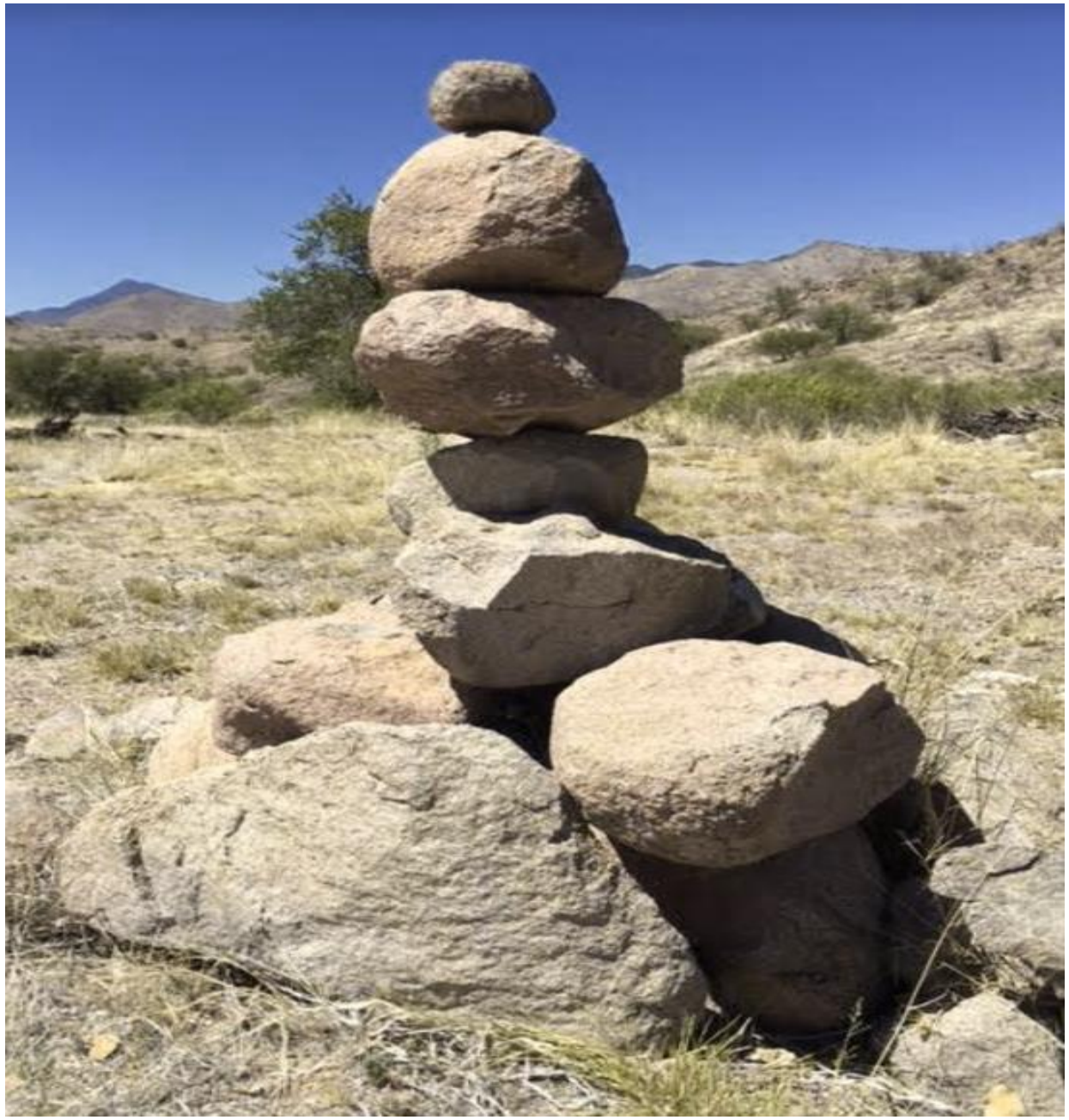
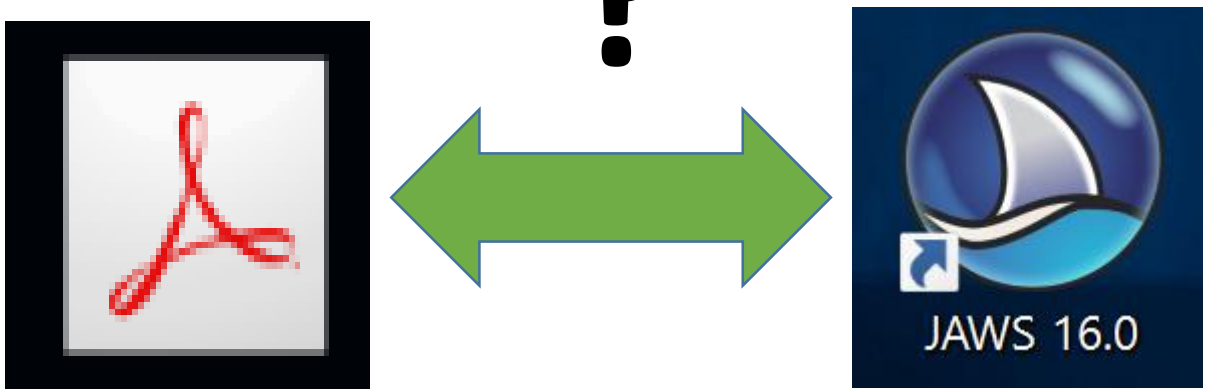


# Making Peace Between Instructional Technology and Assistive Technology

?



# Disclaimer

- I am not endorsing or recommending any of the programs mentioned in this presentation for any individual and / or specific situation or application. The programs presented here are simply provided as examples of the types of programs that might be used in the higher education environment.

# Objectives

- Know the basic functions of some assistive technologies (some free and low cost) used by individuals with disabilities and others to access instructional materials/technology in College.

- Know how to use accessibility checkers to identify and remediate access barriers and improve the ***accessibility*** of instructional material/technology often used in College.

# Accessibility means that:

"a person with a disability is afforded the opportunity

- to aquire the same information,
- engage in the same interactions,
- and enjoy the same services

- as a person without a disability

- in an equally effective
- and equally integrated manner,
- with substantially ***equivalent ease of use***."

*equivalent ease of use*

- **Accessible**
- **Usable**
- **Enjoyable**

# Different strategies for addressing barriers to access

- Medical
- Social
- Political

# Medical Model –

- Student learns to use the assistive/access technologies

# Some assistive technologies used by individuals with disabilities to access instructional materials in College.

- Screen readers
- Screen modifiers
- Braille translators
- Voice recognition
- Text to speech

# Some Examples of Screen Readers

nvaccess

Home of the free **NVDA screen reader**

chromeVox

VoiceOver

nvaccess

Home of the free **NVDA screen reader**

Link to NVDA https://www.nvaccess.org/

# Some Examples of Screen Modifiers

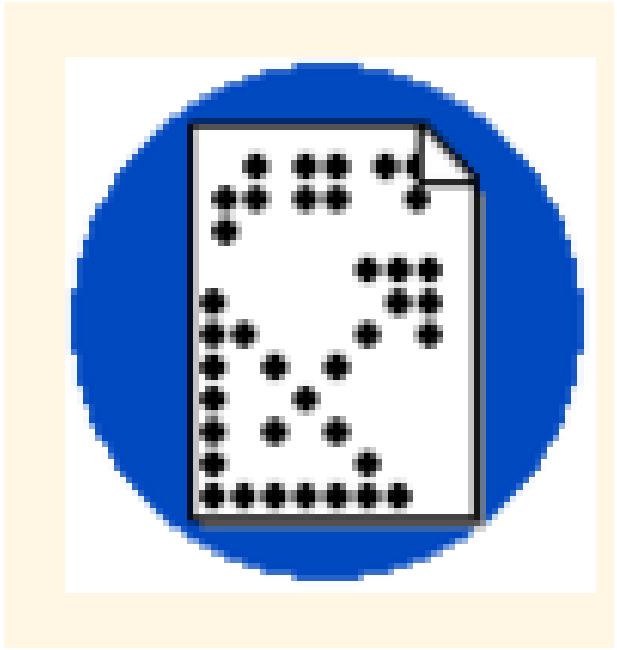
MAGic®
Screen Magnification Software

Start Magnifier

Mercury Reader
offered by https://www.postlight.com

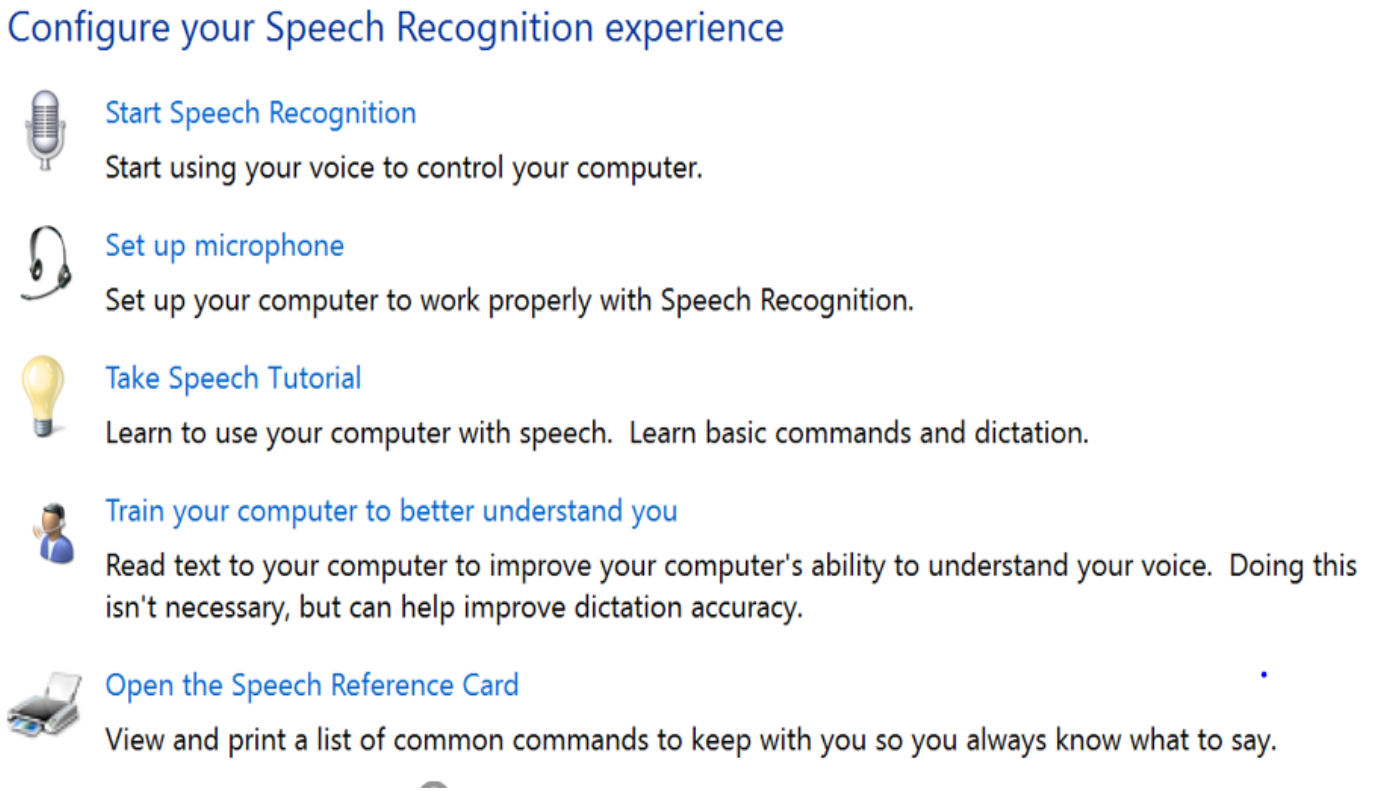
- Windows + “+”
- Windows + “Escape”

# An Example of Software for Braille Translation



# Examples of Voice Control Software

- Speech recognition: Control Panel->Ease of Access-> Use the Computer without mouse or keyboard ->Speech recognition



# Configure your Speech Recognition experience

## Start Speech Recognition

Start using your voice to control your computer.

## Set up microphone

Set up your computer to work properly with Speech Recognition.

## Take Speech Tutorial

Learn to use your computer with speech.  Learn basic commands and dictation.

## Train your computer to better understand you

Read text to your computer to improve your computer's ability to understand your voice.  Doing this isn't necessary, but can help improve dictation accuracy.

## Open the Speech Reference Card

View and print a list of common commands to keep with you so you always know what to say.

# Some Examples of Text to Speech Software

Link to ATBar https://www.atbar.org/

Link to Natural Reader https://www.naturalreaders.com/

NVDA

JAWS 16.0

Start Magnifier

DBT 11.2

ATbar

Read &Write Gold

Off

74

JAWS 16.0

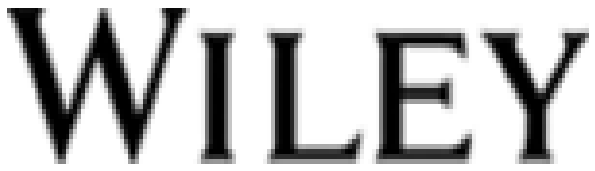
# Social Model –

- Fixing the environment

Docs

moodle

CENGAGE


WILEY

Mc
Graw
Hill
Education

Blackboard

D2L

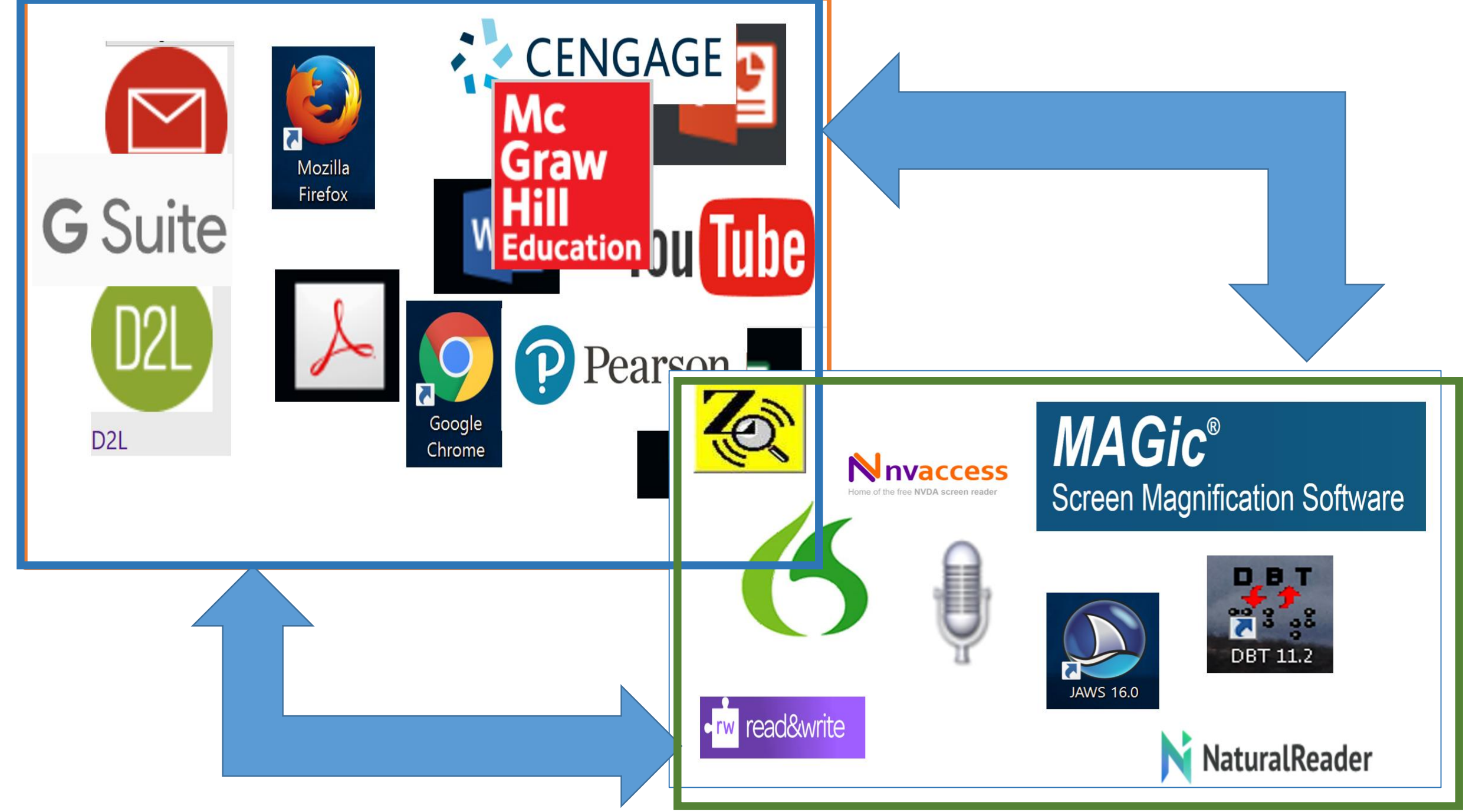
D2L

Pearson

Prentice
Hall

canvas

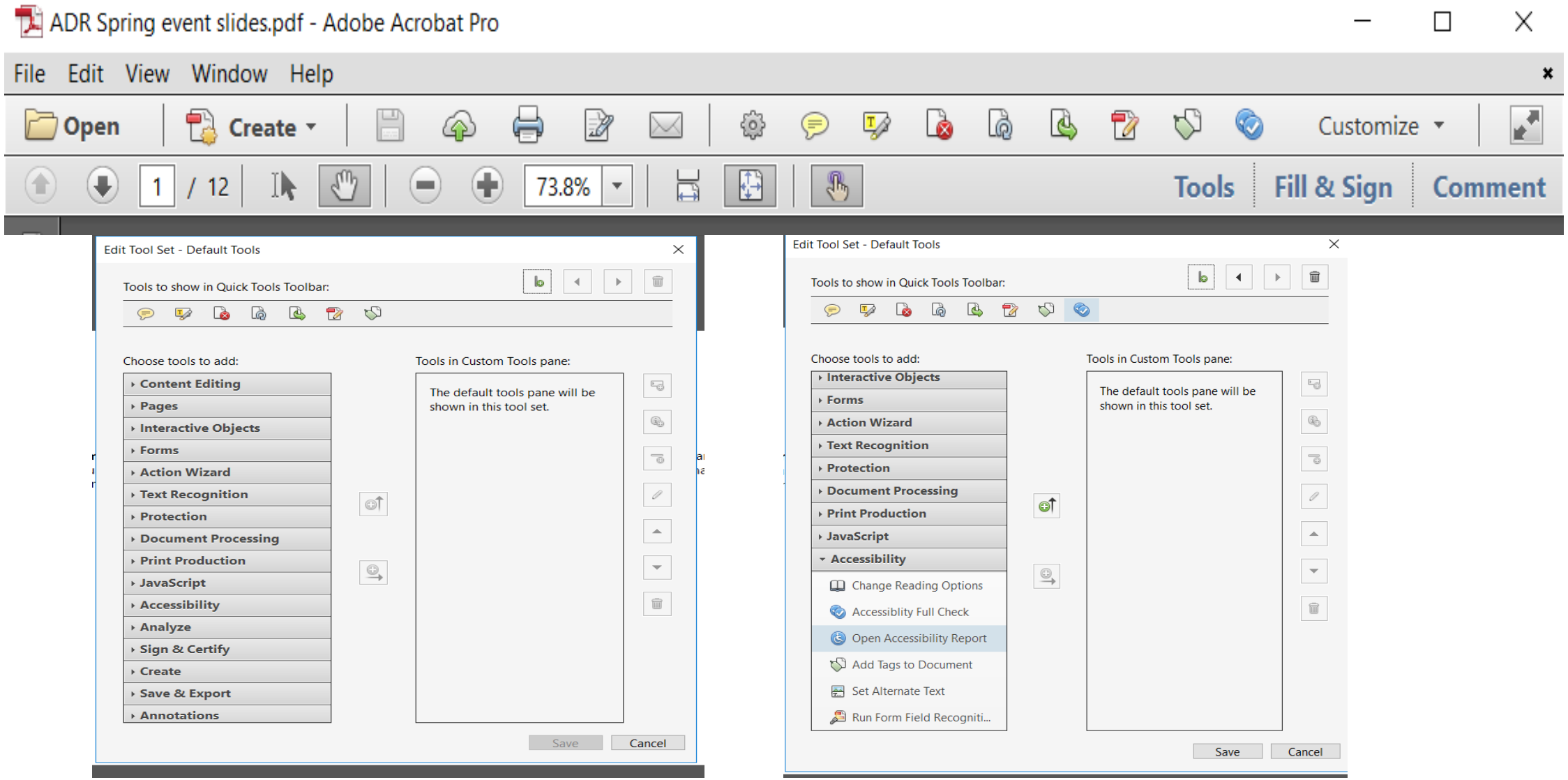
OER
COMMONS
OPEN EDUCATIONAL RESOURCES

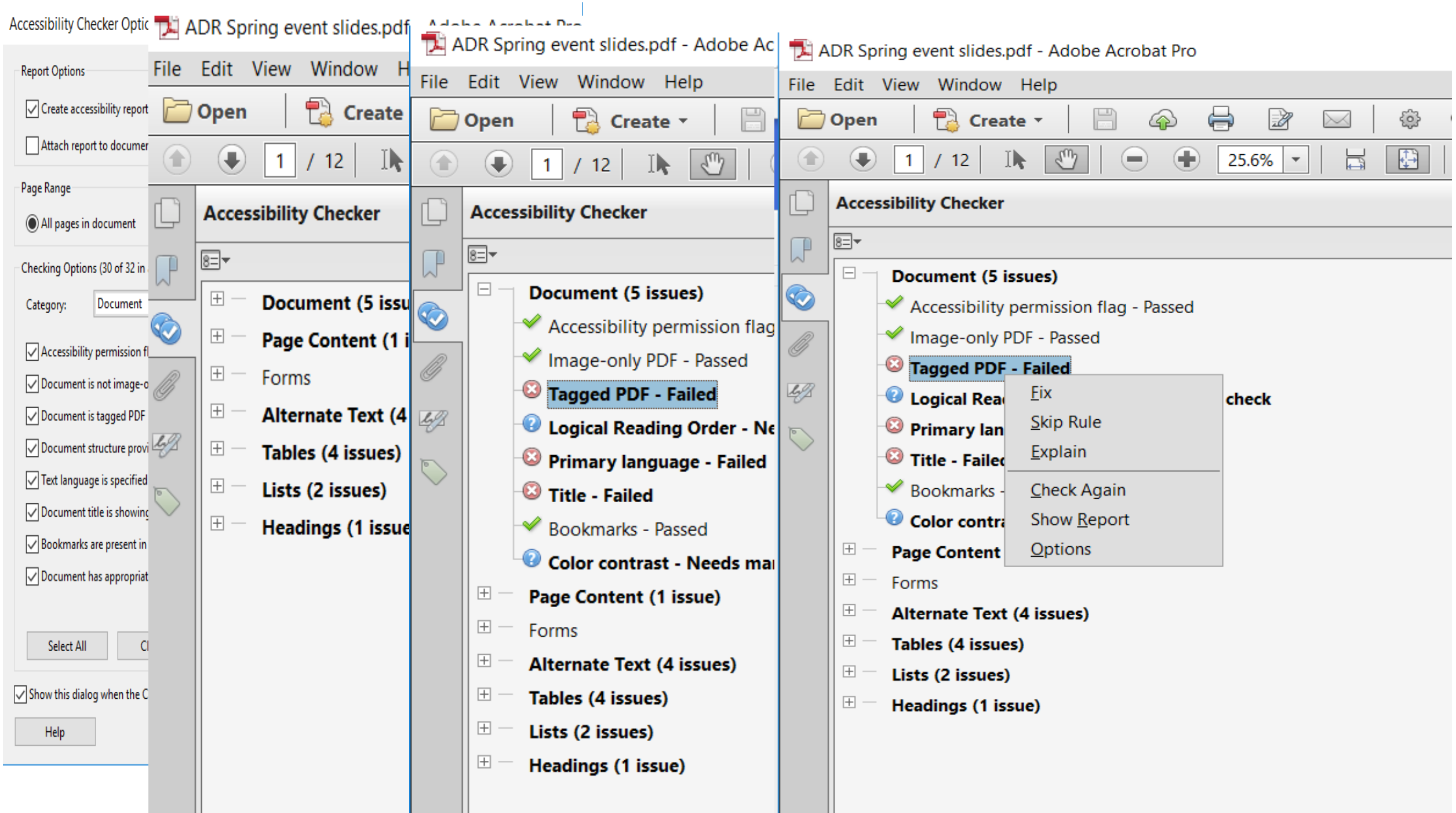

CENGAGE
Mc Graw Hill Education
Mozilla Firefox
G Suite
D2L
D2L
Google Chrome
Pearson
YouTube
nvaccess
Home of the free NVDA screen reader
MAGic®
Screen Magnification Software
DBT 11.2
JAWS 16.0
read&write
NaturalReader

# Fixing the Environment (Big 4)

1. Use accessibility checkers for documents:
    1. Word, PPTs, PDFs, and Google Docs
2. Use accessibility checkers for Webpages:
    1. Webaim.org
3. Use VPATs and manual checks for Vendor materials
4. Caption/transcribe all audio material

# PDF Checkers – Acrobat Pro




Accessibility Checker Optic
ADR Spring event slides.pdf
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Create accessibility report
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Headings (1 issue
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1 / 12
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Document (5 issues)
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Tagged PDF - Failed
Logical Reading Order - Ne
Primary language - Failed
Title - Failed
Bookmarks - Passed
Color contrast - Needs ma
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Tables (4 issues)
Lists (2 issues)
Headings (1 issue)
check
Fix
Skip Rule
Explain
Check Again
Show Report
Options

### Tagged PDF

If this rule check fails, the document isn't tagged to specify the correct reading order.

To fix this item automatically, select **Tagged PDF** on the **Accessibility Checker** panel, and then choose **Fix** from the **Options** menu. Acrobat automatically adds tags to the PDF.

To specify tags manually, do one of the following:

- Enable tagging in the application in which the PDF was authored, and re-create the PDF.
- Choose **Tools** > **Accessibility** > **Autotag Document** in Acrobat DC. The **Add Tags Report** appears in the navigation pane if there are any issues. The report lists potential problems by page, provides a navigational link to each problem, and provides suggestions for fixing them.
- Choose **Tools** > **Accessibility** > **Reading Order** in Acrobat DC, and create the tags tree. For more information, see **Touch Up Reading Order** tool overview.
- Open the **Tags** panel and create the tags tree manually. To display the **Tags** panel, choose **View** > **Show/Hide** > **Navigation Panes** > **Tags**. For more information, see Edit document structure with the Content and Tags panel.

ON THIS PAGE

Make PDFs accessible (Acrobat Pro DC)

Check accessibility of PDFs (Acrobat Pro DC)

Fix accessibility issues (Acrobat Pro DC)

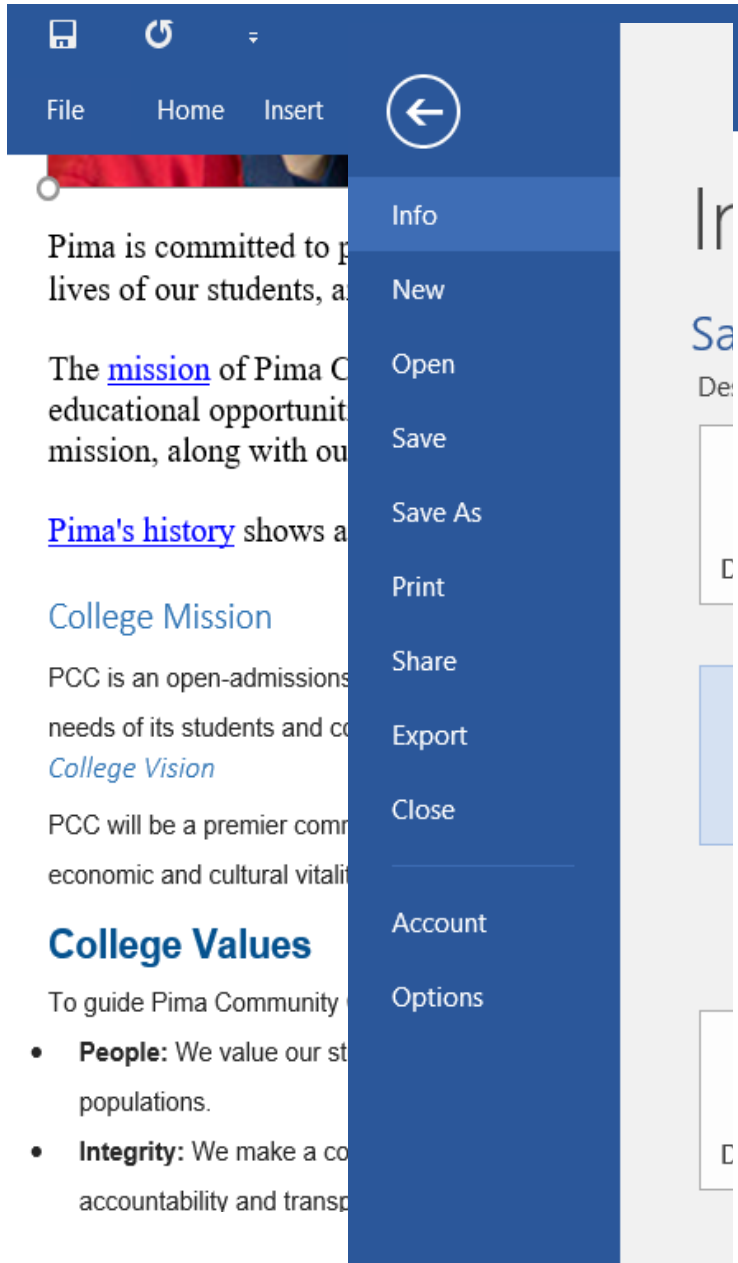
Accessibility issues

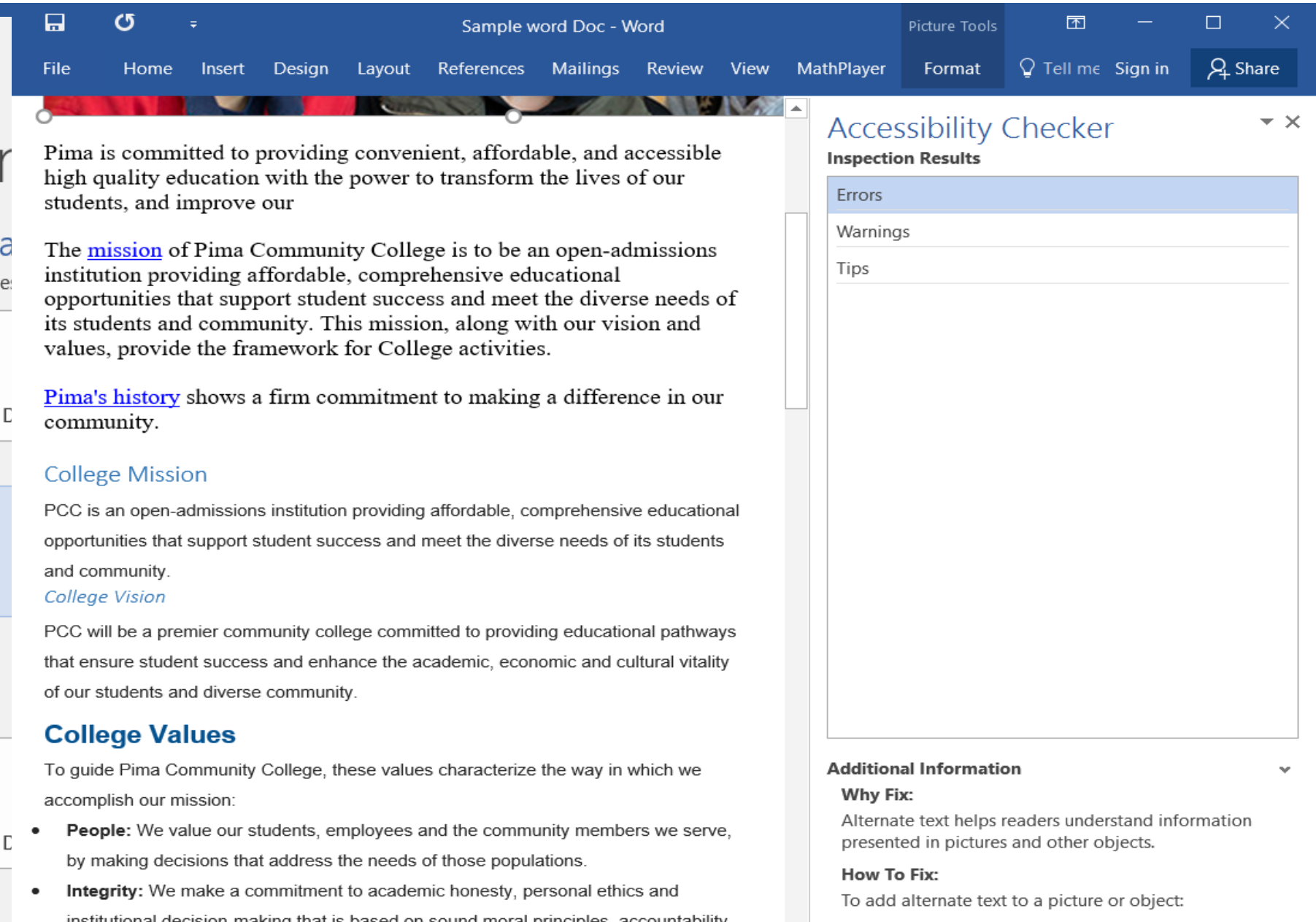
WCAG mapping to PDF/UA

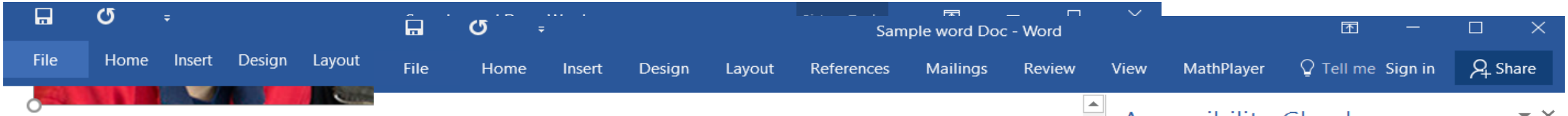
Applies to: **Acrobat DC**

Last Published: **April 13, 2017**

# Microsoft Word Checkers






Pima is committed to providing conven
high quality education with the power t
students, and improve our

The mission of Pima Community Colle
institution providing affordable, compre
opportunities that support student succe
its students and community. This missio
values, provide the framework for Colle

Pima's history shows a firm commitmer
community.

## College Mission

PCC is an open-admissions institution providing
opportunities that support student success and r
and community.

*College Vision*

PCC will be a premier community college comm
that ensure student success and enhance the a
of our students and diverse community.

## College Values

To guide Pima Community College, these value
accomplish our mission:

- **People:** We value our students, employees a
  by making decisions that address the needs
- **Integrity:** We make a commitment to acaden
  institutional decision-making that is based on

Access and Disability Resources (ADR) works to open Pima Community College's educational opportunities to the entire community, including those with disabilities, by supporting the creation of a College environment without physical, social, or academic barriers. When

At ADR we recognize that disability is an integral part of diversity and seek opportunities to advocate for and be a resource for inclusive design practices in facilities, communication, and instruction.

In accordance with the Americans with Disabilities Act (ADA) and the Rehabilitation Act of 1973, Section 504, no qualified person will be denied access to, participation in, or the benefits of, any program or activity operated by Pima Community College because of disability.

The following person has been designated to handle inquiries regarding The Americans With Disabilities Act (ADA) and the Rehabilitation Act, Section 504:

ADR Program Specialists work with each student and faculty member to determine reasonable accommodations, giving students equal access to the college experiences. All students, including those utilizing accommodations, must meet the same academic standards.

Contact ADR at https://pima.edu/current-students/disabled-student-resources/contact-us.html when you are ready to get started with the eligibility process and to learn more about ADR and services that are available https://pima.edu/current-students/disabled-student-resources/contact-us.html.

**Announcements:**

## Accessibility Checker

**Inspection Results**

Errors

- Missing Alt Text (2)

Warnings

- Unclear Hyperlink Text
  https://pima.edu/current-students/disabled-student-...

Tips

- Skipped Heading Level
  College Vision

**Additional Information**

**Why Fix:**

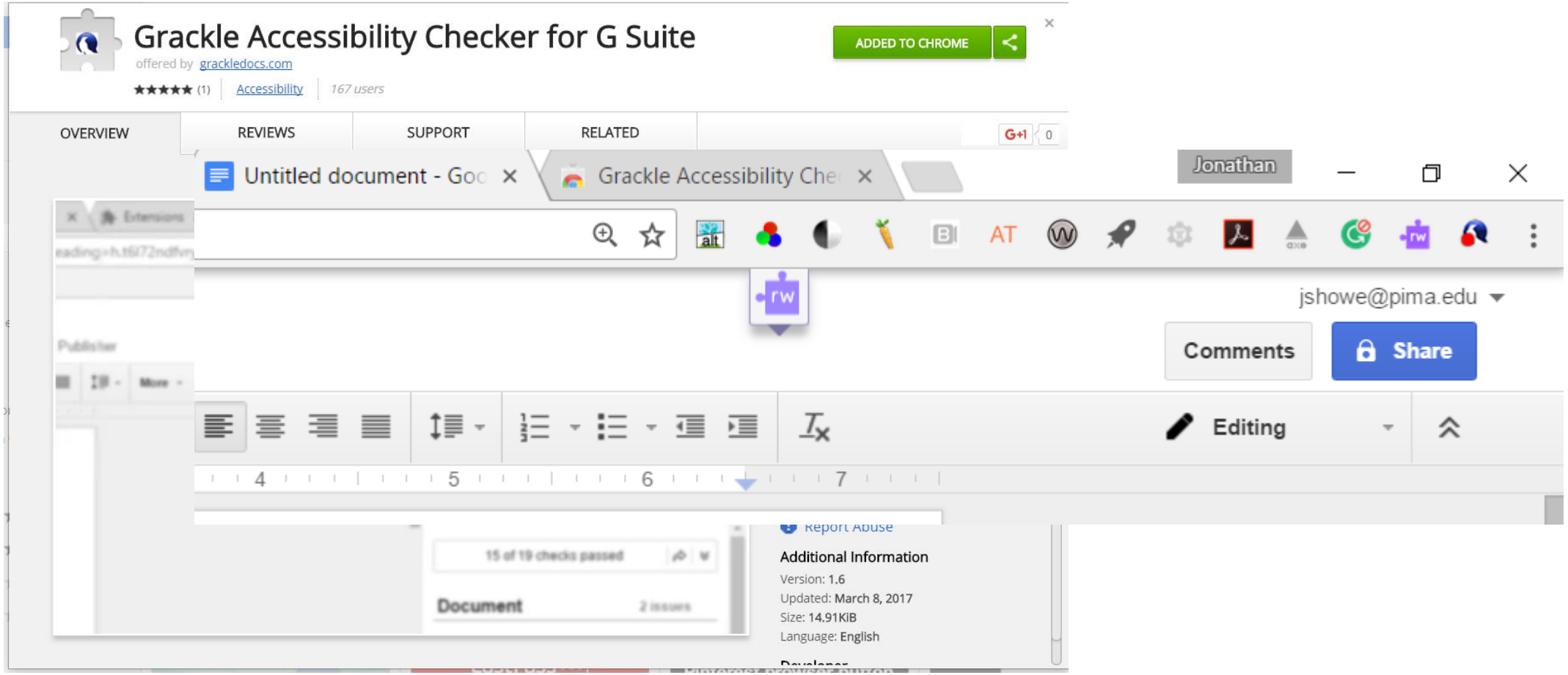
Hyperlink text should provide a clear description of the link destination instead of providing only the URL.

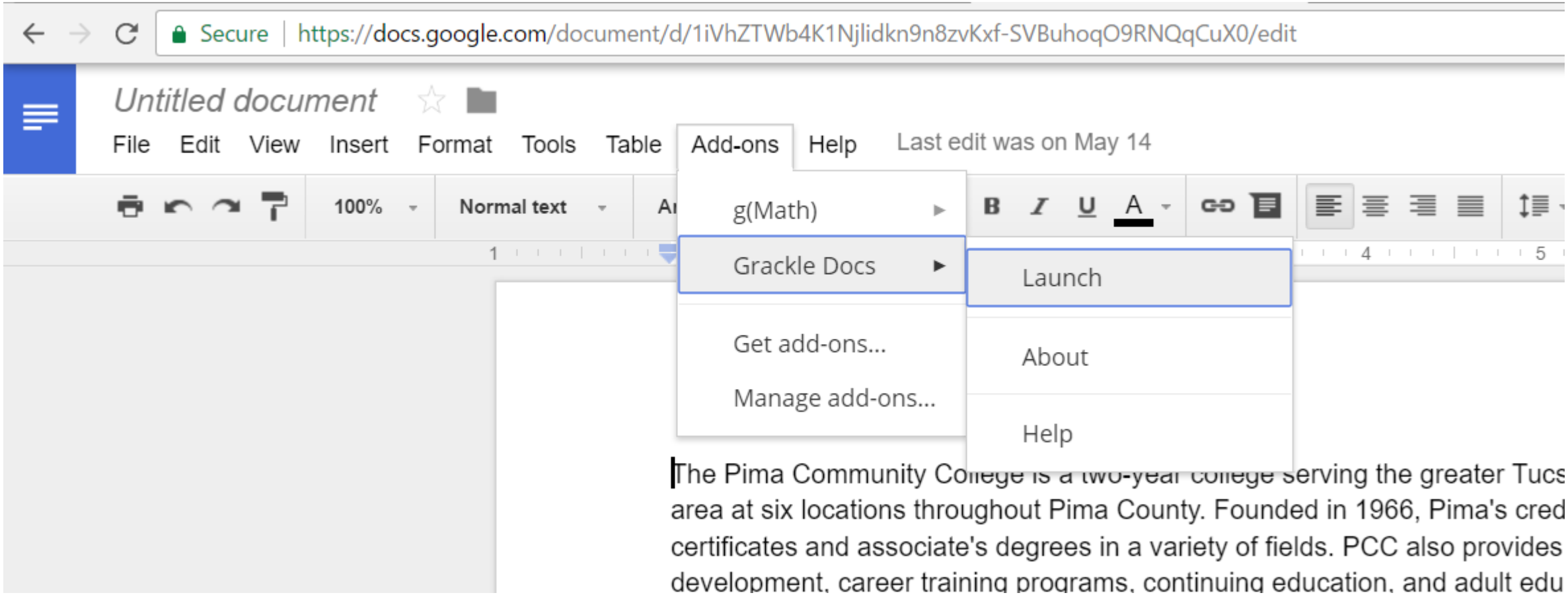
**How To Fix:**

To make the hyperlink text more accessible:
1) Select the link and click Hyperlink on the Insert tab to open the Edit Hyperlink dialog.
2) Type a phrase in Text to display which will briefly describe the link destination.

Read more about making documents accessible

# Google Docs Checker




Secure
https://docs.google.com/document/d/1iVhZTWb4K1Njlidkn9n8zvKxf-SVBuhoqO9RNQqCuX0/edit
Untitled document
File
Edit
View
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Format
Tools
Table
Add-ons
Help
Last edit was on May 14
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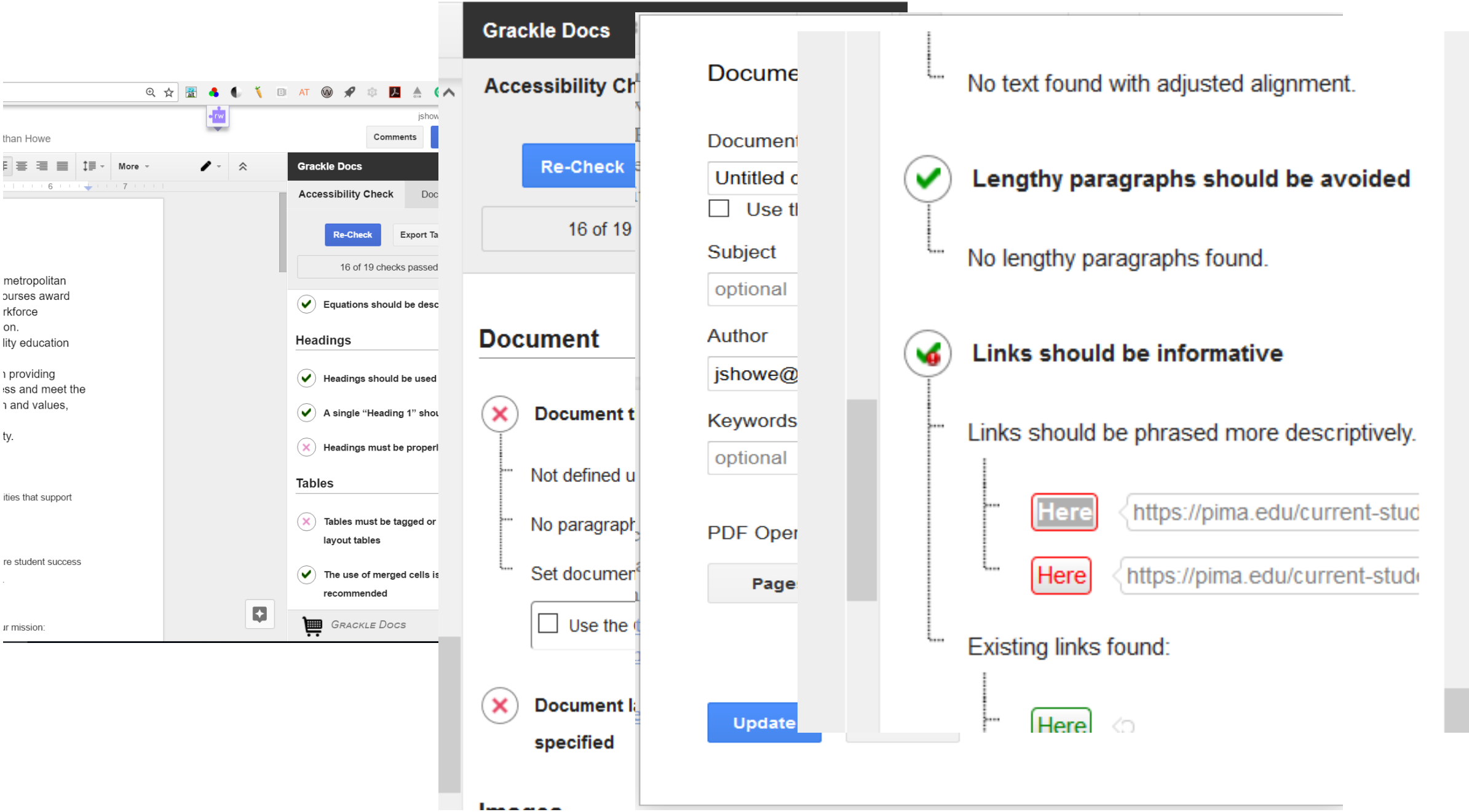
Normal text
g(Math)
Grackle Docs
Launch
About
Help
Get add-ons...
Manage add-ons...
The Pima Community College is a two-year college serving the greater Tucs
area at six locations throughout Pima County. Founded in 1966, Pima's cred
certificates and associate's degrees in a variety of fields. PCC also provides
development, career training programs, continuing education, and adult edu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PDF Oper
Page
Update
No text found with adjusted alignment.
Lengthy paragraphs should be avoided
No lengthy paragraphs found.
Links should be informative
Links should be phrased more descriptively.
Here
https://pima.edu/current-stud
Here
https://pima.edu/current-stud
Existing links found:
Here

# Top Five

- Alt Text
- Selectable text
- Tables
- Headings
- Hyperlinks

# Checking Websites

- Website checkers:
  - **Wave it:** Link to WAVE  http://wave.webaim.org/
  - **Wave toolbar for Firefox:** Link to Firefox Checker https://addons.mozilla.org/en-US/firefox/addon/wave-accessibility-tool/
  - **Wave Chrome extension:** Link to Chrome checker http://wave.webaim.org/extension/
    - https://www.azdot.gov/mvd/

ADOT

Google Custom Search

About | Motor Vehicles | Projects | Business | Planning | News | Traffic | Maps | Contact

Arizona DOT / Motor Vehicle Services

subscribe for updates

# Motor Vehicle Services

HOURS & LOCATIONS
NOW WITH WAIT TIMES!

## Online Services

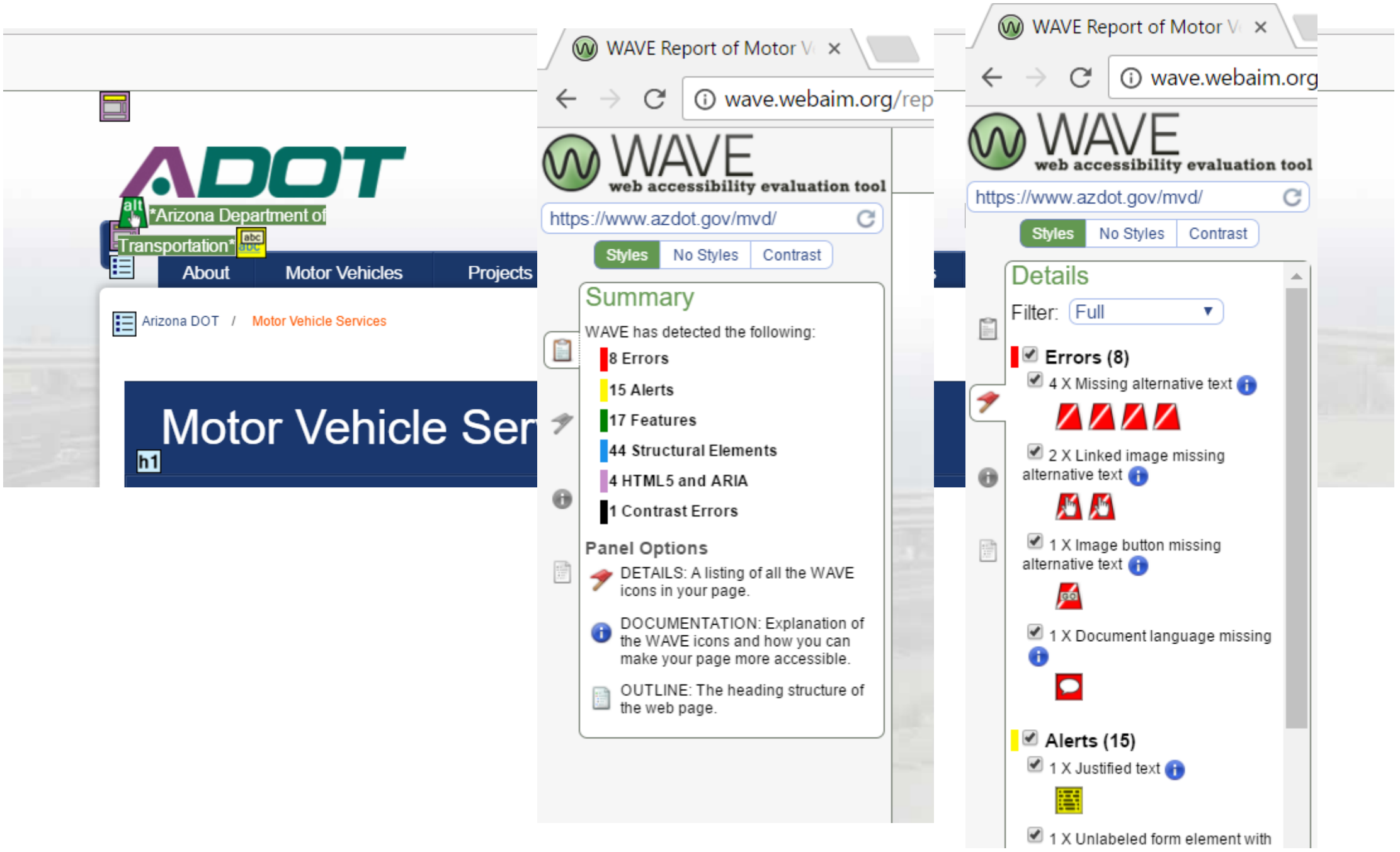
### New to AZ
Welcome!

## Forms and Publications

### Driver Services
Driver License Information

## Contact MVD

### Vehicle Services
Registration


ADOT
alt
*Arizona Department of Transportation*
abc
About
Motor Vehicles
Projects
Arizona DOT / Motor Vehicle Services
Motor Vehicle Ser
h1
WAVE Report of Motor V
wave.webaim.org/rep
WAVE
web accessibility evaluation tool
https://www.azdot.gov/mvd/
Styles
No Styles
Contrast
Summary
WAVE has detected the following:
8 Errors
15 Alerts
17 Features
44 Structural Elements
4 HTML5 and ARIA
1 Contrast Errors
Panel Options
DETAILS: A listing of all the WAVE icons in your page.
DOCUMENTATION: Explanation of the WAVE icons and how you can make your page more accessible.
OUTLINE: The heading structure of the web page.
WAVE Report of Motor V
wave.webaim.org
WAVE
web accessibility evaluation tool
https://www.azdot.gov/mvd/
Styles
No Styles
Contrast
Details
Filter: Full
Errors (8)
4 X Missing alternative text
2 X Linked image missing alternative text
1 X Image button missing alternative text
1 X Document language missing
Alerts (15)
1 X Justified text
1 X Unlabeled form element with

# Working on the environment: VPATs

- **Voluntary Product Accessibility Templates (VPAT)**
  - **VPAT Template http://www.w3.org/TR/WCAG20/#text-equiv-all**

**Section 1194.21 Software Applications and Operating Systems - Detail**
**Voluntary Product Accessibility Template**

| *Criteria* | Level of Support & Supporting Features | Remarks and explanations |
|---|---|---|
| (a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually. | | |
| (b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed | | |

# Caption Videos (YouTube)

- Create plain text file .txt (note pad) 7-12 words per line, Double space
- Log into video manager and find your video
- Click on drop down arrow and select “captions”
- Upload transcript file (under type make sure “upload transcript file” is selected)
- Select your transcript, under language select English, and name file
- Then click upload file
- After a minute or so it will complete and a cc button will appear on the video

# Captioning software

- **National Center for Accessible Media**
  - **CADET:** http://ncamftp.wgbh.org/cadet/
  - **MAGpie**: http://ncam.wgbh.org/invent_build/web_multimedia/tools-guidelines/magpie2helpcontents

# Political Model

## Include Users in Decision-making