

# Preliminary Library Accessibility Task Force Report

To: Library Steering Committee

From: Library Accessibility Task Force (LATF)

Dates for relevant document stages:

- October 12, 2021: Submitted to Library Steering Committee.
- October 27, 2021: Report announced at General Faculty and Staff meeting.
- November 8, 2021: Document shared with library employees via tcnjlibstaff-group@tcnj.edu. Invited input through an online survey form (open through December 13).
- December 22, 2021: Revised report submitted to Library Steering Committee.

This report contains a discussion of the Library Accessibility Task Force's investigation into the accessibility of the electronic resources offered by the library. Using vendor-supplied accessibility conformance documentation, LATF found that vendors varied greatly in how accessible their products are. We also observed patterns in which aspects of accessibility are most and least commonly addressed in interface design.

After a brief overview of LATF's origin and background, this report describes our data collection and analysis process, and we offer several recommendations for various library and campus stakeholders.

The members of LATF acknowledge that this report is informed by the privilege embodied in our respective identities. We cannot fully avoid the limitations of our perspectives, and we ourselves do not represent the many identities of Disabilities Communities.

## I. Background

The Library Accessibility Task Force (LATF) convened on March 9, 2020 based on a charge from the Library Steering Committee to examine the accessibility of the library's physical space (i.e., "built environment"). [Library Steering's charge can be found here: <https://library.tcnj.edu/wp-content/uploads/sites/226/2020/04/LATF-Charge-Final-1.pdf>]. In April 2020, in light of the library closure due to the COVID-19 pandemic and online accessibility issues that were magnified by a pivot to remote learning, LATF approached Library Steering with a proposal to refocus our charge. It was agreed that the LATF would focus on the library's online accessibility and postpone its evaluation of library physical space during the pandemic.

LATF determined that an audit of the accessibility of the library's online resources was the most pressing need. LATF began collecting and analyzing web accessibility documentation for each of the databases that the library offers on its website. This involved collecting and interpreting web accessibility documents (called "Voluntary Product Accessibility Template" or "VPAT"). This VPAT data project has been a useful learning experience not only for assessing the accessibility of specific library-licensed resources, but also for building LATF members' understanding of web accessibility standards and practices more generally.

[Web Content Accessibility Guidelines \(WCAG\)](#) are published by the World Wide Web Consortium's (W3C) Web Accessibility Initiative (WAI), and provide recommendations for making Web content more accessible. WCAG reports, also known as VPATs, are provided by our library vendors on a voluntary basis (i.e., not required by any law). Compliance with WCAG standards makes resources more accessible to a wide range of people with disabilities, including blindness and low vision,

deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity and combinations of these. In addition, adhering to WCAG guidelines will often make web content more usable to everyone in general.

## II. Data Collection

WCAG standards have gone through several iterations, and LATF settled on collecting vendor data points from WCAG 2.0, the most commonly used set of standards. WCAG 2.1 standards are more recent and more thorough, but few vendors are using them. WCAG 2.0 is a list of 61 highly specific accessibility standards called success criteria. For each of these success criteria, VPATs report whether an interface “Supports,” “Does not support,” or “Partially supports” the criteria, and in some cases “Not applicable” is reported. Our analysis focuses on the 38 success criteria that fall under the Level A and Level AA designations in WCAG 2.0. Vendors rarely conform to the success criteria that fall under Level AAA, which is why our data analysis looks at 38 WCAG success criteria, not 61. WCAG 2.0 is based on four principles known by the acronym POUR: **P**erceivable, **O**perable, **U**nderstandable and **R**obust, which are described in detail on the [World Wide Web Consortium \(W3C\) website](#). Under the four principles there are 12 guidelines, and under the guidelines are the 61 success criteria. The principles are very general, the guidelines slightly more specific, and the success criteria are very specific. To complicate matters, not all criteria are applicable across all databases, and reporting conventions differ among vendors.

After aligning the different conventions of reporting across databases, LATF ultimately recorded data on success criteria for 53 of Gitenstein Library’s database platforms, using the databases on the library’s Databases A-Z page (retrieved June, 2020) as our original checklist/dataset. Approximately 130 databases—or about 70% of the library’s online databases—are provided on these 53 platforms. This percentage is as high as it is because, in a few cases, multiple databases are on one common platform (e.g., EBSCO provides more than 40 databases to us on one platform). 51 databases were excluded from analysis because either a VPAT was not available, or the database was deemed irrelevant for another reason, such as an individual eBook whose platform is already represented in the analysis. TCNJ’s Digital Archive was excluded from analysis for similar reasons (i.e., no VPAT documentation).

## III. Data Analysis and Discussion

### A. Accessibility Performance by Vendor/Database

One of our goals was to assess which vendors/databases support accessibility most thoroughly. Most notable is the considerable difference of the accessibility of the products provided by ProQuest and EBSCO. While ProQuest ranks highly among all of the platforms we examined, EBSCO ranks among the lowest. This is true of each vendor’s “flagship” platform – the common interface for dozens of their databases. Out of the 38 accessibility criteria, the ProQuest platform supports 27 criteria, while the EBSCO platform supports just 13. The ProQuest platform partially supports 8 success criteria, while the EBSCO platform partially supports 22 success criteria. The electronic book platforms for ProQuest and EBSCO were more similar to each other, with ProQuest supporting 23 success criteria compared with EBSCO supporting 20 success criteria. (See Table 1 and Table 2).

Out of 38 success criteria, Gale Virtual Reference Library and ICPSR scored the highest, with their support of 34 success criteria, with several other databases not far behind.

Table 1: <i>Best-Performing Platforms/Databases</i>	
Database	Number of success criteria supported (out of 38)
Gale Virtual Reference Library Platform (GVRL)	34
ICPSR (Inter-University Consortium for Political and Social Research) Data Archive	34
Annual Reviews	33
Children's Literature Comprehensive Database (CLCD)	32
HeinOnline: Government, Politics & Law	32
IEEE Xplore	32
SPIE Digital Library	32
Project Muse	31
Social Explorer	31
Literature Online	30
Literature Resource Center (GALE)	30

Table 2: <i>Worst-Performing Platforms/Databases</i>	
Database	Number of success criteria supported (out of 38)
RefWorks	7
Knovel	10
SAGE Journals	10
EBSCO Platform [includes 40 applicable databases]	13
UpToDate	13
ASCE Library	14
Cochrane Library	14
Comprehensive Organic Name Reactions and Reagents	14
Journal Citation Reports (JCR) on the Web	16
Ulrich's Periodical Directory	17

## B. Assessing the Success Criteria

Another goal of this project was to examine vendor-supplied documentation to assess to what extent the success criteria are supported by platforms. In other words, which criteria do vendors tend to support, and which are not supported? Vendor-reported accessibility conformance varies, but there are definitely some visible patterns. The success criteria that are most commonly supported are clustered

under Guideline 3.2 “Predictable,” which is defined as “Make Web pages appear and operate in predictable ways.” These included Consistent Identification (3.2.4); Consistent Navigation (3.2.3); and On Focus (3.2.1), which are supported in 48, 47, and 45 databases, respectively (see Table 3).

Table 3:  
*Databases That Do Support Each WCAG Success Criterion*

<b>WCAG success criteria</b>	<b>Number of Gitenstein Library databases supporting this criterion (out of 53 databases):</b>
<a href="#">2.4.5 Multiple Ways</a> *	48
<a href="#">3.2.4 Consistent Identification</a>	48
<a href="#">3.2.3 Consistent Navigation</a>	47
<a href="#">1.3.3 Sensory Characteristics</a>	45
<a href="#">3.2.1 On Focus</a>	45
<a href="#">1.4.4 Resize text</a>	44
<a href="#">2.1.2 No Keyboard Trap</a>	44
<a href="#">2.4.2 Page Titled</a>	41
<a href="#">3.1.1 Language of Page</a>	41
<a href="#">3.2.2 On Input</a>	41
<a href="#">3.3.1 Error Identification</a>	41

\* In tables 3, 4, & 5, WCAG success criteria are presented as hyperlinks that point to WCAG explanatory documentation for each success criterion. (The homepage for that documentation is <https://www.w3.org/TR/UNDERSTANDING-WCAG20/>).

The success criteria most commonly reported “does not support” are 3.1.2. Language of Parts and 2.4.1 Bypass Blocks (see Table 4).

Table 4: <i>Databases That Do Not Support Each WCAG Success Criterion</i>	
<b>WCAG success criteria</b>	<b>Number of Gitenstein Library databases that do not support this criterion (out of 53 databases):</b>
<a href="#">3.1.2 Language of Parts</a>	17
<a href="#">2.4.1 Bypass Blocks</a>	12
<a href="#">1.2.5 Audio Description (Prerecorded)</a>	11
<a href="#">1.2.3 Audio Description or Media Alternative (Prerecorded)</a>	8
<a href="#">3.1.1 Language of Page</a>	8
<a href="#">1.3.1 Info and Relationships</a>	7
<a href="#">4.1.2 Name, Role, Value</a>	7
<a href="#">3.3.2 Labels or Instructions</a>	6
<a href="#">4.1.1 Parsing</a>	6
<a href="#">2.4.6 Headings and Labels</a>	5

In between definitive reporting of “supports” and “does not support” was a problematic gray area, with VPATs reporting criteria as partially supported. Language varied across the databases, with the use of “partially support” or “supports with exceptions” the most common. Some vendors specified in detail what this meant, but others were vaguer, so it was difficult to assess the degree of compliance. Our convention was to name this in-between support as “partial,” regardless of the language and details provided. The rating “not applicable” raises some similar challenges. (See Table 5). Because of the text-centric nature of most of the library’s platforms/databases, “not applicable” seems to be most commonly given for success criteria that are related to support for audio/video content. (e.g., providing captions for audio/video content or providing a mechanism for controlling the audio/video content).

Complicating matters further, vendors were inconsistent in their use of these problematic ratings/labels. For example, one vendor might report “not applicable” while another vendor might report “supports with exceptions” to describe an equivalent level of accessibility for the same success criterion. This inconsistency introduces a challenge when looking at the data for how many items are supported. We need to take into account that even if it looks like database criteria seem less supported, it might be because the criteria are not applicable. For example, the criteria apply to audio/video, but there is none of this format on the site.

Table 5:

*Databases That Report “Not Applicable” for Each WCAG Support Criterion:*

<b>WCAG success criteria</b>	<b>Number of Gitenstein Library databases reporting “Not applicable” for criterion (out of 53):</b>
<a href="#">1.2.4 Captions (Live)</a>	30
<a href="#">1.4.2 Audio Control</a>	19
<a href="#">3.3.4 Error Prevention (Legal, Financial, Data)</a>	17
<a href="#">1.2.1 Audio-only and Video-only (Prerecorded)</a>	16
<a href="#">1.2.5 Audio Description (Prerecorded)</a>	15
<a href="#">2.3.1 Three Flashes or Below Threshold</a>	13
<a href="#">1.2.2 Captions (Prerecorded)</a>	12
<a href="#">1.2.3 Audio Description or Media Alternative (Prerecorded)</a>	11
<a href="#">2.2.2 Pause, Stop, Hide</a>	11
<a href="#">2.2.1 Timing Adjustable</a>	9

### C. Analysis Limitations

One of the more difficult aspects of our analysis was understanding the criteria and translating these into practical terms from the point of view of our users. In other words, we don’t know (yet) the meaningfulness of the respective aspects of web accessibility (i.e., different success criteria), and which of these impact persons with disabilities the most. Are there criteria that matter less?

Another limitation to our analysis is vendor self-report bias. There is an inherent limitation in information collected from VPATs because vendors report their own accessibility compliance. We also found vendor-to-vendor variation in the approaches for completing these documents, and recognize that these documents are all voluntary, with no central authority providing oversight or accountability. Many vendors use some automated tools in addition to manual evaluation. For example, ProQuest reports that their platform "is checked for accessibility using a range of automated, manual, and visual checks."

Many vendors made accessibility documentation readily available via a link at the bottom of the database home screen or another one of their webpages, while others were less accommodating. For all vendors that did not provide documentation on a webpage, we contacted them and requested it. Some responded promptly and provided documentation via e-mail. Others did not respond at all. Some vendors claimed that their resources are accessible without providing the detailed documentation that is common and accepted practice, and simply provided an affirmation of accessibility. The VPAT is a best practice for web developers to communicate accessibility, and lack of this documentation is cause for concern about the vendors’ accessibility practices (or potential deficiencies therein). The absence of accessibility documentation also creates a barrier for library stakeholders who are evaluating accessibility when they choose which information product to use.

For the following platforms/databases, the vendor confirmed that they do not provide accessibility conformance documentation:

African Women's Bibliographic Database  
Anthropological Index Online  
ASTM Compass  
Global Music Archive  
Google Scholar  
NJVid  
Plunkett Research Online  
PubMed  
Simmons  
Statista

For these platforms/databases, vendors did not respond to requests for accessibility documentation:

American Religion Data Archive  
ATLA Religion Index  
Bibliography of Africana Periodical Literature Database  
Chemical Abstracts (SciFinder Web)  
Child Care & Early Education Research Connections  
CRB Commodity Yearbook  
Dictionary of Old English Corpus  
Feminae: Medieval Women and Gender Index  
Film Literature Index Online 1976-2001  
Gartner  
Global Music Archive  
Handbook of Latin American Studies  
Historical Encyclopedia of American Business  
IBISWorld Industry Reports  
International Financial Statistics  
iPOLL Center (Roper Center for Public Opinion Research)  
Mergent Archives/Mergent Online  
Middle English Compendium  
Naxos Music Library  
NCJRS Abstracts – National Criminal Justice Reference Service Abstracts Database  
Oxford Islamic Studies Online  
Population Index  
Reference USA  
RIA Academic Advantage Library-Checkpoint  
Smithsonian Global Sound for Libraries  
Worldcat

#### IV. Practical Implications and Recommendations

Despite the inexact nature of analyzing data from VPATs, our analysis yielded many useful findings. Probably the most significant result was that members of the LATF have greatly increased their knowledge and awareness of accessibility issues related to library database interfaces, which should help LATF with its future projects. We also found that a high proportion of the electronic content we provide is on platforms with low self-reported accessibility. EBSCO's flagship platform provides access to more of our database products than any other vendor, and its self-reported accessibility is among the lowest that we saw. Other major content packages made our worst-performing platforms list, including SAGE Journals, Wiley's Cochrane Library, and Wolters Kluwer's UpToDate. These are products that are used extensively, and it stands to reason that their shortcomings in terms of accessibility would be felt by a large proportion of our user community.

With regard to success criteria data (i.e., which dimensions of accessibility are most/least commonly supported), further research is necessary—most notably to incorporate the lived experience of persons with disabilities—and this report will not attempt to draw any conclusions about the data we collected.

The findings from this audit are a solid start to raising awareness and improving the library experience for our users with disabilities, and the LATF offers the following recommendations [recommendations are numbered for ease of reference, and should not be interpreted as priority order]:

1. Share the results of this report with relevant stakeholders in the library. This should include but is not limited to the Public Services unit, the Collection Development Committee, the Library Web Committee, and the Library Systems Platform group. Continue conversations among relevant stakeholders within the library. The stakeholder input that LATF collected supports this recommendation.
2. Consider deepening this investigation of web accessibility by discussing this report (and the issues contained within it) with relevant stakeholders like the campus Accessibility Resource Center, the Division of Inclusive Excellence, members of Disabled Communities, and other relevant campus organizations/offices/groups.
3. Consider sharing the findings of this report publicly with the campus community. The stakeholder input that LATF collected supports this recommendation.
4. It is appropriate for the relevant library stakeholders to demand that e-resource vendors provide the most accessible products that they can. The support that Gitenstein Library provides for these e-resources (financial, educational, and otherwise) make library personnel complicit in any barriers that block the effective use of these e-resources. We could potentially include accessibility-related language in our licenses, e.g. "Disabilities Compliance" in [section 5.1.E. of this document](#), including the phrase "If the product does not comply, the Licensee has the right to adapt the Licensed Materials in order to comply with federal and state law." It seems that the Americans With Disabilities Act (ADA)(1990) is the most notable and relevant federal law. Conversations with TCNJ General Counsel and with comparable New Jersey institutions (e.g., Seton Hall) might be necessary to confirm that appropriate federal and state laws are mentioned. LATF suggests that ADA compliance (the legal minimum for accessibility) would be a good starting point, but it would be appropriate for the library to pursue web accessibility (as outlined in WCAG) well beyond that minimum.
5. Offer users an easy-to-use and easy-to-access form for reporting Web Accessibility issues. E.g., [page 9 of this Seton Hall presentation](#).

## References

Americans With Disabilities Act of 1990, Pub. L. No. 101-336, 104 Stat. 328 (1990).  
[https://www.ada.gov/2010\\_regs.htm](https://www.ada.gov/2010_regs.htm)

World Wide Web Consortium Web Accessibility Initiative (2008). <https://www.w3.org/TR/WCAG20/>

## Resources and additional reading:

Bigham, J., Lin, I., Savage, S. (2017) The effects of “not knowing what you don’t know” on web accessibility for blind web users. *ASSETS '17 Proceedings of the 19th International ACM SIGACCESS Conference on Computers and Accessibility*. Baltimore, MD. October 19, 2017. (pp. 101-109). Association for Computing Machinery. <https://doi.org/10.1145/3132525.3132533>

Brunskill, A. (2020). “Without that detail, I’m not coming”: The perspectives of students with disabilities on accessibility information provided on academic library websites. *College & Research Libraries* 81(5), pp. 768–788. <https://doi.org/10.5860/crl.81.5.768>

Gibson, Anne (2015, February 3). *Reframing Accessibility for the Web*. A list apart.  
<https://alistapart.com/article/reframing-accessibility-for-the-web/>

Mulliken, A. (2019). Eighteen blind library users’ experiences with library websites and search tools in U.S. academic libraries: A qualitative study. *College & Research Libraries*, 80(2), pp. 152–158.  
<https://doi.org/10.5860/crl.80.2.152>