How content design helps create truly inclusive services

Lorena Sutherland

@lolylena

Hello, I’m Lorena.

This session is about…

Accessibility and inclusivity

Law and standards

Barriers and challenges

Understanding users

Inclusive language

Designing for accessibility

Is this session for you?

As a content designer

I need to improve my knowledge and skills for accessible, inclusive content design

So that I help create services that meet the needs of every user

Content is the conversation you have with your users

It is the most obvious way you have to show people they are welcome

Definitions

What are we talking about?

Accessibility

Inclusivity

Usability

Universal design

Inclusive design

Accessibility means…

Extent to which a product or service can be used by everyone, regardless of disabilities.

[Digital Accessibility course, University of Southampton]

Usability of a product, service … by people with the widest range of capabilities.

[ISO 9241: Ergonomics of human-system interaction]

Making sure your service can be used by as many people as possible. [GOV.UK Service Manual]

Inclusivity means …

Taking account of a range of needs.

Understanding and designing for different experiences and perceptions.

Making sure people feel your service is for them and that they belong there.

Inclusivity thinks about ...

Culture and belief

Age

Sex and gender

Social and economic situation

Language and geographic location

Education

Usability

"The extent to which a product can be used by specified users to achieve specified goals effectively, efficiently and with satisfaction in a specified context of use."

[ISO 9241-11]

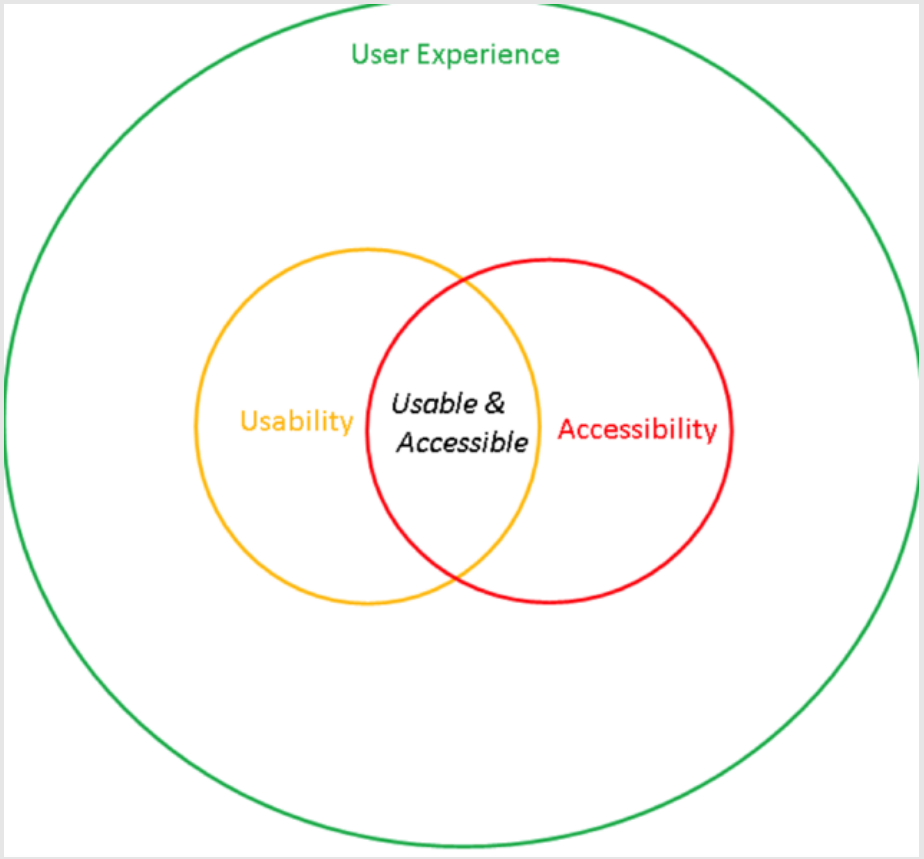


Image: University of Southampton

Usability and user experience

Usability' is normally used to refer to the actual use of the technology by a particular target group of users and contexts (e.g. including whether they find it easy to learn to use).

'User Experience' is normally used to refer to any experience of a user that is related to the use of that technology (e.g. including how they feel about the brand and whether they can get it easily repaired).

Only accessibility is enforced by law

Accessibility is inclusivity

When you meet accessibility needs, you make your service more inclusive for others as a bonus.

Reasons to care

Legal: the law says we have to care.

Policy: if we in government want people to do something, we need to make it clear to them.

Commercial: it's a big marketplace out there and it's in your financial interest.

Moral or social: it's just the **right thing to do**.

Law and standards

Equality Act 2010

If you provide goods or services, you must make them accessible to everyone, including disabled people.

This includes members of the public and your own employees.

If you do not, you're breaking the law.

https://www.gov.uk/guidance/equality-act-2010-guidance

Web Content Accessibility Guidelines (WCAG)

Standards for accessible web content, which includes:

- information, such as text, images or sounds
- code or mark-up that defines structure, presentation, etc

https://www.w3.org/WAI/standards-guidelines/wcag/

POUR principles

WCAG says web content must be:

- perceivable
- operable
- understandable
- robust

https://www.w3.org/WAI/fundamentals/accessibility-principles/

Government service manual has a useful summary of the principles - https://www.gov.uk/service-manual/helping-people-to-use-your-service/understanding-wcag#wcag-design-principles

1. Perceivable

Information must be presented to users in ways they can **perceive**. It cannot be invisible to all their senses.

Example: alt-text on an image.

2. Operable

User interface components and navigation must be **operable**. Users must be able to control the available function.

Example: keyboard commands for people who cannot use a mouse.

3. Understandable

Content must be **understandable.** Users must comprehend the information as well as the operation of the user interface.

Text should be readable and understandable.

Pages should appear and operate predictably.

Users should easily avoid or correct errors.

4. Perceivable

Content must be **robust** enough that it can be interpreted reliably by a wide variety of user agents.

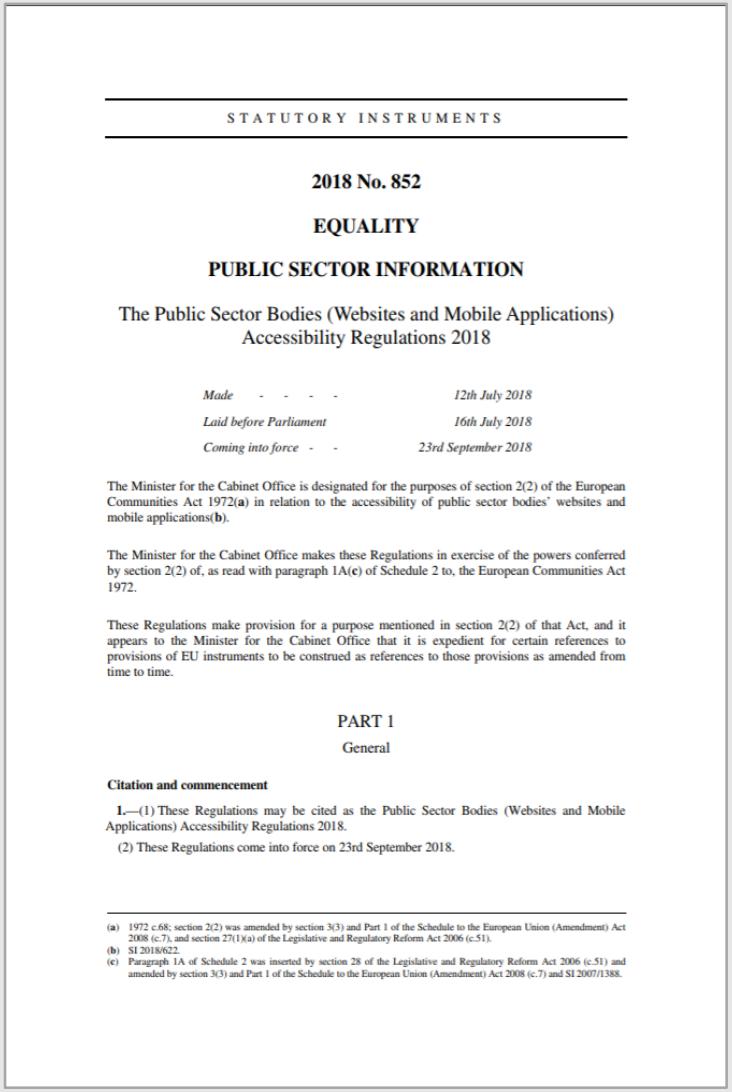
Example: by using different browsers, media players or assistive technologies.

Public sector regulations

Public sector bodies must make websites or mobile apps accessible by Sept 2021.

Regulations talk about the POUR principles.

[Public Sector Bodies (Websites and Mobile Applications) Accessibility Regulations 2018]



STATUTORY INSTRUMENTS

2018 No. 852

EQUALITY

PUBLIC SECTOR INFORMATION

The Public Sector Bodies (Websites and Mobile Applications) Accessibility Regulations 2018

Made - - - -	*12th July 2018*
Laid before Parliament	*16th July 2018*
Coming into force - -	*23rd September 2018*

The Minister for the Cabinet Office is designated for the purposes of section 2(2) of the European Communities Act 1972(**a**) in relation to the accessibility of public sector bodies' websites and mobile applications(**b**).

The Minister for the Cabinet Office makes these Regulations in exercise of the powers conferred by section 2(2) of, as read with paragraph 1A(**c**) of Schedule 2 to, the European Communities Act 1972.

These Regulations make provision for a purpose mentioned in section 2(2) of that Act, and it appears to the Minister for the Cabinet Office that it is expedient for certain references to provisions of EU instruments to be construed as references to those provisions as amended from time to time.

PART 1

General

Citation and commencement

1.—(1) These Regulations may be cited as the Public Sector Bodies (Websites and Mobile Applications) Accessibility Regulations 2018.

(2) These Regulations come into force on 23rd September 2018.

(**a**) 1972 c.68; section 2(2) was amended by section 3(3) and Part 1 of the Schedule to the European Union (Amendment) Act 2008 (c.7), and section 27(1)(a) of the Legislative and Regulatory Reform Act 2006 (c.51).
(**b**) SI 2018/622.
(**c**) Paragraph 1A of Schedule 2 was inserted by section 28 of the Legislative and Regulatory Reform Act 2006 (c.51) and amended by section 3(3) and Part 1 of the Schedule to the European Union (Amendment) Act 2008 (c.7) and SI 2007/1388.

Digital Service Standard

Point 12: Create a service that is simple to use and intuitive enough that users succeed first time.

Service Manual has overview of accessibility requirements.

www.gov.uk/service-manual/service-standard/create-a-service-thats-simple

www.gov.uk/service-manual/helping-people-to-use-your-service/making-your-service-accessible-an-introduction

Digital Service Standard

1. Understand user needs. Research to develop a deep knowledge of who the service users are and what that means for the design of the service.
2. Put a plan in place for ongoing user research and usability testing to continuously seek feedback from users to improve the service.
3. Put in place a sustainable multidisciplinary team that can design, build and operate the service, led by a suitably skilled and senior service manager with decision-making responsibility.
4. Build the service using the agile, iterative and user-centred methods set out in the manual.
5. Build a service that can be iterated and improved on a frequent basis and make sure that you have the capacity, resources and technical flexibility to do so.
6. Evaluate what tools and systems will be used to build, host, operate and measure the service, and how to procure them.
7. Evaluate what user data and information the digital service will be providing or storing, and address the security level, legal responsibilities, privacy issues and risks associated with the service (consulting with experts where appropriate).
8. Make all new source code open and reusable, and publish it under appropriate licences (or provide a convincing explanation as to why this cannot be done for specific subsets of the source code).
9. Use open standards and common government platforms where available.
10. Be able to test the end-to-end service in an environment identical to that of the live version, including on all common browsers and devices, and using dummy accounts and a representative sample of users.
11. Make a plan for the event of the digital service being taken temporarily offline.
12. Create a service that is simple and intuitive enough that users succeed first time.
13. Build a service consistent with the user experience of the rest of GOV.UK including using the design patterns and style guide.
14. Encourage all users to use the digital service (with assisted digital support if required), alongside an appropriate plan to phase out non-digital channels/services.
15. Use tools for analysis that collect performance data. Use this data to analyse the success of the service and to translate this into features and tasks for the next phase of development.
16. Identify performance indicators for the service, including the 4 mandatory key performance indicators (KPIs) defined in the manual. Establish a benchmark for each metric and make a plan to enable improvements.
17. Report performance data on the Performance Platform.
18. Test the service from beginning to end with the minister responsible for it.

Barriers and challenges

1 in 5 people have a disability

In the UK, 20% of people have some form of disability affecting:

- sight
- hearing
- mobility
- cognitive function
- speech

Other challenges

Sometimes our circumstances affect how we function, for example:

- anxiety or stress
- illness or tiredness
- location and equipment

Disability isn’t a fixed state

There’s also:

- temporary impairment
- age-related impairment
- multiple disabilities
- health conditions
- changing abilities
- situational limitations

Diverse abilities and needs

Each individual is unique, with diverse abilities, skills, tools, preferences and expectations.

Consider diverse functional needs. Try not to categorise people simply with medical classifications.

https://www.w3.org/WAI/people-use-web/abilities-barriers/

Think about functional, rather than clinical, disability

Example: cognitive function

Focus on functional disability, such as:

- memory
- problem-solving
- attention
- reading, linguistic, and verbal comprehension
- mathematical comprehension
- visual comprehension

[WebAIM: introduction to cognitive disabilities]

Diagnosis has its limits

Knowing someone's diagnosis doesn't help you understand their barriers.

If I tell you I have depression, that doesn't tell you what you need to do to support me.

But if you know that for many people, depression can lead to poor memory, problem-solving difficulties and low attention, you can act on that.

It’s not just clinical

Functional disabilities can be affected by things other than a diagnosed condition.

For example, anyone can experience poor memory function, if they are tired, ill, distracted or under stress.

Microsoft’s persona spectrum

Permanent, temporary and situational impairments.

In the USA, 26,000 people lose upper extremities each year. But temporary and situational impairments takes that to 21 million.

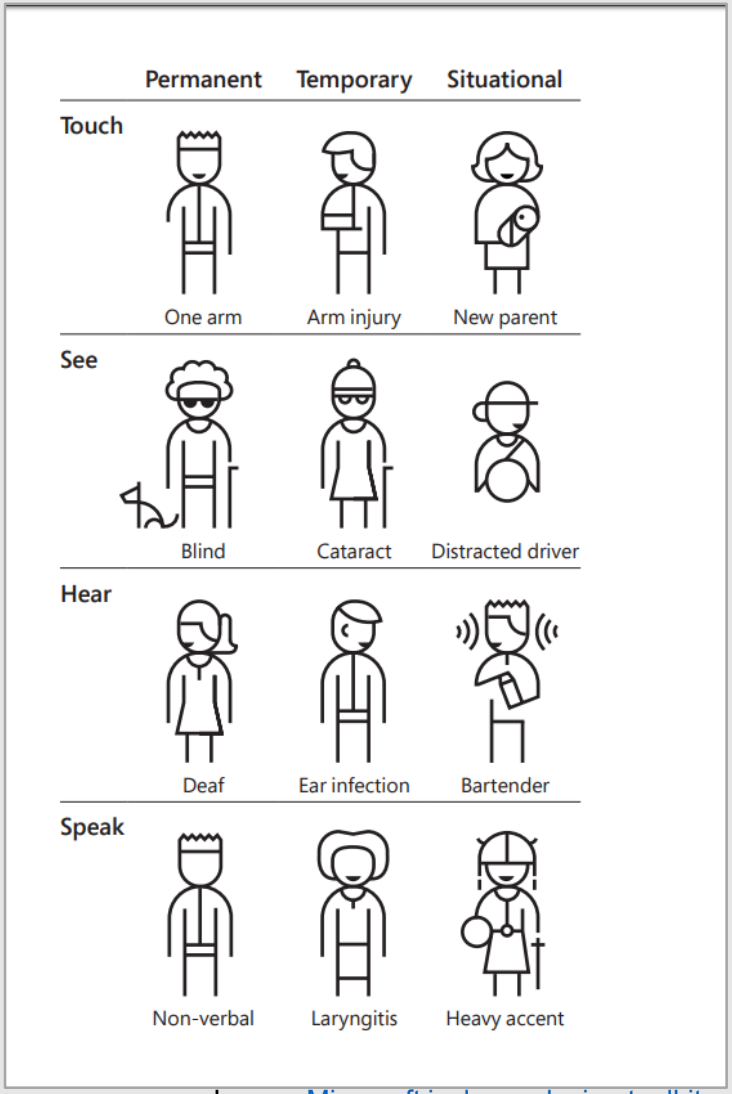


Image: Microsoft inclusve design toolkit

Barriers to consuming content

Dyslexia: 6 to 7 million people

Learning disabilities: 1.4 million people

Autism: 700,000 people

ADHD: 1.5 million adults

Literacy: 7.1 million people with very poor literacy skills

Language: 5 million people have a main language other than English or Welsh

Content barriers: sources

Dyslexia: 10% population – British Dyslexia Association

Learning disabilities: 2.16% of adults and 2.5% of children – Mencap

Autism: prevalence estimate from 2012; diagnosis rates much lower – National Autistic Society

ADHD: 5% of children and 3% of adults (1.5 million) in the UK, with only about a third of those children diagnosed, and about 7-8% of those adults diagnosed (ADHD Action)

Literacy: National Literacy Trust

Language: 8% of people in England and Wales have a main language other than English or Welsh. 138,000 speak no English.

If you design for a broad range of abilities, it benefits everyone

Understand users

Research with all kinds of users

Research

How will people with a wide range of impairments use your service?

How will their circumstances, location or surroundings affect their use?

What difference does the channel or device make?

Do not make assumptions

We cannot predict behaviour

Received wisdom says people in stressful situations will not read content.

Evidence shows that it's true for some people. They do not read.

But it also shows that others read every single word.

Test, test, test

Test your service with people who use assistive technology.

Test with people who have a range of impairments and technology.

Do not assume one person’s experience is a proxy for everyone else.

It’s more than just screen readers

Alternative input and output

Input

- joysticks
- trackballs
- switch access
- alternative keyboards
- touch screen
- speech recognition
- eye gaze
- gesture
- sip and puff

Output

- screen reader
- text to speech
- magnification
- optical character recognition
- scanning
- captions
- transcripts
- signing
- braille (input and output)

Individual adjustments

- text highlighting
- spelling and grammar checks
- magnification
- colour contrast
- font changes
- increased line space
- coloured overlays
- memory aids
- large button devices
- vibration and light signal alerts
- speech to text transcription

Inclusive language

Inclusive language is …

… the way you talk to your users:

- tone of voice
- being respectful
- sensitivity
- recognising social or cultural differences
- avoiding assumptions

Do not make your users think “this is not for me”

Gender-neutral language

Always use gender-neutral (gender-inclusive) language unless the context demands otherwise.

Impertinent questions

Personal questions force people to reveal information they might not want to share.

Or they exclude information that's important to a person, such as a gender question that has only 2 options.

Impertinent questions (2)

For example, asking for title might force someone to reveal their gender or relationship status, which could make them feel vulnerable.

Jane Reid and Steph Holland in ‘Let’s talk about sex and gender’ quoted a user looking at a “male/female” question: “My granddaughter wouldn’t exist in your eyes, the way that question is worded.”

Triggering language

How might your choice of words make a user feel?

Do not assume they are as comfortable as you with certain ideas or language.

Triggering language (2)

Melanie Martin in ‘Creating a minimum viable NHS service’ quoted a user saying (about a survey to assess the current state of a long-term health condition): “These surveys remind me what I can’t do and make me feel crap about myself”.

Be clear why you need to ask a question.
Or else don’t ask.

Avoid making assumptions

For example, do not assume that:

- people see themselves as disabled
- parents live together
- bereaved people are sad about a death

Do not exclude by accident

In the public sector we have a duty to be clear, or else people might:

- miss out on a benefit or entitlement
- break the law and suffer the consequences
- be ill-prepared to handle a life-changing event

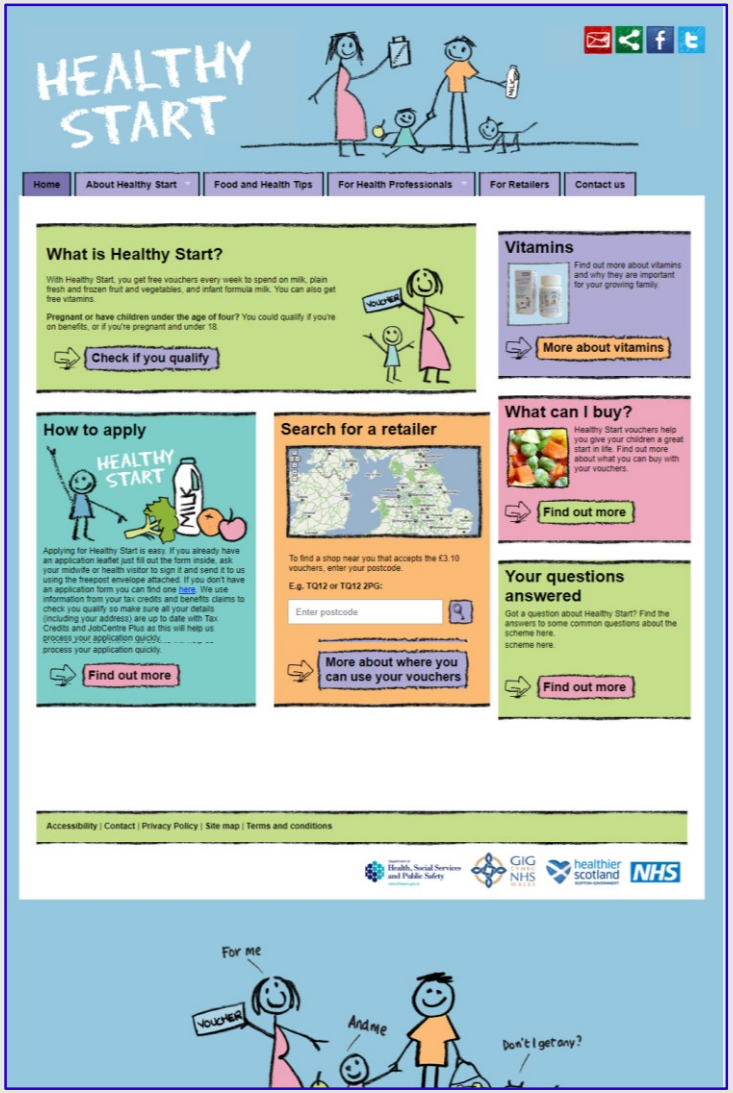
Example: Healthy Start

If your service helps someone, make it easy to find it and recognise it.

Vouchers to help with food.

Take-up is a bit low.

“Healthy Start” doesn’t tell you what it does, so changing to “Help to buy healthy foods”.



https://digitalhealth.blog.gov.uk/2019/01/04/changing-the-name-of-a-service/

Designing content for accessibility

Don’t worry, there are handouts

Design for accessibility

Page and site structure

Headings and subheadings

Body copy

Links and buttons

Images and graphics

Video and audio

Alternative formats

Good content design goes a long way towards making services accessible

Headings

Headings aren’t decorative, they’re the skeleton.

They help users move around the page with assistive technologies.

They let users scan a page for relevance.

They create space and improve readability.

[See the handout for more detail]

Body copy

Structure body copy with summaries, short paragraphs, and lists.

Use clear language and plain English.

Keep it short and simple.

Avoid jargon and figures of speech, and avoid or explain acronyms.

[See the handout for more detail]

Links and buttons

Be descriptive and clear about where the link or button will send the user.

Use links sparingly and avoid using them mid-sentence as they can distract people.

[See the handout for more detail]

_____ is regularly asked to provide expert legal comment to the media including, most recently, Sky News (watch the interviews here, here, here, here, here, here, here and here), LBC radio, (listen here), and for the Independent newspaper, (read here).

Images and graphics

Try to use images only if they add meaning. Use descriptive alt-text.

Images such as maps, illustrations and diagrams can enhance comprehension.

Text-only or image-only content will not solve accessibility.

[See the handout for more detail]

Example: mystery image

A florist advertises a bouquet called “Filled with Delight” at $70.

What is it like?

Alt-text says “Filled with Delight” so I’m none the wiser.

Video and audio

Provide text transcripts for audio and video content.

Use captions for video content.

Avoid animations and gifs if they don’t enhance your meaning. Make them short and user controlled.

Other formats

Make sure the other channels in your service are accessible, such as letters, and text messages.

Provide alternative formats, such as Braille, large print, or translations.

Consider how video, images, icons etc might enhance accessibility for cognitive difficulties.

Design for dyslexia

All previous advice is relevant, plus:

- sans-serif, large fonts
- larger line spacing (1.2 to 1.5)
- high contrast, no white backgrounds
- left-aligned text with ragged right
- no italic or underlining
- no columns and short(ish) line length

[British Dyslexia Association: Dyslexia Style Guide 2018]

Design for cognitive differences

Good content design goes a long way to help people with cognitive difficulties.

WebAIM provides guidance.

[WebAIM: Cognitive disabilities, design considerations]

Useful blogpost from a designer.

[Brandon Gregory: Designing for Cognitive Differences]

Design for screen readers

“Don’t write content that works specifically for screen readers, write content that works well for everyone.

Use correct punctuation, spelling and grammar, use standard conventions for acronyms and abbreviations, and use words that are appropriate for your audience.”

Léonie Watson: How to create content that works well with screen readers

Check and evaluate your work

Tools for testing

Use what's on your device:

- screen readers: VoiceOver on Mac/iOS, Narrator or NVDA on Windows
- magnifiers: Apple Zoom or Windows Magnifier
- voice recognition: Apple Dictation or Windows Speech Recognition
- unplug your mouse and use only the keyboard

https://www.gov.uk/service-manual/technology/testing-with-assistive-technologies
GDS Accessibility blog: Assistive technology tools you can test with at no cost

Readability testing

Readability tests measure sentence length, number of words or syllables, etc.

They give a superficial view of readability, and can only highlight simple issues.

They are no substitute for human beings.

(Examples: Flesch-Kincaid, Gunning Fog, HemingwayApp)

Reading age

There’s a world of difference between a 10 year old and a 50 year old, even if they do share a reading age of 10. Life experience, what they have to read, why they have to read it, the support they get in reading.

Tying accessibility and inclusivity together

Accessibility plus inclusivity

Legal requirement + good practice.

Assistive technology + human behaviour.

Technical design + empathy.

Specific needs + flexible needs.

Person focus above clinical focus.

Inclusivity …

If you are inclusive, your users:

- recognise themselves, their needs and their circumstances in the service you provide
- can use your service to meet their needs, with necessary adaptations but without fundamental compromise

Inclusive content design

Content design is inclusive when it reflects and meets the diverse needs, experiences and understanding of the widest range of users, regardless of their capabilities.

Links and references

Links: law and standards

Web Content Accessibility Guidelines (WCAG)

Equality Act 2010 (Great Britain)

Public Sector Bodies (Websites and Mobile Applications) (No 2) Accessibility Regulations 2018 (United Kingdom)

Disability Discrimination Order (Northern Ireland)

Americans with Disabilities Act 1990 (USA)

Rehabilitation Act 1973, section 508 (USA)

Government Digital Service Standard

Links: guidance

W3C Web Accessibility Initiative: Diverse Abilities and Barriers

WebAIM: Cognitive disability and HTML accessibility

Microsoft: Inclusive design toolkit

Content Design London's collaborative project: the Readability guidelines

British Dyslexia Association: Dyslexia Style Guide 2018

GOV.UK: Service Manual and Content design guidance

Links: testing for accessibility

Government Service Manual: Testing with assistive technologies

GDS Accessibility blog: Assistive technology tools you can test with at no cost

Screen reader: NVDA (free to download)

Readability tool: HemingwayApp

Creative Bloq: 7 tools to create a site that works for everyone

Links: blog posts

Anne Gibson: An Alphabet of Accessibility Issues

Brandon Gregory: Designing for Cognitive Differences

Chris Atherton: If you care at all about inequality, you have to care about web accessibility

Jane Reid and Steph Holland: Sex and/or gender — working together to get the question right

Léonie Watson: How to create content that works well with screen readers

Links: training course

Digital accessibility: Enabling Participation in the Information Society by the University of Southampton and Future Learn (free, 5 weeks remote learning)

We are all only temporarily not disabled

You may not need it now, but who knows what the future holds?

Be kind to future you

Thank you

Lorena Sutherland

@lolylena

bit.ly/lorena-sdingov