Barriers to Fanfiction Access: 
Results from A Usability Inspection of Fanfiction.net

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Abstract
As researchers encourage teachers to bring fanfiction into classrooms, questions remain about whether online fanfiction communities are accessible to all students. This paper presents results from a practitioner-oriented usability inspection of FanFiction.net, investigating challenges students with disabilities might encounter as they participate. Operating this website with screen reader assistive technology reveals navigation, social connection, and reading barriers users may face when trying to engage in typical fanfiction practices. This study offers implications for media literacy educators to consider as they work to bring online media into classrooms without further marginalizing students with disabilities.

Keywords: accessibility, assistive technology, disabilities, fanfiction, online writing community

As the Internet becomes an increasingly important site of media production and dissemination, recognizing the opportunities and challenges posed by online spaces becomes vital for media literacy education. While others have explored the media literacy education implications of and practices within social networking sites (e.g., Vanderhoven, Schellens, & Valcke, 2013) and blogs (e.g., Thein, Oldakowski, & Sloan, 2010), here we focus on Fanfiction.net, one of the largest online communities for sharing fanfiction texts. We explore the barriers to full participation that may be encountered in this site by students with disabilities. We recognize, as the National Association for Media Literacy Education (NAMLE, 2007) does, that technology-mediated digital spaces are rich sites of media literacy education, though we remain acutely aware that the Internet may
not be accessible to all, creating what some call the “digital disability divide” (Dobransky & Hargittai, 2016). We see our examination of FanFiction.net as an important step in bridging this divide by first building awareness of what barriers to access exist in a popular literacy website.

Our decision to focus on FanFiction.net extends ongoing conversations in the fields of education and media studies about the powerful literacy opportunities available to young fans who participate in online fanfiction communities (e.g., Black, 2008; Curwood, 2013; Davis, 2016; Jenkins, 2006; Lammers & Marsh, 2015). The practices involved in writing fanfiction, as texts that require authors to remix existing narratives, characters, and story worlds into new creative works, have been connected to the skills and practices fostered through media literacy education (see McWilliams, Hickey, Hines, Conner, & Bishop, 2011). Similarly, we see alignment between our work and the NAMLE (2007) Core Principles because, in writing their stories, fanfiction authors think critically about the characters and worlds in existing media (the first principle) and then construct their own meanings and interpretations of those media (the sixth principle) to share with others. In addition, an exploration of Fanfiction.net aligns with the expanded notion of what counts as literacy in the second NAMLE (2007) Core Principle, which recognizes that 21st century literacy practices take place in a variety of online spaces. However, while past work has encouraged teachers to consider fanfiction as a potential resource for media literacy education (e.g., Davis, 2016; McWilliams, et al., 2011), we can see no evidence that the literature recognizes that not all students may be able to equally access websites like FanFiction.net.

To begin the crucial work of bringing awareness of the “digital disability divide” (Dobransky & Hargittai, 2016) to media literacy educators, we adapted methods used by Pribeanu, Fogarassy-Neszly, and Pătru, (2014) to conduct a practitioner-oriented version of a usability inspection of FanFiction.net, assessing the usability of the site for those who might need the assistance of Screen Reader Technologies (SRT) to access the content. SRT assists a user in reading text through a speech synthesizer or braille display. In employing SRT, the user provides the interface with commands that generate either an auditory or sensory output of the text within a specified area of a given screen. Beyond merely reading text, SRT empowers a user with additional functions from navigating between web pages to locating specific text on a web page. SRT is available on all major operating systems for personal computers (i.e., Linux, OS, Windows) and those found on mobile and tablet devices (i.e., iOS, Android). In addition to these preloaded, basic SRT packages, many comprehensive and advanced SRT programs (e.g., JAWS, COBRA) are available for purchase (AFB, 2016). As Boone and Higgins (2007) point out, assistive technologies, including SRT, have a tremendous impact on the accessibility of the Internet both within and outside educational contexts for students with disabilities.

In what follows, we first situate our work in understandings of critical disability theory and new literacies. We then provide background about FanFiction.net and the details of our practitioner-oriented usability inspection before presenting three barriers students with visual disabilities may face when
trying to engage in typical fanfiction-related practices on FanFiction.net. We continue with a discussion of these barriers and the limitations of our inspection, and conclude by connecting our work back to media literacy education and offering relevant recommendations to educators.

**Critical Disability Theory**

Our investigation into FanFiction.net’s accessibility is rooted in our commitment to bringing a critical disability theory perspective into conversation with new literacies approaches to media literacy education. We bring a critical disability theory approach to this work because it honors our ultimate practical objective of expanding human freedom and ending the further marginalization of students with disabilities. We ground our work in a disability studies orientation, similar to that of Hosking (2008), as we acknowledge the following three perspectives:

- Disability is just as much a social construct within the virtual landscape of the Internet as it has been entrenched in the structures of our physical world;
- Disability is a multifaceted interaction between an individual and their response to the social and structural environment of the Internet; and,
- Inequitable access to the Internet is seen as a failure to meet the needs of individuals who do not fit the schema of a typical user.

With the Internet’s proliferation came a ubiquitous notion that access to information in such an immediate fashion will advance all. Work from Sullivan and Matson (2000) and others began disrupting this ideal as they revealed how the Internet expands opportunities for typical web users and presents barriers to access for those with disabilities. These barriers have greater implications for some subcultures within the disability community, in particular, those who employ SRT to assist in reading and authoring online content. As the media literacy community has not yet studied this issue, we look to work from human-computer interaction research and disability studies for insights about the Internet’s inaccessibility.

Based on influential early work, we knew accessibility might be a problem for many websites. In 2003, Lazar and colleagues examined the accessibility of 50 highly trafficked websites, including sites for colleges and government agencies, finding that 49 of them had major inaccessible features when analyzed according to the Web Content Accessibility Guidelines (Web Accessibility Initiative, April 18, 2017). Unfortunately, according to more recent studies that have looked into hotels, shopping, and government websites, similar accessibility issues persist (Lopes, Gomes, & Carriço, 2010; Rau, Zhou, Sun, & Zhong, 2016; Sambhanthan & Good, 2013).

While few studies have conducted in-depth accessibility evaluations when using SRT to access a particular site, one study of Google News gives us pause.
Leporini’s (2011) investigation into the usability of this platform, aimed at providing up-to-date information to the public, revealed the inaccessibility of this site, even when SRT technology was employed.

**New Literacies**

In bringing a new literacies approach to media literacy education, we recognize the dynamic changes in media and literacy practices brought about by the Internet and the ease with which anyone with access to a connected computer can produce content for the web. As Coiro, Knobel, Lankshear, and Leu (2008) explained, “a new technology for literacy as powerful as the Internet” requires us to reconsider all that we know about literacy learning (p. 3). These authors go on to offer up a theory of new literacies that we have adopted to make sense of online media spaces such as FanFiction.net. This perspective requires us to acknowledge new literacies as:

- the new “practices, skills, strategies, and dispositions” required for “effective use” of the technologies we use for information and communication;
- “Central to full civic, economic, and personal participation” in a global world;
- rapidly changing as the technologies themselves change; and
- “multiple, multimodal, and multifaceted” (p. 14).

We find this lens useful in thinking about the implications of NAMLE’s (2007) acknowledgment of the Internet as a site for media literacy education because it encourages us to recognize the centrality of online spaces in young people’s everyday practices. Thus, it is not simply an opportunity, but a necessity to ensure that all students can equally engage in reading, analyzing, and crafting content in and for online spaces like FanFiction.net. In addition, as we conducted our examination of FanFiction.net, we did so by thinking about all the various literacy practices involved in full participation in a fanfiction community; we thought about more than just reading and writing stories, but also about the extent to which those using SRT could engage in some of the social connection activities that are integral to a media context like FanFiction.net.

**The Case of FanFiction.net**

FanFiction.net is one of the largest online repositories for fanfiction, with millions of registered users and tens of millions of stories. According to website traffic data available from SimilarWeb.com (2017), Fanfiction.net had more than 84 million visits in April 2017, with users spending more than 18 minutes visiting nearly seven pages, on average, per visit. Stories on Fanfiction.net are based on a variety of media, from books, television shows, movies, anime, Broadway musicals, and more. As of May 5, 2017, the *Harry Potter* series of books remains the most popular fandom on Fanfiction.net, with more than 765,000 published
stories, and the anime series *Naruto* comes in a distant but impressive second, with more than 413,000 stories.

The site is primarily text-based. Figure 1 shows a screenshot of the text-heavy design of the website. Although users can tie a photo to their username and authors can include a small cover image for their stories, navigating Fanfiction.net requires reading text and clicking on hyperlinks or using dropdown menus to access desired content.

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**Figure 1.** Screenshot of FanFiction.net homepage accessed on May 2, 2017.

To participate on the site, writers can create accounts, post their stories, follow other authors and stories, solicit help from what the site calls “beta readers” (users who proofread and offer advance feedback on writing), and build a following of readers for their work. The design of FanFiction.net facilitates interaction between readers and writers, as a passionate audience of readers leaves public feedback through “reviews,” reacting to stories and encouraging authors to keep writing (Curwood, Magnifico, & Lammers, 2013).

While no demographic data is available about who publishes or reads stories in FanFiction.net, researchers have documented cases of adolescents participating in this space (e.g., Black, 2008; Lammers & Marsh, 2015), and it is for the particular benefit of students with disabilities that we conducted this usability inspection, bringing awareness to educators about what happens when trying to participate in this space using SRT.
Method

Bringing together our complementary knowledge in literacy learning in online environments and accessibility, we carried out a practitioner-oriented usability inspection of FanFiction.net. Below we provide a rationale for the choice of SRT software we used for testing, a description of the tasks we performed to access the content of the website, and our process for collecting and analyzing usability output data, which included 150 minutes of spoken word content.

Software. We selected one of the most widely available SRTs on the market, VoiceOver (VO), standard on all iOS devices (e.g., iPad, iPhone) for our usability inspection of FanFiction.net. Though online reviews critique the functionality of VO (see Smith, 2012), Morris and Mueller (2014) acknowledge that VO possesses important features specific to vision (e.g., notification through gestures). Despite the robust disability-specific features built into VO, they also highlight the limitations and drawbacks of VO relative to the SRT that come standard in other common operating systems (i.e., Android devices use an application called TalkBack). However, Morris and Muller go on to point out, that for blind and low-vision testers of SRT, ease of activation is an essential function. Here, VO meets this important need, because with three taps of the home button on an iOS device, users easily access and disable VO.

Tasks. Drawing from Lammers’ past research with an adolescent who participated on FanFiction.net (Lammers & Marsh, 2015), we designed a usability inspection around the following two specific tasks for accessing content on FanFiction.net:

Task #1: Gain a better understanding of what reading a story on FanFiction.net is like using VO.
A. Can you go to chapter 2 of a story you’re reading using VO?
B. Can you access the author page from a story using VO?

Task #2: Gain a better understanding of what reading a review of a story on FanFiction.net is like using VO.
A. Can you read others’ reviews of a story using VO?
B. Can you determine which chapter the review is from using VO?
C. Can you access these reviewer’s own author pages from a review page using VO?

These tasks could be considered typical forms of navigation for managing a text-heavy website where content includes stories and reviews by multiple authors. In conducting a usability inspection, the second author, Nicholas Palumbo interacted with the software, locating the targeted area of a page needed to accomplish a given task, using gesture-based commands to direct the screen.
reader. These commands involved swiping one finger anywhere across the screen, either in a rightward (forward) or leftward (backward) motion to tell VO the intended direction of movement across the screen. With each swipe of the finger, VO determined the unit of content (e.g., block of text, picture, etc.) and either read the text aloud or attempted to describe the content. It is important to note that VO, not Palumbo, determined the size of the unit (i.e., sometimes a swipe of the finger prompted VO to read a single word, while other times a single swipe prompted VO to read an entire paragraph of text).

**Data collection.** While the co-author Palumbo completed the two guiding tasks, a digital audio recorder captured the output produced by both the software and the author as he navigated FanFiction.net using this SRT. In addition to the Palumbo’s real-time descriptions, commentary, and reactions while completing these tasks, central to this inquiry, and the primary data source, was the recorded synthetic voice of VO describing the content of all web pages as the author navigated the website content. Speech-to-text software was then used to transcribe these 150 minutes of audio recordings.

**Data analysis.** Our analytic process involved both authors reflexively listening to the recordings and reviewing transcripts together. During this process we considered whether each of the two tasks could be completed by examining which sub-questions could be answered. We looked at our results and then returned to FanFiction.net to examine in what structural conditions and spaces did VO perform optimally (i.e., read text fluidly without major difficulties) or not perform optimally (i.e., jumped around the page or repeated text). We then drew on what we knew about fanfiction practices and accessibility to identify and characterize the potential “barriers” to literacy learning in this online environment.

**Findings**

Through this work, we uncovered a variety of barriers when trying to use VO to participate in FanFiction.net. Here we highlight three difficulties: reading fanfiction stories, navigating the website, and connecting with others in the space. For each, we share a screenshot from FanFiction.net, accompanied by an audio clip of the VO output on that particular page of the site. Readers can thus hear for themselves how a website sounds when read aloud using an SRT technology.

**Navigation Barriers**

Barriers were encountered frequently while navigating FanFiction.net, leaving us frustrated with the significant challenges faced when navigating FanFiction.net with VO. Barriers to navigation seem to afflict all areas of FanFiction.net in an indiscriminate fashion. We illustrate the navigation-specific barriers encountered during our usability inspection with Figure 2 and the corresponding Audio Clip 1 featured below.
In Audio Clip 1, we attempted to access and navigate the “Betas” dropdown menu shown in Figure 2, which lists different types of stories available including anime, books, cartoons, comics, games and more. Two noticeable errors occurred as Palumbo used the standard left to right swipe command to navigate: First, VO had great difficulty passing over the “Books” link. This was evident in the audio clip when the screen reader erratically moves back up to the top of the dropdown menu. Second, VO became ensnared on an invisible embedded structure within the menu. Instead of reading the next item on the dropdown, VO continues to say “vertical line” three times and then begins to say, “search” instead of reading the next link, Cartoons.

As noted earlier, navigating FanFiction.net in part requires users to select where they would like to go in the site from dropdown menus like the one shown here. These menus control access to beta readers and community forums, where FanFiction.net participants can talk about their fandoms, engage in various writing activities, and navigate to fanfiction stories. So, while limited participation in FanFiction.net remains possible if a SRT cannot navigate dropdown menus effectively, users who rely on SRT to access the Internet will encounter unintelligible content on FanFiction.net.
Social Connection Barriers

Given the importance that connecting with other readers and writers plays in FanFiction.net, we sought to understand whether using SRT would create any challenges for students with disabilities who tried to establish these connections. Evidence of social connection-specific barriers encountered during the usability inspection is well illustrated by Figure 3 and the Audio Clip 2 featured below.

Figure 3. Screenshot of the FanFiction.net bio page VO interacts with in Audio Clip 2.

In Audio Clip 2, co-author Palumbo set out to read through the biography (known as the “bio” page) of a FanFiction.net user. Albeit fast-paced and quite confusing, Audio Clip 2 also reveals a significant barrier: the erratic movement of SRT within a text-heavy section of FanFiction.net. This finding is similar to the erratic and nonlinear movement illustrated in the dropdown menu. For example, at the end of Audio Clip 2 Palumbo employed a left to right swipe command in an attempt to move down the page, yet, as one can hear, VO moved in the opposite direction going from the start of the last paragraph, “I was formally known as...”, to the middle of the bio, “that’s all you’re getting.” This type of unpredictable movement within a body of text on FanFiction.net fundamentally prevents screen reader users from being able to meaningfully engage in important areas of the site that facilitate social connection (e.g., bios).

While being able to read an author’s bio is not required for FanFiction.net participation, finding others who share interests provides important opportunities
for connection on the site. Authors use bios to create their persona on FanFiction.net, often revealing the fandoms they write for and follow and establishing their ethos. Students who need SRT to participate in FanFiction.net may have difficulties learning more about authors, and thus relating to others socially on the site.

**Reading Barriers**

In addition to the navigation and social connection barriers, we found the basic function of reading a full story on FanFiction.net equally challenging. We illustrate the reading-specific barriers encountered during our usability inspection with Figure 4 and Audio Clip 3 featured below.

![Figure 4](wicked.png)

**Figure 4.** Screenshot of the FanFiction.net story VO is reading in audio clip 3.

**Link to Audio Clip 3**

In Audio Clip 3, we attempted to read through the story *Lengths* from start to finish. The clip starts at the seventh line of the story in figure 4. This was not our intention. Instead of a linear transition from saying “001” (appearing above the story) to reading the first line of the story, VO erratically jumped down and started reading the seventh line, “…Is there something you’d…”. In attempting to complete the task, Palumbo employed a right to left swipe command to move back up the page. This process revealed three errors: First, VO found it difficult to read the passage in a linear fashion. A clear example of the nonlinear movement is heard when VO went from trying to move up the page and beyond the line “Who was this girl?” to, instead, shockingly jumping down a page to a lower line, “She’d kept such…” We found this first error to be a confirmatory finding, as it reflects the same type of erratic movement seen within the FanFiction.net bio.
page discussed above. Second, certain lines of text seem to ensnare VO. For example, the line “Who was this girl?” caused VO to repeat the line over and over again. This error, too, is confirmatory given the similar errors identified in both the navigation and social connection barriers.

Third, in listening to Audio Clip 3, it is obvious that sections of a given line are not read in the same uniform fashion. In other words, instead of having the SRT read an entire sentence at a time, it will randomly chunk certain aspects of a given sentence (e.g., VO will read the first three words in a sentence and then needlessly pause before continuing on), which produces choppy and distorted auditory output.

This final example presents the most consequential barrier to full participation in FanFiction.net for students who require SRT to access the content. Reading stories is a fundamental fanfiction activity. If the site’s architecture makes it impossible for a student with disabilities to reliably read fanfiction, from beginning to end, even with the help of SRT assistive technology, FanFiction.net becomes fundamentally inaccessible for them.

Discussion

This practitioner-oriented usability inspection revealed the navigation, social connection, and reading barriers that participants who rely on SRT to access the content and features of FanFiction.net may face as they attempt to participate as readers, writers, and commenters of fanfiction. As others have noted, participation in sites like FanFiction.net provides young people with access to identities as writers (Black, 2008), motivation and encouragement to share their work (Curwood, et al., 2013; Lammers & Marsh, 2015), and opportunities to engage in personally meaningful literary analysis (Curwood, 2013; McWilliams, et al., 2010). Not having full access to the literacy practices available in this online writing community places students with disabilities at a disadvantage.

While not discussed above, it should also be noted that there were instances in our usability inspection when the completion of fanfiction tasks went more smoothly and thus, the content was more accessible. For example, when it encountered a long paragraph of written text, VO narrated this content well. However, as many fanfiction stories contain frequent dialogue between characters, resulting in individual lines of text, and as many authors format their stories for visual appeal with tabs and headings that break up the text, users relying on SRT may not encounter many long paragraphs and thus face a very challenging literacy experience.

The uncovering of navigation, social connection, and reading barriers on such a popular online writing community speaks to larger issues about the structural design of websites, the need for wider recognition of the issues faced by web users with disabilities, and the broader social responsibility for ensuring online accessibility for everyone. We draw on critical disability theory (Hosking, 2008; Sullivan & Matson, 2000) lens to make sense of our findings and their implications for accessing rich multimedia literacies.

In our mission to expand human freedom and end the further marginalization of students with disabilities, we view assistive technology as a
tool that empowers students and promotes autonomy. However, others argue that assistive technology fundamentally positions disability as an impairment. From this more critical perspective, assistive technology serves as a means of correcting or overcoming the disability, thus, characterizing people with disabilities as inherently flawed or deficient (Alper, Ellcessor, Ellis, & Goggin, 2015). Despite not fully agreeing with their perspective on the intersectionalities between disability, technology, and communication, our work resonates with what these authors have to say about “deeply cherished notions of ‘the good life’” (p. 2). These notions rest on the belief that any dysfunction that disrupts the “normal” environment and how things in our world “should be” runs counter to “the good life.” This worldview leads to the egregious lack of consideration or complete disregard for disability in the construction of both the physical and virtual world. The barriers revealed by our examination of FanFiction.net provide further evidence of how such disregard manifests on this site and leads to limited access.

From our perspective, the structural design of popular online writing communities, ripe with well-documented opportunities for literacy learning, position people with disabilities as separate from the whole, either knowingly or unknowingly. No student should be prevented or disempowered from engaging and participating in rich multimedia literacies because the structure of a website cannot handle popular SRT, such as VO.

Our goal here is not to point fingers or cast blame. Rather, we seek to call attention, albeit critically, to these barriers and raise concern. In deconstructing the barriers that serve to other and prevent students with disabilities from accessing rich multimedia content and online literacy learning, we advocate for shifting attention toward examining the socio-cultural conditions of the Internet. Doing so demands an active, involved, and collective conversation around current web design practices perpetuating educational and access inequalities. It also calls for practitioners working with students both with and without disabilities to be critical in their selection of multimedia content and websites, while vigorously sharing online resources that effectively support the literacy development of young people. Finally, it warrants good cause for a broader discussion around the structural and societal inequalities faced by all when the Internet is inaccessible.

This initial analysis represents only a beginning to the research and advocacy work needed to ensure that all users can engage in the rich literacy practices facilitated by online sites like FanFiction.net. As such, we recognize the limited scope of this phase of our project. For example, in narrowing our focus to what happens when trying to accomplish a few tasks in FanFiction.net using SRT, we cannot yet offer insights into barriers or access issues that those with other disabilities might face.

A different aspect of our work includes an evaluation of whether 50 pages within FanFiction.net meet Web Content Accessibility Guidelines, and begins to shed more light on how the structure of the site presents a variety of accessibility concerns (Palumbo & Lammers, in preparation). In addition, we have not yet involved users with visual or other disabilities in this work, and recognize that much more can be learned by doing so in the next phase of this research. Finally, we cannot make claims about accessibility issues in other online spaces, because
our exploratory project only currently focuses on the single case of FanFiction.net. More research is needed to better understand the experiences of students identified with a variety of disabilities as they engage in literacy practices in many different online spaces.

Conclusion

The core principles guiding media literacy education appropriately expand our concept of literacy and encourage us to ensure students actively engage with, produce content for, and think critically about a variety of media contexts, including digital, online spaces (NAMLE, 2007). While there are numerous other websites educators could use to teach media literacy education skills and practices, we share the results of this inspection not to discourage teachers from tapping into the meaningful literacy learning opportunities in FanFiction.net. Rather, given what we know about the pervasiveness of accessibility issues across many websites (Lopes et al., 2010; Rau et. al., 2016; Sambhanthan & Good, 2013), we share our work here to build awareness of barriers that may prevent students with disabilities from meaningfully participating in media literacy education in any website. The inaccessibility in FanFiction.net serves as an illustrative example from which we draw the following recommendations that media literacy educators should consider to work against marginalizing their students with disabilities as they facilitate the development of media literacy skills in any online space.

Application

- Teachers can pre-screen all online media (websites and other texts) they plan to use in their instruction with the version of SRT available to their students. Doing so will uncover in advance the potential barriers students with disabilities may face.
- We share this issue about web accessibility with media literacy educators to help build on-the-ground awareness of accessibility issues faced not only by students with disabilities, but also by any who use SRT to access digital content. With such awareness, teachers can modify their instruction in ways that build the autonomy of their students with disabilities and consistently affords all students with access to rich multimedia literacies.
- Many educators create their own or class websites. It is important to consider the access needs of all students, parents, and community members who may visit these websites, and ensure content remains accessible for all. We recommend that teachers consult resources, such as this information from American Foundation for the Blind, to help with this: http://www.familyconnect.org/parentsite.aspx?FolderID=3&SectionID=53&TopicID=167&DocumentID=7072&rewrite=0
References


Disciplinary Conference on Web Accessibility (W4A) (pp. 1-10). New York, NY: ACM.


