

# Evaluating web information accessibility: Insights on information ableism from U.S. tourism marketing organizations and state health departments

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**Abstract:** With the Internet often serving as the primary source of information for people with disabilities, ensuring digital inclusion and accessibility is essential for supporting independent travel planning and accessing health information. This study, which is of significant importance, investigated information ableism in the U.S. by evaluating the web content accessibility of 50 state Destination Marketing Organizations (DMOs) and 50 state health departments. Using the AChecker tool, the findings indicated that DMOs' web pages had more accessibility issues compared to those of state health departments. Significant discrepancies in Web Content Accessibility Guidelines (WCAG) were particularly evident in providing text alternatives for non-text content and input assistance in the DMOs' web pages. The study discusses these findings' implications and suggests future research directions.

**Keywords:** Web contents accessibility, destination marketing organization, State Department of Health, information ableism, people with disabilities

## 1. Introduction

Societal preferences for particular abilities are deemed 'normal' and the associated rights and privileges that come with those abilities. Ableism is a network of beliefs and practices promoting an idealized human body standard, positioning it as the norm (Campbell, 2009). This creates a divide between what is considered normal and what is not, reinforcing the marginalization of those who do not meet this standard (Campbell, 2009). This systemic bias creates psychological advantages for non-disabled people while denying equal opportunities to individuals with disabilities (Dunn, 2019; Friedman et al., 2006). In the context of web accessibility, these patterns contribute to "information ableism," where digital barriers disproportionately affect people with disabilities. In today's digital age, access to information is a cornerstone of decision-making and a fundamental aspect of equality. In addition, digital accessibility empowers individuals to access resources and information independently, without reliance on caregivers. In tourism and hospitality, web accessibility is not just a legal or ethical responsibility but a competitive advantage. Accessible websites can enhance customer satisfaction, loyalty, and the overall competitiveness of a destination or business.

Nowhere is this issue more critical than in public health, where timely and accurate information can be a matter of life and death. For people with disabilities (PwD) and those reliant on healthcare services, access to clear and accessible information is paramount. The urgency of this issue is reflected in the staggering number of individuals affected, as it is estimated that one in four Americans and over a billion people worldwide live with some form of disability (Centers for Disease Control and Prevention, n.d.). These statistics emphasize the importance of ensuring accessibility for all, particularly in health and tourism.

Recent studies have explored web accessibility in the hospitality and tourism industries, revealing widespread challenges. Studies evaluating websites across tourism have shown significant accessibility gaps (Eusébio et al., 2021; Lei & Law, 2019; Park & Ha, 2022; Park & Jung, 2022). For example, earlier research demonstrated that hotels and regional tourism organizations (RTOs) often failed to meet accessibility standards (Kumar & Motupalli, 2015;

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Williams & Rattray, 2004;). However, recent studies have addressed these deficiencies, providing practical recommendations for improving accessibility. For instance, research has found that even high-end hotels face substantial accessibility challenges, and casual restaurants often have more web errors compared to high-end establishments (Park & Ha, 2022; Teixeira et al., 2022).

With public health agencies increasingly utilizing websites to disseminate critical information (Youngblood et al., 2021), the lack of accessibility to these online platforms may hinder the effective communication of essential health and safety information. This oversight is significant, as much of the information shared by state health departments is directly relevant to the hospitality and tourism sectors, where the health and safety of guests and employees are top priorities. A comparison of web accessibility between tourism marketing organizations and state health departments could yield valuable insights, setting a benchmark that encourages tourism organizations to enhance their digital accessibility practices.

Public health's commitment to protecting the welfare of all citizens inherently includes a responsibility to ensure accessible information environments. Consequently, its emphasis on accessibility can serve as a model for the creation of inclusive, accessible, and equitable digital spaces. Therefore, this study undertakes a comparative analysis of digital accessibility practices across two critical sectors—tourism and public health. Whereas previous research has often focused narrowly on accessibility within isolated domains, limiting the generalizability of findings (Eusébio et al., 2021; Teixeira et al., 2022), this research adopts a broader lens to examine how information accessibility varies across these two industries.

By contrasting the accessibility practices of destination marketing organizations (DMOs) with those of state health departments (SHDs), this study seeks to provide actionable insights for practitioners across both fields. It underscores the broader need for universal web accessibility standards that transcend industry boundaries, advocating for public health organizations to set benchmarks that tourism entities can follow. Through this cross-sectoral analysis, the study promotes a culture of digital inclusivity, with public health's established commitment to accessibility serving as a model for tourism.

This research aims to address the disparities in web content accessibility by evaluating the digital accessibility of 50 state DMOs and 50 state health departments. By assessing the current state of web accessibility in both tourism and public health, this study intends to fill a critical gap, offering insights that are actionable for policymakers, industry professionals, and researchers alike. Addressing these disparities is a step toward dismantling information ableism, thereby ensuring equitable access to information for all individuals.

The Web Content Accessibility Guidelines (WCAG) are based on being perceivable, operable, understandable, and robust, each with specific criteria (Park & Ha, 2023). WCAG defines three levels of conformance: Level A (basic features), Level AA (addresses common barriers), and Level AAA (highest complexity) (W3C, 2020). In this study, researchers aimed to measure the inaccessibility of web content using an automated tool called AChecker. This tool evaluates web pages by scanning them against the WCAG criteria to identify common accessibility issues.

## 2. Literature Review

### 2.1 Foundations of web accessibility in tourism and health

Disability has historically been viewed through the lens of the medical model, which considers it an individual problem stemming from impairment (Shakespeare, 2006). However, the social model of disability, which gained prominence in the 1970s, reframes this perspective by arguing that barriers limiting the abilities of PwD are societal constructs rather than individual deficits (Oliver, 2013). This shift emphasizes the need for society to remove or lower these barriers to ensure inclusivity.

Tim Berners-Lee, the inventor of the World Wide Web, emphasized that the Web's power lies in its universality, making it accessible for everyone, regardless of disability (Park & Ha, 2023). As the Web is designed to be usable by everyone, irrespective of their ability, it becomes accessible to people with diverse hearing, movement, sight, and cognitive abilities, significantly altering the impact of disability by removing barriers to communication and interaction that many face in the physical world (W3C Web Accessibility Initiative, n.d.). However, poorly designed websites, applications, technologies, or tools can create barriers that exclude people from using the Web.

Web accessibility means that websites, tools, and technologies are designed and developed so that people with disabilities can use them (W3C Web Accessibility Initiative, n.d.). Specifically, it ensures that people can perceive, understand, navigate, and interact with the Web, and contribute to it. Web accessibility covers all disabilities that affect access to the Web, including auditory, cognitive, neurological, physical, speech, and visual disabilities (Jung et al., 2024). Moreover, web accessibility benefits people without disabilities, such as those using mobile phones, smart watches, smart TVs, and other devices with small screens or different input modes. It also aids older individuals with changing abilities due to aging, people with temporary disabilities like a broken arm or lost glasses, those with situational limitations such as bright sunlight or environments where they cannot listen to audio, and users with slow Internet connections or limited bandwidth (W3C Web Accessibility Initiative, n.d.).

In the context of tourism and health, information and communication barriers are particularly significant. These barriers prevent access to essential health guidelines and response measures, especially during emergencies like the COVID-19 pandemic. The United Nations (2020) highlighted the difficulties faced by PwD in accessing necessary information during the pandemic, underscoring the critical role of online information platforms. Tourism marketing organizations have a significant role in ensuring their web content is accessible to all users, including PwD. The accessibility of online information is not merely a matter of convenience but a necessity for independent living and voluntary community participation (Zeng & Parmanto, 2004). Despite recognizing that accommodating travelers with disabilities is essential, there is still a substantial gap in providing fully accessible information (Singh et al., 2020). The failure to do so can alienate a significant portion of the population, given that over one billion people worldwide live with some form of disability (Darcy et al., 2020; Randle & Dolnicar, 2019).

The concept of accessibility in tourism and public health extends beyond physical barriers to digital accessibility. This digital inclusion is vital as the Internet often serves as the only source of information for PwD, enabling them to plan travel or access health services without dependence on caregivers or family members. Consequently, web accessibility is now a requirement rather than an option for any organization aiming to serve all human aspects (Randle & Dolnicar, 2019). In this regard, this study aims to bridge the gap in existing research by exploring the comparison across different industries' websites, as previous research recommended (Jung et al., 2024; Park & Jung, 2021).

## ***2.2 Legal and policy frameworks governing web accessibility***

Legal frameworks like the Americans with Disabilities Act (ADA) and Section 508 of the Rehabilitation Act ensure that web content is accessible to PwD in the United States. Although the ADA does not explicitly mention websites or mobile applications, the U.S. Department of Justice (DOJ) has clarified that these digital platforms must be accessible under the ADA (Arenth, 2019). This interpretation has significant implications for organizations, particularly those in tourism and public health, which must ensure their web content is accessible to avoid legal consequences and provide equitable access to services.

The Web Content Accessibility Guidelines (WCAG) are the most widely recognized standards for web accessibility. Developed by the World Wide Web Consortium (W3C), these guidelines are

based on four principles: perceivability, operability, understandability, and robustness. Each principle contains specific criteria that help ensure web content is accessible to all users, including PwD. Compliance with WCAG is typically measured at three levels: A, AA, and AAA, with Level AA being the most targeted in legal and regulatory frameworks (W3C, 2024).

However, despite the existence of these guidelines and legal requirements, there are significant challenges in enforcement and implementation. Many organizations, particularly in tourism and public health, have yet to fully comply with these standards. This lack of compliance exposes organizations and agencies to potential legal risks and limits the ability of PwD to access critical information and services. The need for more vigorous enforcement and a greater emphasis on accessibility in digital spaces is evident (Randle & Dolnicar, 2019; Tutuncu, 2017).

### ***2.3 Web accessibility research***

Research on web accessibility in tourism has gained momentum recently, but significant gaps remain. Early studies in this area, such as those by Michopoulou and Buhalis (2013), highlighted the disparity between the informational needs of disabled travelers and the availability of accessible information. This gap is particularly problematic in tourism, where accurate and accessible information is crucial for safe and enjoyable travel experiences. More recent studies, such as those by Vila et al. (2020) and Singh et al. (2020), have assessed the accessibility of official tourism websites using WCAG 2.0 standards. These studies revealed significant accessibility issues, with many websites failing to meet basic compliance levels. The findings suggest that many tourism and public health websites remain inaccessible to PwD despite technological advances, limiting their ability to participate fully in these areas.

A study by Park, Jeon, and Park (2022) critically examined the accessibility of 246 tourism-related websites across various countries and service industries, utilizing the WCAG 2.0. The findings revealed persistent accessibility issues, particularly with global airline and hotel booking websites, which were prone to omitting essential text alternatives for non-text content, lacking adaptable content, and presenting information in a manner that is not easily distinguishable. These shortcomings suggest that while there has been progress in recognizing the importance of accessibility, many tourism websites still fail to meet the necessary standards, leaving PwD at a disadvantage.

In the restaurant industry, Park and Ha (2023) conducted a comprehensive evaluation of 405 restaurant websites, including those of Michelin-star restaurants, casual chains, and local independents. The study found that although Michelin-star restaurants generally performed better in accessibility, significant issues remain across all segments. Specific guidelines, such as those requiring adaptable and distinguishable content, needed to be fully adhered to, indicating that even high-end establishments have room for improvement in making their online platforms more inclusive.

Park and Jung (2022) examined the accessibility of 278 websites across various events, including professional event management associations, convention centers, and tradeshow and identified significant accessibility issues across these platforms. The study highlighted diverse problems, such as inadequate text alternatives and non-distinguishable content, which vary by event. Moreover, the authors employed exploratory factor analysis that guided the methodological procedure, suggesting that understanding the unique interrelationships among detected accessibility issues could help web designers develop more practical improvement plans. This study emphasized that despite the recognized importance of web accessibility in creating inclusive events, there remains a considerable gap in actual implementation, pointing to the need for continuous improvements in this area.

Expanding on the topic, Jung et al. (2024) focused on global trade show websites, examining their accessibility through quantitative analysis of WCAG 2.0 compliance and qualitative document analysis of web accessibility policies. The study revealed significant variations in web accessibility across different countries, with the United States, Australia, Japan, and Ukraine exhibiting lower average accessibility issues. In contrast, countries like Poland, Spain, China, Russia, and India had the highest levels of inaccessibility. The findings highlighted that trade show websites consistently struggled with Principle 1 (Perceivable), particularly regarding text alternatives and distinguishable content. However, they better comply with the other principles (Operable, Understandable, and Robust). The study also connected these accessibility challenges to the United Nations' Sustainable Development Goals (SDGs), particularly the goals related to social inclusion and equality. By doing so, the research underscores the broader implications of web accessibility, advocating for more rigorous global standards and enforcement to ensure that all users, including persons with disabilities, can fully participate in the digital aspects of trade shows and events.

Similarly, Singh, Sibi, and Bashir (2023) evaluated the top 100 hotel websites to assess their compliance with WCAG 2.0, focusing on conformance level AA. The study identified critical accessibility barriers, particularly in areas related to text alternatives, navigability, and content compatibility. These barriers significantly hindered PwD from using these websites effectively, underscoring the need for the hotel industry to enhance its digital inclusivity. The research also discusses the broader implications of promoting inclusive tourism, suggesting that while resources and guidelines are available, there is still a considerable gap between policy and practice in the hospitality industry.

These studies collectively highlight the ongoing struggle to achieve true digital inclusion in tourism and hospitality despite the existence of clear guidelines and legal frameworks. They point to the need for continuous monitoring, better implementation of accessibility standards, and a more concerted effort across industries to ensure that online platforms are truly accessible to all users. The methodologies used in these studies included automated tools to assess WCAG compliance, supplemented by manual reviews to identify specific accessibility issues. While these methods provided valuable insights, they also have limitations, particularly in their ability to assess the accessibility of complex interactive elements or mobile applications.

Overall, there are limited studies addressing roles of public health or state health in the context of hospitality and tourism literature. While the use of social media by state or local health departments has been examined (e.g., Jha et al., 2016; Khokhar et al., 2021; Ma, 2016), websites are a key communication tool for disseminating timely health and safety information that directly impacts consumer well-being (Youngblood et al., 2021). Specifically, state health departments use their websites to share a variety of data, statistics, educational programs, alerts, and resources related to health and safety, including information on communicable diseases, foodborne illnesses, restaurant inspection procedures, mental health, and more.

Momenipour et al. (2021) investigated the usability of COVID-19 dedicated state public health websites in the U.S. However, their study did not address website accessibility for individuals with disabilities. For these individuals, public health and safety information is crucial, yet many government websites do not comply with fundamental accessibility standards (Allgood & Frandell, 2023; McQuinn & Castro, 2017). Alajarmeh (2021) analyzed the accessibility of public health websites in 25 countries, identifying significant barriers to accessing information on many global public health sites. Additionally, Allgood and Frandell (2023) examined the web accessibility of state health agencies' COVID-19 and vaccine information. They discovered that the longer a COVID-19-related website had been active, the less accessible it became.

The research highlights the need for a more comprehensive approach to web accessibility in tourism and public health. This includes not only assessing compliance with WCAG standards but

also considering the user experience of PwD and the specific challenges they face when accessing digital content. There is also a need for more cross-disciplinary studies that compare the accessibility of websites across different industries and regions. By continuing to explore the barriers to web accessibility and developing strategies to overcome them, researchers can help ensure that PwD obtain equal access to the digital resources they need, particularly in the critical areas of tourism and health.

### 3. Methods

This research evaluated the web content accessibility of 50 state DMOs and 50 state health departments using WCAG 2.0. The assessment utilized the AChecker tool, which offers multiple methods for analyzing web accessibility—via website addresses, uploaded HTML files, or input of HTML source code. Data collection transpired during the pandemic and concluded by December 2022. This enabled the compilation of web accessibility information related to COVID-19 precautionary measures from state health department websites, a topic of significant importance that attracted substantial web traffic. Additionally, the data encompassed the availability of safe travel information from DMOs, which experienced heightened usage during the pandemic.

The evaluation process addressed Web Content Accessibility Guidelines 2.0 (Level AAA) in assessing HTML content for web accessibility issues. The WCAG are structured around four main principles, each with specific criteria (Park & Ha, 2023): (a) perceivability (22 criteria): Information and user interfaces must be presented in ways that users can perceive, (b) operability (20 criteria): Navigation and interface components must be usable by all users, (c) understandability (17 criteria): Both the user interface and information must be easy to understand. (d) robustness (2 criteria): Content must be reliably interpreted by a wide variety of user agents, including assistive technologies.

As shown above, WCAG 2.0 encompasses four primary dimensions—perceivability, operability, understandability, and robustness—and sets forth three success criteria to achieve Level A, Level AA, and Level AAA, respectively (WCAG 2.0, n.d.):

1. Level A: The most basic web accessibility features (25 criteria).
2. Level AA: Deals with the biggest and most common barriers for disabled users (13 criteria).
3. Level AAA: The highest and most complex level of web accessibility (23 criteria).

These levels represent progressively more stringent requirements to address a higher likelihood of accessibility issues (Web Content Accessibility Guidelines, W3C, 2020).

In this study, the researchers sought to measure the inaccessibility of web content using an automated tool known as AChecker. This tool is specifically designed to identify common accessibility issues by evaluating web content against the WCAG. The researchers selected AChecker for its effectiveness and reliability, particularly in the context of academic and applied accessibility research. This tool has been utilized extensively in prior studies to measure and compare web content accessibility across various domains. For instance, studies such as those conducted by Park and Jung (2021) and Singh et al. (2020, 2023) have leveraged AChecker to collect data. By referencing these earlier works, the researchers emphasized the credibility and utility of AChecker in systematically evaluating compliance with WCAG standards and advancing the understanding of digital accessibility issues. The process began with AChecker scanning the web pages in question. As it scanned, it checked each element against the WCAG criteria. For instance, one of the criteria, WCAG 1.1.1, required that all non-text content, such as images, have text alternatives. This ensured that users who rely on screen readers can understand the content. Whenever AChecker encountered an image without an alt attribute, it flagged this as a violation of WCAG 1.1.1. This flag indicated that the content was inaccessible according to this specific

guideline. The tool continued to scan for other common issues, such as improper heading structures or insufficient color contrast, each time noting the specific WCAG criterion that was not met.

Figure 1 refers to a visual example of the AChecker tool in action. Nonparametric analysis, also known as nonparametric statistics or distribution-free statistics, was used in this research. Nonparametric tests are employed when the data does not follow a known or specific probability distribution, such as the normal distribution. Accordingly, the Mann-Whitney U test was used to compare the number of inaccessible web pages.

Figure 2. Snapshot of AChecker Tool

## 4. Results

The findings of this study indicated that AChecker was employed to detect and compile any known issues with the website. However, it is important to note that other guidelines were not identified as being problematic. The description of identified problematic WCAG criteria is explained in Appendix 1. Table 1 demonstrates significant differences in accessibility issues across the WCAG guidelines 1.1, 1.3, 2.4, and 3.3 between health department websites and DMO websites, as shown by Mann-Whitney U tests. Specifically, significant discrepancies were observed in the number of known accessibility issues related to text alternatives (WCAG 1.1), adaptable content (WCAG 1.3), navigable content (WCAG 2.4), and input assistance (WCAG 3.3). Based on mean ranks, DMOs consistently exhibited significantly higher values compared to health department websites, indicating that DMO websites have significantly more accessibility issues than state health department websites.

DMO websites had the highest mean ranks for text alternatives (WCAG 1.1), with health websites at 33.43 versus DMOs at 67.57, and input assistance (WCAG 3.3), with health websites at 38.65 versus DMOs at 62.35. This high prevalence of accessibility issues on DMO websites, which are critical for providing information to travelers, is particularly concerning, especially in these two areas. The lack of text alternatives for non-text content (WCAG 1.1) severely impacted users with disabilities, making it difficult for them to access essential information. Additionally, DMO websites show deficiencies in adaptability (WCAG 1.3), failing to provide flexible content that can be easily perceived and understood by users with diverse abilities.

Moreover, the navigational issues (WCAG 2.4) further complicated the user experience by making it harder for users to locate content and orient themselves within the website. DMO websites also often fall short in input assistance (WCAG 3.3), which is essential for helping users avoid and correct mistakes, a critical element in creating a user-friendly web environment. Lastly, compatibility issues (WCAG 4.1) with current and future assistive technologies reflect a lack of

attention to ensuring these platforms are accessible to all users, particularly those relying on assistive technologies.

In Table 2, a total of 5,059 accessibility issues were identified across U.S. states, with DMOs accounting for the majority at 4,385 issues, while health departments reported 674 issues. Thirteen states reported over 100 accessibility issues on DMO websites, with Rhode Island ranking first (1,118 issues), having nearly twice as many issues as the second-ranked state, Oklahoma (479 issues). Mississippi, New Mexico, and Maryland also ranked highly, each reporting more than 150 issues on DMO websites. In contrast, eight states, including North Dakota, Georgia, Minnesota, and Colorado, had fewer than five accessibility issues on DMO websites.

**Table 1.** Mann-Whitney U test on the Number of Known Accessibility Problems

| WCAG    | Categories | Mean Rank | Mann-Whitney U | Z     | Asymptotic Sig. (2-tailed) |
|---------|------------|-----------|----------------|-------|----------------------------|
| WCAG1.1 | Health     | 33.43     | 2103.50        | 5.968 | < 0.001                    |
|         | DMOs       | 67.57     |                |       |                            |
| WCAG1.3 | Health     | 42.41     | 1654.50        | 3.078 | 0.002                      |
|         | DMOs       | 58.59     |                |       |                            |
| WCAG1.4 | Health     | 47.90     | 1380.00        | 0.927 | 0.354                      |
|         | DMOs       | 53.10     |                |       |                            |
| WCAG2.1 | Health     | 50.98     | 1226.00        | -     | 0.661                      |
|         | DMOs       | 50.02     |                |       |                            |
| WCAG2.4 | Health     | 44.69     | 1540.50        | 2.085 | 0.037                      |
|         | DMOs       | 56.31     |                |       |                            |
| WCAG3.1 | Health     | 51.90     | 1180.00        | -     | 0.437                      |
|         | DMOs       | 49.10     |                |       |                            |
| WCAG3.3 | Health     | 38.65     | 1842.50        | 4.311 | < 0.001                    |
|         | DMOs       | 62.35     |                |       |                            |
| WCAG4.1 | Health     | 45.74     | 1488.00        | 1.946 | 0.052                      |
|         | DMOs       | 55.26     |                |       |                            |

**Table 2.** Mann-Whitney U test on the Number of Known Accessibility Problems

| State       | Health department total | DMO total |
|-------------|-------------------------|-----------|
| Alabama     | 10                      | 110       |
| Alaska      | 8                       | 48        |
| Arizona     | 46                      | 66        |
| Arkansas    | 0                       | 66        |
| California  | 18                      | 38        |
| Colorado    | 10                      | 3         |
| Connecticut | 4                       | 101       |
| Delaware    | 32                      | 84        |
| Florida     | 21                      | 34        |
| Georgia     | 2                       | 2         |

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|                |    |      |
|----------------|----|------|
| Hawaii         | 14 | 133  |
| Idaho          | 35 | 19   |
| Illinois       | 13 | 95   |
| Indiana        | 1  | 75   |
| Iowa           | 6  | 24   |
| Kansas         | 2  | 184  |
| Kentucky       | 2  | 15   |
| Louisiana      | 39 | 37   |
| Maine          | 0  | 50   |
| Maryland       | 9  | 185  |
| Massachusetts  | 7  | 22   |
| Michigan       | 21 | 7    |
| Minnesota      | 3  | 3    |
| Mississippi    | 10 | 215  |
| Missouri       | 1  | 26   |
| Montana        | 7  | 6    |
| Nebraska       | 26 | 32   |
| Nevada         | 6  | 162  |
| New Hampshire  | 7  | 8    |
| New Jersey     | 33 | 65   |
| New Mexico     | 22 | 181  |
| New York       | 1  | 104  |
| North Carolina | 4  | 18   |
| North Dakota   | 6  | 1    |
| Ohio           | 7  | 132  |
| Oklahoma       | 91 | 479  |
| Oregon         | 2  | 29   |
| Pennsylvania   | 42 | 47   |
| Rhode Island   | 5  | 1118 |
| South Carolina | 4  | 17   |
| South Dakota   | 7  | 19   |
| Tennessee      | 6  | 33   |
| Texas          | 10 | 22   |
| Utah           | 12 | 28   |
| Vermont        | 2  | 12   |
| Virginia       | 4  | 116  |
| Washington     | 1  | 43   |
| West Virginia  | 32 | 32   |
| Wisconsin      | 14 | 32   |
| Wyoming        | 9  | 7    |

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## 5. Conclusion

### 5.1 Theoretical implications

This study makes a significant theoretical contribution by expanding the application of the social model of disability to the digital realm, specifically web accessibility in tourism and public

health. By addressing information ableism, it highlights how systemic biases in digital platforms perpetuate inequality for individuals with disabilities. This extension of the social model of disability underscores the importance of removing digital barriers as part of a broader effort to achieve societal inclusivity. The research further demonstrates the role of Web Content Accessibility Guidelines as a benchmark for assessing digital inclusivity, aligning theoretical frameworks with actionable metrics (Oliver, 2013; W3C, 2024).

Another theoretical implication is the comparative analysis of web accessibility practices across two critical industries: tourism and public health. By contrasting destination marketing organizations and state health departments, the study revealed systemic gaps and set a precedent for cross-sectoral research in accessibility. This approach addressed a notable gap in existing literature, which often focuses on isolated industries. By positioning public health's commitment to accessibility as a potential benchmark, the study advocates for an integrative model of accessibility that transcends industry-specific boundaries (Teixeira et al., 2022; Youngblood et al., 2021).

This research invites scholars to explore the intersection of technology, accessibility, and social equity. The concept of information ableism introduced in this study provides a framework for examining how digital platforms can either mitigate or exacerbate inequities. It opens avenues for interdisciplinary research, encouraging the inclusion of sociological, technological, and economic perspectives to understand and address the barriers faced by individuals with disabilities. This theoretical lens highlights the multifaceted nature of accessibility and its implications for equity and inclusion (Darcy et al., 2020; Friedman et al., 2006).

Finally, this study emphasized the role of policy and regulation in shaping accessibility practices. By identifying compliance gaps with WCAG and the Americans with Disabilities Act, it reinforces the theoretical argument that legal and regulatory frameworks are essential but insufficient without proactive organizational efforts. Future research should expand this theoretical exploration to include how cultural and organizational dynamics influence compliance and how they can be leveraged to promote inclusivity (Arenth, 2019; Randle & Dolnicar, 2019).

## ***5.2 Practical implications***

The findings from this study have significant practical implications for organizations, particularly in tourism and public health. DMOs exhibited substantial accessibility issues, specifically in areas such as text alternatives for non-text content (WCAG 1.1) and content adaptability (WCAG 1.3). It is crucial for DMOs to prioritize web accessibility in their digital strategies, as failure to address these issues not only limits access for individuals with disabilities but also poses legal risks under the Americans with Disabilities Act and WCAG standards. Organizations should use these findings as a roadmap to improve their websites. Ensuring that all non-text elements, such as images and videos, have meaningful alternative text is critical. This makes content accessible to visually impaired users and reduces legal risks. In addition, adopting responsive design and offering features like text resizing and high-contrast modes can enhance usability for users with various impairments.

Improving website navigation (WCAG 2.4) is another key area, especially for DMO websites. To address this, organizations should implement clear, intuitive navigation structures that include well-organized menus, descriptive headings, and breadcrumb trails that help users orient themselves and easily locate the desired content. Organizations can improve user satisfaction by making websites easier to navigate and ensure that essential information is accessible to all users. Organizations should also prioritize error prevention and correction mechanisms (WCAG 3.3) by providing real-time form validation, clear error messages, and suggestions on how to correct mistakes. This is particularly important when users interact with forms or complete tasks, as errors can frustrate users and create barriers to completing important actions, such as submitting inquiries or booking services.

Beyond compliance, web accessibility should be seen as a business opportunity. Catering to individuals in the United States with disabilities opens new markets, particularly in tourism, where

accessible digital experiences can set businesses apart and enhance brand loyalty. Also, investing in training for web developers and designers to embed accessibility in the design process will lead to sustainable improvements. Regular accessibility audits and a proactive, user-centered approach will help organizations maintain compliance, enhance user experience, and unlock new growth opportunities.

### 5.3 Limitations and future studies

Despite its valuable implications, this study is not free from limitations. Its scope is confined to the United States, limiting its generalizability to other countries with differing legal frameworks, technological infrastructures, and cultural attitudes toward accessibility. Future studies should consider cross-national comparisons to examine how web accessibility varies globally and how local regulations influence these variations. Different regions of the world have distinct legal frameworks, technological infrastructures, and cultural attitudes toward accessibility, which can significantly influence how organizations approach digital inclusion.

This study utilized the AChecker tool to evaluate web accessibility, effectively identifying WCAG compliance issues. However, this may result in limitations in assessing complex web functionalities and dynamic content such as mobile applications or highly interactive websites. Manual evaluations and user testing with individuals with disabilities could provide richer data and offer a more comprehensive picture of the actual user experience. Future research might incorporate these methodologies to capture both the technical and experiential aspects of web accessibility. Such research would provide more holistic insights into the barriers that users with disabilities encounter and offer practical recommendations for improving the user experience across different types of websites.

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## Appendix.

### Description of identified problematic WCAG criteria

Despite its valuable implications, this study is not free from limitations. Its scope is confined to the United States, limiting its generalizability to other countries with differing legal frameworks, technological infrastructures, and cultural attitudes toward accessibility. Future studies should consider cross-national comparisons to examine how web accessibility varies globally and how local regulations influence these variations. Different regions of the world have distinct legal frameworks, technological infrastructures, and cultural attitudes toward accessibility, which can significantly influence how organizations approach digital inclusion.

1.1 Text Alternatives: Provide text alternatives for any non-text content

1.3 Adaptable: Create content that can be presented in different ways (for example, a more straightforward layout) without losing information or structure

1.4 Distinguishable: Make it easier for users to see and hear content, including separating foreground from background

2.1 Keyboard Accessible: Make all functionality available from a keyboard Success

2.4 Navigable: Provide ways to help users navigate, find content, and determine where they are

3.1 Readable: Make text content readable and understandable

3.3 Input Assistance: Help users avoid and correct mistakes

4.1 Compatible: Maximize compatibility with current and future user agents, including assistive technologies