

1  Using Flexible Technology to Meet the Needs of Diverse Learners

2  Who we are

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3  House Keeping

- Quick Polling
- Type in a Response
- Type messages (Q &A) into chat area
- Q & A via Email - [eventquestion@wested.org](mailto:eventquestion@wested.org)

4  Quick Poll: Where are You?

Are You:

In California


In another State

5  Poll: Who is on the webcast?

- SEA/LEA Staff
- School/ District Administrator
- Curriculum /Technology Coordinator
- Staff Developer
- Teacher – General/Special Ed.
- TA Provider
- Parent
- Other

6  Poll: Do you primarily work with...?

- Teachers &/or Students in K-3
- Teachers &/or Students in K-6
- Teachers &/or Students in Middle School
- Teachers &/or Students in High School
- All of the Above
- Other

7  Quick Poll: Have you used the Tech Tips or TDL websites?  
www.wested.org


- Yes
- No

8  Quick Poll: How comfortable are you with using technology ?

- Very Comfortable
- Some what comfortable
- Not at all

9  Intended Outcomes

- Participants will understand how digital formats support students access to the general curriculum
  
- Participants will know where to access resources to help them do this

10  Technology  
for Diverse Learners Design:

11  Screen Shot TDL

12  Technology for Diverse Learners

- Web site
- PowerPoint trainings
- Tip-sheets
  - *focused on using technologies most schools already have; and*
  - *for use in professional development of technology-using general and special educators, and staff.*
- Knowledge Brief

13  Let's Consider

- Most schools still rely on print text books
- NCLB and IDEA (1997) mandate increase to the general curriculum for ALL students
- Teachers have responsibility to individualize instruction
- Most students with diverse needs are in mainstreamed classrooms

14  Differentiated Instruction

- Providing materials and tasks at varied levels of difficulty with varying degrees of scaffolding, through multiple instructional groups.
- Encouraging student success by varying ways in which students work: alone or

collaboratively, in auditory or visual modes, or through practical or creative means.  
(Tomlinson, 2000)

## 15 ☐ Differentiation Strategies

- Small groups working collaboratively
- Pre-teaching to activate prior knowledge
- Re-teaching
- More background
- Condensing material
- Reading materials at various levels
- Partner or round table reading
- Audio tape or other audible materials

## 16 ☐ A Simple Definition

A *differentiated* classroom provides multiple options for:

- Taking in information
- Making sense of information
- Expressing what students learn

## 17 ☐ However...

- Few teachers have either the time or expertise to adequately adapt the curriculum materials to meet the diverse needs of their students.

(Ellis & Sabornie, 1990; Moon, Callahan & Tomlinson, 1999)

- And we are not making full use of what we already have.

## 18 ☐ Research-based Strategies

- Identifying Similarities and Differences
- Summarizing and Notetaking
- Nonlinguistic Representations
- Cooperative Learning
- Questions, Cues, and Advance Organizers
- Homework and Practice
- Setting Objectives and Giving Feedback

## 19 ☐ Differentiated Instruction

- Technology is a great **tool** for *differentiation*, which allows changes to:
  - content
  - channels of input
  - means of output
- It is also an excellent platform for cooperative learning.

## 20 ☐ Reflection:

How, if at all, are you or your teachers currently using technology to differentiate instruction?

## 21 Today

Digital Text  
Audio Channels: Talking Text  
Software – Word Features  
Digital Enhancements to Text  
Curricular Supports

## 22 Quick Poll: Which of these areas are of most interest to you?

Digital Text  
Audio Channels: Talking Text  
Software – Word Features  
Digital Enhancements to Text  
Curricular Supports

## 23 *Digital Text*

### 24 What is Digital text?

- Text stored as strings of characters.
  - If you can select and change the font of text on the computer screen, it's digital text
  - *Transferable*
  - *Transformable*
  - *Increasingly Available*

### 25 Digital Text is *Transferable*

Copy or cut-and-paste it from one computer application to another

- World Wide Web to text editor
- Text editor to e-mail
- Visual map to presentation software

*Once text is available in digital format, it is flexible, accessible, and usable for all learners...*

### 26 Digital Text is *Transformable*

Customize it for individual needs and preferences

- Size
- Spacing
- Font
- **Style**

## 27 Free *Digital Text*

- The flexibility of digital or electronic text makes it a great option for customizing text to the needs of different learners.
- Digital text can be
  - Searched,
  - Rearranged
  - Read aloud by a computer
  - Customized for individual learners

## 28 Free *Digital Text*

- Dickens
- Robert Frost
- Mark Twain
- Edgar Allan Poe
- Rosa Parks
- Star Spangled Banner
- Bill of Rights
- The Jungle
- First Across the Continent

## 29 How-to find *Digital Text*

**Free Books Online** (2 of 90 digital library collections)

- Project Gutenberg  
<http://promo.net/pg/>
- University of Virginia's e-Book Library <http://etext.lib.virginia.edu/ebooks/ebooklist.html>

## 30 Sample of digital text

**The Project Gutenberg Ebook of Tom Sawyer**

CHAPTER I. TOM SEEKS NEW ADVENTURES

DO you reckon Tom Sawyer was satisfied after all them adventures? I mean the adventures we had down the river, and the time we set the ducky Jim free and Tom got shot in the leg. No, he wasn't. It only just pisoned him for more. That was all the effect it had. You see, when we three came back up the river in glory, as you may say, from that long travel, and the village received us with a torchlight procession and speeches, and everybody hurrah'd and shouted, it made us heroes, and that was what Tom Sawyer had always been hankering to be.

For a while he WAS satisfied. Everybody made much of him, and he tilted up his nose and stepped around the town as though he owned it. Some called him Tom Sawyer the Traveler, and that just swelled him up fit to bust. You see he laid over me and Jim considerable, because we only went down the river on a raft and came back by the steamboat, but Tom went by the steamboat both ways. The boys envied me and Jim a good deal, but land! they just knuckled to the dirt before TOM.

### 31 **Guides to Digital Text Sources for Educators**

- Extensive List of e-book and e-text sites:  
<http://www.edtech-associates.com/ebooks-etexts-and-readers.htm>
- Annotated list in handout form:  
<http://www.wested.org/cs/tdl/view/lib/2527>

### 32 **Poll: In what ways are you currently using digital text?**

### 33 **Audio Channels**

- Talking Text (Text to Speech)
- Text to MP3

### 34 **Poll: How familiar are you with text to speech supports?**

- Very
- Some what
- Not at all

### 35 **What is *Talking Text*?**

- Words on the screen are read aloud by the computer on command.
- In some cases, the words need to be highlighted first.
- Allows reading of individual words or phrases.
- Works with word processors, websites, and more.
- Often called text-to-speech.

### 36 **Who does *Talking Text* help?**

- Students who struggle with comprehension may benefit from:
  - pre-reading to increase comprehension
  - reading to access standard or advanced materials
  - reading and listening together (reinforcement)
  - reading selected words or phrase
- *Talking Text* also helps writers to hear omissions or inaccuracies in their work.

### 37 **What does research say about *Talking Text*?**

- Developing reading comprehension is a complex skill.
- If a great deal of effort goes to sounding out words, energy for comprehension is reduced.
- Talking text can provide one more tool for supporting comprehension for some students.

(Rose & Dalton, 2002)

### 38 **What does practice show about *Talking Text*?**

- Poor readers can have access to the same content by having it read to them.
- Many students improve editing and proofreading if they can hear their work.
- Hearing one's own words is rewarding and motivating.

*Hint: Hearing multiple computers with Talking Text is disturbing; you WILL need headphones.*

### 39 **Software That Talks**

- KidPix Deluxe
- Kidspiration/Inspiration
- Storybook Weaver
- Natural Reader
- Macintosh OSX
- AppleWorks
- Microsoft Reader ...and many more!

### 40 **What else *talks*?**

- Free utilities & shareware, such as Microsoft Reader, ReadPlease, and TexEdit Plus
- Operating Systems (Mac OSX & Windows XP)

### 41 **For Example: PC ReadPlease**

### 42 **What else *talks*?**

Websites

Free talking web browsers:

- [BrowseAloud](#) (add-in for Internet Explorer)
- WeMedia [Talking Browser](#)
- [pwWebSpeak](#)

### 43 **Classroom Examples**

Providing access to literature, background information and content for struggling readers and all students.

- CAST - [Life Cycle Video](#) (Digital books with text-to-speech to support fluency)
- [Earphone English](#) at Berkeley High In California (ELL, background knowledge)

44  **Kathleen's Examples**

- High School English teacher
  - Download Shakespeare "Macbeth"
  - Burn a CD with the text by Act
  - Download ReadPlease 2003 at home
  - Result: Independent access to literature for the first time

45  **Reflection:**

What resources do you have, or could easily acquire, at your school to promote the use of Talking Text?

46  ***Adapting or Enhancing Digital Text ...***


- Adding information, questions, hyperlinks, or graphics to enhance comprehension
- Works with printed or electronic text, as well as audio versions

47  **Poll: Do you currently use online curriculum supports?**

- Online Text Books
- Fee Based Services (e.g. United Streaming, NetTrekker, Sparks Notes)
- Enhanced Web sites (e.g. Starfall)
- Other


48  ***Digital Enhanced Text ...***

- Allows customizing access & learning supports in content
  - Pre-reading background, definitions
  - Summary
  - Key questions
- Allows students to copy/paste, or otherwise manipulate the text, to indicate comprehension
- Allows built in features (note taking, dictionaries, bookmarks etc )

49  **Who is helped by  
*Enhanced Text?***

- Students with who have difficulty with comprehension or with organizing information.

- English-learners who struggle with vocabulary.
- Students who come from diverse cultures and may need more context.

50  **Research on *Enhanced Text***

Techniques that have been shown to increase comprehension include:

- embedded questions that allow self-monitoring for understanding,
- use of graphic and semantic organizers,
- prompts for students to generate questions about the text,
- awareness of story structure, and
- periodically summarizing key points.

(National Reading Panel, 2000)

51  ***Enhanced Text is Motivating***

The Center for Applied Special Technology (CAST) found that students who read novels in a digital format with decoding supports are more motivated to read because they can access the content at an age-appropriate level that is just challenging enough.

(O'Neill & Dalton, 2002)

52  ***Examples of Enhanced Text***

53 

54  ***Enhanced E-Textbooks***

subscription services

**Prentice Hall Interactive Textbooks** [http://www.phschool.com/successnet/preview\\_it.html](http://www.phschool.com/successnet/preview_it.html)

The same trusted content as the printed textbook with interactive activities, videos, audio, and self-assessments to engage all learners.

**Holt Online** <http://www.hrw.com/liveink/demo.htm>

Includes printed version, interactive tutors, classroom management tools, tests, journals, audio files, video files, and additional activities that engage students in the subject matter.

McDougal Littell Home "Classzone"


<http://www.classzone.com/>

55  **Prentice Hall Literature Text On line**


- Literature analysis
- Reading strategies
- Author Biographies
- Additional questions
- Video clips
- Self-tests
- Links to external websites
- Internet activities and research

56  **Starfall.com K-3 learn to read**

free service, inexpensive books for purchase


57  **StudyDog.com** (pre K-2 Early Reading software - online and CD)

58  **Spark Notes** (free and subscription options)

59  **Windows to the Universe**  
Spanish/English, Beginning/Intermediate/Advanced

60  **Virtual Math Manipulatives**

61  **Other: Online Widgets**

62  **Web-Based subscription tools**

United Streaming - builds vocabulary, comprehension and background knowledge

NetTrekker - gives readability and state standards content matches of selected websites

KidBiz/TeenBiz - customizes reading materials to each student's reading level

MyAccess - scores student writing and provides immediate feedback (English, Spanish and Chinese)

63  **Software**

What can Microsoft Word (and other popular word processors) do that supports differentiated instructional strategies?

64  ***Word Features: to support reading & writing***

- Allows teacher to enhance text
  - change how the text looks (visual displays)
  - check readability
  - computer-generated summaries
  - additional information and supports, i.e. graphics and comments


65  ***Word Features***


- Adjust text appearance
  - Allows user preference for font: **type**, **SIZE**, and **color**.
- Create hyperlinks
  - Allows teacher to link to websites, other documents or content within a document.
- Highlight text
  - Built-in *colored highlighters* enable students to demonstrate understanding or to

mark unknown words.

66  **Word Features**

- Highlight text
  - Built-in colored highlighters enable students to demonstrate understanding or to mark unknown words.
  - Highlighting is a low tech strategy that can also be done electronically
  - Students and/or teachers highlight specific words, letters, or parts of speech

67  **Word Formatting:** Different views to support readers **Highlight tools,** Background, **Font color,** Spacing, Zoom

68  **MS Word- AutoSummarize**

69  **Putting It Together:**  
**Quick Demo**

- Text from the web
- Readability
- Auto summary
- Comments

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**Putting it all together... Open Court**

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78  **Using Word for Reading/Writing Assistance**

- Make Accessible Interactive Worksheets (outlines, note taking, concept maps)
- Tiered Activities for different learners
- Pair Graphics with pictures
- Add Links to audio/visual information to build background knowledge

79  **Word Features -**  
**Note-taking Strategies**

80  **Word Features- Note Taking Strategies**

81 

- Important to have a note taking system with the color highlighters

82  Kathleen's Tips

83  Reflection:

Which of these Word features are you most interested in sharing with your staff?

84  Reflection:

What is the first tip you would want your staff to learn about & why?

85 


### Bring it Home

86 

Where do Schools Begin to improve the outcomes for “all learners” with these accessible tools?


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88  Next Steps:

89  Leverage the features of common desktop technology tools MS Office, Inspiration, and Kidspiration to support learning and literacy skills.

Install a “reader” (ReadPlease) and desktop dictionary thesaurus (WordWeb) on each computer to support “all learners.”

90  Next Steps:

91  Response to Intervention

92 

What questions or concerns do you have about making this happen?

93  **WestED TDL Web Site**

[www.wested.org/tdl](http://www.wested.org/tdl)

Online Events Updates

94  **CITeD's**

Center for Implementing Technology In Education

[www.cited.org](http://www.cited.org)

In September 2006

Centers for TA

- Learn - directory of AT resources
- Action- for planning
- Research - linking research & practice

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Presentations, Workshops and Institutes designed to help teachers create Plans for Learning Diversity and empower learners with accessible tools to support their learning.

“Tools for Learning”

“Tools for Literacy: Removing Barriers,

Empowering Learners, Achieving Results”

“Science Tools for Learning”

“Math Tools for Learning”

Customized for Grades K-5 or Grades 6-12

<http://www.edtech-associates.com/>

96  **Next Steps**

- Go to the SchoolsMovingUp Web Site  
<http://www.schoolsmovingup.net>
- Using Technology for Diverse Learners  
<http://www.wested.org/TDL>

97  **Your Feedback**

- **Online Survey**
- <http://www.addaform.com/c/@0/Forms/5156YEsr/5156YEsr.html>

98  **Thank You**