

Digital Accessibility for beginners and improvers

Niall Barr, Senior Learning Technology
Developer

Katharine Terrell, Academic and Digital
Development Advisor



What we'll cover today

First hour (ish):

- Why is this important?
- SCULPT principles (general guidelines)
- STEM subjects

Second hour (ish):

- How to check your digital accessibility
- Practical activity

Before we begin...



Why digital accessibility?

- It's the right thing to do!
- It's the law (Digital Accessibility Regulations 2018)
- It's UoG policy ([Accessible and Inclusive Learning Policy](#))
- Technical or pedagogical (or both, or something else?) (Coughlan, et al, 2019)



Who might face digital barriers?

Parents and carers
([Fensie et al, 2023](#))



Disabled people
([Coughlan, 2021](#))



Students facing
“digital poverty”
([Office for Students, 2020](#))



What does “disabled” mean, anyway?

- The “social model” of disability says that people who have an “impairment” are disabled not by their bodies or minds, but by external barriers. (Finkelstein, 2001)
- These barriers could be social, physical, educational, digital.



Disability vs Learning Challenge?

- “Research suggests that students do not consider their issues to fall under the term disability, resulting in a hidden population of students who could be better supported by their university.” Grimes et. al. 2017.
- Using the ‘non-deficit language’, Learning Challenge, Grimes et. al. found the following non disclosure rates at Newcastle University NSW.

Learning Challenge	Nondisclosed
Learning difficulties, e.g. dyslexia, Asperger’s Syndrome	57%
Ongoing medical condition, e.g. asthma and epilepsy	43%
Mental health issues, e.g. anxiety and clinical depression	60%
Physical disability, e.g. deafness, blindness and mobility	17%
2 or more learning challenges	36%

Where do I come in?

- Reconsider the “implied student” (Ulriksen, 2009)
- We all have a role to play to remove barriers.
- No magic wand!
- Perfection is the enemy of good.
- Accessibility is a journey, not a destination.



Here's some we made earlier!

We have created some examples of badly designed documents.

As we go along, we'll show you how to apply each principle.

Use the QR code to navigate to Padlet.

Pick one document to work on.



<https://tinyurl.com/4z6x96uu>

SCULPT principles

Structure (heading styles)

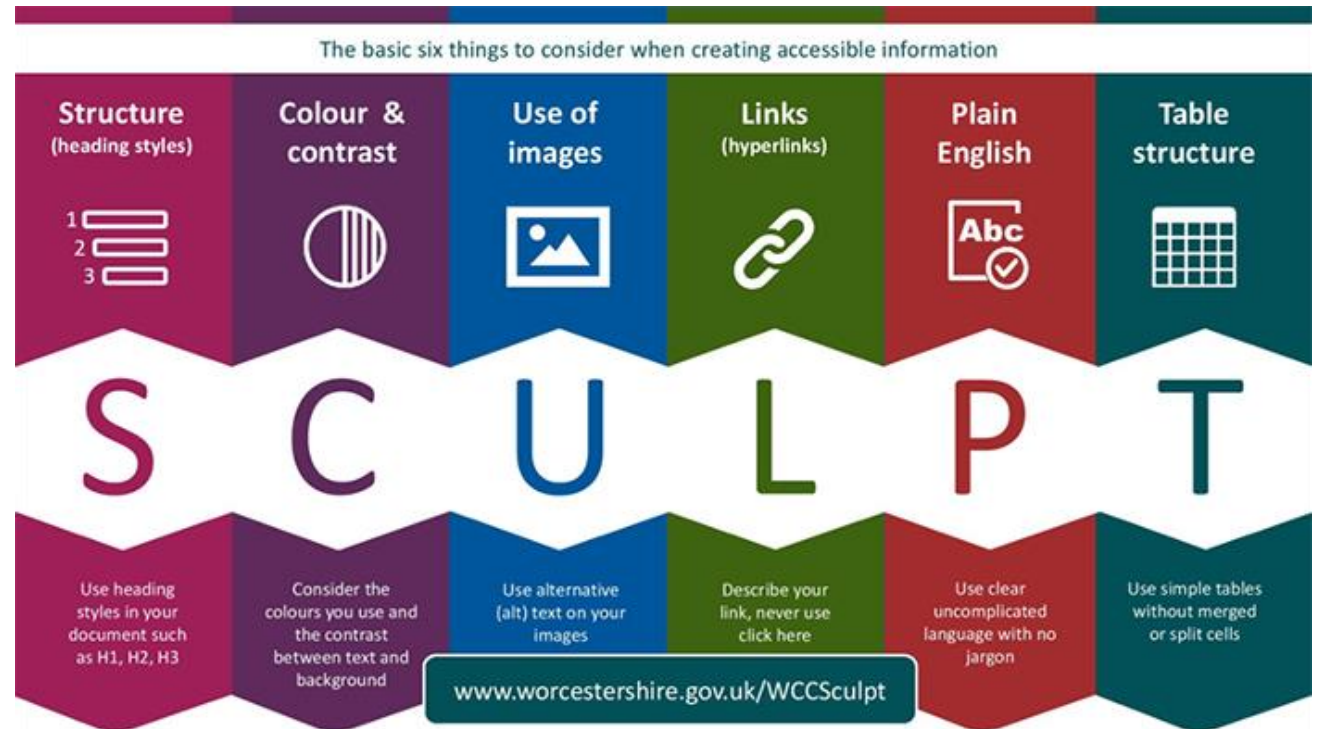
Colour and contrast

Use of Images

Links (hyperlinks)

Plain English

Table Structure



Types of files

- Microsoft Office
- HTML
- PDF (be careful!)

SCULPT principle 1: Structure

Use a clear structure with:

- “heading styles”
- Bullet points/numbered lists
- Don’t just use **bold** for subheadings
- Sans serif font like Arial or Helvetica and use a minimum 12 point
- Use tables of content
- [Guidance for Word, Excel, PowerPoint and PDFs](#)
- How [screen-readers read screens](#)



SCULPT principle 2: Colour and contrast

Consider the colours you use and the contrast between text and background.

This supports people with colour blindness or a vision impairment.

Make sure:

- Colour is not the only method of conveying meaning. e.g. using green, red and amber alone to convey a hierarchy
- There is sufficient contrast between text and background colour in your document.
- For example, in PowerPoint, you can use Accessibility > Inspect without Colour
- [There is more information on how to do this online.](#)

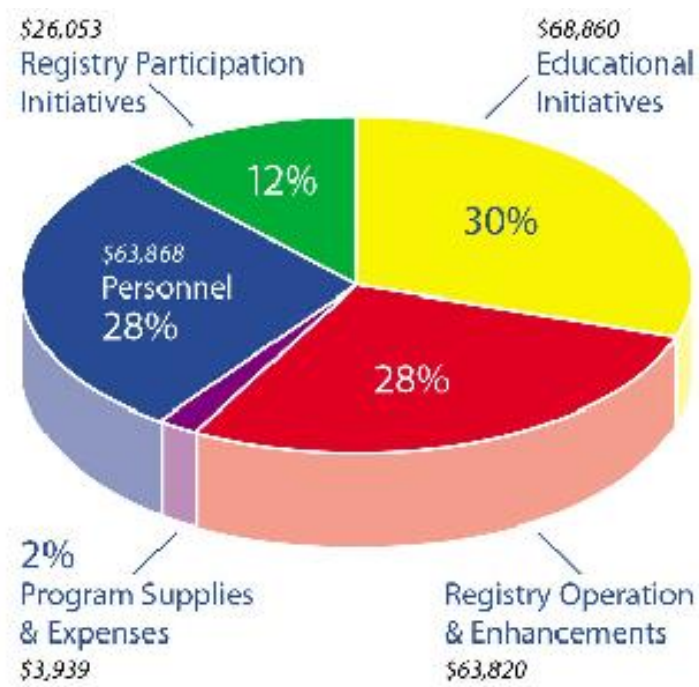


SCULPT principle 3: Use of images

- All key points should be made in the text of a document.
- Use alternative (alt) text on your images, or mark as decorative.
- [Further advice on writing “alt text” especially for complex images, graphs and maps.](#)



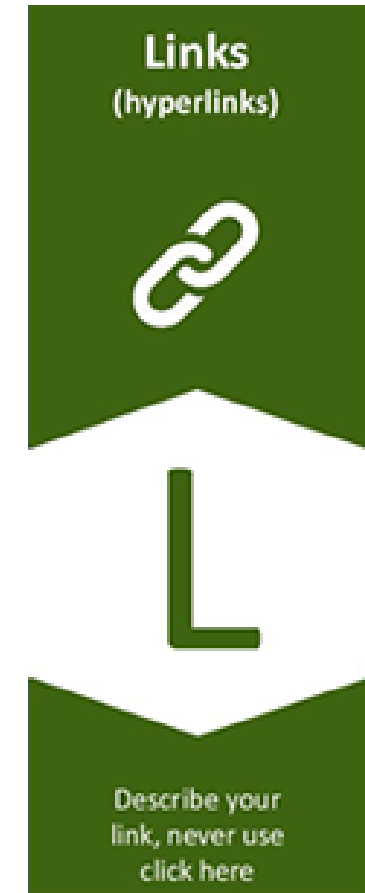
Let's practice...



Dr Hamied Haroon
(image removed
for copyright
purposes)

SCULPT principle 4: [Links](#)

- Use descriptive text for your links.
- Do not use “click here”.
- Do not use the full address.



SCULPT principle 5: Plain English

Use clear language with no jargon
(except...)

This supports people with:

- specific learning difficulties (SpLDs) such as dyslexia;
- English as a second or other language (ESOL);
- Limited time!



SCULPT principle 6: Table structure

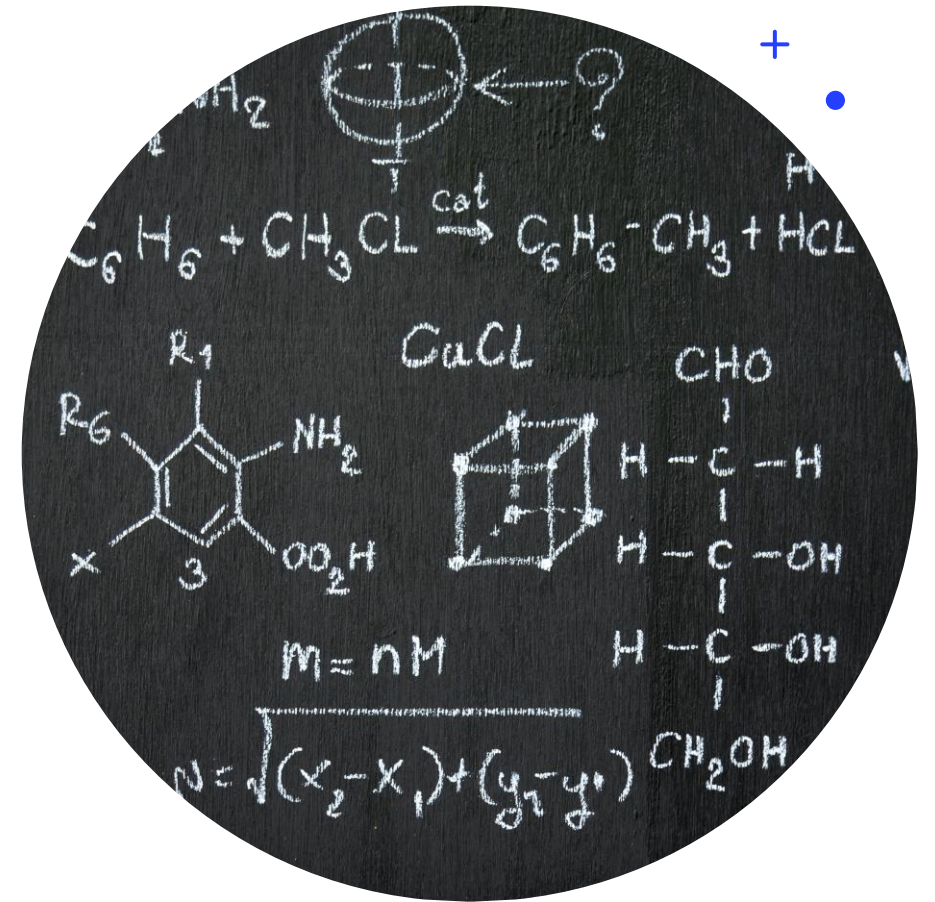
Simple table structure helps people who use screen readers.

- Only use tables for data when you need to.
- Avoid merged cells.
- Add table “headers”.
- Avoid blank cells.



Science, Technology, Engineering and Maths (STEM)

- Check the best way to render equations and formulae depending on where you're writing them, avoid images.
- PDFs generated from LaTeX are notoriously inaccessible to people using screen readers, though improvements are in the pipeline.
- For now, it is better to use HTML with MathJax, or use R markdown/PanDoc instead, which can export to alternative formats.
- Advance HE has a [digital accessibility toolkit](#)



LaTeX accessibility **New!**

Use a 2024 distribution:

- New instruction (before `\documentclass`)
`\DocumentMetadata{testphase={phase-III,math,tabular}}`
- Still under development, and some issues:
 - Not (yet?) compatible with `\lstlisting`

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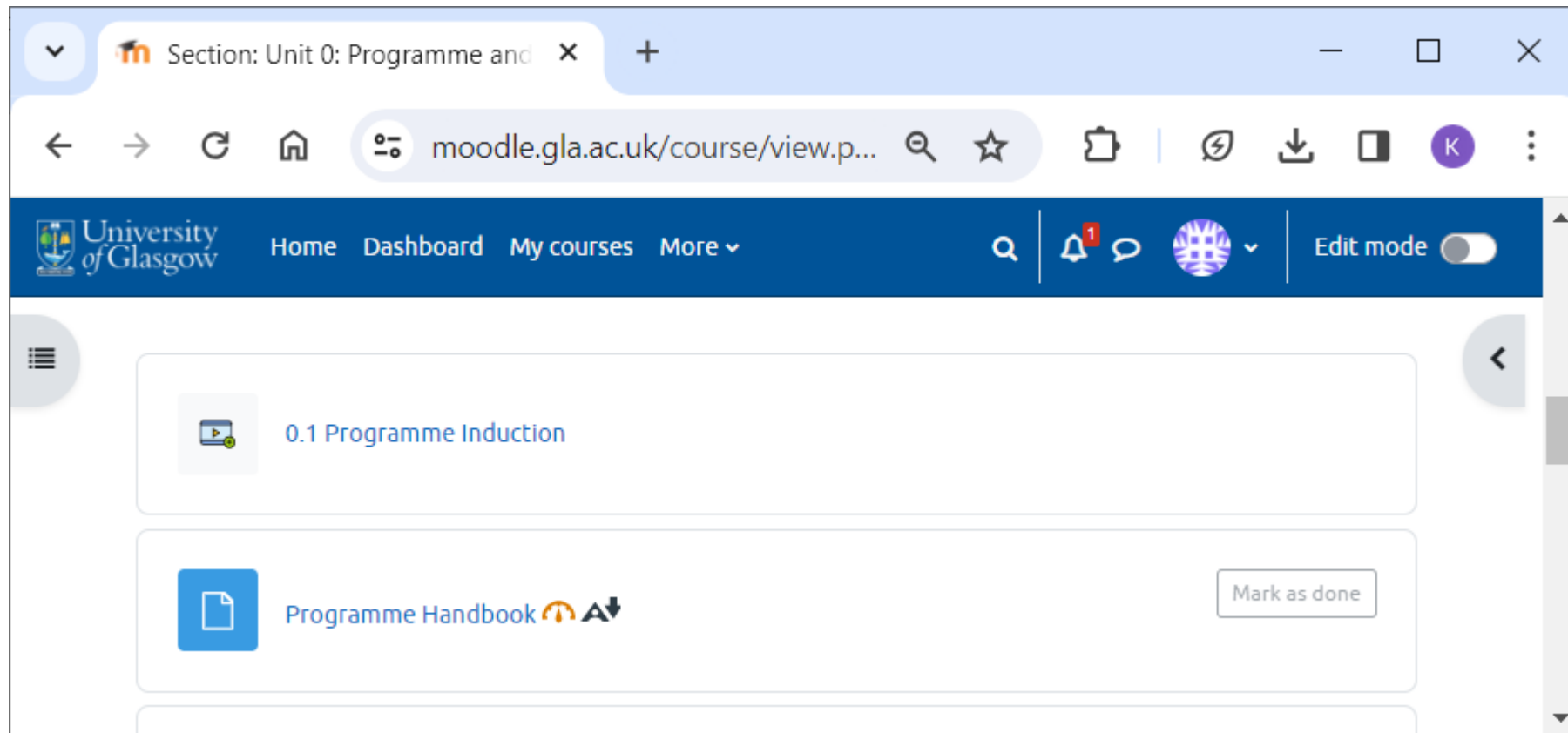
How to check document accessibility

- Anthology Ally on Moodle
- Microsoft accessibility checker

Anthology Ally on Moodle

- Navigate to a file and see how accessible the file is.
- Moodle Ally also allows students to download alternative formats.

Use Ally to check your content



Example of Moodle Ally score

Page 1 of 7

15 Text fragments with insufficient contrast

Vincent van Gogh

1 / 15

Summary of Van Gogh's life

Vincent van Gogh (30 March 1853 – 29 July 1890) was a Dutch Post-Impressionist painter who is among the most famous and influential figures in the history of Western art. In just over a decade he created about 2,100 artworks, including around 860 oil paintings. They include landscapes, still lifes, portraits and self-portraits, and are characterized by bold colors and dramatic, impulsive and expressive brushwork that contributed to the foundations of modern art. His suicide at 37 followed years of mental illness and poverty.

Van Gogh was unsuccessful during his lifetime, and was considered a madman and a failure. He became famous after his suicide, and exists in the public imagination as the quintessential misunderstood genius, the artist "where discourses on madness and creativity converge". His reputation began to grow in the early 20th century as elements of his painting style came to be incorporated by the Fauves and the German Expressionists. He attained widespread critical, commercial and popular success over the ensuing decades, and is remembered as an important but tragic painter, whose troubled personality typifies the romantic ideal of the tortured artist.

Some highlights of van Gogh's work

Artwork title	Year Created	Location
The potato Eaters	1885	Van Gogh Museum, Amsterdam

Accessibility score for:
Vincent Van Gogh(62) (7).docx

26%

All Issues

This document contains text with insufficient contrast

What this means

How to fix contrast

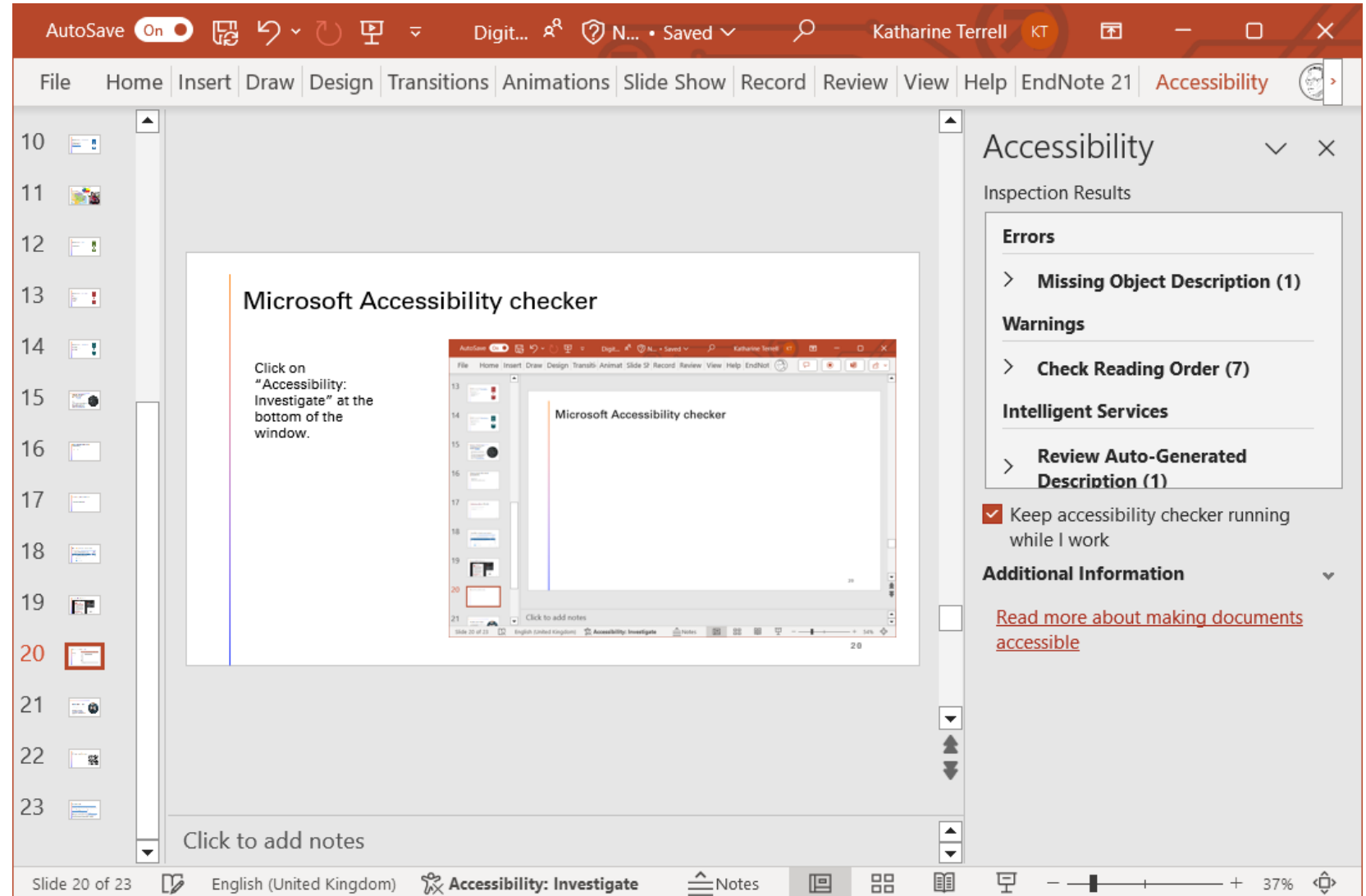
Upload a version with sufficient contrast

Drop file to upload
or

Browse

Microsoft Accessibility checker

Click on
“Accessibility:
Investigate” at the
bottom of the
window.



Audio and Video

If it is produced by staff at the university, it must have a transcript/captions.

Auto-generated captions are ok

Properly corrected transcripts are better, especially for “required” resources

[Further information can be found here](#)

(Did you know that PowerPoint subtitles can be used live?)



Before you leave...

Please answer our brief post-session questions.



References

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