



# General Writing Guidelines for Technology and People with Disabilities

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## Introduction

The recommendations in this article reflect current thinking on language for writing in the academic accessibility community. Certain words or phrases can (intentionally or unintentionally) reflect bias or negative, disparaging, or patronizing attitudes toward people with disabilities and in fact any identifiable group of people. Because language can convey these things, it can influence our impressions, attitudes, and even actions. Choosing language that is neutral, accurate, and represents the preference of the groups to which it refers can convey respect and integrity.

Terminology changes over time. Indeed many terms that were acceptable 50 years ago are not generally acceptable now. Perhaps some of the terms we suggest here may be unacceptable for unforeseen reasons 50 or even 5 years from now. The language in use at a given time reflects the attitudes and philosophies of the time. It is important to understand the meanings and backgrounds of the terminology you use to make sure that your writing accurately reflects your own attitudes and philosophies.

We have attempted to gather suggestions for terminology that currently reflects the preferences of various disability groups and accurately portrays those groups. We have also tried to avoid trendy terminology that seems to come and go quickly. Also listed are several terms that today's authors should avoid. When appropriate, we've listed occasions when these terms are in fact appropriate to use. Recognizing that language usage changes over time, we consider this document an overview of terminology currently appropriate. For updates to this document reflecting terminology changes, please see <http://sigaccess.org/xxx.htm>

This article describes terminology appropriate for academic publications in the field of accessibility. Terminology varies as used by disabled people themselves, historically, and among various stakeholder communities (such as the medical, education, rehabilitation, and disability rights establishments). For this reason, different language may be commonly used in other contexts.

In general,

- Define your terms. In the context of your writing, does 'blind people' mean people who cannot see or people who primarily use screen readers to access the computer?
- Be consistent. For example, if you've chosen 'cognitively impaired' keep using that -- don't switch between 'cognitively impaired' and 'intellectual disability' throughout the writing.
- When describing people with no disability, use the terms 'non-disabled' or 'persons without disabilities' rather than 'normal' or 'healthy'.

## **Impairment, Disability, or Handicap?**

The words 'impairment', 'disability', and 'handicapped' have different meanings that convey critical distinctions. Use language that maintains the integrity of individuals as whole human beings by avoiding language that (a) equates persons with their condition (e.g., epileptics, the deaf), (b) has superfluous, negative overtones (e.g., stroke victim or sufferer ), or (c) is regarded as a slur (e.g., cripple).

The words 'impairment', 'disability', and 'handicap' are not synonymous [3, 9]. The following is taken from the American Psychological Association Online Style Manual [3]:

Impairment is used to characterize a physical, mental or physiological loss, abnormality or injury that causes a limitation in one or more major life functions. For example, "The loss of her right arm was only a slight impairment to her ability to drive."

Disability refers to a functional limitation that affects an individual's ability to perform certain functions. For example, it is correct to say, "Despite his disability, he still was able to maintain employment."

Handicap describes a barrier or problem created by society or the environment. For example, "The teacher's negative attitude was a handicap to her." Or, "The stairs leading to the stage were a handicap to him."

A disability is a measurable impairment or limitation that "interferes with a person's ability, for example, to walk, lift, hear, or learn. It may refer to a physical, sensory, or mental condition" (Schiefelbusch Institute, 1996).

The word handicap is not a synonym for disability. Rather, a handicap is a disadvantage that occurs as a result of a disability or impairment. The degree of disadvantage (or the extent of the handicap) is often dependent on the adaptations made by both the individual and society (Department of Physical Medicine and Rehabilitation, 2000). Therefore, the extent to which a disability handicaps an individual can vary greatly. For instance, a person who uses a wheelchair would be much less "handicapped" in a building that is wheelchair accessible than one that is not.

It is important to consider terms that disabled people themselves use. Consider, for example, the fact the term 'hearing-impaired' is not considered acceptable within the deaf community (see below).

### **Terms to avoid:**

There are many terms that are considered especially offensive to people with disabilities [5, 7, 9]. Listed here are some tips specifically relevant for accessibility researchers. In general, avoid using:

- terms that equate people with their disability such as 'quadriplegics,' 'the deaf,' and 'the disabled.' Instead, use 'people who use a wheelchair,' 'deaf people' or 'people who are deaf,' and 'people with disabilities.'
- normal and/or abnormal
- victim of \_\_\_\_\_
- suffering from \_\_\_\_\_
- afflicted with \_\_\_\_\_
- defective

- trendy euphemisms. Expressions such as “physically challenged,” “special,” “differently abled,” and “handi-capable” generally are regarded by the disability community as patronizing and inaccurate [5].
- patients (use this word only when referring to people who are residing in a hospital or are in need of medical attention).

## **Person first language**

Preferred language varies from country to country. In the United States , 'person with a disability' tends to be favored [8]. In other countries, 'disabled person' is preferred. Given variations in accepted terminology, both will be seen in computing publications.

## **Vision terminology**

The phrase 'visually impaired' is commonly used. While this is a phrase that is acceptable to most stakeholders, for scientific writing this phrase often does not convey enough information. In writing, it is important to note characteristics of the disabled participants.

For example, in some studies it is critical to know if participants are screen reader users or whether they prefer magnification or visual filters. Not all blind people use screen readers, some people with low vision use screen readers, others use magnification software or other software to help better navigate a visual interface. Make sure that your writing explicitly states any assumptions, for example do not use the term “blind people” when you really mean “people who use screen readers as their primary means of accessing a computer.”

In other studies, it may be critical to distinguish participants by degree of vision loss. The terms 'blind', 'legally blind'; and 'low vision' are commonly used, but for scientific writing require definition with reference to the research

### **Terms to avoid:**

- sight deficient
- people with sight problems
- 'unsighted'

## **Hearing terminology**

The choice of the words for referring to people with a hearing loss will depend on many factors. People who use sign language generally refer to themselves as deaf. In some cases, the word Deaf is spelled with a capital D to refer to members of the Deaf Community [6]. This would be appropriate if discussing a cultural issue. The use of deaf with the lower-case spelling more typically refers to a hearing loss and is appropriate if cultural issues are not part of the discussion topic.

Some deaf people prefer to use sign language; others prefer to rely on spoken language through speech, lipreading, residual hearing, hearing aids, or cochlear implants. Thus, when describing deaf participants it is often crucial to indicate the communication preferred by the individual.

Typically, the term hard of hearing is used to refer to less severe hearing loss than the term deaf. Again, however, this terminology is culturally sensitive and for individuals is determined in many cases by their community identify rather than by the degree of hearing loss.

In writing about participants with a hearing loss, choice of terminology will often be determined by the topic of study.

Hearing impaired is a term typically reserved for medical writing and refers to the decibel-level of hearing. Because it negatively emphasizes a deficiency, the term hearing impaired is typically rejected by members of the Deaf Community. However, elderly people who have experienced hearing loss later in life may prefer the term hearing impaired as they do not identify with the deaf or hard of hearing groups.

As examples, when writing about topics that include sign language or Deaf Culture, use 'deaf' or 'Deaf'. When writing about general accommodation for this group use 'deaf and hard of hearing'. If you are writing about topics that include or are directly dependent on decibel level of hearing, refer to the degree of hearing loss.

### **Terms to avoid:**

- deaf mute
- deaf and dumb

### **Mobility/Motor/Dexterity Terminology**

The word mobility generally refers to walking or moving about and so the term 'mobility impairment' may be an inappropriate classification when referring to computer use. If the intended classification is meant to refer to a person's ability to use a standard mouse or keyboard, motor or dexterity impairment would be a better choice. 'Motor disability' and 'physical disability' are also acceptable terms.

Wheelchair usage: Use the phrase 'person who uses a wheelchair' or 'wheelchair user' rather than 'confined to' or 'restricted to' a wheelchair.

### **Terms to Avoid:**

- restricted to a wheelchair
- confined to a wheelchair
- wheelchair-bound
- deformed
- crippled
- physically challenged

### **Cognitive Terminology**

Cognitive disabilities affect a person's ability to learn, process and / or remember information, communicate, or make decisions. Specific forms of cognitive impairment are often referred to in medical literature as deficits. This term may be used in computer science when referring to specific cognitive skills, for example 'people with a visual processing deficit', but avoid 'people with deficits'.

It is important that writers carefully define cognitive disabilities. Consider whether the research relates to learning disabilities, intellectual disability, or specific cognitive ability (such as memory or language processing). Be precise in describing the characteristics of the population.

Developmental disability is any severe mental and/or physical disorder that began before age 22 and continues indefinitely. Individuals with mental retardation, autism, cerebral palsy,

epilepsy and other similar long-term disabilities may be considered to have developmental disabilities.

Mental illness is a term describing many forms of illnesses such as schizophrenia, depression and emotional disorders. Use 'person with a mental disability.'

For people who do not have a cognitive disability, use terms 'people without disabilities' or, in the case of developmental disabilities, 'typically developing children.'

### **Terms to Avoid:**

- retarded
- deranged
- deviant
- demented
- deficient
- people with deficits
- insane
- slow or slow learner
- abnormal or normal
- mad, crazy, paranoid
- mongoloid (use person or child with Down Syndrome instead)
- "special ed"
- clinical terms such as "neurotic" and "psychotic" should be used only for clinical writing.

### **Other**

The terminology discussed here does not completely cover all areas of accessibility research. For example, work with older adults is currently an important area. The general principles indicated here, however, should apply in considering writing on topics not covered here.

### **Summary**

As we stated at the beginning, appropriate terminology changes over time and with context. This article, however, is a starting point for current research on accessible computing.

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Vicki Hanson is Chair of ACM's Special Interest Group on Accessibility (SIGACCESS) and has chaired their ASSETS'02 conference on Assistive Technologies. She is the co-founder and Editor-in-Chief of *ACM Transactions on Accessible Computing* (with Andrew Sears) , Associate Editor for Accessibility of *ACM Transactions on the Web* and has served as guest editor for several Special Issues on accessibility topics for journals. She is a Fellow of the British Computer Society and was named ACM Fellow in 2004 for her contributions to computing technologies for people with disabilities. She received the ACM SIGCHI 2008 Social Impact Award for her work.