases in overall access to the site and contributions to the content repository. New features and enhancements designed to improve user experience are encouraging a broader range of use by teachers. Here is a brief overview of recent usage statistics:

- Weekly access to TeacherSource has more than tripled since the start of the year compared to this time last year

Week	Visits	Visits/Day	Visitors	Time on Site	Page Views
October 20	1092	156	720	7:02	7193
October 13	968	138	643	8:04	7212
October 6	1300	186	942	6:55	8583
September 29	1178	168	745	5:52	6554
September 15	1365	195	880	8:13	9593
September 8	1036	148	642	8:32	8657
September 1	957	137	650	6:59	6834

Table 1 – TeacherSource Analytics, Fall 2012

- Content (lessons, units, prompts, assessments, videos and links) has increased over 35% in the last year. There are now 4,400 assets available to teachers through TeacherSource

New Features & Upgrades

- Redesigned navigation structure to support the new Common Core and Learning Targets
- Simplified rubrics for easier access and closer alignment to Learning Targets
- Upgraded Community section
- New Collaboration Space feature for online professional development and meetings

- Addition of differentiation elements incorporated into the lesson template
- Behavioral Learning Targets separated from Academic Learning Targets
- Video Repository enhancements

Models of Innovation

We continue to explore new and innovative ways to support learning as teachers and students engage around rigorous and relevant curriculum. Two innovative resources are outlined below.

Student Source

Today's children are living in the most stimulating, media-rich, and interactive environment in the history of the earth. Education is in stiff competition for the mindspace of our children. StudentSource i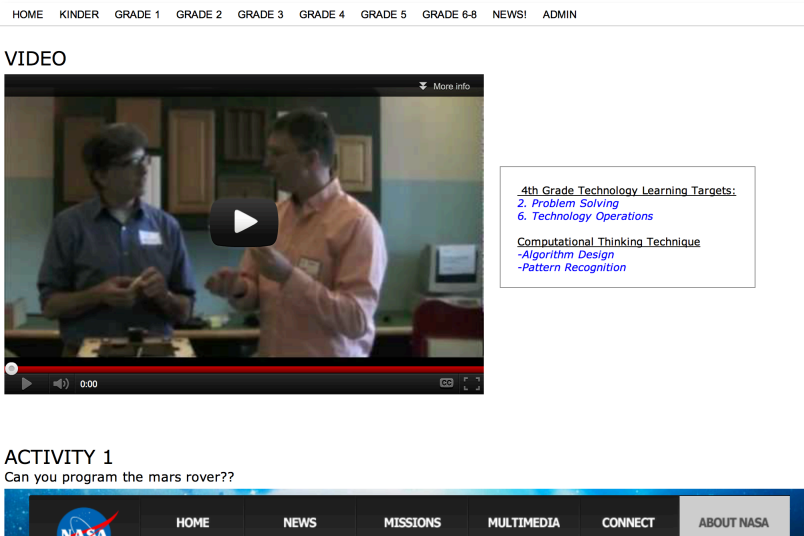s a games-based, interactive learning program developed by teacher G Douglas Bundy in collaboration with Principal John Peplinski at Raleigh Hills K-8, and provides students in technology classes an environment where they are given great autonomy and the opportunity for mastery and purpose at their own pace. This

Image 5– StudentSource screen showing 4th grade video, learning targets, and a related activity

elementary program offers an environment where the joy of gaming meets the educational standards of our time in an engaging way that leaves the student wanting more.

10

Volumes of behavior research compiled over the last 40 years (chronicled in Daniel Pink's book, Drive) have presented us with a picture of what motivates humans on a deep level. Broken into its essence, there are three things that motivate human beings: autonomy, mastery, and purpose. In addition, emerging brain research gives us a picture that resonates with decades of experience: every single human brain is different. Learning is diverse and students do not all learn at the same pace or in the same ways. Game theory, a hot topic among educational researchers, gives additional insight into how children learn complex thinking and perseverance through game play, and also how we can utilize the aspects of great video (and other) games to enhance the effectiveness of our learning environments and experiences.

StudentSource is built in the Google Apps for Education platform. Since Google Apps for Education has the ability to widely share content, students and Technology Instructional Assistants throughout the district are able to use this application both in technology special classes and at home or anyplace they have access to a computer.

StudentSource already has a large amount of student-generated content. By the end of the year, students from around the district will have the opportunity to contribute content, ideas, and shape the growth of StudentSource. To date, StudentSource pages have been visited over 1 million times by Beaverton School District elementary students and others since the beginning of the 2012 school year.

Enterprise Wireless

Most of the initiatives detailed in the *Technology Plan 2011 – 2014* require a robust and secure network environment. The current wired network capacity is adequate at this time, and is expected to remain so for the near future. However, the wireless network was not sufficient to accommodate the influx of mobile devices on the network and to meet the increasing connectivity needs of students and staff.

An enterprise wireless network was needed district-wide. This type of wireless network has security features to allow guest access, facilitating the ability for students and staff to use personal communication devices as tools for learning while protecting the rest of the network and applications containing sensitive data, such as the HR/Finance and student information systems. In addition to providing more coverage and connection capacity for computing devices, an enterprise wireless network infrastructure also contains sophisticated management tools, saving support staff travel time out to school sites for problem resolution.

The move to an enterprise wireless network began last year and is currently in phase four of completion. To date, 38 schools throughout the district have been upgraded to enterprise wireless. The fifth and final phase will cover the remaining schools and ancillary sites and is expected to be complete during the next school year.

Horizon

There are two projects on the horizon for the Beaverton School District that show promise to increase technology access, support teacher collaboration and allow students to learn in new and engaging ways.

Bring Your Own Device (B.Y.O.D)

Nationally, there is much debate on allowing student-owned devices (laptops, cell/smartphones, tablets) into the school environment. Proponents point to student-owned devices as a way to increase technology access at schools, and as this is a common experience for students entering higher education institutions, it becomes a way to more fully prepare students for what they will experience as they finish their K-12 education experience. Skeptics are concerned about distraction, liability, and equity issues, as not all students have such devices.

One feature of the enterprise wireless network is the ability to create a separate, guest wireless network. This guest network will allow students, staff, parents, and community members the ability to bring their own device and connect to the Internet. A guest network is currently in the design phase; with IT staff researching best practices to ensure appropriate safety and security issues are addressed. A limited, proof-of-concept pilot is in production at ACMA, allowing IT staff to ensure that access, security, and filtering issues are appropriately addressed.

With the intention of increasing staff, student and parent understanding of the purpose, proper use, and liabilities of a guest network, a website is under development to communicate capabilities, security issues, and liabilities surrounding use. As this resource becomes available, we will begin a dialogue about the merits and challenges of integrating staff and student-owned devices into the environment. Additionally, equity issues must be addressed to ensure all students are able to use technology devices on the guest network to support learning.

Digital Content and Curriculum

In many areas of life, use of digital content has exploded. Streaming video, social media networks, downloadable music (as opposed to CDs or other media delivery mechanisms), and e-books are now commonplace. In the education sector though, schools are just beginning to take advantage of the benefits of using technology devices to consume content that is delivered digitally.

Some benefits to moving from a textbook-centric approach to one that involves digital instructional content and collaboration include: the ability to keep digital content up to date and relevant without reprinting costs, the flexibility to consume anytime and anywhere, personalization of content, and content that becomes interactive with animation, virtual labs and online assessments.

We must begin the transition to instructional content and curriculum that includes digital delivery and consumption. There are many issues to be addressed, some of which include: sustainable funding for devices, teacher training and development to integrate digital content into instruction, intellectual property and licensing, and quality control issues.

Conclusion

The Beaverton School District Strategic Plan places students at the center of our vision and assumes responsibility for their individual achievement. Technology tools, applied appropriately, have the power to engage students, support individualized and personalized learning experiences, and foster innovation and creation along each student's learning path. Despite economic challenges, we remain focused on providing the framework and supports for individual student learning and teacher collaboration.