
Lecture 19

Accessibility

UNIVERSITY OF AUCKLAND

COMPSCI 345 / SOFTENG 350

Dr Danielle Lottridge

Lecture Q&A on zoom <https://auckland.zoom.us/j/7290166787>

First 15 minutes of the usual lecture times, or longer, on June 2, 3

Optional: The UX Book 30.3.2.2-30.3.2.4, 32.10.8

Learning Outcomes

- To appreciate the goals of inclusive design, and relate inclusive design to the UX/HCI design process
- To gain familiarity with tools for inclusive design

Agenda

- Accessibility and inclusive design
- Guest: Oliver Tipping, Digital Experience Lead UoA

what is design for accessibility and inclusiveness?



<https://www.youtube.com/watch?v=DybczED-GKE>

Q1

- Discuss the user experience of the Seeing AI interface.

Accessibility and inclusive design at the University of Auckland

Oliver Tipping
Digital Experience Lead

Who am I?



ICRC

Software at UoA

- Around 1000 systems and tools used across the University
- Huge range of technologies and quality
- Mix of bought software and in-house built software
- Organisational shift to Agile methodology and principles
- New Digital Strategy for the University
- Drive to be customer led

Why do we need accessibility and inclusive design?

“Inclusion is about creating a better world for everyone.”

Diane Richler, Former President of Inclusion International



Human Rights Commission
Te Kāhui Tika Tangata

Equity Policy

All members of the University are to support equitable access, participation, engagement and success for all staff members and students

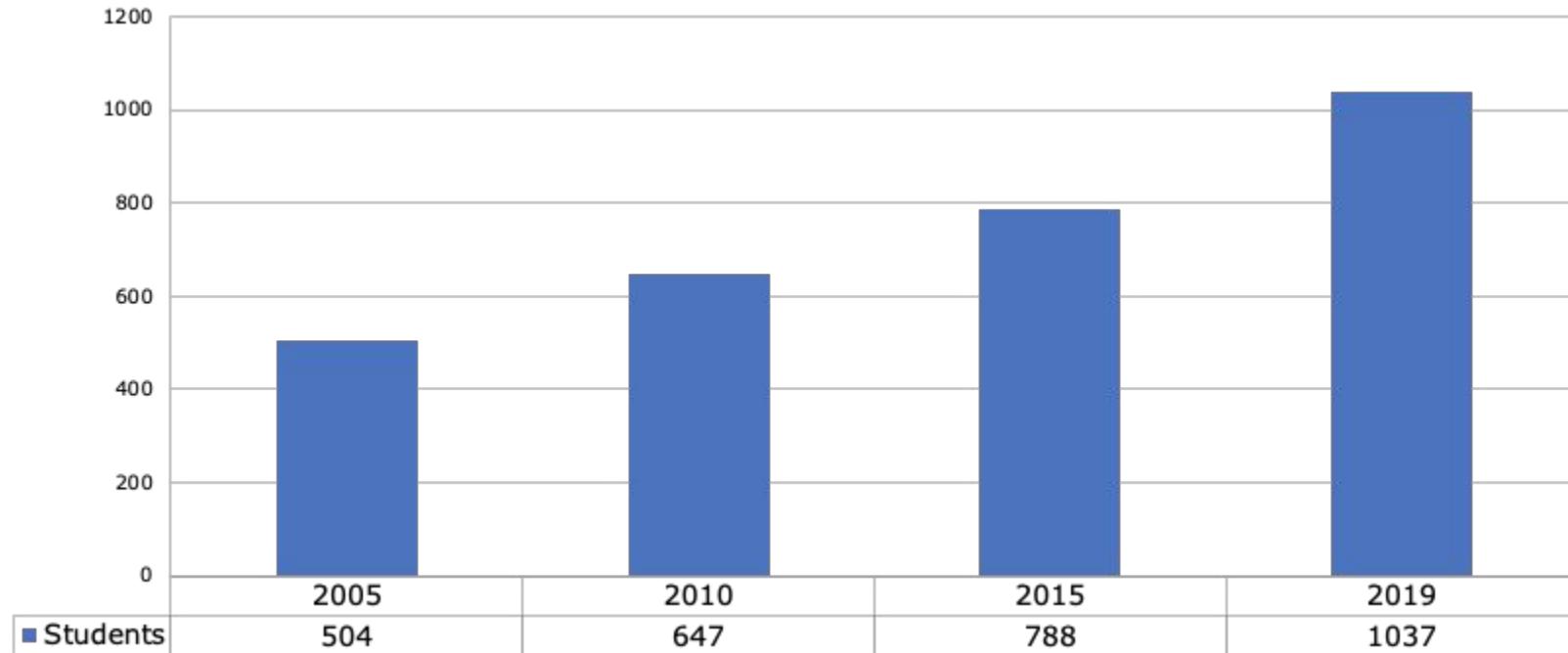


“Government committed to achieving a fully accessible New Zealand” 6 DECEMBER 2018
- Proposed legislation

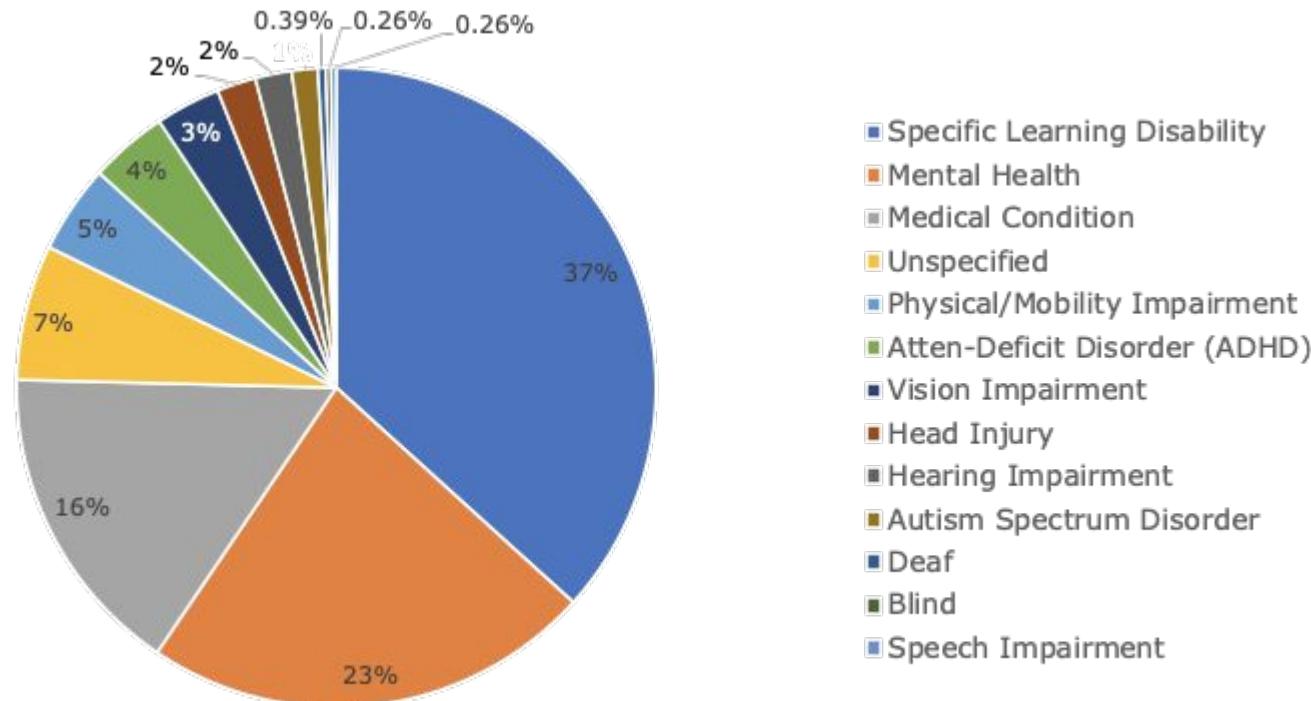
The University of Auckland Strategic Plan 2013–2020

Providing equal opportunities to all who have the potential to succeed in a university of high international standing

Students with disabilities registered with Student Disability Services, 2005-2019



Registered students with disabilities



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New Zealand's world-ranked university

The University of Auckland is #1 in New Zealand for 37 of 40 subjects in the QS World University Rankings by Subject 2017.

[Read more](#)

Accommodation



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Find out what you need before applying for accommodation at University.

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Giving

Inclusive design

New Zealand's world-ranked university

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Study options

Search our wide range of study options and find a programme or degree that's right for you.

[Explore options >](#)

AskAuckland

Your online help and support centre. Search our frequently asked questions.

Ask your question

Go

Top questions

How do I apply for admission?

Where should I submit my admission documents?

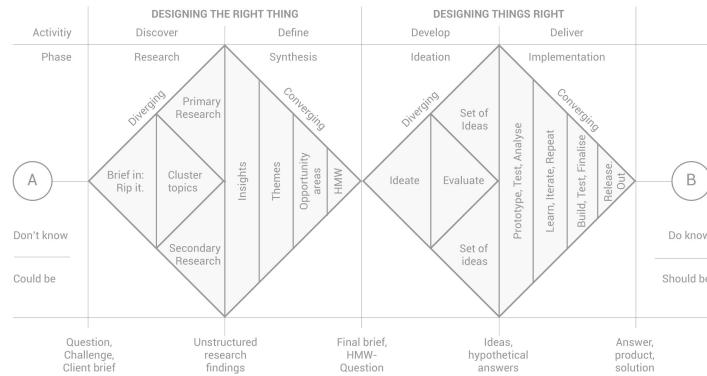
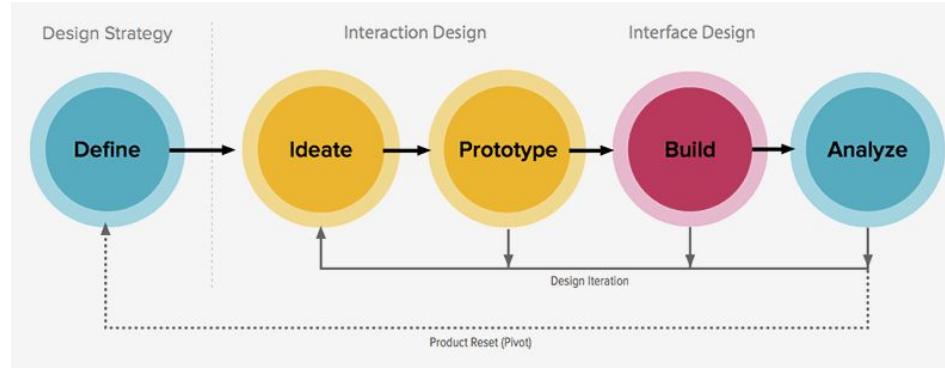
How do I choose my Bachelor of Arts courses?

What does it mean for our work?

- Provide comparable experiences
- Consider the situation & context of the user
- Be consistent
- Give control
- Offer choice
- Prioritise content
- Add value

[Inclusive Design Principles](#)

Our design process



Design system



The landing page for The University of Auckland's Style Guide. It features a large photograph of a modern glass building at sunset. Overlaid on the image is the title "The University of Auckland" in a large, bold, white sans-serif font, followed by "Style Guide" in a slightly smaller, italicized, white sans-serif font. Below the title is a descriptive paragraph in white text: "The objective of this Style Guide is to outline fundamental design principles that establish consistency, coherence and a high standard of execution in the University of Auckland's communications." At the top of the page, there is a navigation bar with links for Home, Principles, Our Brand, Guidelines, Resources (which is highlighted with a blue border), and a search icon.

Brand elements



Day to day

Welcome - The University of Auckland

powered by WebAIM

Styles: on off

Details

Summary... Details Reference Structure Contrast

1 Errors

- 1 X Linked image missing alternative text

43 Alerts

- 1 X A nearby image has the same alternative text
- 1 X Suspicious link text
- 28 X Redundant link
- 1 X Nonscript element
- 12 X Redundant title text
- 23 Features

aria-labelledby="accessibility-label"

Apply for admission to study

Search

Students Staff Alumni

Study Research On campus About us

Code

https://www.auckland.ac.nz/en/main-content

Welcome - The University of Auckland

Apply for admission to study

Students Staff Alumni

DevTools - www.auckland.ac.nz/en.html

141141 - www.auckland.ac.nz

https://www.auckland.ac.nz/en.html

86

Accessibility

These checks highlight opportunities to improve the accessibility of your website. While it's a list of accessibility issues can automatically detect, manual testing is still encouraged.

ATRIA — These are opportunities to improve the usage of ARIA in your application which may enhance the experience for users of assistive technology, like a screen reader.

▲ (color) values are not valid

Normal and tabs — These are opportunities to improve the semantics of the controls in your application. This may enhance the experience for users of assistive technology, like a screen reader.

▲ Links do not have a descriptive name

Tables and lists — These are opportunities to improve the experience of reading tables or list data using assistive technology, like a screen reader.

▲ Lists do not contain only elements and script supporting elements (<script> and <script>).

▲ List items () are not contained within or parent elements.

Additional items to manually check (11) — These items address areas which an automated testing tool cannot cover. Learn more in our guide on [conducting an accessibility review](#).

Passed audits (17)

Not applicable (14)

Giving

CONTRAST CHECKER

COURTESY OF ACART COMMUNICATIONS

SEE GRAYSCALE SHARE SAMPLE RESET

FOREGROUND #000000 Sample 12px

BACKGROUND FFFFFF Sample 18px

GET FROM IMAGE RATIO: 21 ADD TO HISTORY

AA AA AA AAIer AAAlert PASS COLOR 765

HISTORY

SHARE HISTORY SAVE PDF

STATUS FOREGROUND BACKGROUND SAMPLE

CONTRAST CHECKER ABOUT CONTACT US

Expert review

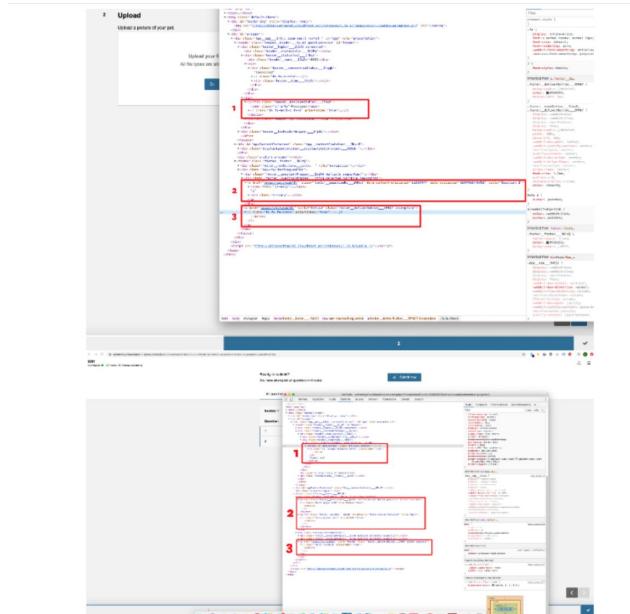


Figure 18: Labels and "buttons"

1. Inconsistent use of labels in buttons and links. Item 1 includes explicit "Submit now" content, which is the best option for accessibility; Items 2-3 rely on "title" attributes, which is the least desirable.

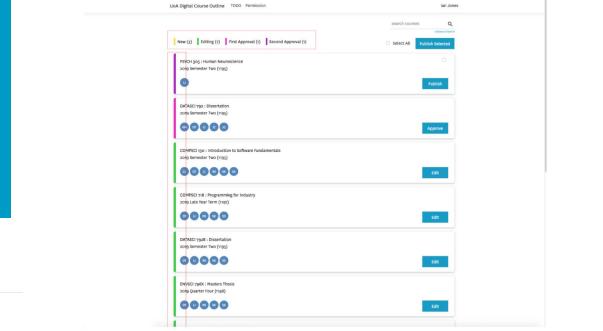


Figure 3

1. Do not use colour exclusively to communicate meaning. Provide document status as text in each card.
 2. Do not rely on title attributes as fall-back when image or colour used to communicate meaning.
 3. How many status items will the filter menu need to support? How will it behave fully loaded, or displayed in a small viewport?

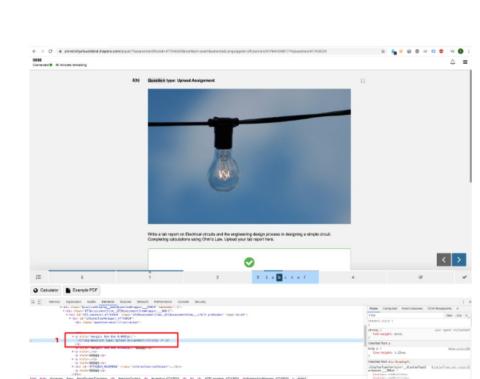


Figure 12: Semantics and structure

1. Styling elements used instead of semantically meaningful HTML elements (e.g. HTML headings).

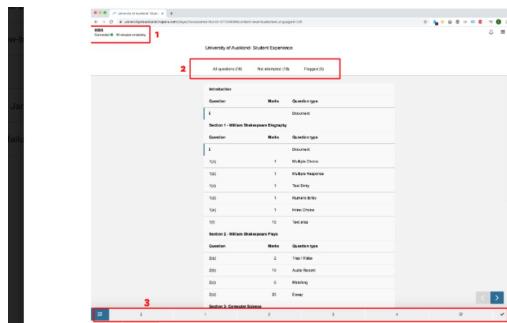
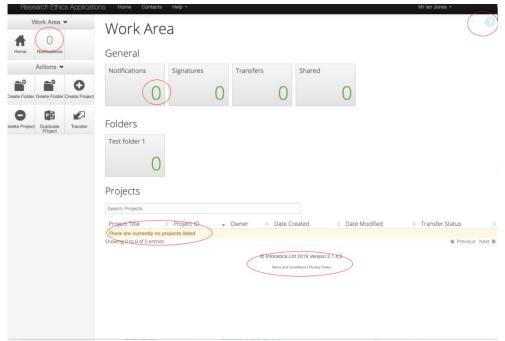


Figure 4: Exam table of contents

1. The timer (1) cannot be turned off directly. The timer, and a number of other in-exam functions, can only be accessed via the unlabeled hamburger menu (top right).
 2. The tab array (2) does not indicate the active tab ["All questions..."] when in the default state (default state can be encountered when the page is first loaded). Actively selecting the "All questions" tab (and other tabs) results in subtle line beneath the text, indicating that it has been selected.
 3. Private label (3) utilizes unfamiliar icons (the checkbox and the tick), without labels; equally distributes the question sections without reflecting mark value, or other measure that may be useful to user; provides little progress affordance, and only provides section/question/review labels to screen readers.
 4. Accessibility: issue with keyboard access to primary navigation on windows from the exam page (in SEB).



Figure

1. Accessibility issue: Very low contrast on text, and the help ("?") icon.
 2. The "Help" icon ("?") opens a help section different to the primary "Help" menu. This could be better organised. [is the "?" icon contextual help?]
 3. The "help" icon does not appear to be accessible via keyboard [to double-check]

Try it for yourself

If you have a smartphone - go to Settings > Accessibility

If you're on a Mac - enable [Voiceover](#) using Cmd + F5

If you're on Windows 10 - enable [Narrator](#) using Windows + Ctrl + Enter

Otherwise - [10 Free Screen Readers For Blind Or Visually Impaired Users](#)

How do I do it?

1. Start by researching your user's needs and habits to form personas for your product. Ensure these are an accurate and diverse range of users needs and behaviours, not biased towards one particular audience.
2. Design inclusively - [A set of posters on how to design for accessibility](#). If you're using Sketch or Adobe XD then use [Stark](#) as part of your toolkit.
3. Test your designs (and make it a habit!) - [Accessibility tools for designers and developers](#)
4. Develop using accessible markup - [Developing for Web Accessibility – Tips for Getting Started | Web Accessibility Initiative \(WAI\) | W3C](#)
5. Test! Test! Test! E.g using Audit mode in Chrome Dev tools - [Lighthouse | Tools for Web Developers](#)

Learn more

[Auckland Digital Accessibility and Inclusive Design Meetup \(Auckland, New Zealand\)](#)

[The A11Y Project](#)

[Accessibility](#) from NZ government

Q2

- Describe two types of design for accessibility that can be checked with automated tools.
- Describe two types of design for accessibility that cannot currently be checked with automated tools.

Summary

- We can apply the UX/HCI design process to accessibility
- User needs for accessibility and inclusive are part of the spectrum of user needs that should be designed for
- There are automated tools that check certain aspects of accessibility

What's coming up

- Tutorial 9 reflections this week
- Tutorial 10 peer review on A3 next week
- Assignment 3 due 8am Monday June 8th 2020