Disability and Accessibility Language in Subject Headings and Social Tags

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Citation of this paper:
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Introduction

People with disabilities face innumerable challenges in fighting for equal rights and equity, and one such challenge is regarding access to libraries and information. Although libraries are often welcoming, underlying systems such as subject headings can perpetuate harmful stereotypes, particularly towards marginalized populations. This study examines disability language in two controlled subject vocabularies – the Library of Congress Subject Headings (LCSH) and the Education Resources Information Centre (ERIC) Thesaurus – as well as in two social tagging systems – the Steam computer game client and the fan works repository Archive of Our Own (AO3).

Literature review

Disability language in subject access systems

Previous research on disability language in subject access systems has indicated an ongoing struggle to reflect language used in disability communities. Historically, disability language in subject access was derived from the medical field (Adler, Huber, & Nix, 2017). The so-called “medical model of disability” views disability as pathological; descriptors include “defective”, “crippled”, and “handicapped”, perpetuating stigma (2017). This contrasts with the social model – preferred by disability scholars – which frames disability in terms of socio-cultural barriers (Koford, 2014).

Changes in language have previously been made – LCSH revised “Handicapped” to “People with disabilities” in 2002 (Adler, Huber, & Nix, 2017) – but there have not been accompanying changes in hierarchical structures. In the Library of Congress Classification (LCC), works on “People with disabilities” are classified under HV, which is titled “Social Pathology. Social and Public Welfare. Criminology”. Similarly, Dewey Decimal Classification (DDC) uses the term “People with illnesses and disabilities” (2017). Thus, despite changes to wording, disability is still being explicitly linked to pathology (the medical model) instead of impairment (the social model).

The effects on disability studies

The ongoing linguistic and hierarchical issues surrounding disability have naturally impacted disability studies. Koford (2014) found that disability scholars struggle to find search terms that yield the information they seek. Oftentimes, results are too broad or they are forced to use non-preferred terms (medical model instead of social) to conduct their search. Some of the researchers Koford interviewed also reported being more likely to use multidisciplinary databases over subject-specific databases, as they tend to yield more results. Koford’s (2014) key takeaway was that “the way documents are organized in libraries and databases has a profound impact on what information is retrieved and what remains unseen” (p. 388), and that while no subject access system can meet every user’s needs, consultation with subject experts is a good first step towards improving language and hierarchies.

Social tagging & Archive of Our Own

Within the literature, researchers suggest the existence of two major forms of tagging: controlled vocabulary and social tagging. A controlled vocabulary uses predetermined and standardized language in order to organize information. Controlled vocabulary tends to be rigid, with language that becomes outdated easily (McCulloch, 2019). Social tagging, also known as user-tagging, allows users to create their own tags with no specific guidelines or vocabulary (2019).
The most common example of social tagging is through social media tagging, such as on Flickr or Twitter. Since very few rules apply within social tagging, users often find themselves listing multiple variations of the same tag, thereby creating long, conflicting, and cluttered links to information.

AO3 is a non-profit fanfiction repository. It uses a system of social tagging combining controlled vocabulary with user-tags (see Figure 1). Users are encouraged to create their own tags relating to specific fandoms with some help from an autocomplete function which suggests established canonical terminology, which is officially accepted terminology derived from individual fandoms (Dalton, 2012). Resembling LCSH, a user may select a tag to see its parent tags, synonymous tags, and subtags (see Figure 2). AO3 also uses tag wranglers: volunteers who look through tags and match non-canonical tags with canonical tags to ensure some level of control over terminology (McCulloch, 2019). Tag wranglers operate using a set of rules, which Dalton (2012) likens to the “use” and “used for” devices “in authority records of the Library of Congress” (p. 3). Overall, the combination of social tagging and controlled vocabulary exhibited through tag wranglers and AO3’s autocomplete functionality ensures that information organization and retrieval is more useful and insightful than strictly controlled vocabulary or user-tagging (McCulloch, 2019).

![Figure 1: AO3 tags on a work of fanfiction](image1)

This tag belongs to the Fandom Category. It’s a common tag. You can use it to filter works and to filter bookmarks.

**Parent tags (more general):**
- Books & Literature
- Cartoons & Comics & Graphic Novels
- Movies
- Video Games

**Tags with the same meaning:**

**Meta tags:**
- Star Wars: Rise of Empire Era – All Media Types
- Star Wars – All Media Types

**Sub tags:**

![Figure 2: AO3 tag structure](image2)
Tagging on Steam

Steam is a digital store and client program for computer games. Users and game developers can apply tags to games, and the most frequently used tags are compiled into a public list of “global tags” (Valve Corporation, n.d.a). Valve seems to exert some control over this list, however, as profanity is filtered out (Valve Corporation, n.d.a), and they only recently officially included an LGBTQ+ tag (Good, 2019a).

An analysis of Steam tags found that they can be organized similarly to the Video Game Metadata Schema (VGMS) developed by the Game Metadata Research Group and the Seattle Interactive Media Museum (Windleharth, Jett, Schmalz, & Lee, 2016). Categories included genre, visual style, pacing and customization options; however, some categories—including mechanics and input types—were not part of the VGMS at the time (Windleharth et al., 2016). The study concluded that tags are mostly used to denote genre, mood, and characteristics that wouldn’t otherwise be listed in promotional materials.

Digital games & accessibility

Accessibility has been coming to prominence as a topic in the games community, notably in early 2019 after the release of the game Sekiro: Shadows Die Twice (Thompson, 2019). Yuan, Folmer, and Harris (2010) grouped impairments as they affected gameplay into four categories—visual, hearing, motor, and cognitive—and modeled gameplay interaction into three steps with which impairment might interfere: receiving stimuli, determining a response, and providing input. Following that, in 2012 a living document was published with guidelines for developers for what accessibility features they should consider including, and the level of time and effort it would take to implement each of them (Ellis et al., 2012). Improvement is uneven, and accessible hardware traditionally cost-prohibitive, but more and more developers are committing to accessibility, comparatively-affordable adaptive controllers have been released in the past few years, and organizations like The AbleGamers Charity can help offset remaining costs (Good, 2019b; Gwaltney, 2019).

Methodology

We examined four subject access systems altogether: two fully-controlled taxonomies—LSCH (2006) and the ERIC Thesaurus (Institute of Education Sciences, n.d.) — and two folksonomies—AO3’s social tags (Organization for Transformative Works, n.d.) and Steam’s Global Tags (Valve Corporation, n.d.b). A list of terms related to disability and accessibility was selected from each taxonomy. To reduce bias, we tried to collect terms that were explicitly connected to accessibility or disability, either based on the term itself or, in the case of ERIC, collecting terms from their pre-established Disability category. An exception was made for Steam, as no terms in their global tags explicitly referred to disability language. Terms from Steam were instead selected based on whether they might indicate the inclusion of accessibility features per the Game Accessibility Guidelines (Ellis et al., 2012) or features that would make the game inaccessible for certain disabilities.

Collected terms were sorted into sub-categories based on prominent similarities. Most sub-categories were centred around different types of disabilities or in relation to particular people groups, as well as accessibility and accommodation. However, the categories for the Steam tags drew greater inspiration from the VGMS and the categories used by Windleharth et al. (2016) in their sorting of Steam tags. The collected and sorted lists of terms can be found in the appendices.

Discussion

LSCH & ERIC

As controlled vocabularies, LCSH and ERIC share some similarities in regards to terminology. While both vocabularies focus on disability and accessibility language, LCSH (n=76) tends to consist of more age-group headings and more terms pertaining to accessibility than ERIC. An examination of ERIC terms (n=92) indicates that the language is directly focused on disabilities and accessibility, primarily in an educational context. ERIC is also the only thesaurus in this study to highlight dead terms.
Interestingly, “Architectural barriers” has been marked dead, even though the term “barriers” is commonly used throughout disability studies, the social model of disability, and in major thesauri, such as LCSH. Both thesauri have shifted towards using people-first language, which demonstrates a willingness to update the language used to describe disability; however, ERIC still contains instances of “[the] disabled”.

**AO3 & Steam**

Despite the large contributing communities of both AO3 and Steam, the content of their respective tags vastly differs. The Steam tags (n=35) are functionally descriptive: describing a component of gameplay or visual aesthetic. Even still, only one term concretely suggests an accessibility feature (tutorial), nor are there many terms that clearly indicate inaccessibility. On the other hand, the AO3 tags (n=102) are narratively descriptive: describing character or story elements. Given the works the tags respectively describe, this makes some sense. But, games often have narratives as well, yet there is only one narrative Steam tag that can apply to disability: transhumanism, which is weighted with controversy (Bradshaw & Ter Meulen, 2010; Hilvoorde & Landeweerd, 2010; Koch, 2018).

**General Discussion**

Although controlled vocabularies, such as LCSH and ERIC, have undergone updates to modernize disability terminology, Koford’s (2014) research suggests disability scholars still disregard controlled vocabulary as it often provides an inaccurate portrayal of the disability community. Folksonomies, such as Steam’s global tags and AO3’s social tags, provide an interesting contrast as they combine aspects of controlled vocabulary with user-generated tag structures. Within these folksonomic systems, users are encouraged to provide their input while organizational authorities ensure consistency of tags (i.e., AO3’s canonical and Steam’s global tags). With AO3, we can see this system working most clearly. The combination of tagging freedom and supportive structure has allowed for tags that describe social and activist dynamics of disability: intersectionality, confrontation of ableism, and sexuality – the latter of which contrasts with consistent desexualization of people with disabilities elsewhere. This does not mean, however, that user-tagging systems are the only means of including activist description. ERIC has a heading for “Disability Discrimination”, though it falls within the “Bias and Equity” category (and thus was not included in our list), and said category also includes terminology to describe activist work. On the other hand, we have already discussed Steam’s lack of disability language. Whether or not these subject access systems have accomplished inclusivity in their disability language has largely been dependent on whether their respective central communities have cared to make changes.

How, then, to proceed? Deodato (2014) proposed introducing social tagging to exist alongside official bibliographic records and subject headings, which has been implemented in some discovery platforms such as BiblioCommons. But these tags seem to lack control in their vocabulary, and there does not seem to be any indication that they do, or even could, influence updates to official subject headings. At its core, any changes that are made require input from members of the disability community (including scholars) to determine preferred terminology. But a new hybrid approach can look to some of the strengths of the systems we have observed. Elements like LCSH’s use of the term “barriers”, AO3’s strong social language, ERIC’s categorization, and Steam’s use of mechanically-descriptive tags would all be useful in an updated subject access system.

**Conclusion**

Currently, disability scholars and members of the disability community experience difficulty when searching databases and catalogues, because much of the language in those systems has not completely caught up to that which is used by these communities, instead remaining medically-derived and negatively-toned. Social tagging systems, especially if some measure of control is applied, provide a potential remedy to this issue, but success is largely contingent on their contributing communities and the potential for inducting tags into official terminology. Neither fully controlled vocabularies such as LCSH or ERIC, nor social tagging systems like AO3 or Steam have all the answers. Future research in this field could explore the effectiveness of other systems, including the hybrid-structure discovery systems already in place.
References


Appendix A: Terms Selected from the Library of Congress Subject Headings

Accessibility & Benefits
Accessible Web sites for people with disabilities
Animals as aids for people with disabilities
Assistive computer technology
Automobile parking for people with disabilities
Barrier-free design
Barrier-free design for children with disabilities
Barrier-free design for children with mental disabilities
Barrier-free design for older people
Barrier-free design for people with mental disabilities
Barrier-free design for people with visual disabilities
Barrier-free design for students with disabilities
Disability awareness
Disability evaluation
Disability insurance
Disability retirement
Disabled veterans
Drug accessibility
Health services accessibility
Hearing ear dogs
Hearing impaired - Means of communication
Hearing impaired - Services for
Local transit accessibility
Meetings - Accessibility for people with disabilities
Passenger lifts for people with disabilities
Television - Accessibility for people with disabilities

Physical Disabilities
Deaf
Deafness
Disabilities
Hearing disorders
Hearing impaired
Movement disorders
People with disabilities
People with disabilities - Abuse of
People with visual disabilities
Perceptual disorders
Sensory disorders
Vision disorders
Visual agnosia
Visual discrimination
Word deafness

Mental/Cognitive/Neurological Disabilities
Adjustment disorders
Affective disorders
Communicative disorders
Developmental disabilities
Developmentally disabled
Dissociative disorders
Dyslexia
Impulse control disorders
Learning disabilities
Mental illness
People with mental disabilities
People with social disabilities

Children
Children with disabilities
Children with disabilities - Development
Children with disabilities - Education
Children with mental disabilities
Children with mental disabilities - Education
Children with perceptual disabilities
Children with social disabilities
Children with visual disabilities
Children with visual disabilities - Orientation and mobility
Children, Blind
Children, Blind - Orientation and mobility
Deaf children
Hearing disorders in children
Hearing disorders in infants
Hearing impaired children
Hearing impaired infants
Hearing impaired students
Students with disabilities
Youth with disabilities
Youth with mental disabilities
Youth with social disabilities

Older Adults
Developmentally disabled older people
Hearing impaired middle-aged persons
Older people—Mental health
Older people—Orientation and mobility
Older people with disabilities
Older people with disabilities—Long term care
Older people with mental disabilities
Older people with visual disabilities
### Appendix B: Terms Selected from the ERIC Thesaurus

Note: Dead terms are denoted with strikethroughs and the years in active use.

<table>
<thead>
<tr>
<th>Accessibility</th>
<th>Communication Disorders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Accommodations (Disabilities)</td>
<td>American Sign Language</td>
</tr>
<tr>
<td>Accessibility (for Disabled)</td>
<td>Communication Disorders</td>
</tr>
<tr>
<td>Adapted Physical Education</td>
<td>Cued Speech</td>
</tr>
<tr>
<td>Assistive Technology</td>
<td>Deaf Interpreting</td>
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<tr>
<td>Augmentative and Alternative Communication</td>
<td>Finger Spelling</td>
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<tr>
<td>Individualized Family Service Plans</td>
<td>Hearing Impairments</td>
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<tr>
<td>Sensory Aids</td>
<td>Hearing Therapy</td>
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<td>Travel Training</td>
<td>Language Impairments</td>
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<td></td>
<td>Lipreading</td>
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<td></td>
<td>Manual Communication</td>
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<td>Oral Communication Method</td>
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<tr>
<td>Mental/Cognitive/Neurological Disabilities</td>
<td>Sign Language</td>
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<tr>
<td>Alzheimer's Disease</td>
<td>Speech Impairments</td>
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<tr>
<td>Aphasia</td>
<td>Speech Language Pathology</td>
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<tr>
<td>Asperger Syndrome</td>
<td>Speech Therapy</td>
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<tr>
<td>Attention Deficit Disorders</td>
<td>Stuttering</td>
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<tr>
<td>Attention Deficit Hyperactivity Disorder</td>
<td>Total Communication</td>
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<td>Autism</td>
<td>Voice Disorders</td>
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<td>Cerebral Palsy</td>
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<td>Developmental Disabilities</td>
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<td>Down Syndrome</td>
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<td>Dyslexia</td>
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<td>Epilepsy</td>
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<td>Fetal Alcohol Syndrome</td>
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<td>Head Injuries</td>
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<td>Hyperactivity</td>
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<td>Intellectual Disability</td>
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<td>Learning Disabilities</td>
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<tr>
<td>Mild Intellectual Disability</td>
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<td>Minimal Brain Dysfunction</td>
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<td>Moderate Intellectual Disability</td>
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<tr>
<td>Neurological Impairments</td>
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<td>Pervasive Developmental Disorders</td>
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<td>Seizures</td>
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<td>Severe Intellectual Disability</td>
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<td>Slow Learners</td>
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<td>Physical Disabilities</td>
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<tr>
<td>Articulation Impairments</td>
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<td>Physical Disabilities</td>
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<td>Physical Mobility</td>
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<td>Visual Disabilities</td>
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<tr>
<td>Blindness</td>
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<td>Braille</td>
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<td>Large Type Materials</td>
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<td>Partial Vision</td>
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<td>Perceptual Impairments</td>
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<td>Tactile Adaptation</td>
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<td>Visual Impairments</td>
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<td>Visually Impaired Mobility</td>
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<td>Sociocultural Elements</td>
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<td>Disability Identification</td>
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<td>Institutionalized Persons</td>
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<td>Mainstreaming</td>
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<td>Normalization (Disabilities)</td>
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<tr>
<td>Parents with Disabilities</td>
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<tr>
<td>Miscellaneous</td>
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<tr>
<td>Adventitious Impairments</td>
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<td>Community Based Instruction (Disabilities)</td>
<td>Congenital Impairments</td>
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<td>Congenital Impairments</td>
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<tr>
<td>Deaf Blind</td>
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<td>Daily Living Skills</td>
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<td>Disabilities</td>
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<td>Exceptional Child Education (1968-1980)</td>
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<td>Exceptional Child Services (1968-1980)</td>
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<td>Gifted Disabled</td>
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<td>Group Homes</td>
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<td>Handicapped Students (1967-1980)</td>
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<tr>
<td>Homebound</td>
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<tr>
<td>Mild Disabilities</td>
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<td>Multiple Disabilities</td>
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<td>Residential Care</td>
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<td>Respite Care</td>
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<td>Severe Disabilities</td>
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<td>Severity (of Disability)</td>
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<td>Sheltered Workshops</td>
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<td>Special Education</td>
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<td>Special Education Teachers</td>
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<tr>
<td>Students with Disabilities</td>
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</tbody>
</table>
Appendix C: Terms Selected from Archive of Our Own Tags

Canonical Tags
Disability
Disability Fest
Physical Disability

Accessibility & Accommodation
accessibility
accessibility and cultural accommodations [sic]
Accessibility Issues
Accommodations of Disability
adapting to disability
adjusting to a disability
Americans With Disability Act
Disability Accommodation [sic]
Disability and accessibility
disability rights
Lack of Accessibility is Real
Magic used for accessibility
misuse of accessibility devices

Struggle, Learning to Cope, & Acceptance
(poorly) coping with disability
Acceptance of disability
Acknowledgement of character’s disability
basically struggling to come to terms with a new disability
characters learn how to handle disability
confluence between disability shaming and self-esteem issues
Conversations About Disability
Coping with a Disability
Coping with a Long-Term Disability
dealing with a new disability
Dealing with disability
disability acceptance
Disability Curse
Disability Difficulties
disability feelings
Disability Frustrations
Struggle with Disability
Struggles with disability acceptance/identity

Intimacy
(people who see my disability as a kink dni [do not interact])
Adaptive Sex Practices or Sexual Disability
Disability Intimacy
disability sex
Intimacy and disability
non-fetishized disability
Pregnancy with disability

Sex and Disability

Physical Disabilities
Body Disability
Canon Physical Disability
character with a hearing disability
Childhood Physical Disability
chronic disability
Disability (blindness)
disability (loss of limb)
Disability and injuries
disability and terminal illness
Hearing disability
Injury-related physical disability
Mute Disability
permanent disability due to injury
Temporary Physical Disability
Vision disability
visual disability

Mental/Cognitive Disabilities
Alien with a developmental disability
aluded! [sic] intellectual disability
Brief Mentions of Mental Disability
Canon reading disability
cognitive disability
Developmental Disability
Intellectual Disability
Psychiatric Disability
Psychological Disability
reading disability
Verbal Disability

Identity & Activism
adequate portrayal of disability
bamf female character with disability
Disability Bechdel Test Pass
Disability Community
disability fashion
disability identity
Disability Pride
disability slur
disability’ does not equal ‘disadvantage’
queer character with a disability
queer female character with a disability
Realistic depictions of disability
talks of disability and ableism and deafness

[Continued on next page]
Miscellaneous
(spoiler) disability
acquired disability
and ableism from the man with a disability
At-Birth Disability
because not all disability stories have to be
about pure angst
can disability be used to justify abusive
tendencies and behaviors?
canon character with disability
canon disability
Character feigning disability
character with a disability
character with permanent disability
Child with disability
convenient disability
Disability in Middle-earth
Grieving a disability
hidden disability
invisible disability
Parental illness/disability
Powers as Disability
Temporary Character Disability
temporary disability
Appendix D: Terms Selected from the Steam Global Tags

**Game Feature**
Asynchronous Multiplayer  
Mod  
Moddable  
Quick-Time Events  
Tutorial

**Gameplay Genre**
Bullet Hell  
Point & Click  
Rhythm  
Rogue-like  
Rogue-lite  
Souls-like  
Spectacle Fighter  
Spelling  
Strategy  
Word Game

**Skill Level**
Casual  
Difficult  
Unforgiving

**Visual Descriptors**
Colourful  
Minimalist  
Pixel Graphics  
Psychedelic  
Text-based

**Game Inputs**
Controller  
Intentionally Awkward Controls  
Mouse only  
Touch-Friendly  
Voice Control

**Pace**
Fast-Paced  
Real-Time  
Real-Time with Pause  
Relaxing

**Sound**
Dynamic Narration  
Narration

**Narrative elements/genres**
Transhumanism