TECHNOLOGY
DEPARTMENT STRUCTURE
AND BUDGET

William Diehl – Director of Technology
# Summary of Expenditures

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hardware</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>District level</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>School level (1-to-1 installments)</td>
<td>$1,224,000</td>
<td>$1,224,000</td>
<td>$1,224,000</td>
</tr>
<tr>
<td><strong>Hardware Acquisitions</strong></td>
<td>$1,324,000</td>
<td>$1,324,000</td>
<td>$1,324,000</td>
</tr>
<tr>
<td><strong>Software Acquisitions</strong></td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
</tr>
<tr>
<td><strong>Hardware Maintenance</strong></td>
<td>$559,625</td>
<td>$499,625</td>
<td>$497,117</td>
</tr>
<tr>
<td><strong>Software Maintenance</strong></td>
<td>$430,872</td>
<td>$471,872</td>
<td>$473,172</td>
</tr>
<tr>
<td><strong>Wages and Benefits</strong></td>
<td>$861,019</td>
<td>$861,019</td>
<td>$861,019</td>
</tr>
<tr>
<td><strong>Professional Development</strong></td>
<td>$25,000</td>
<td>$25,000</td>
<td>$25,000</td>
</tr>
<tr>
<td><strong>Total Estimated Expenditures</strong></td>
<td>$3,205,516</td>
<td>$3,186,516</td>
<td>$3,185,308</td>
</tr>
<tr>
<td><strong>Total ERATE Priority 1 Discounts</strong></td>
<td>$231,122</td>
<td>$192,122</td>
<td>$192,122</td>
</tr>
<tr>
<td><strong>Total Discounted Expenditures</strong></td>
<td>$2,974,394</td>
<td>$2,994,394</td>
<td>$2,993,186</td>
</tr>
</tbody>
</table>

*First district ERATE Priority 2 rebate for $417,000 recently received.*
## 2013-2015 Technology Budget, pg. 1

### DISTRICT-Level

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hardware acquisitions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network upgrade, switches, etc.</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$25,000</td>
</tr>
<tr>
<td>Server/Storage upgrades</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>Unscheduled purchases</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$25,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td><strong>Software acquisitions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dashboard BI software</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
</tr>
<tr>
<td><strong>Hardware maintenance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Device Repair</td>
<td>$93,000</td>
<td>$93,000</td>
<td>$93,000</td>
</tr>
<tr>
<td>Network, Access, Bandwidth, Phones</td>
<td>$373,134</td>
<td>$313,134</td>
<td>$313,134</td>
</tr>
<tr>
<td>Servers &amp; Storage</td>
<td>$65,491</td>
<td>$65,491</td>
<td>$62,983</td>
</tr>
<tr>
<td>Supplies</td>
<td>$10,000</td>
<td>$10,000</td>
<td>$10,000</td>
</tr>
<tr>
<td>Website Host</td>
<td>$18,000</td>
<td>$18,000</td>
<td>$18,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$559,625</td>
<td>$499,625</td>
<td>$497,117</td>
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</table>
## Software maintenance

<table>
<thead>
<tr>
<th>Software Maintenance</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment software</td>
<td>$42,000</td>
<td>$42,000</td>
<td>$42,000</td>
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<tr>
<td>Contracted Services</td>
<td>$50,000</td>
<td>$35,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>Educational Software</td>
<td>$133,292</td>
<td>$133,292</td>
<td>$133,292</td>
</tr>
<tr>
<td>Email/Calendar &amp; Messaging software</td>
<td>$78,011</td>
<td>$78,011</td>
<td>$120,311</td>
</tr>
<tr>
<td>Internet Filtering</td>
<td>$17,600</td>
<td>$17,600</td>
<td>$17,600</td>
</tr>
<tr>
<td>Mobile Device Mgt &amp; HELP Desk</td>
<td>$5,000</td>
<td>$61,000</td>
<td>$5,000</td>
</tr>
<tr>
<td>Library</td>
<td>$42,340</td>
<td>$42,340</td>
<td>$42,340</td>
</tr>
<tr>
<td>Reporting Software</td>
<td>$62,629</td>
<td>$62,629</td>
<td>$62,629</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$430,872</strong></td>
<td><strong>$471,872</strong></td>
<td><strong>$473,172</strong></td>
</tr>
</tbody>
</table>

## Professional Development

<table>
<thead>
<tr>
<th>Professional Development</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Development</td>
<td>$23,700</td>
<td>$23,700</td>
<td>$23,700</td>
</tr>
<tr>
<td>Travel and expenses</td>
<td>$1,300</td>
<td>$1,300</td>
<td>$1,300</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$25,000</strong></td>
<td><strong>$25,000</strong></td>
<td><strong>$25,000</strong></td>
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</tbody>
</table>

## Summary Costs

<table>
<thead>
<tr>
<th>Summary Costs</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Acquisitions</td>
<td>$105,000</td>
<td>$105,000</td>
<td>$105,000</td>
</tr>
<tr>
<td>Total Maintenance</td>
<td>$990,497</td>
<td>$971,497</td>
<td>$970,289</td>
</tr>
<tr>
<td>Total Professional Development</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$25,000</td>
</tr>
<tr>
<td><strong>Total Estimated Expenditures</strong></td>
<td><strong>$1,120,497</strong></td>
<td><strong>$1,101,497</strong></td>
<td><strong>$1,100,289</strong></td>
</tr>
</tbody>
</table>
Accomplished Initiatives

- SMARTboards in all language, math, and science classrooms
- Install 45 projectors (10 new, and replace older models) and classroom sound systems
- District-wide wireless network with over 1,000 APs
- 430 Apple TVs in all language, math, and science classrooms
- Creation of new Websites for district and all EAC schools
- 65 iPad charging cabinets for grades 4 & 5 and jr/sr libraries
Prior Year In Reflection

- Committee mtgs for 1:1 began with staff/admin
- Multiple presentations made to Board, Admin, Staff
- Almost a year to the day the Board chose the most progressive of the two options
- The next morning a mission began to make the Board choice a reality (orders, label, image, install apps)
- Community meetings held May, August, & October
- Pre-summer staff deployment and training for iPads
2013 Major Initiatives

**INFRASTRUCTURE**
- Server upgrades
- Backup upgrade
- E to Active Directory
- Windows XP to Win 7
- GroupWise to GMAIL
- School Messenger
- Documentation

**BLENDED LEARNING – YEAR TWO**
- Gradual Release Yr 2
- iTunes U Course Resources
- Summer staff training
  - Digital Workflow
  - Flipped Learning
  - iTunes U staff training
- Model Classrooms
- Peer Observations
2013 Challenges

**FOUNDATIONAL**
- Projector upgrades
- SMARTboard requests
- Webcasting
- Distance Learning
- Data & Dashboards
- Personnel retention

**BLENDED LEARNING– 1:1**
- Year-end collection
- Insurance options 2013-14
- iPad Mgt Issues
  - Reduce Theft/Breakage
  - Refine Global Filtering
  - Restriction reductions
- Sponsors for MCs
Acknowledgments

- IDOE eLearning Grant
- Other school district visits and 1:1 consortium
- Ceragon Microwave Radio upcoming video
- Forbes Magazine recognition – Top 10 Rollout
- iTunes U Store Rankings
- Apple Distinguished Educator invitation for our Technology Coach-Keith Madsen
- FileWave video featuring EACS
RESEARCH STUDY OF 1:1 DEVICES IN SCHOOLS

Shelley Jenkins - technology coach
Project RED:

Major study of 1000 schools, gathering evidence of technology transforming education.
Results: Continuous access to a computing device for every student leads to increased academic achievement and financial benefits, when technology is properly implemented.
What is Proper 1:1 Implementation?

- Infrastructure to support wireless access and tech support and management
- Multi-year plan for expanding student, staff, and administrative use
- Continuous and varied types of professional development and training
- iPads are set up with software, tools, and apps, and technology coaches work with teachers and students on classroom integration
- Students collaborate with devices and use them daily – we use My Big Campus online classroom platform for collaboration
Our iPad project coincides with all the findings for proper implementation
The study also found that daily technology use is an indicator of:

- better discipline,
- better attendance,
- increased college attendance, and
- better return on investment (ROI)
- opportunities to transform teaching and learning.

As we move into the 2nd year, we are right on track with the findings of the study as we continue our 1:1 implementation:

- [http://www.projectred.org/about.html](http://www.projectred.org/about.html)

A 1:1 student-computer ratio has a higher impact on student outcomes and financial benefits than other ratios, and the key implementation factors (KIFs) increase both benefits.
YEAR ONE PROGRESS

Keith Madsen - technology coach
iPadaPalooza in May of 2012:

- Handed out 620+ iPads to teachers
- Gave mass trainings on My Big Campus, Apps, and the Gradual Release of Responsibility
### The Gradual Release of Responsibility

<table>
<thead>
<tr>
<th>Training</th>
<th>Chapter 1</th>
<th>Readers should have a basic understanding of blended learning, the iPad, and MBC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 2</td>
<td>Section 1: Create a Group</td>
<td>Educators should be able to start a MBC group and make a group announcement.</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>Section 4: Sharing Resources</td>
<td>Educators should be able to add members to their group.</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>Section 5: Sharing Resources</td>
<td>Educators should be able to create and use assignments and quizzes.</td>
</tr>
</tbody>
</table>

### Goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>May/June</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
</tr>
</thead>
<tbody>
<tr>
<td>iPad/Apple</td>
<td>Online PD Opportunities EACSTechPage (MBC) MBC Resources Library</td>
<td>Explore Online PD Teach the EACS created MBC lesson during First 20 Days</td>
<td>Explore Online PD Attend bi-weekly or monthly technology meeting with technology coaches/ instructional coaches.</td>
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</tr>
</tbody>
</table>

### Expectations

<table>
<thead>
<tr>
<th>Expectation</th>
<th>Introduction</th>
<th>Modeling</th>
<th>Guided Practice</th>
<th>Collaboration/Independence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educators have a willingness to use their iPad and begin to explore opportunities for utilizing the iPad in their classroom.</td>
<td>Educators should be able to create a simple version of their MBC lesson using the ShowMeEverything video to MBC.</td>
<td>Educators should be able to give parents access to assignment due dates and calendars events, select any group content to share with parents, and tell parents to access your group.</td>
<td>Educators should be preparing for year 2 of MBC in their classroom.</td>
<td></td>
</tr>
<tr>
<td>Educators have a willingness to use their iPad and continue to explore opportunities for utilizing the iPad in their classroom.</td>
<td>Educators update MBC profile and have weekly newsletter/Overview uploaded for each MBC group. Educators will also have all groups (classes) created with members (students) added during first 20 days.</td>
<td>Educators continue to implement MBC group discussion for a minimum of two groups (class).</td>
<td>Educators fully implement MBC for all groups.</td>
<td></td>
</tr>
<tr>
<td>Educators continue to use their iPad and begin to explore opportunities for utilizing the iPad in their classroom.</td>
<td>Educators implement MBC group discussion for a minimum of one group (class).</td>
<td>Educators continue to implement MBC group discussions, online assignments, and online quizzes for a minimum of one group (class) with the addition of online assignments and quizzes.</td>
<td>Educators fully implement MBC for a minimum of four groups and continue to utilize MBC group discussion for all groups (classes).</td>
<td></td>
</tr>
</tbody>
</table>

### Blended Learning Year 1: MyBigCampus Educator Implementation

<table>
<thead>
<tr>
<th>Month</th>
<th>Goal</th>
<th>Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>May/June</td>
<td>Introduction</td>
<td>Educators should have a basic understanding of blended learning, the iPad, and MBC.</td>
</tr>
<tr>
<td>July</td>
<td>Modeling</td>
<td>Educators should be able to start a MBC group and make a group announcement.</td>
</tr>
<tr>
<td>August</td>
<td>Guided Practice</td>
<td>Educators should be able to add members to their group.</td>
</tr>
<tr>
<td>September</td>
<td>Collaboration/Independence</td>
<td>Educators should be preparing for year 2 of MBC in their classroom.</td>
</tr>
</tbody>
</table>
SUMMER TRAININGS… JUNE AND AUGUST

iPad basics
My Big Campus
Productivity apps
Nearpod
Livebinder
In August...

- 7,000 iPads to students to take home in grades 6-12 at the 5 different school areas in the district
- 24 apps have been “pushed” to students via the app portal, (most were free) and dozens more loaded via teacher request
The technology coaches are assigned multiple schools throughout the district, with their primary focus at the high school level. Coaches also work with elementary and middle school teachers on a consistent basis for trainings. Technology coaches are constantly in communication with principals, instructional coaches, and teachers at all levels for individualized technology instruction.

Shelley Jenkins, Keith Madsen, and Michael Starewich
Examples of Technology Coach Collaborations:

- MBC tutorial: one for each stage of the Gradual Release of Responsibility
- WebDavNav
- Pages, Numbers, Keynote
- iMovie
- Paper53
- Screenchomp/Educreations
- Showbie
- Nearpod
- Apple TV and remote
- ScribblePress
- iPad feature tutorials such as email, keyboard, accessibility, usage, etc.
As a result of the iPads...and teachers utilizing the iPads.

- Assignments in the digital world through My Big Campus or Showbie.
- Research projects are completed from start to finish via iPad, then submitted.
- Keynote and iMovie projects are becoming familiar assignments with students.
- Educreations and Screenchomp are consistently being utilized within certain classrooms.
Network Security Provider Enterasys research data: first reported on Edudemic

(2011 survey results from 1000 school corporations around the U.S.)

Infrastructure can accommodate the move. The responses are presented below.

Do you use digital text books at your school?

- 36.5% Currently use digital textbooks
- 42.5% Plan to use within 3-12 months
- 21.0% No plans to move to digital textbooks

More than 37% say they plan to move to only digital textbooks within the near future (1-5 years)?

With your current network infrastructure, can you move to digital textbooks?

- Yes, easily 26.3%
- Possibly or with difficulty 73.7%
Network Security Provider Enterasys research data: first reported on Edudemic

(survey results from 1000 school corporations around the U.S.)

As part of your CIPA and FCC Order 11-125 related activities, do you currently monitor student network and Internet access?

FCC Order 11-125 specifies that Internet safety policies must “...include monitoring the online activities of minors...”

Can monitor online activities: 84%
Not yet capable of monitoring student activities: 7%  Don’t know: 9%

BUT: With your current network infrastructure, can you customize each student’s network access based on factors like their grade level?

Not possible or with difficulty  Don’t know

27%  16%
Network Security Provider Enterasys research data: first reported on Edudemic
(survey results from 1000 school corporations around the U.S.)

Who uses **ONLINE ASSESSMENT**
- Currently use online assessments
- Plan to use within 3 – 12 months
- No plans to use online assessment

Schools that plan to exclusively use online assessment for testing within 5 years: **46%**

With your current infrastructure, can you move to online assessment? **15%**
Not possible or with difficulty
Network Security Provider Enterasys research data: first reported on Edudemic

(survey results from 1000 school corporations around the U.S.)

Is your school planning to adopt some usage of the FLIPPED CLASSROOM model?

Currently use or plan to try the Flipped Classroom model.

In the next five years, 13% of respondents plan to COMPLETELY ADOPT the flipped classroom model.

With your current network infrastructure, could you move to the flipped classroom mode?

<table>
<thead>
<tr>
<th></th>
<th>12.8%</th>
<th>34.2%</th>
<th>14.1%</th>
<th>38.9%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possibly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t Know</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Network Security Provider Enterasys research data: first reported on Edudemic
(survey results from 1000 school corporations around the U.S.)

When will Social Media be used in classrooms for teaching purposes?

- Currently using: 33%
- Within 3 – 12 months: 18%

Which social media platforms are you planning to use in your school?

- StumbleUpon: 2%
- Twitter: 26%
- Google+: 32%
- Facebook: 30%
- Pinterest: 20%
- Gaggle: 9%
- Edmodo: 4%
- Schoology: 2%
MARCH 19TH AND TITLE II
Curriculum / Technology Connection

- March 19th teacher in-service
- Title II
  - Funding
  - Course Resources
iTUNES U COURSE RESOURCES DEVELOPMENT
Standard 1-Motion and Forces

SCI.P.1.1 2010
Using motion, maps, graphs and algebraic equations, describe, measure, and analyze constant acceleration motion in one dimension in terms of time and the vector quantities of displacement, velocity and acceleration.

SCI.P.1.2 2010
Using motion, maps, graphs and algebraic equations, describe, measure, and analyze constant acceleration motion in two dimensions in terms of time and the vector quantities of displacement, velocity and acceleration. Consider specifically...

SCI.P.1.3 2010
Describe the magnitude and direction of kinds of forces, including both contact forces and non-contact forces, those that act at a distance. Find the net force acting on an object using free-body diagrams and the addition of forces. Use Newton's t...

SCI.P.1.4 2010
Use Newton’s Law of Universal Gravitation and the laws of motion to quantitatively analyze the motions of orbiting objects such as the moon, the planets and satellites (i.e., Kepler’s Third Law of Planetary Motion). 

Standard 2-Energy and Momentum

SCI.P.2.1 2010
Describe qualitatively and quantitatively the concepts of momentum, work, kinetic energy, potential energy and power.

SCI.P.2.2 2010
Quantitatively predict changes in momentum using the impulse-momentum theorem
Workflow
My Big Campus
Assignments

Teachers create assignments and upload to MBC.

Students open and complete the assignment in Notability.

Students submit the assignment to their individual folder in Showbie.

Teachers open the submitted assignments and grade via Notability and resubmit to Showbie.
In March, we applied for, and were awarded funds from the Imagining and Creating eLearning Grant from the IDOE.

EACS is one of six districts in the State’s Digital Content Consortium.

The grant award of $600,000 will be split among the consortium members.

Consortia workday on April 17th at Project Lead The Way with the IDOE.
EACS had 3 out of the top 4 downloaded courses in the Teaching and Learning Section of iTunes U on March 20th.
Top Courses in iTunes U

Other EACS-created courses have shared success in iTunes U
EACS iTunes U Course Traffic By Country

From Apple’s iTunes U Public Site Manager
Grant Vision

- Expand teacher access to professional development through digital content and on-site training

- Assist teachers in providing a student-centered eLearning environment that allows access to digital information from school or home

- Foster collaboration with other school districts with a similar goal and vision
Digital Content

- Interactive eBooks created by teachers using iBooks Author on MacBook Computers (through grant funds)
- Screencast Lessons created by teachers using Camtasia software (through grant funds)
- Distributed to students through My Big Campus and iTunes U
- Greater access to digital content allows for further student engagement
EACS PARENT

Diana Gibson
ESL TEACHER: BENEFITS OF THE iPAD FOR ENGLISH LEARNERS
Benefits of the iPad for English Learners

- Combined with Apple TV, students can see steps of a process more easily.
- Increased student responsibility for own learning - access to a variety of websites and video tutorials to investigate further or for remediation.
- 1:1 access for doing research, access to primary sources and current events.
- Students are able to write more and edit/revise more easily than with paper/pencil; the iPad also provides a scaffolding for those that need it (spelling suggestions, dictation).
Benefits of the iPad for English Learners

- Students are better organized because their materials are all in one place - an asset for students with limited formal schooling.

- Assignments, tests, quizzes, and websites can be read aloud to students as needed - this is great when students are accessing websites that are above their independent reading level.

- "Modified" tests are easily created in MBC, and students don't have to be embarrassed by being handed a different test than the rest of the class.

- Increased student engagement - students are able to produce high-quality, unique projects using a variety of multimedia tools.

- Free, instant access to bilingual dictionaries in order to quickly understand a word or concept.
iPADS IN A SCIENCE CLASSROOM

Carolyn Tuesca - New Haven High School
Tutorial/Review
Lab Directions
Reading
Research/Presentation
Graphic Organizers
Qualitative Lab Results
HIGH SCHOOL ALGEBRA II
iPADS IN THE CLASSROOM

~ STUDENT ENGAGEMENT

~ HIGHER-LEVEL THINKING

~ EXAMPLES FROM A 2ND GRADE CLASS

“KING TUT TRAILER”
“THE MOON”

Liz Kowatch - Woodlan Primary School