

What is accessibility in user experience design?

Accessibility is the practice of making your products usable by as many people as possible, including people with various disabilities.

What is usability in user experience design?

Usability is about designing products to be effective, efficient and satisfying. Usability is intertwined with accessibility but doesn't address directly people with disabilities.

What is inclusion in user experience design?

Inclusion is about designing for all. It addresses all types of constraints, including cultural, geographic, economic, age and other aspects.

Why design for a11y?

Because there is a significant percentage of people with disabilities in the world, and you should always provide them with a better user experience. If your product is not accessibility compliant people can take legal action.

How many people have disabilities?

1 in 4

adults in the US has a disability

40%

of people 65 years and older in the US have a disability

20%
(48 million)

of people in the US have some degree of hearing loss

2.3%
(7 million)

of people in the US have a visual disability

1 million

of people in the US are legally blind

16%
(39 million)

of people in the US have a physical impairment

17.1 million

of people in the US can't normally walk a quarter mile

8 million

of people in the US have an intellectual disability

1 in 12

men is color blind or color deficient

1 in 200

women is color blind or color deficient

Types of disabilities



Auditory

Hard of hearing – mild or moderate hearing impairments in one or both ears.
Deafness – substantial, uncorrectable impairment of hearing in both ears.
Deaf-blindness – substantial, uncorrectable hearing and visual impairments.



Visual

Color blindness – difficulty distinguishing between colors such as between red and green, or between yellow and blue, and sometimes inability to perceive any color.
Low vision – poor acuity (vision that is not sharp), tunnel vision (seeing only the middle of the visual field), central field loss (seeing only the edges of the visual field), and clouded vision.
Blindness – substantial, uncorrectable loss of vision in both eyes.
Deaf-blindness – substantial, uncorrectable visual and hearing impairments.



Speech

Apraxia of speech (AOS) – inconsistent articulation and production of speech sounds, and errors producing sounds in the correct order so that spoken words or phrases become difficult to understand.
Cluttering – increased speaking rate, incorrect rhythm, intonation, and co-articulation of sounds, and other fluent speech that is sometimes similar to stuttering.
Dysarthria – weakness or complete paralysis of muscles that are necessary to produce speech, including lips, lungs, throat, tongue, and others.
Speech sound disorder – difficulty or inability to produce certain sounds or patterns of sound and sometimes results in addition, distortion, omission, or substitution of such sounds with others.
Stuttering – fluent speech, repetition of individual sounds or entire words and phrases, and misplacement or prolongation of pauses and sounds while speaking that is different from cluttering.
Muteness (also called "mutism") – involves the inability to speak due to various reasons such as anxiety, brain injuries, or inability to hear and learn speech.



Cognitive

Attention deficit hyperactivity disorder (ADHD) – difficulty focusing on a single task, focusing for longer periods, or being easily distracted.
Autism spectrum disorder (ASD) – impairments of social communication and interaction abilities, and sometimes restricted habits and interests.
Intellectual disabilities – impairments of intelligence, learning more slowly, or difficulty understanding complex concepts. **Down syndrome** is one among many different causes of intellectual disabilities.
Learning disabilities – perceptual disabilities.
Mental health disabilities – anxiety, delirium, depression, paranoia, schizophrenia, and many other disorders. These conditions may cause difficulty focusing on information, processing information, or understanding it. In particular medication for these disorders may have side effects including blurred vision, hand tremors, and other impairments.
Memory impairments – limited short-term memory, missing long-term memory, or limited ability to recall language. Dementia is one among many different causes of memory impairments.
Multiple sclerosis – causes damage to nerve cells in the brain and spinal cord, and can affect auditory, cognitive, physical, or visual abilities, in particular during relapses.
Neurodiversity – is a societal rather than medical term to describe the natural diversity in neurocognitive functioning, like gender, ethnicity, sexual orientation, and disability.
Perceptual disabilities – difficulty processing auditory, tactile, visual, or other sensory information. This can impact reading (**dyslexia**), writing (**dysgraphia**), processing numbers (**dyscalculia**), or spatial and temporal orientation.
Seizure disorders – includes different types of epilepsy and migraines, which may be in reaction to visual flickering or audio signals at certain frequencies or patterns.



Physical

Amputation – missing fingers, limbs, or other parts of the human body.
Arthritis (rheumatism) – inflammation, degeneration, or damage to the joints.
Fibromyalgia (rheumatism) – the chronic pain of muscle and connective tissues.
Reduced dexterity – the ability to control the hand, such as hand-eye coordination of people with cognitive and neurological disabilities.
Muscular dystrophy – progressive weakness and degeneration of muscles, sometimes including in arms and hands.
Repetitive stress injury (RSI) (also called "repetitive motion disorder" (RMD) and "cumulative trauma disorder" (CT)) – injuries to the musculoskeletal system (bones, joints, tendons, and other connective tissues) and the nervous system from repetitive tasks and damage.
Tremor and spasms – involuntary movement or muscle contraction, including short twitches, and continual or rhythmic muscle contractions.