LAWRENCE SCHOOL
Lou Salza, Head of School
Presentation to NASDSE 2010 Conference
Nashville, Tenn., Oct. 18, 2010

The only independent school for diverse learners in NE Ohio
Grades K-6 in Broadview Hts  Grades 7-12 in Sagamore Hills
LAWRENCE SCHOOL

Lawrence students come from over 70 communities in 10 counties

One of 300 schools known nationally for students with learning differences

LD schools are the third fastest growing sector of the education industry behind home schooling and charter schools
Technology Environment

SmartBoards and projectors in every classroom

Interactive Response devices and receiver for check out by teachers

Wireless, one to one tablet or laptop, all students, all classes

All staff use tablet computers with DVD capability

Headsets to all staff and students

Printers, digital cameras, camcorders, microphones available as needed by teachers
Assistive Technology Program

- Started in early 2003 with in computer lab with a handful of students
- Tested every AT program on the market at the time
- Had students help evaluate software
  - Was it easy to use?
  - How long was training period?
  - Would they use it?
- Students and staff selected *Read & Write Gold* as Lawrence School’s assistive technology software
Assistive Technology Program

Read & Write Gold and Inspiration on all computers from K-12 grade

Dragon Naturally Speaking
  After school training available to students in grades 5-12

AlphaSmart NEO’s to support Lower School students with written expression
Assistive Technology

- Prosthetic Processing: speed up dysfluent readers
- Boost ease of reading for dyslexics with average reading skills
- Build on listening comprehension strengths, prevent frustration and fatigue
- Metaphor: GPS for navigation
  - Convenience
  - Efficiency
  - Increased attention to safety & traffic
Changing Attitudes: Technology

System-wide adoption and implementation crucial to de-stigmatizing assistive technology tools

Everyone trains everyone uses tech tools: no stigma no foul

Bottom line: Assistive Tech can boost performance beyond the levels associated with accommodation or compensation
For students with Learning Differences

- Text-to-speech for reading purposes in class with teacher and for homework independently
- Speech-to-text
- Word prediction
- Graphic displays, webs, semantic maps
- Note-taking on tablet laptops
## Organizing Work, Homework, and Projects

<table>
<thead>
<tr>
<th>Assignment notebooks</th>
<th>Digital versions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>To keep track of homework and assignments due</td>
<td>Outlook</td>
</tr>
<tr>
<td></td>
<td>Excel, Word</td>
</tr>
<tr>
<td></td>
<td>Saywire (online social networking tool)</td>
</tr>
<tr>
<td></td>
<td>Google Calendar (online tool)</td>
</tr>
<tr>
<td></td>
<td>Cell/Blackberry/iTouch or Ipods</td>
</tr>
</tbody>
</table>
Text Help /E-Readers

Alternatives to reading for students with print/visibility learning differences

- Audio books
  - Audible.com, iTunes, Amazon Audio books, PlayAway devices
- Text-to-Speech Reading tools, Speechmaker tools
  - Read and Write Gold, Kurzweil, Balabolka, Write:Outloud
  - Kindle, Nook other text-to-speech enabled e-readers
  - Convert digital text to mp3 file
- Portable Readers/OCR devices
  - Intel Reader
  - The Reading Pen2 by Wizcom
Conclusion

- Technology is ubiquitous; a part of the environment
- Training is planned, skills practiced, protocols integrated
- Focus is on student learning, productivity, performance and effectiveness
Back-up
Text to Speech as Processing Support

- For students with ADHD, delays for processing, working memory deficits
- Prosthetic processing tool to help them ‘fly over’ text
- Multisensory engagement
- Facilitates focus on content in a way that doesn’t exhaust them.
<table>
<thead>
<tr>
<th>Resource</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audacity software for audio recording (free)</td>
<td><a href="http://audacity.sourceforge.net">http://audacity.sourceforge.net</a></td>
</tr>
<tr>
<td>Google Books; public domain e-books (free)</td>
<td><a href="http://Books.google.com">http://Books.google.com</a></td>
</tr>
<tr>
<td>Google Chrome web browser (free)</td>
<td><a href="http://Google.com/chrome">http://Google.com/chrome</a></td>
</tr>
<tr>
<td>Ghotit context sensitive spellchecker (free/$)</td>
<td><a href="http://ghotit.com">http://ghotit.com</a></td>
</tr>
<tr>
<td>Readability tool for distraction free online reading (free)</td>
<td><a href="http://lab.arc90.com/experiments/readability/">http://lab.arc90.com/experiments/readability/</a></td>
</tr>
<tr>
<td>Balabolka text-to-speech &amp; mp3 creator tool (free)</td>
<td><a href="http://www.cross-plus-a.com/balabolka.htm">http://www.cross-plus-a.com/balabolka.htm</a></td>
</tr>
<tr>
<td>Quizstar online quiz creator and grading system (free)</td>
<td><a href="http://Quizstar.4teachers.org">http://Quizstar.4teachers.org</a></td>
</tr>
<tr>
<td>Saywire private learning community for schools and organizations ($)</td>
<td><a href="http://www.Saywire.com">http://www.Saywire.com</a></td>
</tr>
<tr>
<td>Smart Technologies for SmartBoards and Smart Response ($)</td>
<td><a href="http://www.Smarttech.com">http://www.Smarttech.com</a></td>
</tr>
<tr>
<td>Bookshare; over 90K e-books, including textbooks, literature.</td>
<td><a href="http://www.bookshare.org">www.bookshare.org</a></td>
</tr>
<tr>
<td>Free for U.S. students with qualified print disability</td>
<td></td>
</tr>
<tr>
<td>Project Gutenberg; public domain e-books (free)</td>
<td><a href="http://www.gutenberg.org">www.gutenberg.org</a></td>
</tr>
<tr>
<td>Inspiration software ($)</td>
<td><a href="http://www.inspiration.com">www.inspiration.com</a></td>
</tr>
<tr>
<td>Dragon Naturally Speaking software ($)</td>
<td><a href="http://www.nuance.com">www.nuance.com</a></td>
</tr>
<tr>
<td>Quia online review activities and quizzes ($)</td>
<td><a href="http://www.quia.com">www.quia.com</a></td>
</tr>
<tr>
<td>Read and Write Gold software &amp; FluencyTutor online service ($)</td>
<td><a href="http://www.texthelp.com">www.texthelp.com</a> <a href="http://www.fluencytutor.com">www.fluencytutor.com</a></td>
</tr>
</tbody>
</table>
Spelling

- Help spelling words
  - **Google Chrome**: built in spell check on web fields
  - **ieSpell**: Internet Explorer plug-in if you don’t want to use Google Chrome!
  - **Read & Write Gold Dictionary**: phonetic spell check as well ability to view definitions and hear words before making selection
  - **Ghotit**: context sensitive spellchecker; plugin for Office 2007; free for schools and free online spellcheck service; minimal cost for home user

- However, many students perseverate over misspellings and inhibit the writing process
  - Turn off Check Spelling As I Write options in word processor
Four Pillars of Practice

- Memorization
- Grading
- High stakes testing
- Excessive Homework
Planning and Concept Mapping Tools

- **MS Office: Smart Art tools**
- **Bubbl.us (online tool)**
- **Inspiration**

![Diagram showing Planning and Concept Mapping](image-url)
Inspiration Tools to Help with Organizing Ideas and Details

second Persian war

I. the war

A. here come Persians
   1. Persian army enters Greece though narrow mtn. pass
      a. 7000 Greeks wait for enemy 360 are Spartans
         (1) Xerxes underestimates Spartans
         (a) 3 days of battle
            i. Spartans army sacrifices itself to let the rest head back to Greece
               (1) all Spartans were slaughtered
      (a) Greece made an entire blockade around Greece
         (i) all of Persians were killed

II. before war

A. Xerxes son of king darius
   1. Xerxes sets out to fulfill his father's wishes to destroy Athens
      a. Xerxes assemble very large army

B. Greece
   1. city state's pledge to Athens and Sparta
      a. Greek city states become split while some are neutral
   10 yrs later 480 B.C.

III. punishment of war

A. Athens
   1. city burned during Persian war
      a. Athenians make Delian League
         (1) Athens go to golden age
            (a) both want war
               i. Spartans burn food supply

B. Sparta
   1. tension grows between Sparta and Athens
Bubbl.us – free online web mapping tool
Word Prediction

- When students know what they want to say but get bogged down with the mechanics of typing
- Word Prediction tools provide a list of common words used as you type
- Software will learn how you write the more you use it
- Popular tools:
  - Read & Write Gold
  - Co:Writer
  - WordQ