

Digital Literacy for ALL: Ensuring Access through UDL and AT

Donald Gregory, BBRI,
Dr. Elizabeth Dalton, TechACCESS of RI,
Gloria Stuart, TechACCESS of RI

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Broadband RI Digital Literacy Program



Why is Digital Literacy so important?

- Currently, it is estimated that approximately 1 in 3 Rhode Island adults do not go online
- This means that 1/3 of our population does not have access to job opportunities
- These Rhode Islanders are locked out of the abundance of services now migrating online (TDI, GED, etc.) and cannot enjoy resources that improve quality of life (health/medical information, etc.)



What is the BBRI Digital Literacy Program?

- Part of the *American Recovery and Reinvestment Act of 2009*
- Developed by *Broadband Rhode Island (BBRI)*, an initiative of the *Rhode Island Economic Development Corporation (RIEDC)*
- Works to create new opportunities by expanding broadband use and digital literacy across Rhode Island



Defeating the Demographics!

BBRI Fall 2011 Digital Literacy Pilot



What do broadband non-adopters want to learn?

Job search

School info

Health information

News information

Craigslist

Community events
& happenings

Social Media
(Facebook, Twitter)



The BBRI Digital Literacy “Core” Curriculum

Basic Internet Skill

- Navigation
- Search
- Communication
- Explore



Curricular Component

- Browser and Website Basics
- Google and Library Resources
- Email
- Capstone Class



The Online Home of Rhode Island's Digital Literacy Community

The Training Network



- Instructors and Class Materials



- Class Locations



- Community Partners

The Digital Literacy "Portal"

- Instructor Resources and "Open Source" Curriculum

- Class and Event Schedules

- Community Contacts

<http://literacy.broadband.ri.gov/>



Learner Variation & Universal Design for Learning

Supporting students' learning in effective ways



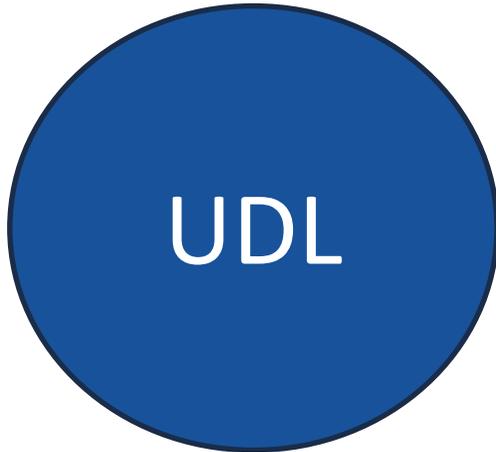
People learn in different ways.

- Some are good readers
- Some are poor readers
- Some learn by listening
- Some learn by doing
- Some speak English
- Some speak other languages
- Some may not hear well
- Some may not see well

*Everyone has ways in which **they learn best!!***



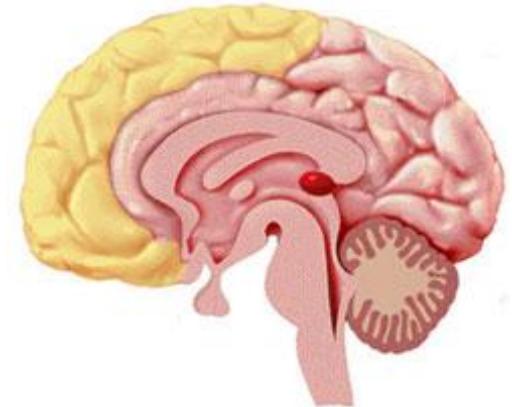
Universal Design for Learning: from CAST, Inc.



SUPPORTS VARIATION

by applying
MULTIPLE MEANS
in
DESIGN and **DELIVERY** of
INSTRUCTION

- **Multiple Means of Representation**
- **Multiple Means of Action & Expression**
- **Multiple Means of Engagement**



<http://udlwheel.mdonlinegrants.org/>
<http://www.udlcenter.org>

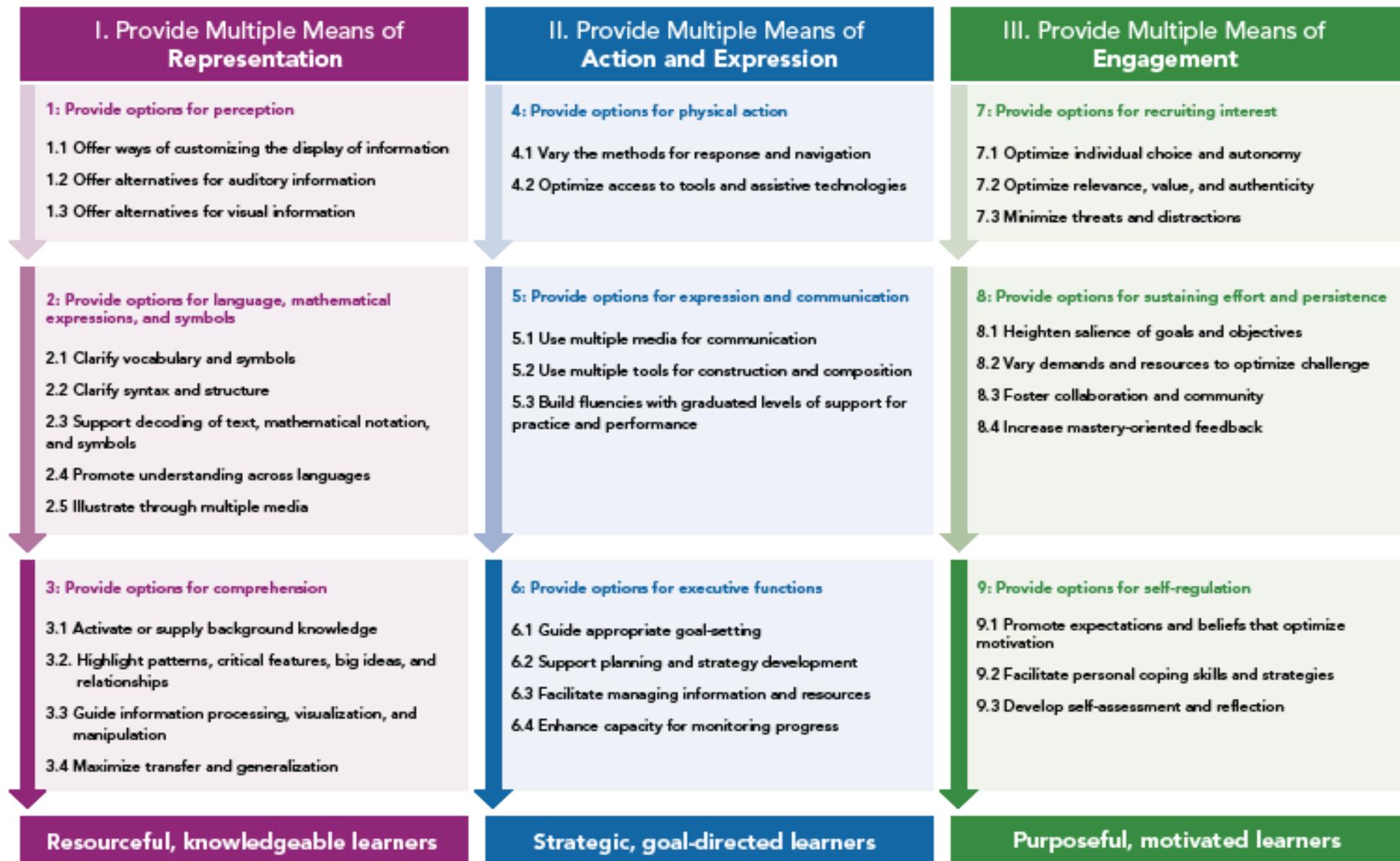


UDL & BBRI - UDL Relevance for adult learners

- UDL Step 1: Convert **curriculum** from “text-heavy” to be more engaging, visually-accessible, easy-to-use.
- UDL Step 2: Integrate **content on UDL** into the Instructor Workshop.
- UDL Step 3: Training **scenarios** representing a range of varied DL learners.
- UDL Step 4: Exemplary **UDL models** that support scenario activities.
- UDL Step 5: Vary **instructional methods** to model diversified instruction & exemplify UDL in practice.
- UDL Step 6: UDL **resources** via Digital Literacy Portal



Universal Design for Learning Guidelines



Simple ideas for UDL

- To vary means of REPRESENTATION
 - Use **color** to highlight key terms or ideas
 - Use **pictures** to reduce language barriers
- To vary means of ACTION & EXPRESSION
 - Encourage **verbal restatement** by students
 - Encourage **demonstration** to peers and to you
- To vary means of ENGAGEMENT
 - Help students **relate** content to their own lives
 - Have students **share & support** each other by working in pairs



TECHNOLOGY SUPPORTS ACCESS. TECHNOLOGY TRANSFORMS.

- Allows **manipulation** and **control** of format
- Offers **alternatives for access**
- Supports **multi-sensory** instruction
- Supports greater personal **independence**
- Use general technology & assistive technology together – a **continuum of access**



**Figure 3: Sum average results of BBRI DL Instructor Workshop
pre and post assessments N=50**

Curriculum Content Goal	Pre Assessment	Post Assessment	Degree of Change
Adult learning	3.5	4.0	+0.5
Learner variation & UDL	2.5	3.7	+1.3
Broadband access	3.6	4.2	+0.5
Team facilitation	3.2	4.2	+1.0
Online resources	3.4	4.2	+0.8
Online searching	3.7	4.2	+0.5
Search engines	3.7	4.3	+0.6
Email functions	3.7	4.2	+0.5
Student project	3.3	4.2	+0.9
Physical access	2.5	3.6	+1.1
Learning access	2.5	3.6	+1.1
Communication access	2.3	3.4	+1.1
Scheduling DL sessions	2.6	3.8	+1.3
Finding tools & resources	2.8	3.9	+1.1
TOTAL SUM AVERAGE	3.1	4.0	+0.9

Maximum Possible Change
+4.0

Range of Change
+0.5 to +1.3

Average Change
+0.9

Adult Learning
+0.5

UDL
+1.3

Technology Access
+1.1



Microsoft Accessibility

Microsoft
Accessibility
Technology for Everyone



Introduction

Most working-age adult computer users in the U.S. could benefit from using options on their computers that make it easier to see, hear, and use.

Referred to as accessibility options, they are not just for persons with disabilities.

These options are beneficial to individuals who have:

- Dexterity pain in the hands, arms, and wrists
- Eye strain and reduced vision
- Hearing loss
- Work in noisy and poorly light environments (where it is hard to see and hear our computers, such as airports, near bright windows, etc.)



Accessibility in Windows 7



 Windows 7

- Personalization
 - High Contrast
 - Colors > Advanced appearance settings
 - Sounds
 - Mouse pointers
 - Display

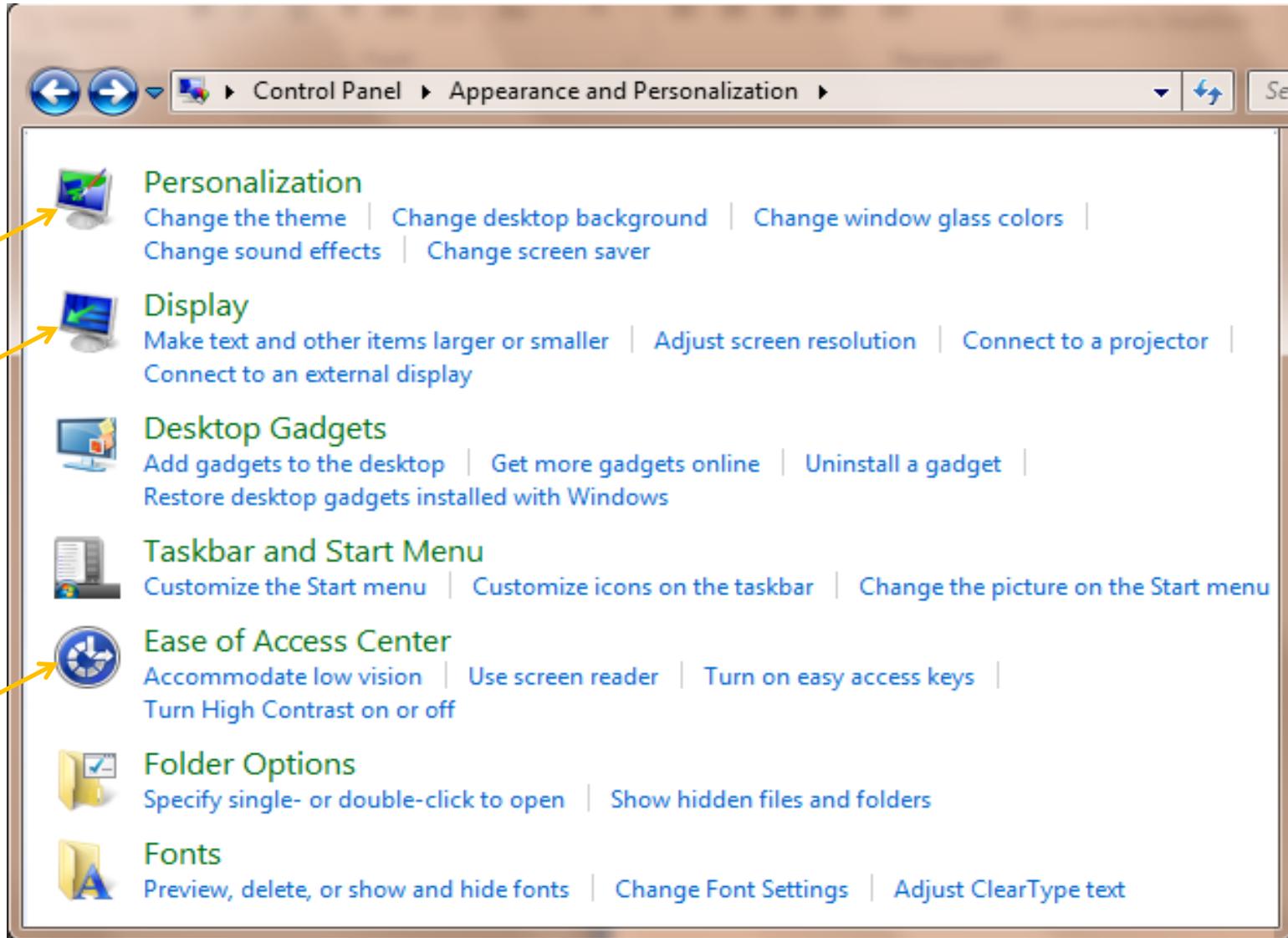
- Ease of Access Center
 - Get recommendations
 - Explore settings
 - Magnifier
 - Zoom in Internet Explorer
 - On-Screen Keyboard
 - Narrator
 - Speech Recognition



Control Panel



Appearance and Personalization



Personalization

The screenshot shows the Windows 7 Personalization Control Panel window. The breadcrumb path is "Control Panel > Appearance and Personalization > Personalization". The window title is "Change the visuals and sounds on your computer". Below the title, it says "Click a theme to change the desktop background, window color, sounds, and screen saver all at once." There are two main sections: "Basic and High Contrast Themes (6)" and "Desktop Background, Window Color, Sounds, and Screen Saver".

Basic and High Contrast Themes (6):

- Microsoft IT Theme
- Windows 7 Basic
- Windows Classic
- High Contrast #1
- High Contrast #2
- High Contrast Black
- High Contrast White

Desktop Background, Window Color, Sounds, and Screen Saver:

- Desktop Background: Slide Show
- Window Color: Custom
- Sounds: Sonata
- Screen Saver: Blank

Left Navigation Panel:

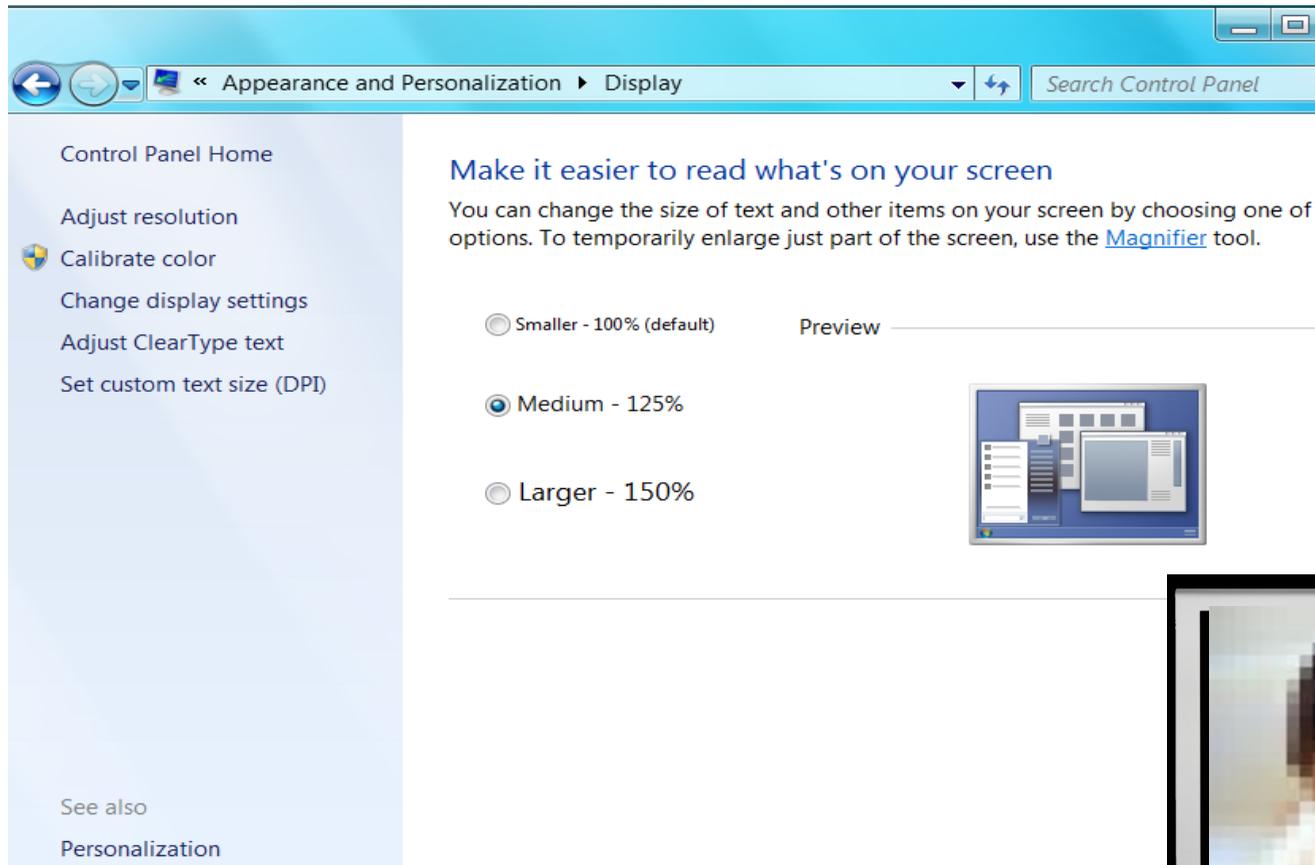
- Control Panel Home
- Change desktop icons
- Change mouse pointers
- Change your account picture
- See also:
 - Display
 - Taskbar and Start Menu
 - Ease of Access Center

Yellow Arrows:

- Points to "Change mouse pointers" in the left navigation panel.
- Points to "High Contrast #2" theme.
- Points to "Display" in the "See also" section.
- Points to "Ease of Access Center" in the "See also" section.
- Points to "Custom" under "Window Color".
- Points to "Sonata" under "Sounds".



Make text larger



The screenshot shows the Windows 7 Control Panel window titled "Appearance and Personalization > Display". The left sidebar contains links: "Control Panel Home", "Adjust resolution", "Calibrate color", "Change display settings", "Adjust ClearType text", and "Set custom text size (DPI)". The main content area is titled "Make it easier to read what's on your screen" and includes the text: "You can change the size of text and other items on your screen by choosing one of the options. To temporarily enlarge just part of the screen, use the [Magnifier](#) tool." Below this are three radio button options: "Smaller - 100% (default)", "Medium - 125%", and "Larger - 150%". A "Preview" window shows a desktop with a larger font size. At the bottom left, there is a "See also" section with a link to "Personalization".

Lower resolution
results in pixilation

- Change the DPI (dots per inch) setting to increase the size of text and UI without losing picture quality
- Now you can make things larger and easier to see without losing picture quality



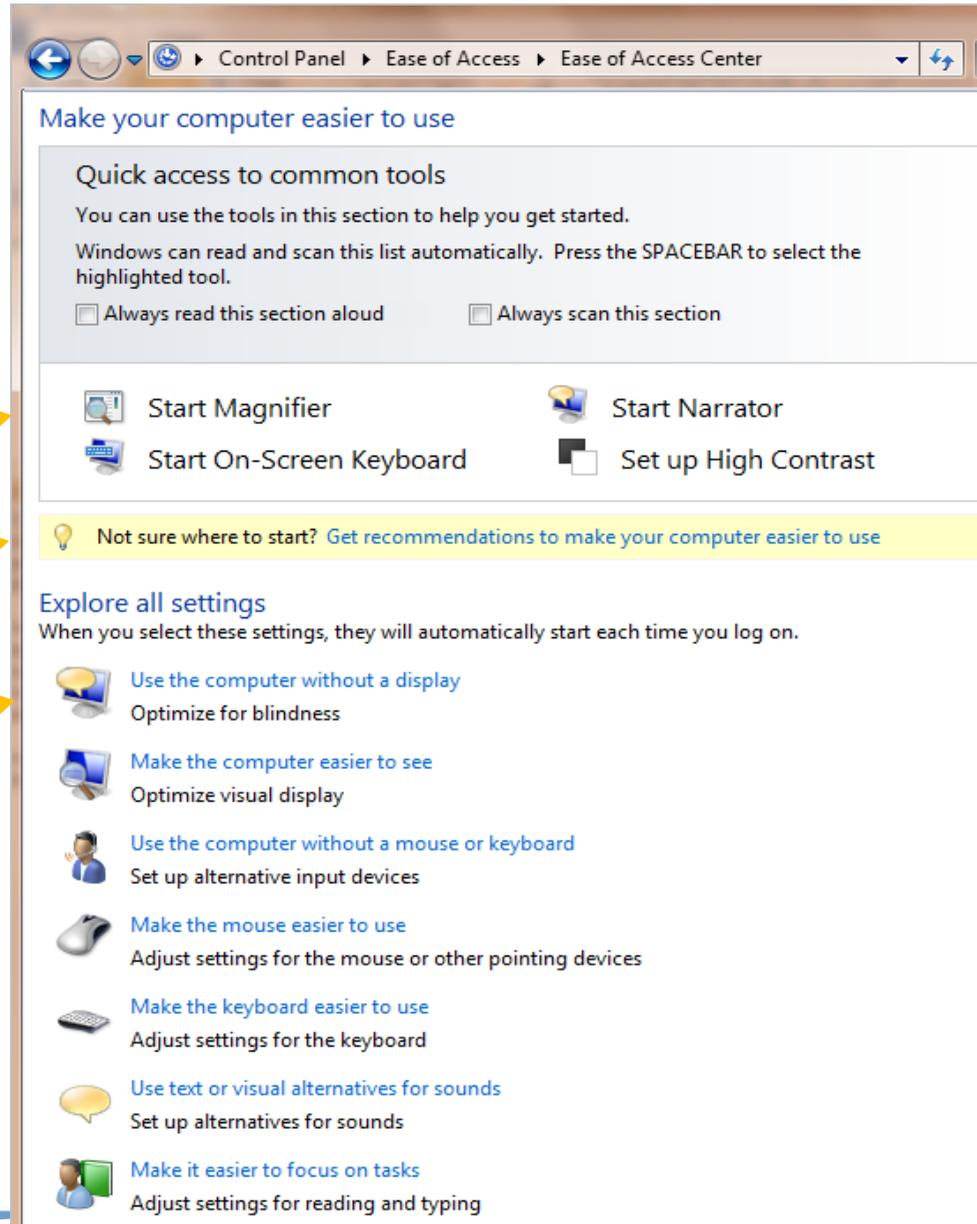
Ease of Access Center

- Centralized location to find accessibility
- In the Control Panel
- Winkey+U

• Quick start

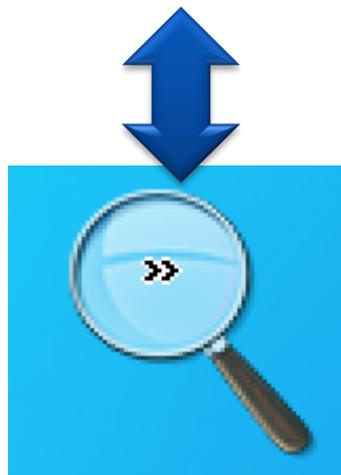
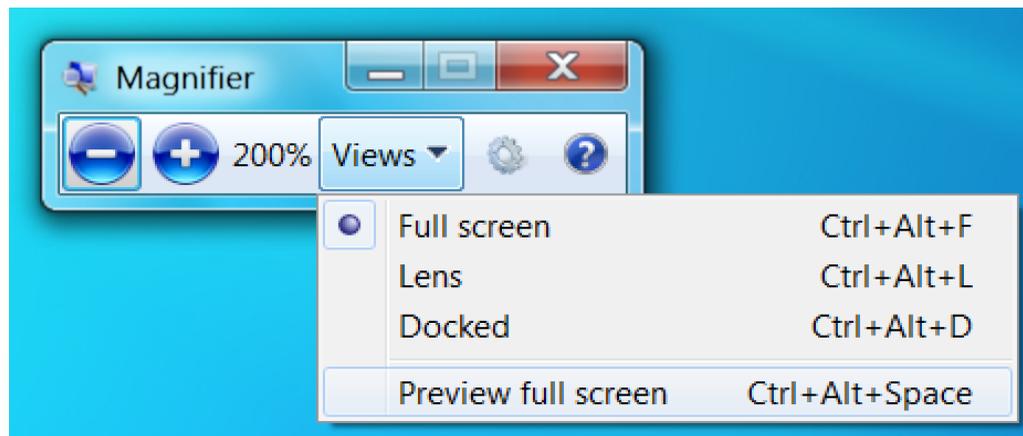
• Questionnaire to “Get Recommendation”

• Explore settings by categories

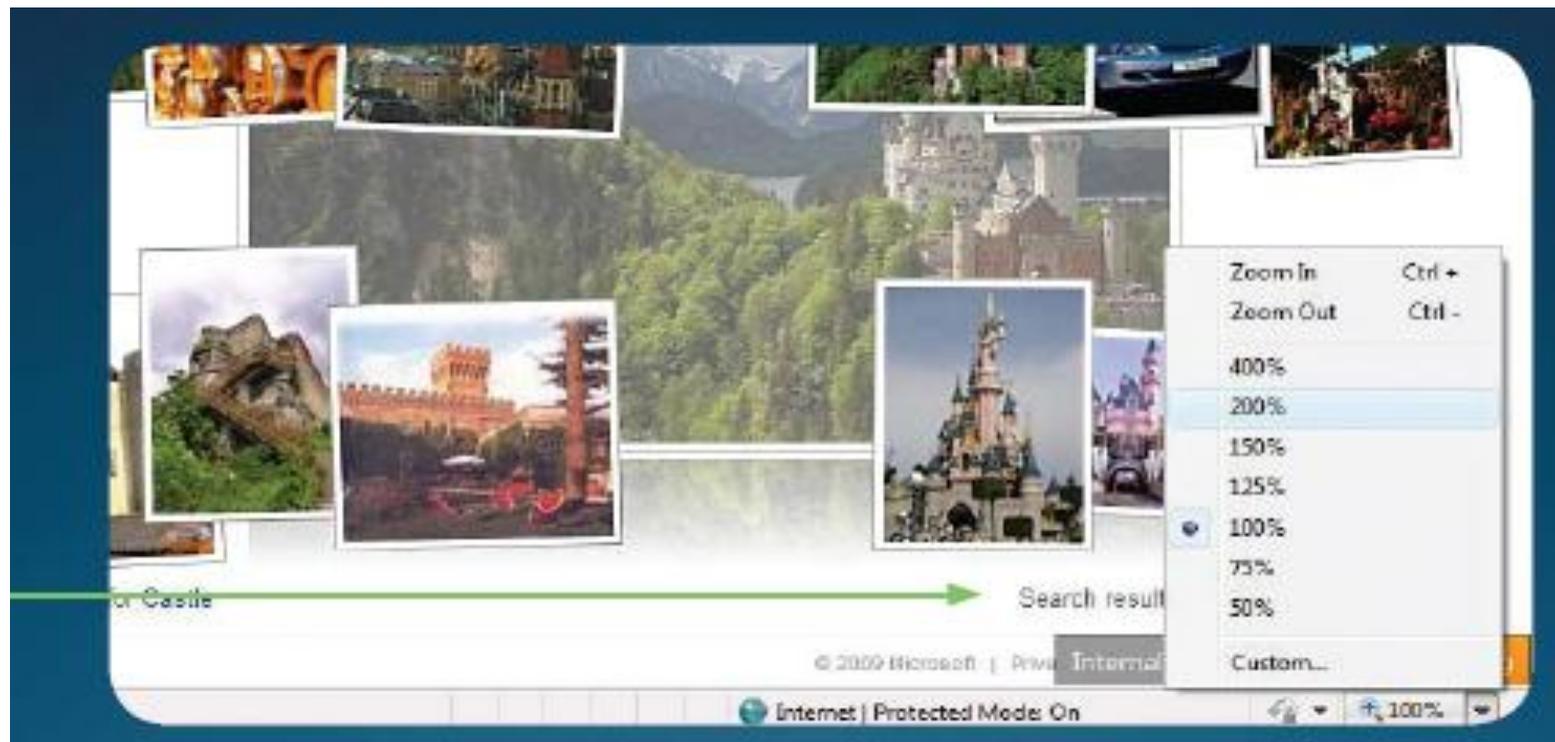


Magnifier

- Magnify up to 16 times
- Full screen, lens, or docked mode
- Zoom in/out
Winkey +
Winkey -
- Exit Magnifier
Winkey + ESC

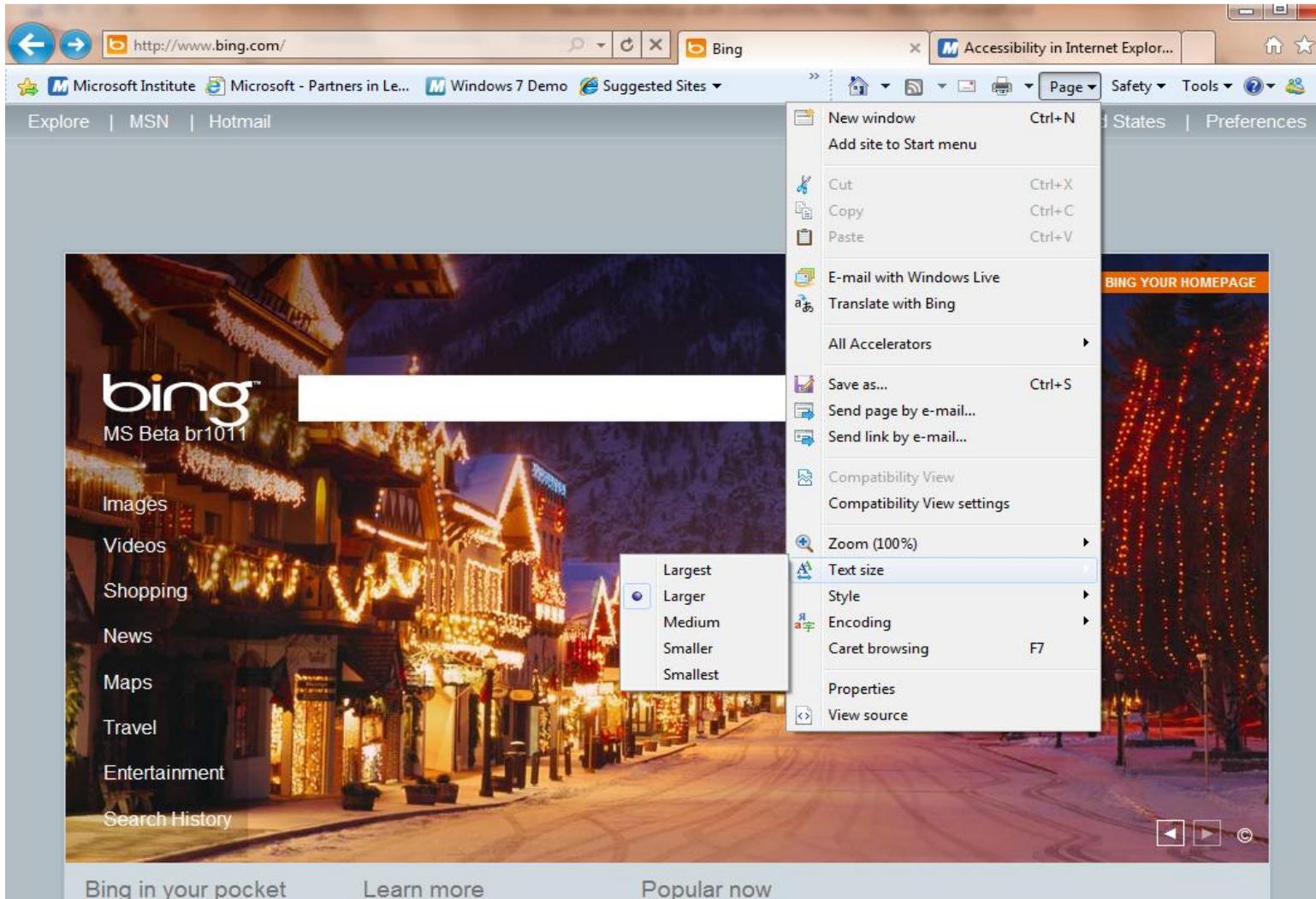


Zoom in Internet Explorer



- Instantly zoom in and out
- Ctrl + Ctrl -

Larger text on Web pages



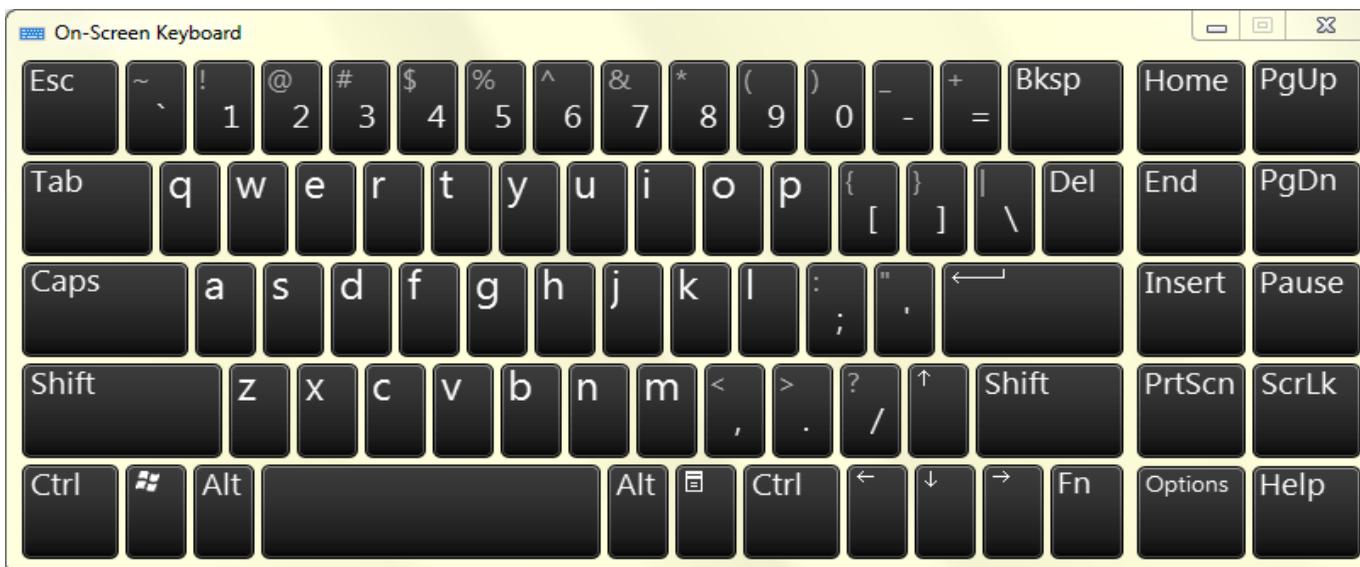
On-Screen Keyboard

- Speeds up word entry
- Click mode, Hover mode, Scan mode
- Available in six languages
- Text prediction
- Can be customized – change colors and resize entire keyboard to make it easier to see and use



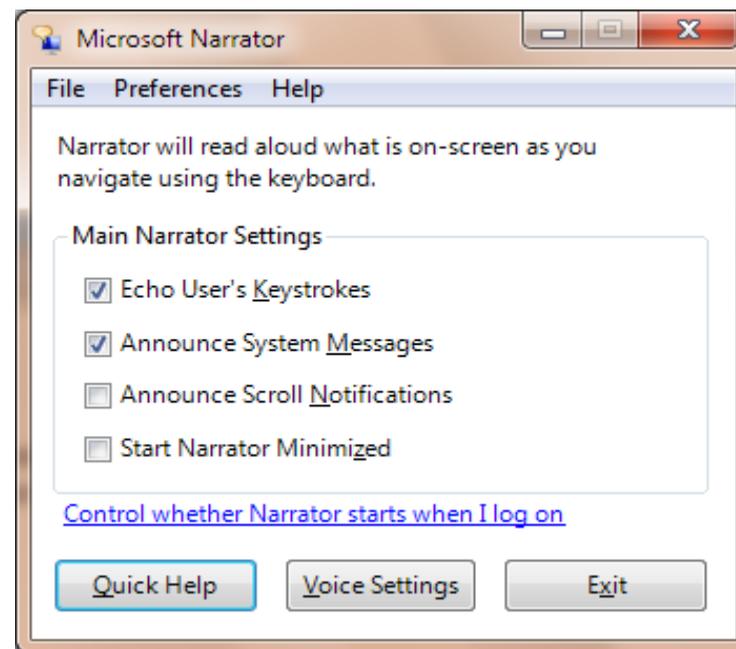
On-Screen Keyboard: Customize

- Change the color of the glass - High Contrast themes, keys glow when clicked
- Resize - keys become larger or smaller, size of the text on the keys changes



Narrator

- Narrator, which reads text on the screen aloud and describes some events (such as an error messages appearing) that happen while you're using the computer.
- Choose which text Narrator reads aloud
- Change the Narrator voice
- Start Narrator minimized



Speech Recognition



Microsoft **Accessibility** Technology for Everyone

Microsoft Accessibility Web Site

www.microsoft.com/enable/

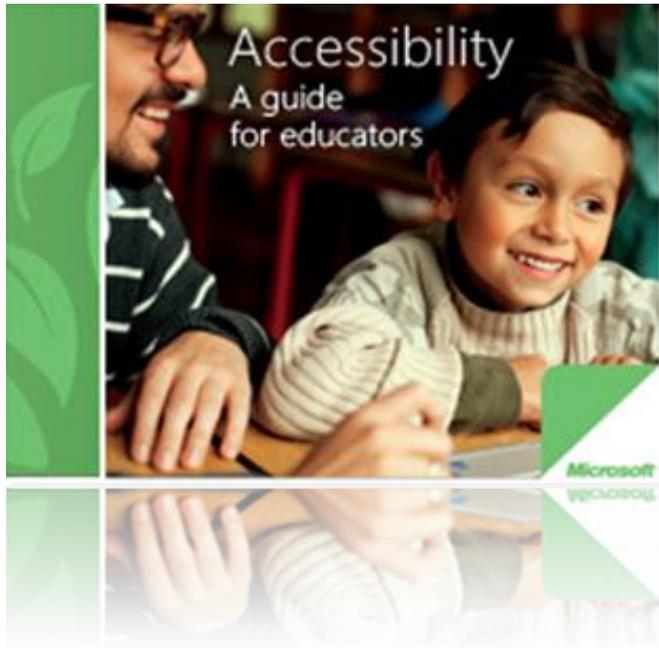
- Microsoft Accessibility Update newsletter

www.microsoft.com/enable/subscribe/



Accessibility in Education Resources

www.microsoft.com/enable/education/



- Accessibility: A guide for educators
- How to articles
 - [Five ways to make a PC easier to see](#)
 - [Four ways to make a PC easier to hear](#)
 - [Four ways to help a student control the mouse](#)
 - [Six ways to help students stay focused](#)
 - [Five ways to help dyslexic students get organized](#)
- Workshops (in development)
- Accessibility features, tutorials, demos

Accessibility in Business Resources

www.microsoft.com/enable/business/

Resources for organizations interested in integrating accessible technology into the workplace

- **The Business Value of Integrating Accessible Technology into Organizations**
Discover how accessible technology helps enhance diversity and team communication among all employees—including those with disabilities.
- **Understanding Accessible Technology**
Overview about what accessible technology is and the current need and demand.
- **Developing an Accessible Technology Plan**
Get an overview of an effective 5-step plan for integrating accessible technology into corporate technology plans and Identifying the Right Assistive Technology.



Questions??

Thank you for coming.

