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TED503 Summer II

Module F/Activity 1

Universal Accessibility in Macs

* How easy or difficult was it to find and implement the accessibility features?

**Finding the accessibility features was very simple on my Macbookpro OSX. There were two areas from which settings could be changed to enable computer assistance. The first area I began to search was the speech preferences, located directly from the system preferences folder. From here I was able to choose the speech recognition items for both Speech Recognition and Text to Speech.**

**Also found in the preference folder was the subfolder for Universal Access folder. In this folder I found all the other tools, including “Voice Over”, which includes gesture support on the trackpad, braille display mirroring, and spoken hints. As the cursor moves, voice over lets the user know where the cursor is located, for instance the document name. The mac included built-in support for over 40 braille displays that Voice Over automatically recognizes. More information about VoiceOver can be found at** [**Apple’s Accessiblility page.**](http://www.apple.com/accessibility/voiceover/)

**I kept a journal as I tested each of the tools listed for Mac’s Universal Accessibility (see below). All of the tools worked easily except for the voice commands. I was not always able to get it to work for me. I would have to repeat commands several times before the system recognized what I was saying. This became very frustrating. My two favorite tools were the magnifier and the clock voice.**

* Have you ever used these features?

**I have never used these features prior to this activity, though I did know they were available. Now that I know more about each feature, I have kept a few of the items turned on because I found them helpful to me.**

* Could you understand the computer voice?

**The computer voice was perfect! There were several voices to choose from. Two of the voices sounded more human than the others. “Vicki” now tells me what time it is on the hour. I think I will keep that turned on! “Alex” replays my speech commands and the text to speech. “Alex” sounded the most human. “Fred” sounded just like Stephen Hawking, much more like a synthesizer. I preferred the more human voices.**

* Were you able to read with the magnifier?

**The magnifier was one of my personal favorites from the tools I tested. The tool itself was a rectangular magnifier that worked just like a magnifying glass. It had a scaled preference for magnification. I found the lowest setting to be most easy to use. I definitely see how this tool can be beneficial as a visual aid. Though I am not sure why one couldn’t just expand a document to higher zoom levels. It is important to note here is that the magnifier on the Mac works with Voice Over.**

* When would it be helpful for a person to be able to use some of the keyboard modifications?

**Keyboard modifications are especially useful when an individual has physical disabilities or poor fine motor skills. The features include the ability to change the layout of the keyboard, eliminate the need to press two keys at once for command sequences, and eliminates repetition of characters when the fingers rest to long on a key. I found the command sequence modification feature to be especially valuable, as many times key commands for shortcuts are hard to manipulate when the keys are scattered across the keyboard. Anytime a student shows difficulty in typing due to fine motor skill development or physical disabilities, the keyboard might be the first to implement some modifications to assist.**

Which of these accessibility features will be most helpful to you in the classroom?

**For some of my purposes, I might try to use the text to speech. In religious education programs, sometimes it is easier to hear biblical text, rather than just reading it. For some students, this might be an interesting way to “read” the Bible.**

**My Testing Journal of Universal Access Options**

The following Apple tools can be found in the System Preferences folder:

* Speech Recognition: Users can speak commands such as “Quit Microsoft Word” instead of using a mouse or keyboard commands.

**In the Speech recognition, I found several option settings. The options were very easy to change. First, “Speakable Items” provided a choice to be either on or off. I switched it to on and continued. I looked in the “Speakable Commands” folder, but found it to be very limiting. Here are the commands available:**

**Cancel last command;Close Speech Commands window;Close this window;Copy this to the clipboard;Define a keyboard command;Get my mail;Hide this application;Insert today's date;Listen continuously;Log me out;Make new item;Make this into a sticky note;Make this speakable;Minimize Speech Commands window;Minimize Speech Feedback window;Minimize this window;Move page down;Move page to bottom;Move page to top;Move page up;Open a document;Open my browser;Open Speech Commands window;Open Speech Feedback window;Open the Speakable Items folder;Open the Speech Preferences;Open VoiceOver;Paste the clipboard here;Quit Speakable Items;Quit this application;Save this document;Show me what to say;Start screen saver;Tell me a joke;Turn on push to talk;What day is it?;What time is it?**

**I was then prompted to calibrate the microphone. This took much time to figure out. It did not seem to accept my command speech. I tested a few of the commands such as Get my mail. I was delighted when it recognized my command and opened my mail. Most of the commands responded well for me, some took several repeats and others, I just couldn’t get to work for me.**

**The only other folder of software with speech commands was my “Finder”Folder, which included helpful tasks such as Add this to my favorites; Connect to server; Empty trash; Make new folder; Show toolbar. The Microsoft for Mac folder did not have any commands listed in the folder.**

* Text-to-Speech: This tool reads aloud alerts, as well as documents in some applications. A Spanish version is available.

**In order for the text to speech to work I needed to press Option+Esc. It read this page perfectly! Option + Esc might be difficult for small hands to use, so I easily changed key to command +Z. I chose keys that were comfortably close to each other. I did find later in the Universal Access the option to turn on “Sticky Keys” which treats a sequence of modifier keys as a sequence, not having to press keys all at once. This is helpful when modifier keys for commands are scattered around the keyboard. The key choice is very simple to do and very customizable. However, text to be read must be selected with highlighting.**

* CloseView: Magnify text and graphics with this tool.

**I never knew about the magnifier and was very surprised about how this tool worked. Turning on the magnifier was very easy. I found it under the Universal Access folder. Options for Seeing, Hearing, Keyboard and Mouse/Trackpad were given. Opening the seeing tab, I turned on the zoom which provided me with a magnifying window which worked like a manual magnifying glass.. I moved it around my desktop and found it to be very helpful to magnify specific areas. What I found very interesting was the option to speak items under mouse, so that as I moved the magnifier, it would tell me in voice where I was.**

* Mouse Keys: With this tool, users with fine motor disabilities can operate the mouse using keys on the numeric keypad.

**This option was not as easy for me to test from a laptop because I don’t have a mouse. I did see the options and to access this feature is simply a matter of turning it on. I tested the trackpad options instead. The options for click speed and scrolling speed can be customized for individual preference. I found the option to change the cursor size also, which is very helpful! Sometimes even I have trouble finding where my cursor went. I am keeping the changes I made to the cursor to be larger for my own preference. This is an interesting concept to keep in mind as we discussed earlier the value of assistive technology being available to all.**

* Sticky Keys: With this tool, for users with limited hand or finger movement, keys such as SHIFT or ALT can be pressed once rather than held down for commands or typing.

**Again, this was found in the Universal Access folder. This worked easily. At times, even for me, it is difficult to easily press command keys all at once. The ability to press the sequence of keys individually is so convenient.**

* Slow Keys: Students whose disabilities may cause them to type extra keystrokes will benefit from this tool, which eliminates extra characters or symbols. This was also found in the Universal Access under keyboard.

**I tested the ease of this tool as I typed this paragraph. As I pressed a key and held it down, it did not type it repeatedly. I turned on the option for hearing the clicking sounds, and it made my keyboard sound like a typewriter.**

* Visual Alerts: Users with hearing disabilities can use this tool to display alerts on the computer screen rather than through beeps or other sounds. (Go to Sound in the Control Panel to access this feature.)

**I found this option also in the Universal Access folder in preferences. The tab for hearing had two options, “Flash the screen when an alert sound occurs” and “Play stereo audio as mono. I am not sure which alerts it flashes for. As I was testing the system, I received my e-mail alert sound, but the screen did not flash. I am not exactly sure what alerts will flash. I was unable to find information about the screen flash in the help section.**