

ASCILITE 2023

People, Partnerships and Pedagogies

Not off to a flying start: Rerouting with human-centred design

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Often, when presented with a task or a problem, we jump in and start work immediately. This approach can lead to solutions that do not meet the needs of the people they are designed for. This paper outlines a less straightforward approach using human-centred design. The Accessibility Hub project was conceived as an online self-service resource for students at an Australian tertiary institute. A teaching and learning specialist and an information technology specialist led the project. After initially dividing up the task and getting started on their to-do lists, the two colleagues decided to take a step back. They employed human-centred design, a process that included empathy interviews with students with disability and ideation sessions with colleagues. Out of this grew a community of practice and the idea that the Accessibility Hub could be a resource for all staff and students at the institute. The Accessibility Hub was launched in January 2023 with the tag line ‘Everyone needs a little help sometimes.’

Keywords: accessibility, inclusion, disability, human-centred design thinking

Introduction

This paper explores the use of technology-supported teaching and learning, using the example of an Accessibility Hub project initiated to solve the problem of students with disability at an Australian tertiary institute not being able to find the help they needed. It addresses different aspects of the conference themes, in particular the diversity of people in learning and teaching, by foregrounding their perspectives in the project methodology. Employing human-centred design (HCD) produced a shift in emphasis from a completing a task to engaging in a conversation and being guided by its outcomes. The project took place at the intersection of people, pedagogy and technology. It opened a window into evolving tools and technologies that can assist with accessibility and offered a starting point in making use of them.

Background: issues and obligations

The Accessibility Hub was initiated to help solve long-standing significant problems. The project team learnt that information about disability services and accessibility at the institute was not in one place, easy to find or fully documented.

About 18% of the Australian population have a disability and more students with disability study at TAFE (10.8%) than at university (6.3%) (Australian Institute of Health and Welfare, 2022). It is known that many students do not disclose disability and don’t get the help they might need (Lindsay et al., 2018). Students approach their teachers for help with accessibility, but teachers are not always sure how to help them.

The institute was aware of its obligations under Australian access and equity standards and laws, including:

- Disability Discrimination Act 1992 and Disability Standards for Education 2005, which state the rights of students to an equitable and inclusive education experience.
- The Standards for RTOs 2015, which define access and equity responsibilities as including being responsive to people who encounter barriers to participation.

There was also a widespread demand from the institute community for accessibility features, such as enlarged fonts, text to speech and closed captions, which make online interactions easier. However, knowing where to find the right one and getting started was seen as difficult and time-consuming. Many of our staff and students struggle with digital literacy.

From discussions with students with disability, we found that they usually need to work harder to achieve the

same result as those without a disability. Students with ADHD and dyslexia, for example, were hit with a ‘double whammy’ where restlessness and difficulty with spelling and grammar tasks made many tasks difficult. It is estimated that up to half of those with dyslexia may also suffer from ADHD (Bowman & Van der Pluym, 2022). In tertiary education, disabled students also have to advocate for themselves, whereas at school their parents and teachers looked after their needs. (LDRFA, 2023)

Alongside people with a disclosed disability, there are many people who can benefit from accessibility services, tools and software. For example, older people with diminishing vision and/or hearing, people whose first language is not English and people with temporary disabilities. There is also a wide spectrum of learning difficulties that are not diagnosed as a disability. Learning difficulties can result in students making errors in spelling, writing, processing information or making mathematical calculations. These can all have a negative impact on their learning. (ADCET, n.d.)

Project process: collaboration and human-centred design

The Accessibility Hub project was initiated as a collaboration between two departments: Teacher Development and Teaching Innovations. A teaching and learning specialist and an information technology specialist led the project, which ran from June to December 2022.

The initial focus was on researching accessibility touch points: from student enquiry to graduation; from the toilets to the car park. This built up a picture of the kind of supports available and highlighted gaps. After initially dividing the task into campus services and assistive technology, and getting started compiling lists, the two colleagues decided to take a step back. They employed human-centred design (HCD) thinking, based on the Harvard Institute of Design (2010) and IDEO (2015) models, to ensure that people with disability were consulted on their issues of concern and that their views informed design and review of the project.

Human-centred design starts with understanding the needs of the people you are designing for. When used well, it fuels creativity and drives engagement by aligning with people’s needs and desires. (Queensland Government, 2018). Use of HCD for accessibility projects in tertiary institutes has shown promise in finding solutions (Heron et.al., 2022). And as Bartlett et.al. (2021) state, using HCD with those who are disadvantaged or marginalised offers advantages in terms of ethics and effectiveness.

The institute had adopted a HCD approach for a number of recent projects and also ran courses on implementing HCD, which one of the two people leading this project had completed.

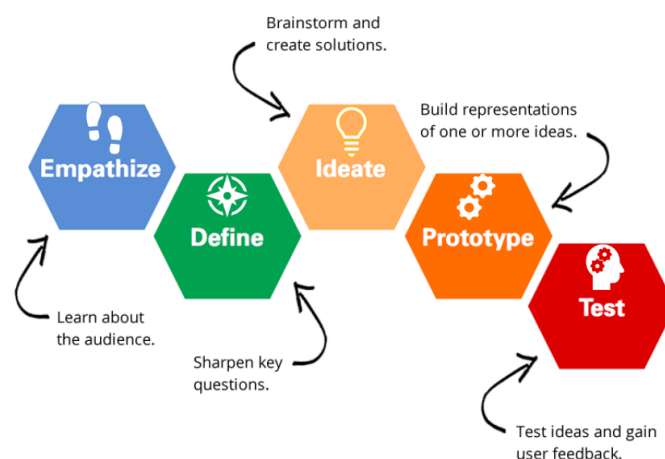


Figure 1: Human-centred design process. Source: Institute of Design at Stanford.

The project followed six steps in the HCD process, as shown in the diagram above (Figure 1):

1. Empathise: Empathy interviews were held with students and teachers with disability, who were asked questions about what accessibility meant to them and their experience of accessibility at the institute.
2. Define: Results of empathy interviews were collated and discussed to come up with a problem question, which was, ‘How might we improve current accessibility processes and information for learners with diverse

- needs to level the playing field?’
3. Ideate: Key stakeholders from across the institute met to work in groups and came up with a wide range of ideas to address the problem question. All ideas were recorded.
 4. Prioritise: At a second meeting with stakeholders, a priority list was drawn from the ideas previously recorded and then discussed. It was decided to proceed with could be included immediately as part of the Accessibility Hub project, and retain the other ideas for future development.
 5. Prototype: The first iteration of the Accessibility Hub was created as a self-service hub for help and support with accessibility. It was created in two parts: Campus accessibility information and services; Assistive technology – equipment and software. A technical and user testing process took place. Advice on assistive technology was sought from the ADCET technical advisory service.
 6. Test: The second iteration of the Accessibility Hub was user tested by a wide range of stakeholders, including students and teachers with disability. A final technical and user-testing process took place, and fixes implemented before launching in December 2022.

The Accessibility Hub is located on the Moodle learning management system and is accessible without a login.

Outcomes: Usage, support and community

The Accessibility Hub has added significant value and a point of difference to the student experience and to employees, evidenced by the strong uptake of users. Activity data shows that since the Accessibility Hub was created (to 1 July 2023) there have been nearly 7000 views by more than 1400 users.

Library staff were trained to support teachers across all campuses in how to help their students find what they need in the Accessibility Hub and support them with trying new software. Lunch and Learn sessions open to all staff were held.

Student services added an introduction to the Accessibility Hub to their registration process for students with disability. They were also able to refer many low-level support enquiries from students to the information in the Accessibility Hub. At the very busy time of enrolments in early 2023, this allowed staff to handle more queries and focus on students with the greatest need.

An ongoing Accessibility Hub community of practice was initially set up in Microsoft Teams to schedule meetings and provide a space for collaboration with colleagues. This group took on the responsibility of creating a marketing plan and actioning further ideas from the priority list. The Accessibility Hub was promoted across the institute community as a resource for all staff as well as students. A link to the Accessibility Hub from the front page of the institute website was added in early 2023.

Rewards and challenges

In May 2023, the Accessibility Hub team won a national Accessibility in Action Award from the Australian Disability Clearinghouse on Education and Training (ADCET). They also received a staff award for innovation. Awareness of accessibility was raised at the institute and a new role, Learning and Accessibility Specialist, was created within the Teacher Development team.

The main challenge is to maintain momentum and to keep the Accessibility Hub information current. This is a significant challenge in a busy environment with competing priorities. It is possible that the Hub needs to be redesigned to reduce the need for frequent updates.

Conclusion

The Accessibility Hub provides a place where everyone can get information and resources independently, without having to disclose a disability. The project made use of inclusiveness strategies, such as open discussion, and welcoming diverse and challenging ideas from across the institute’s community. The positive impact of these strategies includes enabling those who are disadvantaged to access opportunities to develop initial knowledge and skills in assistive technology, become lifelong learners and maintain up-to-date skills.

The implications of this project include a demonstration of how to centre practice on the lived experience of people with disability by using a human-centred design approach. This approach promoted collaboration across departments and faculties and resulted in the realisation that accessibility is about and for all of us; it supports collective wellbeing. Another key aspect of this project was the initiative to include communication and training

in the project plan to ensure the Accessibility Hub was known to as many staff and students as possible. This was further enhanced by empowering teachers to upskill themselves in evolving tools and technologies they can pass on to learners.

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