# **From Passive to Active: Teaching NVDA to Create Digital Access**

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# Introduction

## Disability Specialist

### Caseload management

### Faculty/student guidance for disability-related matters

## Assistive Technology Specialist

### Alternative Format Textbooks

### Assistive Technology Trainings

### Supervisor of assistive technology on campus

## Not an NV Access Certified User

# Non-Visual Desktop Access (NVDA)

## Non-Visual Desktop Access- NV Access

### A free, open source, globally accessible screen reader for the blind and vision impaired user

### Can be installed or used as a plug and play .exe

### Tech support, training manuals and certification available for purchase

# Goals

## Ability to recognize barriers to using computers for Blind/Low Vision populations

## Develop an understanding of how to use the NVDA screen reader program

## Ability to communicate NVDA to end-users

## Ability to train people with blindness/low vision how to gain electronic access

# Pre-Considerations

## Week 0

# Why?

## Information Access

## The internet is the best (and worst!) way to access most forms of information.

## Although not entirely digitized (or accessible) information that has historically existed can be found on the web.

## Independence in an electronic world

## The world relies on electronic access to complete work, manage life obligations, or leisure activities.

### Especially during pandemics and national emergencies

## Independence is key to equal access

# One-Size Does Not Fit All

## Guidelines not Law

## Variability among computer/technology familiarity

## Language barriers

## Comorbid disability barriers

## Inclusion of personal aids

# Patience!

## There will be setbacks. Users will run into frustrating circumstances and this may create additional barriers.

## Preface this weekly and be sure to constantly provide positive reinforcement of progress.

## It’s okay to be unaware of a keystroke or to need to look them up. The NVDA 2020.3 User Guide and Windows Shortcuts are available online for review.

# Additional Technology Considerations

## Keyboard accommodations

### Raised Overlays/Braille Refreshers

### Keyboard familiarity training

### Computer jargon (ex. Window, browser, etc.)

### Creative problem solving

## Access to internet and availability

## Windows requirements

# And…

## Sadly, the internet is not always WCAG 2.0 compliant.

# Step 1: Installation and Setup

## Week 1

# Critical Point 1

## NVDA is not a native application.

## Users may need to either have the program downloaded for them or will need to use the ease of access Speech Recognition accessibility feature.

## Cortana can be activated from the desktop toolbar for speech assistance

## Additional support may be required before installation can occur.

# Key Lesson 1: Orienting to the Basics

## Following this step in the learning process, users will be able to do the following:

## Start and close the NVDA application

## Navigate with the tab and arrow keys

## Activate buttons and menu options

## Establishing settings for use

# 1.0 Important Keys

## There are multiple ways to engage with NVDA

### Keyboard keystrokes

### Touch Gestures

### Braille Displays

## Training will focus on the keyboard controls as they are the primary access point

### Ctrl+Alt+N: Start NVDA

### Tab: Move the focus of interaction

### Arrows: Move through menus/dropboxes/webpages

### Enter: Interact with the page/object selected

### Space: interact with the object selected

### NVDA+N: NVDA Settings window

### NVDA+q: restart or exit NVDA

### Ctrl/Enter: Stops NVDA speech

# 1.1 Getting NVDA to the User

## NVDA can be downloaded for free from the [NV Access website](https://nvaccess.org/)

## NVDA can be used without installing the program on the computer

### Helpful for USB drive portability

### Does not have automatic updates

### Does not save settings each time

### Restrictions on Windows store, touch screens, and user account control panes

## If installation is preferred, launch the application to begin

### Helpful if primary method of internet/computer usage

### Saves settings for user

### Allows activation at start up

### Can create shortcut on desktop and activation with Ctrl+Alt+N

# 1.2 Establishing Settings

## For first time use, the welcome screen will pop-up with setup options. NVDA will begin reading the window.

## Keyboard access- Laptop or Desktop

## NVDA activator key - Enter/Insert key or the Caps Lock key

## Start on Login

## Determine if this window needs to open each time

## The settings will be key to the rest of the training process.

## If settings are not adjusted appropriately users may face additional challenges.

# User Configuration

## NVDA Menu

## From the NVDA menu, set up specific user settings, access additional tools, and adjust configuration profiles.

## This is a great opportunity to get familiar with some of the navigation commands.

## Commands

## Open the NVDA menu with NVDA+n.

## Use the arrow keys to navigate to preferences and then the sub-menus.

## Enter will activate the current focus.

# Settings -General

## This is where the user can setup the functional options for how the screen reader interacts on an application level with the computer.

# Settings- Speech (NVDA+Ctrl+V)

## How NVDA sounds during user interaction matters! This menu allows for the adjustment of the voices and changes in sound related to changes in text.

# Settings- Object Presentation (NVDA+Ctrl+O)

## The controls for how NVDA will read the information on the page.

### Tooltips

### Notification pop-up

### Number of similar objects

### Dynamic webpage changes

### Shortcut keys when available

### Auto-suggestions notifications

# 1.3 Other Settings Modifications

## Depending on the user’s preferences other settings can be modified depending on disability-impacts such as braille inputs, document formatting, and keyboard functions.

# Where might some challenges arise?

# Homework 1

## Start and quit NVDA using the NVDA keys.

## Change the voice settings to Windows OneCore Voices.

## Create a new user profile.

## Reinforce the learning objectives of:

## Start and close the NVDA application

## Navigate with the tab and arrow keys

## Activate buttons and menu options

## Establishing settings for use

# Step 2: Navigating the Desktop

## Week 2-4

# Critical Points

## This is the prep stage for general use of NVDA

### Selecting Applications

### Switching applications

### Navigating menu

### Switching between groups of objects

## Desktop will include the File Explorer application. These are key elements to navigation and understanding of the basic functions.

## Individuals familiar with the computer may spend less time at this step.

# Key Lesson 2: Familiarity with Navigation

## Following this stage of training users will be able to:

## Understand where the current focus is on the screen

## Move between groups of objects

## Open an application

## Identify menu/tool bar options

# 2.0 New Keys and Terms

## New Keys

### Alt+tab: Switches between open applications

### Shift+Tab: Reverse navigation

### Alt+F4: Close open window

### Escape: Closes focus mode or returns to primary object

### Windows +D: Return to Desktop or window

### NVDA + F12: Current Time

### NVDA + shift+ b: Current Battery level

## New Terms

### Focus Mode: This is the interactive functions of the screen reader such as typing or traditional key operations

### Browse Mode: Standard mode that allows navigation from focusable object to focusable object or arrow navigations

### Groupings: Headings for grouped objects

### Textbox: An area to type in information

# 2.1 Desktop Navigation

## Upon start up NVDA, use NVDA+Tab to report current focus.

## Press Shift+ Tab to move to the desktop. If in a window, minimize to desktop (Windows Key +D).

## Depending on settings, NVDA will announce the icon if on Desktop and number of items

## These can be navigated using the arrow keys and activated with Space or Enter

### Navigation with arrows will not cycle and will end with after going through the list

## To have the screen completely read use NVDA+ B. Settings may affect how this sounds.

# The Tab Key

## Used to navigate to the next group of objects

## Tabbing on the desktop will switch between:

### Desktop items

### Windows menu

### Cortana access

### Applications

### Computer Settings (sound, internet, etc.)

## Tip: Using the shift key with other movement keys will usually go backwards

# Identification of Focus Type

## When moving between objects

## Computer functions have multiple primary areas of focus.

## Tab key supports moving between focusable objects.

## Will cycle between objects continuously

## When within objects

## Functions can also be nested within objects

## Arrow keys move through items such as menus, lists, and text entry/reading

# Between Objects

## Start with the user navigating with the tab key

## Identify the cycling of objects with this action

## Activate various options for exploration of different actions

### Can take user into new groupings of actions

# Within Objects

# 2.2 Windows Shortcuts

## Familiarizing the user with the windows shortcuts will enable quicker access to programs and applications:

## Windows Key+ A: Open Notification Sidebar

## Windows Key+ E: Open File Explorer

## Windows Key+ X: Quick Link Menu

## Windows Key+Ctrl+M: Turns on the system Magnifier

## Windows Key+ D: Minimizes all windows

# 2.3 File Explorer

## After navigation of the desktop is established, the user will need to learn the mechanisms of the File Explorer application

### Tree View

### File Information

### Address Bar

### Menu Bar

### Windows Controls

## Navigate to the File Explore icon in the desktop dock.

### If not on the desktop, use the search box for file explorer

### Can also be opened using Windows+E

# File Explorer-Tree View

## Tree view shows a nested list of folders or options.

## Navigate using tab until NVDA reads “Quick Access Level 0 collapsed (expanded)”

### Tip: Levels will denote the nested items inside the level above it

## Use the up and down arrow keys to move within the list

## Use left and right arrows to collapse or expand the lists

## Enter will open the folder /object

## Tab will move into the folder’s contents

# File Information

## Once in the folder information can be found using the arrow keys

## To sort information by type, user will tab until NVDA reads “(label) split button”

## Arrow and space keys will help navigate or activate the sorting

# Address Bar

## The address bar can give context to where the user is or quickly move to previous levels

## Navigating using tab will bring the user to the “Back to (folder)” button , signaling the address bar controls.

## Tabbing will move through options

## Using the arrow keys after hearing “all locations split view” to go to the open folder’s address

## The search box is also located here

# Menu/Tool Bar

## To enter the Menu Bar area (File, Edit, View, etc) use the Alt+ the first letter of your destination or Alt+ arrow keys to cycle through.

## Tabbing will take you through the toolbar located under the menu item.

## Esc will bring you back to the original position on the window.

## Arrow keys will allow you to move through the tools under the menu object selected

# File Explorer-Window Controls

## File explorer can be used as a training for navigating active windows and shortcuts.

## Minimize the window to the desktop using Windows Key + D

## Switch between open/minimized windows with Alt+Tab

## Close any window using Alt+F4

### Depending on computer you may need to hold the Fn key as well

## Create a new folder inside of the window by using Ctrl+Shift+n or use the menu bar object

### Tip: Ctrl+n typically creates a new window, file, or folder

# Homework 2

## Practice connecting to the WiFi

## Practice opening and closing the File Explorer application through the 3 different ways.

## Create a new folder in the Documents group

## Reinforce the learning objects of:

## Understand where the current focus is on the screen

## Move between groups of objects

## Open an application

## Identify menu/tool bar options

# What might be difficult to master?

# Step 3: Accessing the Internet

## Week 5- 9

# Critical Points 3

## The internet is not always WCAG 2.0 compliant.

## Most frustrations will occur during this period.

## The elements list is key if webpages are accessibly designed.

## NVDA may be slower or crash depending on the amount of info it is being required to read.

## The internet is a vast and complicated web of information. Information can be found on surface level or hidden into the web’s integration. There are apps and media which can have various methods of control. The laws around this include Section 508 guidelines for Web Content Accessibility Guidelines 2.0 (2018).

# 3.0 New Keys and Terms

## Keys

## Browse text/objects: Arrows

## Read from current caret: NVDA+ Down

## Switch between modes: NVDA+Space

## Identify title of focus page/app: NVDA+t

## Read page controls: NVDA+b

## Read current caret line: NVDA+shift+.

## Read next/previous line: Down/Up

## Move to address bar: Alt+D

## Switch between open tabs: Ctrl+tab

## Terms

## Browser: The medium to access the internet.

## System Focus: Current focused actionable spot

## System Caret: Current NVDA spot on the page content

# Key Lesson 3: Knowing the Page

## Following this lesson the user will be able to do the following:

## Identify the focus and NVDA mode on the page.

## Identify how to interact and read the content/objects on the page.

## Navigate to specific content using the Elements List.

## Understand the various internet objects.

# 3.1 The Browser

## Depending on the user comfort and preference they can navigate many of the mainstream browsers using NVDA. There are many browsers that are compatible with NVDA including Google Chrome, Mozilla Firefox, and Microsoft Edge.

## Native shortcuts are minimally different between browsers with Firefox being the most robust.

## User/Instructor preference can be used for training model.

# Browser Controls- Google Chrome

## Native Shortcuts

## Ctrl+T: Creates a new tab

## Ctrl+Tab: Moves to next tab

## Alt+ Left/Right Arrows: Move to previous or next page

## F5: Refreshes the page

## Alt+Enter: Open in new tab

## Ctrl+[1-8]: Tab selection by placement

## Ctrl+W: Close tab

# 3.2 Navigating a Page

## Web pages are coded to form an appropriate structure for object navigation:

## Object structure

### NVDA+ Shift + O reports current object of focus

### Tab will move to the next object

### Enter activates the object

## NVDA Key Structure

### NVDA commands for browse mode

### Elements List

# Navigation Modes (NVDA+Space)

## Browse Mode (beep)

## Movement and focus controlled by screen reader controls

## Up/Down Arrows navigate objects

## Right/Left Arrows reads letters

## Uses the NVDA system caret to move through the page.

## For reading the page

## NVDA+Down: Read page from current caret

## Focus Mode (typewriter)

## Keyboard directly interacts with the object

## Tab main way to navigate

## Arrows move the page visually unless in form field

## For interacting with the page

# Elements List (NVDA+F7)

### Pop up menu that lays out the structure of the webpage by object type in lists

### Creates a skeleton of objects on the page

### Can be used to activate or move to a specific focus

### The most important navigation tool!

# Headers

## Purpose:

## Structure system for the grouping of information on a page

## Provides context for subsequent information and creates sections of webpage.

## When compliant, follows a logical progression through the webpage sections

## Browse Mode Shortcuts:

## H key for next header regardless of level

## 1-6 key for next header at the respective level

# Links

## Purpose

## Connections to other pages or other information within the page.

## Activation can cause page changes or open new tabs/content.

## Browse Mode Shortcuts

## K moves to next link

## U moves to next unvisited link

## V moves to the next visited link

## Tab key can move to next link relative to focus

# Form Fields and Buttons

## Purpose

## Form fields are areas where information can be input such as textboxes, emails, etc

## Interacting with form fields requires Focus Mode and may auto change

## Buttons activate a change or submit a change on the page

## Shortcuts

## Space activates buttons or lists for navigation

## F moves to the next form field for text

## B for next button

## R for next radio button

## C for next combo box

## X for next checkbox

# Landmarks

## Purpose

## Items on the website that are identified by their functions such as main content, navigation panes, or banners.

## Assist with finding information that is consistent after page changes

## Typically denoted by ARIA coding and may not be designed correctly on older pages

## Shortcuts

## D locates the next landmark

# Tables

## Purpose

## To organize related information into a column by row cell structure

## Presents information that has an intersecting nature

## Shortcuts

## T moves to the next table

## Ctrl+Alt+ Left/Right moves to columns

## Ctrl+Alt+Up/Down moves through the rows

# Media

## Purpose

## Most pages will have some form of media embedded into the page.

## Provides more robust (in appropriate cases) and varied method of delivering information.

### Pop up dialogs

### Videos

### Audio

## Shortcut

## O will move to the next embedded media object

## Enter allows for engagement with the media

# Homework 3

## Find a web page with unlabeled buttons using the elements list.

## Run an internet search for a favorite animal and identify the heading 2 on that page.

## Find a song or video clip on YouTube to share at next meeting.

## Reinforce the learning objectives of:

## Identify the focus and NVDA mode on the page

## Identify how to interact and read the content/objects on the page.

## Navigate to specific content using the Element’s List

## Understand the various internet objects

# Most frustrating part of this step for the user?

# Step 4: Accessing E-mail Applications

## Week 9-14

# Critical Points 4

## Primary mode of access is important to maintain. Comfort and ease decides primary mode of access.

## Email accounts must be created prior to this step.

## Updates occur and can change the interface of any email service.

## Different email providers, account types, and modalities can create different controls.

## Email applications may link to each other for ease of access.

## Email communication is increasingly important for contacting services and people. Without the ability to send emails, services and people may be difficult to contact and/or have barriers to efficient support.

# 4. New Keys and Terms

## New Keys

## Shift+Arrows: Select Text

## Ctrl+A: Select All

## Ctrl+C: Copy selected text

## Ctrl+V: Paste selected text

## Ctrl+K: Create a hyperlink

## Terms

## Inbox: Area where new emails are located

## Panes: Specific groupings related to application layout

## Ribbons: Options for formatting typing

## Attachments: Files or Images to include with email

# Key Lesson 4: Communicate via Email

## Following this lesson, user should be able to complete the following:

## Understand application and complex website navigation

## Send emails using native and alternate email options

## Adjust and manipulate formatting for text

## Attach images, files, and links within an email

# 4.1 Connecting Email to Windows

## Windows automatically comes with an email application where users can attach their email accounts.

## Open this by searching “Mail” within the Windows search box.

## Tab to “Add Account” and navigate through menu to select appropriate server.

# Windows Mail Navigation Keys

## Ctrl+N: New email

## Esc: Close email back to navigation bar

## F6: Switching between groupings

## Ctrl+Shift+I: Inbox

## Ctrl+1: Return to mail if in other application attached to mail

## Ctrl+Q/U: Mark Email as read/unread

## Ctrl+R: Reply

## Ctrl+Shift+R: Reply all

## Alt+I: Add attachment

## Ctrl+E: Search

# Reading Emails Through Mail

## Locate the navigation pane using Tab or F6

## Tab to Inbox and use Enter to move to the email navigation (Ctrl+I after manual task completion)

## Arrow keys will move through the available emails

### These may be conversations, which can be expanded using the space key for specific email in thread

## Emails can be opened using Space/Enter

## F6 will cycle through the panes to the reading pane if in Browse Mode and can be read using system caret controls

# Sending Emails Through Mail

## Navigate to the New Mail button (Ctrl+N)

## Action pane will allow for replying (Ctrl+R), reply all (Ctrl+Shift+R), or forwarding (Ctrl+F) in open emails

## Reply/Forwards will open a new email in the conversation.

## To, CC, and BCC are for identifying the recipients. Replies and forwards will have this auto-filled.

## Enter subject of email

## NVDA will read “Document…”

## Typing is enabled, but switching to Focus Mode will prevent tab from leaving the document pane

## Ribbon pane will allow for changes or attachments of media in the formatting of the email

## Alt+S will send the email when finished

# 4.2 Accessing via Gmail (Internet)

## Gmail can be accessed through a browser window if not attached to the Windows Mail application.

## Open browser and enter www.gmail.com in the address bar

## Navigate and enter sign in information

### The enter email information can be used with the show password button for password review through selection

## Emails within Inbox/Sent/Drafts are called conversations but are different from chats/hangouts

### Can be accessed using Table navigation

### If only using tab will only identify attachments and buttons

# Navigating Gmail: Standard & Basic HTML

## Standard View

## Allows Screen Reader shortcuts

### Keyboard Shortcuts Link

## Google Shortcuts in Focus Mode

### Locate the “Settings” button and then the “Keyboard Shortcuts On” radio button

### Keyboard Shortcuts will disable the elements list

## May be very confusing at first

## Basic HTML View

## Great for tab navigation

## Much longer to locate information

## Removes extra coding that may complicate navigation, but may complicate information identification

# Accessing Inbox Conversations (Standard)

## In the format of a table with links for expansion:

### Rows are the different emails

### Column 1: Will open the conversation but will not identify email information

### Column 2: Selecting the email via checkbox

### Column 3: Starring the conversation for importance

### Column 4: Labels

### Column 5: Sender

### Column 6: Subject

### Column 7: Attachment info

### Column 8: Date and Time

# Interacting With Email (Standard)

## Gmail conversations function like the Windows Mail options but with different keystrokes due to browser controls.

## Enter Browse Mode

## Navigate to the Conversations Table and activate the email to be read

## Heading 2 will be the subject, with the sent information nested in a table

## Tab to the “Show Details” option and NVDA+Down to have the email read

## Using Tab, locate the reply or forward option (R or F if Google Shortcuts enabled)

## With focus mode activated, enter message.

## To format switch to browse and move to the formatting options

## Tab will move to the send/media area of the email.

# Homework 4

## Send an email to instructor with an attachment.

## Open an attachment sent by instructor.

## Use internet account to send a link to instructor.

## To reinforce the learning objectives of:

## Understand application and complex website navigation

## Send emails using native and alternate email options

## Adjust and manipulate formatting for text

## Attach images, files, and links within an email

# Step 5: Microsoft Office

## Week 14- Week 20

# Critical Points 5

## Office applications have built in accessibility features and identifiers.

## Transferrable to different formats after creation

## Means to share or create content without coding knowledge

## Not everyone has access to Office!

## Microsoft applications are widely used in the transfer of data electronically. From academia to corporations, individuals will need to be proficient in using these tools for communication of information.

# 5.0 New Keys and Terms

## Keys

## NVDA+Alt+C: Show comments at caret

## NVDA+Shift+C: Set column headers for tables

## F5: Starts a presentation in Powerpoint

## Ctrl+N: New Document, Sheet, Presentation

## Ctrl+S: Save changes

## Ctrl+O: Open a document

## Alt+ letter: ribbon controls

## Terms

## Styles Pane: Options for structure creation

## Formulas: Computed processes in Excel

## Review: Pane where comments and accessibility can be checked

## Alternative Text: Text for images in document

## Status Bar: Area that designates page #, document metrics, zoom, etc.

# Key Lesson 5: Create with Microsoft Apps

## Following this lesson, users should be able to do the following:

## Read and create a word document

## Read and perform a PowerPoint presentation

## Read mathematical equations in Word/PowerPoint

## Create an Excel Data Sheet

# 5.1 Microsoft Word

## The fundamental document format for word processing. Users of word can:

## Create lists, tables, and Smart Art images

## Write reports, assignments, or manuscripts

## Comment or edit others’ creations

# Document Structure

## One of the most overlooked aspects of document creation is the structure of information using headings.

## This is how the information can be quickly navigated by NVDA users.

## Headers are created using styles grouping

## Lists are created using paragraph grouping

## Can be located using the navigation pane in the View ribbon

## Similar to Browse Mode functions of the internet can use single key functions:

### Headings

### Links

### Lists

### Tables

## Can use the Elements List for total object navigation including comments

# Reading a Document

## Operates as a combination of Internet document keystrokes and utilizes the formatting tools from email applications:

## Switches between Browse and Focus Modes for reading and editing the pages

### Tab does not work in Document pane and Browse Mode

## NVDA+Down reads the document from current caret position

## F6 moves between specific panes such as Document, Ribbon, and Status Bar

## Home ribbon houses the formatting and structural aspects of the inputs

## Page Up/Down keys move to the beginning/end of the document

# Creating a Document

## Open Word using the windows search menu

## Locate “Blank Document”

## Adjust format of text using the Home ribbon (Alt+H)

### Use Bullets (Alt+H, U) and Numbering (Alt+H, N) for any listed info

## Establish heading structure using the styles grouping in the home ribbon (Alt+H, PG)

## Insert media using the Insert ribbon (Alt+N) and edit using the Format Ribbon (Alt+JP)

### Provide Alt Text for any images (Alt+JP, AT)

### Make sure text wrapping (Alt+JP, TW) is inline with text

## Ctrl+S to save your document when finished

# Word of Math

## NVDA requires the use of MathPlayer to read mathematical content. Math must be made in accessible design of MathML or MathType.

## Interact with math content through NVDA+Alt+M

## If in Browse Mode can navigate to math and using Enter.

## The arrow keys allow the user to move through the equation.

# 5.2 Microsoft Excel

## Fundamental document for data analysis using cell structure for data entry and formatting. Has many purposes in research, business, and STEM fields due to formula and graphic options.

# Navigation of Excel Sheets

## Using Keys

## Tab will move through columns

## Arrows will move to the next directional cell

## Ctrl+F can help to find specific data

## Elements List

## NVDA+F7 activates the elements list

## Moves between:

### Charts

### Formulas

### Notes

### Sheets

# Data Entry

## Cell structure can be operated using the arrow keys for 2D movement or tab to move through columns in a row. When the focus moves to a new cell, NVDA will read the coordinates (B6, B7, etc.)

## Have the user select the cell and begin typing to enter data.

## Data can be:

### Numbers

### Words

### Formulas

### Other Cells

# Formulas

## Formulas can be entered using the = key within a cell.

## Preset formulas can be used from the auto-fill or the Formula Ribbon (Alt+M).

## When the dialogue appears, the user should create a simple formula using +/- of cells

## The user should make a complex formula from the presets with their own data

# Tables and Charts

## Tables and Charts provide organization of data.

## Selecting cells with Shift+Arrow allows for data to be grouped.

## Ctrl+Q opens the Quick Analysis tool to turn selected data into Tables or Charts

### Navigate with Arrows between options

### Use tab to move into ribbon grouping for tool

### Select type of data organization

# 5.3 Microsoft Powerpoint

## The most common way for users to create a presentation.

## Presentations that can include videos, images, and sectionalized information in different designs

## Many downloaded presentations will come in Protected Mode

### File (Alt+F) >Info (I) >Edit (E) for enabling edit

## Once opened from the Windows search for Powerpoint, user will be in slide view

## Navigating through slide view will give the user an idea of the structure based on number of slides and slide titles.

# Slide Structure

## Slides are set up with the heading structure as follows:

### Heading Level 1 is Slide Title

### Heading Level 2 is Sub-title

### Heading level 3 is textbox or list

## When reading from the slide view, user will hear the number of the slide as well as total slides

# Reading Slides

## User should use tab to move between objects/structure

## Object/Structure reading order is also dependent on object position in slide

## Enter on the slide opens focus mode for interaction

## Esc leaves edit or returns to navigation

## F6 will move between available navigation panes

## Ctrl+Space will activate taskbar menu (+C to close) if within an opened task bar

## In presentation mode, NVDA will automatically read the content on slide as it changes

# Creating Slides

## Slides can be created using the Ctrl+M keys

## User should then set up layout of slide using the Layout tab of the Home Ribbon (Alt+H, L)

### Layout can impact reading order and must be adjusted using the Arrange tab (Alt+H, G)

## Content can be then created using the pre-designed context fields or through the Insert ribbon (Alt+N) and the appropriate content field.

# Presenting

## To enter presenter mode, the user can navigate to:

## Slide Show ribbon (Alt+S)

## Status Bar (F6)

## F5

## Presenter mode can be advanced with the spacebar but also using NVDA+Left/Right to change slides and arrows for reading content.

## Users should become familiar with adding presenter notes using the View ribbon (Alt+W, P, N) then navigating to the Notes pane with F6.

## These can be read by the user with NVDA+R on the Thumbnail pane in presentation view.

# Homework 5

## Create a Word document about your most recent training. What did you learn?

## Create an Excel sheet with a table or chart about keystroke usage numbers.

## Create a presentation with at least 5 slides. Include attachments to the slides.

## To reinforce the learning objectives of:

## Read and create a word document

## Read and perform a PowerPoint presentation

## Read mathematical equations in Word/PowerPoint

## Create an Excel Data Sheet

# Troubleshooting

## Week 20- As needed

# Questions?

# Contact Information

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