Helping AT-RISK STUDENTS Develop LITERACY SKILLS
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Helping At-Risk Students Develop Literacy Skills

Expert Presenters:

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An on-demand archive of this webinar will be available at www.edweek.org/go/webinar in less than 24 hrs.
Helping At-Risk Students Develop Literacy Skills
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Peggy Coyne, CAST
Lori DiGisi, Framingham Public Schools
What is Universal Design for Learning?

A Framework

UDL is framework for designing curricula that enables all individuals to gain knowledge, skills, and enthusiasm for learning. UDL provides rich supports for learning and reduces barriers to the curriculum while maintaining high achievement standards for all.
Why Universal Design for Learning?

Neurosciences unveiling the variability of all learners.
Teaching to the average is a myth.
Why Universal Design for Learning?

Curriculum does not typically address or respond to the variability of all learners. When this occurs, it is disabled.
How to Implement Universal Design for Learning?

Principles
Guidelines
Checkpoints
UDL - The Three Networks

Universal Design for Learning

**Affective networks:**
THE WHY OF LEARNING
How learners get engaged and stay motivated. How they are challenged, excited, or interested. These are affective dimensions.

 Stimulate interest and motivation for learning

**Recognition networks:**
THE WHAT OF LEARNING
How we gather facts and categorize what we see, hear, and read. Identifying letters, words, or an author's style are recognition tasks.

 Present information and content in different ways

**Strategic networks:**
THE HOW OF LEARNING
Planning and performing tasks. How we organize and express our ideas. Writing an essay or solving a math problem are strategic tasks.

 Differentiate the ways that students can express what they know
Affective networks:
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Differentiate the ways that students can express what they know
Universal Design for Learning Guidelines

**Provide Multiple Means of Engagement**
Purposeful, motivated learners
- Provide options for self-regulation
  - Promote expectations and beliefs that optimize motivation
  - Facilitate personal coping skills and strategies
  - Develop self-assessment and reflection
- Provide options for sustaining effort and persistence
  - Heighen salience of goals and objectives
  - Vary demands and resources to optimize challenge
  - Foster collaboration and community
  - Increase mastery-oriented feedback
- Provide options for recruiting interest
  - Optimize individual choice and autonomy
  - Optimize relevance, value, and authenticity
  - Minimize threats and distractions

**Provide Multiple Means of Representation**
Resourceful, knowledgeable learners
- Provide options for comprehension
  - Activate or supply background knowledge
  - Highlight patterns, critical features, big ideas, and relationships
  - Guide information processing, visualization, and manipulation
  - Maximize transfer and generalization
- Provide options for language, mathematical expressions, and symbols
  - Clarify vocabulary and symbols
  - Clarify syntax and structure
  - Support decoding of text, mathematical notation, and symbols
  - Promote understanding across languages
  - Illustrate through multiple media

**Provide Multiple Means of Action & Expression**
Strategic, goal-directed learners
- Provide options for executive functions
  - Guide appropriate goal-setting
  - Support planning and strategy development
  - Enhance capacity for monitoring progress
- Provide options for expression and communication
  - Use multiple media for communication
  - Use multiple tools for construction and composition
  - Build fluencies with graduated levels of support for practice and performance
- Provide options for physical action
  - Vary the methods for response and navigation
  - Optimize access to tools and assistive technologies
"Harriet Tubman's Great Escape"

1820-1913

Leader of the Underground Railroad
What Harriet endured

As a slave, Harriet was scarred for life when she refused to help in the punishment of another young slave. A young man had gone to the store without permission, and when he returned, the master wanted to whip him. He asked Harriet to help, but she refused. When the young man started to run away, the master picked up a heavy iron weight and threw it at him. He missed the young man and hit Harriet instead. The weight nearly crushed her skull and left a deep scar. She was unconscious for days, and suffered from seizures for the rest of her life.
What Harriet endured

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unconscious

un-con-scientious: un-kon-shus

ADJECTIVE:: not conscious; lacking awareness;

comatose
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Current Research

Funded by OSEP

National Center on the Use of Emerging Technologies to Improve Literacy Achievement for Students with Disabilities in Middle School

http://www.cast.org/research/projects/udio.html
Current Research

The Product:
Udio: The Universal Literacy Network

Udio is a networked reading environment that displays engaging Web content in a supported, personalized, and pedagogically rich format.

Prototype screens (click to enlarge):

System diagram

Dashboard
Dragon Speech Recognition

Helping students of all abilities realize their full potential

- Who uses Dragon today?
  - Students with physical disabilities use Dragon for accessibility purposes
  - Students with certain learning disabilities use Dragon to help them with writing by taking the focus off the mechanics of composition
  - English Language Learner (ELL) use Dragon to harness their oral English skills to advance their academic writing skills
  - Secondary business education students are learning to use speech recognition to better prepare them for the workplace
  - Teachers can use Dragon to streamline certain aspects of their jobs, such as grading assignments.
Applying UDL to Districts
College Student
What Does this Mean for Educators?

• Teaching students to meet the CCSS standards requires:
  • Strong Curriculum
  • Innovative Pedagogy
  • Recognition that Variability is the Norm
  • Tools
Strong Curriculum

States have created and vetted curriculum

• Massachusetts-
  http://www.doe.mass.edu/CandI/model/download_form.aspx

• New York-
  http://www.engageny.org/common-core-curriculum-assessments
Strong Pedagogy

• IRA- Literacy Implementation Guidance for the ELA Common Core State Standards
Literacy Implementation Guidance for the ELA Common Core State Standards

International Reading Association
October, 2012
Recommendations Related to Use of Challenging Texts: K-1

• For kindergarten through end of first grade, do NOT increase levels of texts used in reading lessons.

• DO increase complexity of texts read to students in grades K-1.
Recommendations Related to Use of Challenging Texts: 2-12

• In grades 2-12, provide instruction with adequate scaffolding for reading complex text.

• Instruction across the school year needs to involve students in the reading of texts written at a variety of levels.
Recommendations Related to Foundational Skills

• Early, systematic, and explicit teaching of the foundational skills is required.

• During the K-2 years, teaching of all aspects of the English Language Arts should take place simultaneously and be coordinated.
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Recommendations Related to Writing

• Provide opportunities for students to write in response to reading across the curriculum.
• Provide research opportunities that involve reading both print and digital texts, and that require writing in response to reading.
Recommendations Related to Disciplinary Literacy

• Involve content area teachers in teaching the disciplinary literacy Standards.
• Teach students the literacy strategies that are pertinent to each discipline.
Recommendations Related to Diverse Learners

• The CCSS require equal outcomes for all students, but they do not require equal inputs. Vary the amounts and types of instruction provided to students to ensure high rates of success.

• Monitor student learning and provide adjustments and supplements based on that information.
Innovative Pedagogy

• Personalizing Learning- David Hargreaves
• Mindsets – Carol Dweck [http://www.youtube.com/watch?v=ICILzbB1Obg]
• Professional Development for Special Educators
• Time
TOOLS

• Vander Ark on Innovation-Gamification

• Conceptual Challenges
• Productive Failure
• Careful Calibration
• Boosts Persistence
• Builds Confidence
• Enhances Intrinsic Motivation
• Accessibility
• Deeper Learning
More About UDL


2. CAST - http://www.cast.org/


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Speech Recognition: A Smart Investment for Education
Reinventing the relationship between people and technology

- Defining the next generation of human-computer interaction: **Intelligent Systems**
- Deeply invested in creating effortless and natural user experiences
- Best known for rapidly advancing voice-recognition technology
How is speech recognition utilized in Education today?

- Take notes for papers and assignments
- Write and format papers and presentations
- Conduct Internet-based research
- Communicate with peers and teachers
Dragon for all students

- Jumpstart the writing process
  - Automatically turns dictated thoughts into correctly spelled text
  - Results in more language production (longer, more detailed essays)
  - Writing flow by reading and re-reading each sentence as it develops
  - Improves sentence structure
- Boost Reading and Spelling Skills
  - Practice reading skills and positively influence sound-character awareness
  - Improve spelling and word recognition by seeing words they speak transcribed on the computer screen
  - Better understand relationship between what a word looks like and how it sounds using playback feature

Research suggests that use of speech recognition by dyslexic students generates significant improvements in reading, decoding, spelling and comprehension
Before and after with Dragon

Scary scary Halloween
October 27, 2010
by. Brandon

Somebody came to my door they knocked on it and then they yelled trick-or-treat and then I open the door I saw my friend Alex. I said hello and gave him candy and then he went to my neighbor's door. And then they went to the basement to play with my toys then I saw and know from Alex. Then I read it and said thank you for the candy Brandon. And then somebody said boo then I it with my friend Alex in a ghost costume you scared me. And then we played with my Lego man. Then Alex had to go home with his mom and dad still I said goodbye to him again and gave him some more candy. And then Alex for one of his late goal man and a
Advantages of speech recognition

- Increases Productivity: It’s 3x faster than typing – helps special education students keep up with their non-disabled peers
- Next Generation of Inputting Skill: It’s up to 99% accurate – recognizes the student’s voice with minimal training and never makes a spelling mistake
- Improves Communication Skills: It’s a proven educational tool – research has shown the remedial value of speech recognition for improving core reading and writing skills
- Prepares Students for Increased Employment Demands: It’s the interface of the future – learning to use products like Dragon will better prepare students to take full advantage of emerging technology — at school, at home, and in the workplace
- Licensing that works – Pricing that works for education including an Academic Lab Pack (5 users) and K-12 Site License (20 users)
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Required Reading from *Education Week*:

**On Special Education**
Reporter Christina A. Samuels tracks news and trends of interest to the special education community, including administrators, teachers, and parents.

**Spotlight on Creating Readers**
This Spotlight explores innovative programs aimed at helping students who struggle with reading.