

## Disability and the Ethics of Inclusive User Interface Design

Length: 1 Day (80 min)

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Problem Statement: Designing accessible user interfaces requires understanding a wide range of possible user experiences, and this cannot be done well without input from the communities being designed for.

Learning Objectives:

Students will understand the medical and social models of disability and their relation to design responsibilities.

Students will understand the difference between universal, inclusive, and adaptive design.

Students will understand the principle that good inclusive design requires input from the communities being design

The social model of disability puts a certain level of responsibility on designers, because their design choices can literally produce or alleviate disability. Products that, when coupled with certain impairments, produce a situation of disability do harm to the people they exclude from ease of use. If it is possible to have designed the product in a way that did not lead to a situation of disability, then it is in the designers' power to prevent these harms. And generally speaking, when someone has the power to prevent a harm, they should.

### Three Types of Accessible Design

While there are many different ways to design products with different abilities and impairments in mind, they can be broadly grouped into three categories, each with various tradeoffs. These three are universal, inclusive, and adaptive design.

Note: this language shifts somewhat depending on usage, and sometimes people will use the terms accessible, universal, or inclusive design to refer to all three under one heading. To refer to all three approaches, we will use "accessibility" or "accessible design" in this module.

Universal design aims to produce a product that is usable by everyone, and where everyone has the same experience.

with physical infrastructure. Adding a ramp onto an old building, or a patch that institutes a new

Ross Minor, an accessibility consultant and video game player who is blind, gives an accessibility review of Diablo 4. [https://www.youtube.com/watch?v=WUynAuWHx\\_E](https://www.youtube.com/watch?v=WUynAuWHx_E) The video is somewhat long for class, but the first 5 minutes or so cover much of the details and positives, and a criticism is offered at 16 minutes.

Similarly, people's imaginations are often limited by what they find familiar. This can lead to less accessible design when an inclusive alternative unnecessarily preserves details or features only relevant to people who do not need that alternative. The history of braille may be illustrative here. Before braille, it was common to teach students with visual impairments using raised letters, that is, the letters of the alphabet are raised off the surface so that they could be recognized by touch. The idea was that it would give visually impaired students the same information as sighted students, but in a form they could access. This turned out to be incredibly difficult for several reasons, one of which being that many letters felt the same or similar enough as to be very hard to distinguish (Such as C, G, Q, O). Visually

"Beyond Accessible to Universal Design." Whole Building Design Guide. <https://www.wbdg.org/design-objectives/accessible/beyond-accessibility-universal-design>

Harden, Bill. 2016. "Colorblind Accessibility in Video Games – Is the Industry Heading in the Right Direction?" <https://www.gamersexperience.com/colorblind-accessibility-in-video-games-is-the-industry-heading-in-the-right-direction/>

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