

Increasing Access to Justice by Improving Usability of Statutory Code Websites

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Introduction

When confronted with a legal problem, researchers need to identify the controlling statutes that determine their legal position. This is not always an easy task, however, especially if a researcher must rely on a free state government website rather than a fee-based platform like Westlaw and Lexis. Free government websites often do not have sophisticated search algorithms or web design features that aid a researcher in efficiently identifying relevant laws. The inability to find the law that governs a legal issue is an access to justice problem. When people are unable to find the laws that govern them, they cannot know what their legal rights and remedies are and cannot enforce them.

This article begins by discussing the importance of access to reliable online platforms to locate statutes. It then discusses usability standards for websites and how those standards can be applied to state statutory code websites. Next it describes the evaluation I conducted of the state statutory code websites based on those usability standards. Finally, it concludes with recommendations to state governments for ways they can make their code websites more useable for researchers and promote access to justice.

Access to Justice: What Does It Require?

Access to justice is a basic principle of the rule of law.¹ It is defined as the ability of citizens to know their legal rights and remedies and to access tools to enforce those rights

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effectively and affordably.² Without it, people cannot exercise their rights and hold their governments accountable.³ In the United States, access to justice is denied to many.⁴ In fact, a vast majority of Americans living below the poverty line and a majority of middle-income Americans encounter important civil legal matters, such as housing, family, and debt issues, without meaningful legal assistance.⁵ There are many causes for this scarcity of legal help, but the result is an access to justice crisis within the United States, as its civil legal system is one of the most costly and inaccessible in the world.⁶

Coinciding with this crisis is an ever-growing body of scholarship on issues pertaining to access to justice. Most of this scholarship focuses on access to justice through meaningful legal representation.⁷ But is access to meaningful legal representation all that is required for an individual to access justice? Deborah Rhode, a leading scholar in the field, argued for a much more expansive view of access to justice beyond that of access to a lawyer.⁸ In her scholarship, she laid out a set of core principles that includes access to legal services and dispute resolution

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¹ United Nations & the Rule of Law, *Access to Justice*, <https://www.un.org/ruleoflaw/thematic-areas/access-to-justice-and-rule-of-law-institutions/access-to-justice/> (last visited Nov. 17, 2021).

² See Charles P. Sabatino, *Access to Justice: The People's Principle*, 43 GENERATIONS: J. AMER. SOCIETY ON AGING 6 (2019); see also Texas Access to Justice Commission, *What Is Access to Justice?*, <https://www.texasatj.org/what-access-justice> (last visited Nov. 17, 2021) (describing access to justice as “the ability of any person, regardless of income, to use the legal system to advocate for themselves and their interests.”)

³ United Nations & the Rule of Law, *supra* note 1.

⁴ See Benjamin P. Cooper, *Preliminary Thoughts on Access to Justice in the Wake of COVID-19*, 56 GONZ. L. REV. 227, 229 (2020–2021) (citing the World Justice Law Project Rule of Law Index which ranks the United States as 109th out of 128 countries in its “Access and Affordability of Civil Justice” category); Deborah L. Rhode, *Access to Justice*, 69 FORDHAM L. REV. 1785 (2001) (“Millions of Americans lack any access to the system, let alone equal access.”).

⁵ Andrew M. Pearlman, *The Public's Unmet Need for Legal Services and What Law Schools Can Do About It*, 148 DAEDALUS 75 (2019).

⁶ See *id.* See also Cooper *supra* note 4.

⁷ See Gary Blasi, *Framing Access to Justice: Beyond Perceived Justice for Individuals*, 42 LOY. L.A. L. REV. 913, 914 (2009); Rhode, *supra* note 4, at 1786.

⁸ Rhode, *supra* note 4.

processes that are fair, efficient, and affordable, the ability to access free and competent aid if one cannot afford legal assistance, opportunities for people to address their legal needs themselves, and access to services that would make self-help effective.⁹

The latter two principles focus on an individual's need to understand the legal issues they face and to advocate for themselves.¹⁰ These principles are particularly significant because a large portion of litigants in the civil justice system represent themselves.¹¹ These litigants advocate for themselves on issues of critical importance to their wellbeing "including physical safety, economic security, access to shelter, marital status, and the right to parent one's children."¹² In order to effectively advocate for themselves, they first must be able to find and access the text of the law.¹³

Traditionally, states provided access to the text of their laws through print codes. Researchers using print codes relied on finding tools to locate sections of the code that were relevant for their issue. These finding tools include tables of contents and subject indexes, both of which direct a researcher to the relevant sections of the code. While it may take some time and thought to identify a relevant subject in the table of contents or index, there is a certain clarity in using the print finding tools to identify relevant laws, because they provide an accessible structure into the code.¹⁴ This structure provides a researcher with context, enabling

⁹ Deborah L. Rhode, *Access to Justice: Again, Still*, 73 FORDHAM L. REV. 1013, 1024 (2004). *See also* Texas Access to Justice Commission, *supra* note 2.

¹⁰ *Id.*

¹¹ Jessica K. Steinberg, *Demand Side Reform in the Poor People's Court*, 47 CONN. L. REV. 741, 748–49 (2015). *See also* Expanding Access to Justice through Uniform Electronic Legal Materials Act (UELMA) (May 11, 2021) (presentation by Barbara Bintliff) (stating that access to electronic text of the law "helps citizens, including self-represented or pro se litigants, more fully recognize their legal stance").

¹² Steinberg *supra* note 11, at 749.

¹³ *Id.*

¹⁴ Barbara Bintliff, *Context and Legal Research*, 99 LAW LIBR. J. 249, 259–60 (2007) (arguing that the shift from print-based research to electronic research fundamentally alters the way lawyers conduct research because it rids us of law's structure and legal context).

them to understand how the laws relate to the specific legal issue and thus helps them find the relevant laws needed to access justice.¹⁵

Often, this same structure and context does not exist when browsing a search result list. Chief Justice Roberts perhaps described the challenge of online research best when he said,

Lawyers run the risk that word searches will uncover reams of marginally relevant precedent superficially on point, thereby distracting them from engaging in critical analysis or structuring of the underlying legal principles. Computer-assisted research certainly enlarges horizons, but law students and lawyers must continue to focus on what is relevant and what is not.¹⁶

This lack of context and structure makes it difficult for researchers, who rely on keyword searching, to identify which statutes are relevant. For an online statutory code to be accessible, the website needs to provide researchers with structure and context so that they can understand and interpret their results. If a site does so, a researcher will be more successful in evaluating which laws are relevant to their legal issue and will be better equipped to access justice.

At its foundation, accessing justice requires the ability to find and read the law.¹⁷ No one can know the entirety of the law. Without access to the law's text, there is no way to identify one's legal rights and responsibilities and to subsequently access justice.¹⁸ "To ensure justice, it is necessary to do more than protect the right of all people to have access to and fair treatment before the courts. It is necessary to protect access to the language of the law itself."¹⁹ All fifty state legislatures and the District of Columbia's city council promote these core principles by

¹⁵ Aliza Kaplan & Kathleen Darvil, *Think & Practice Like A Lawyer: Legal Research for the New Millennials*, 8 LEGAL COMM. & RHETORIC: JALWD 153, 160 (2011).

¹⁶ Remarks of the Honorable John G. Roberts, Jr., Chief Justice, Supreme Court of the United States, 57 DRAKE L. REV. 1, 9 (2008). This problem is exacerbated for non-lawyers who have no formal legal education or training to help them frame the issue they are researching.

¹⁷ Bintliff, *supra* note 11.

¹⁸ *Id.*

¹⁹ Julia Wentz, *Justice Requires Access to the Law*, 36 LOY. U. CHI. L.J. 641 (2005).

providing free electronic access to the text of their statutory codes.²⁰ Widespread online access to the text of the laws increases government transparency and accountability and also encourages citizens' participation in democracy.²¹

While this is a promising first step, researchers still face obstacles in accessing and using these online platforms. One obstacle is that fewer than half of state governments "ensure that the electronic legal information they create and distribute remains un-altered, and is, therefore trustworthy or authentic."²² Because electronic information is susceptible to alteration, either via hackers or the unintentional migration of corrupt data, a major issue is whether the legal information presented to researchers is trustworthy and authentic.²³ This is all the more troubling because many states have eliminated their print resources in favor of electronic-only version without taking steps to ensure that the law is authentic, free, and permanently accessible to the public.²⁴ Governments have a duty to ensure that the online version provided is as accurate and trustworthy as the laws that are published in print. If researchers cannot rely on the text of the laws provided by state governments, those governments are derelict in fulfilling their duty to provide access to an accurate version of the law.²⁵

²⁰ Law Librarians' Society of Washington, D.C., *State Legislatures, State Laws and State Regulations: Website Links and Telephone Numbers*, <https://www.llsdc.org/state-legislation> (last visited NOV. 17, 2021) (providing an alphabetical listing of the fifty states and District of Columbia along with links to the online versions of the statutory codes).

²¹ See NAT'L CONF. OF COMM'RS ON UNIF. STATE L., UNIF. ELECTR. LEGAL MATERIAL ACT at Prefatory Note 1 (2011), <https://www.uniformlaws.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=325397ba-6fc7-ae8e-3e2f-3a8e5796898c&forceDialog=0> (last visited Nov. 17, 2021).

²² *Id.* See also Anna Endter, *Authentication of Online State Primary Legal Resources as a Social Justice Issue: The Uniform Electronic Legal Material Act and How It Can Benefit Pro Se Litigants*, 31 LEGAL REFERENCE SERVS. Q. 293, 296 (2012) (noting that while many states were discontinuing their print versions of the law, very few states were taking steps to ensure the electronic versions of the law were authentic and trustworthy).

²³ NAT'L CONF. OF COMM'RS ON UNIF. STATE L., *supra* note 21.

²⁴ Endter, *supra* note 22, at 295.

²⁵ *Id.*

Uniform Electronic Legal Materials Act: Requires Reasonable Access to Official & Authentic Versions of the Law

The Uniform Electronic Legal Materials Act (UELMA) helps states fulfill their duty to provide permanent and trustworthy online sources of law by giving them an outcome based approach to authenticate their electronic legal material.²⁶ UELMA's goals are to "enable end-users to verify the trustworthiness of the legal material they are using" and to provide states with a framework to preserve their electronic legal material which also allows for permanent access.²⁷ States who adopt UELMA give researchers a means to verify their laws' authenticity. Researchers can then confidently rely on the online version of the laws when attempting to access justice. UELMA also helps states comply with their obligation to guarantee access to the text of their laws, by creating a framework for permanent access to electronic legal material.

The American Association of Law Librarians (AALL) has been a driving force in drafting UELMA and lobbying states to pass UELMA. One of AALL's guiding principles is that a free and democratic society depends on public access to legal information and that public access to legal information is key to achieving access to justice.²⁸ AALL believes that "federal, state, and local governments have a duty to ensure open, equitable, and reliable online access to legal information."²⁹

To promote and further this policy, AALL lobbies governments to fulfill their duty to provide equitable and permanent access to official and authentic versions of their laws.³⁰ AALL

²⁶ NAT'L CONF. OF COMM'RS ON UNIF. STATE L., *supra* note 21, at 2.

²⁷ *Id.*

²⁸ AALL Guiding Principles for Public Access to Legal Information on Government Websites, <https://www.aallnet.org/about-us/what-we-do/policies/public-policies/aall-guiding-principles-for-public-access-to-legal-information-on-government-websites/> (last visited on Dec. 21, 2021).

²⁹ *Id.*

³⁰ AALL Government Relations, <https://www.aallnet.org/advocacy/government-relations/> (last visited Dec. 21, 2021).

argues that “[t]o be trustworthy, digital materials-vulnerable to lapses in management and control, corruption, and tampering—must be equivalent to print official legal resources. To be equivalent, they must be authentic.”³¹ Official versions of laws are those that are “governmentally mandated or approved by statute or rule.”³² In addition, an authentic source is defined as “one whose content has been verified by a government entity to be complete and unaltered when compared to the version approved or published by the content originator.”³³ In order to address the lack of online authentication of official legal materials, AALL worked with the National Conference of the Commissioners on State Laws (NCCUSL) to research and draft a uniform law that addressed the issue.³⁴

In 2007, AALL issued a State by State report on whether web-based state primary resources were trustworthy.³⁵ The report found that very few states ensured that the electronic version of their laws were trustworthy and authentic.³⁶ Shortly after the report’s release, in 2008, the NCCUSL created a study committee to investigate the online authentication of legal materials and the possibility of drafting a uniform law to address these problems.³⁷ In 2009, NCCUSL approved the study committee’s recommendation to create a Drafting Committee on Authentication and Preservation of Electronic State Legal Materials.³⁸ The Drafting Committee

³¹ See Richard J. Matthews & Mary Alice Baish, *State by State Report on Authentication of Online Legal Resources* 7 (2009), <https://www.aallnet.org/wp-content/uploads/2018/01/authenfinalreport.pdf> (hereinafter State by State 2009 Report).

³² *Id.* at 8. See also STEVE BARKAN ET AL., *LEGAL RESEARCH ILLUSTRATED* 11 (9th ed. 2009) (defining an official publication as one that is “mandated by statute or governmental rule. It might be produced by the government, but does not have to be.”)

³³ Matthews, *supra* note 31.

³⁴ See Endter, *supra* note 22, at 297.

³⁵ *Id.* at 296. In addition to the 2007 report, AALL also issued a 2009 State by State report which made similar findings.

³⁶ See Richard J. Matthews & Mary Alice Baish, *State by State Report on Authentication of Online Legal Resources* 15 (2007) (hereinafter State by State 2007 Report, on file with author). See also Endter, *supra* note 22, at 296.

³⁷ Endter *supra* note 22, at 297.

³⁸ *Id.*

then began debating what later became UELMA.³⁹ In July 2011, NCCUSL approved UELMA, and it was finalized in October 2011.⁴⁰ As of November 17, 2021, twenty-one states and the District of Columbia have enacted UELMA legislation.⁴¹

UELMA requires state governments that no longer publish an official version of their laws in print to designate their electronic legal materials as official. It further requires that the official electronic legal material must also be capable of being authenticated, preserved and permanently accessed by the public.⁴² UELMA provides state governments with a technology neutral, outcomes-based approach to authenticate and preserve electronic legal material.⁴³ As stated previously, the goal of the law is to allow researchers “to verify the trustworthiness of the legal materials they are using and to provide a framework for states to preserve legal material in perpetuity in a manner that allows for permanent access” while also granting states flexibility in terms of the technology they use and their budget constraints.⁴⁴ In establishing a framework for states, UELMA promotes access to justice because it ensures that states provide individuals with trustworthy content when researching legal issues and allows those individuals to make informed decisions based on the knowledge that the text they are relying on is trustworthy.⁴⁵ In a webinar on Expanding Access to Justice through UELMA, Barbara Bintliff stated, “We all need ready

³⁹ *Id.* at 297–98 (Professor Barbara Bintliff, former AALL President and Director of the Tarleton Law Library at the University of Texas School of Law served as the reporter for the drafting committee.)

⁴⁰ *See id.* *See also* NAT’L CONF. OF COMM’RS ON UNIF. STATE L., *supra* note 21, at Comment to Section 5, 10.

⁴¹ American Association of Law Libraries, UELMA Enactments, <https://www.aallnet.org/advocacy/government-relations/state-issues/uelma-resources/uelma-enactments/> (last visited Nov. 17, 2021).

⁴² NAT’L CONF. OF COMM’RS ON UNIF. STATE L., *supra* note 21, at Prefatory Note 2.

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Endter supra* note 22, at 304. *See also* NAT’L CONF. OF COMM’RS ON UNIF. STATE L. *supra* note 21.

access to accurate legal information to allow us to understand our legal position.”⁴⁶ UELMA seeks to clear the misinformation barrier by guaranteeing access to accurate legal information.⁴⁷

Another requirement for accessing the law is the ability to locate the law one needs. What good is having an official and authentic electronic version of a jurisdiction’s laws if no one can effectively use the online platform to find the law that applies to their situation? Section 8 of UELMA touches on this issue but does not address it.⁴⁸ Section 8 of UELMA is titled, Public Access to Legal Material in Official Electronic Record.⁴⁹ It states that “[a]n official publisher of legal material in an electronic record that is required to be preserved under Section 7 shall ensure that the material is *reasonably available* for use by the public on a permanent basis.”⁵⁰ The comment to Section 8 states that “[t]o exercise their rights to participate in our democracy, citizens must have *reasonable access* to all legal material.”⁵¹ The comment’s discussion focuses on reasonable access in terms of time but not function.⁵² This means that the legal documents not only need to be accessible in perpetuity, they also need to be made “reasonably available” to the public.⁵³ For the availability to be reasonable, the comments state that legal documents do not need to be available around the clock, every day of the year, but rather that they should be made available in the same manner as other state records.⁵⁴

By focusing on time rather than function, the section and its commentary do not address the very real issue facing users when confronting a legal research platform. How do they find the

⁴⁶ Bintliff, *supra* note 11.

⁴⁷ *Id.*

⁴⁸ NAT’L CONF. OF COMM’RS ON UNIF. STATE L., *supra* note 21, at 15.

⁴⁹ *Id.*

⁵⁰ *Id.* (emphasis added).

⁵¹ *Id.* (emphasis added).

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*

law they need? Reasonable access should be thought of more broadly as a person’s ability to use an online platform to locate the official and authentic legal materials needed to understand their legal rights and responsibilities. But how should we determine what access to electronic information is reasonable?

One way to do this is to compare the online version to the print version and assess whether the online version provides the same finding tools as the print, i.e. the table of contents and subject index. As stated previously, these finding tools provide users with context and allow them to assess how the laws relate to the issue they are researching.⁵⁵ And the good news is that almost all state statutory code websites provide tables of contents to the online versions of their codes.⁵⁶ This is helpful and significant, but it is not enough, because there are significant differences as to how users research in books versus how they research using online databases.

HCI and UX Usability Guidelines and Standards: Assessing Reasonable Access

When determining what access to the electronic version of our laws is reasonable, it helps to consider the usability guidelines and standards established in the fields of human computer interaction (hereinafter “HCI”) and user experience (hereinafter “UX”). These disciplines study the way people interact with technology.⁵⁷ Research in these disciplines often compares and evaluates how easy it is for people to use computer interfaces.⁵⁸ This article applies the usability

⁵⁵ See Kaplan & Darvil, *supra* note 15.

⁵⁶ See appendix b column for clickable table of contents. All jurisdictions except Md (Kathy confirm) have a toc.

⁵⁷ See M. Lee, *Human Computer Interaction*, in SALEM PRESS ENCYCLOPEDIA OF SCIENCE (2020)(stating that “Human-computer interaction (HCI) is a field concerned with the study, design, implementation, evaluation, and improvement of the ways in which human beings use or interact with computer systems.”); *see also* Nick de Voil, USER EXPERIENCE FOUNDATIONS 6 (2020)(defining user experience as a person’s perceptions and responses that result from the user and/or anticipated use of a system, product or service).

⁵⁸ *Id.*

standards and guidelines in these fields,⁵⁹ because they measure the ease with which a user can navigate their way through a website.⁶⁰ Applying usability guidelines and standards to a state government's statutory code website will help determine whether a researcher can use that website to find the law they need to resolve their problem. If a researcher cannot find and use the laws they need, then they do not have reasonable access to those laws.

There are a few different HCI and UX models that establish usability standards and guidelines for websites.⁶¹ The International Organization for Standardization (hereinafter "ISO") is one model, and it produced the standard that defines the term *usability* discussed above.⁶² Other organizations that have developed guidelines are the U.S. Department of Health and Human Services (hereinafter "HHS") and the U.K. Joint Information Systems Committee (hereinafter "JISC").⁶³ The ISO standards are developed by a team of international experts nominated by their national standards agencies.⁶⁴ The ISO design guidance focuses on four areas: purpose and strategy; content and functionality; navigation and interaction; and media design and presentation.⁶⁵ The JISC guidance is designed specifically for the United Kingdom's higher education websites, and the guidance documents are drafted with a focus on being easy to

⁵⁹ While I frame this discussion as an accessibility issue, the technical guidelines frame it as a usability issue, because the accessibility guidelines apply to people with disabilities using the web. *See* Web Accessibility Initiative, Introduction to Web Accessibility, <https://www.w3.org/WAI/fundamentals/accessibility-intro/> (last visited Nov. 18, 2021)(stating that Web accessibility means that "websites, tools, and technologies are designed and developed so that people with disabilities can use them. More specifically, people can: perceive, understand, navigate, and interact with the Web contribute to the Web").

⁶⁰ Nigel Bevan, *International Standards for Usability Should be more Widely Used*, 4 J. USABILITY STUD. 106, 108 (2009) (ISO 9241 standard on Ergonomics of Human System Interaction defines usability as "the extent to which a product [service or environment] can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.").

⁶¹ *See generally* Nigel Bevan, *Guidelines and Standards for Web Usability*, Proceedings of HCI International 2005.

⁶² Bevan, *supra* note 60, at 107.

⁶³ Bevan, *supra* note 61.

⁶⁴ *Id.* at 2.

⁶⁵ *Id.*

understand and straightforward.⁶⁶ Because they are drafted for higher education websites, the JISC design guidance is targeted specifically at online courses, digital libraries, personalization or customization, and portals. Like the JISC guidance documents, the HHS guidance documents are designed to be easily understood and easily used.⁶⁷ These documents cover a wide range of website design issues, including accessibility, home page design, page and site navigation, graphics and images, web content organization, and effective web content writing.⁶⁸ Unique to the HHS guidance documents are two scores: one ranks the importance of an individual guideline to the overall success of the website; the other ranks the strength of evidence that supports that guideline.⁶⁹

In comparing the different standards, HCI and UX scholars find that while the ISO guidelines provide an immense body of knowledge, they are not easy for web designers to implement.⁷⁰ They find the HHS guidelines to be much more approachable for developers.⁷¹ There are a few reasons for this. One is that the HHS guidelines are written in simple language and are illustrated with examples.⁷² In addition, as noted above, each guideline has a score both for relative importance and strength of evidence.⁷³ One final advantage of the HHS guidelines is that they are peer reviewed and research based.⁷⁴ All of these features make the HHS guidelines the preferred model for evaluating a website's usability.⁷⁵ Like the HHS guidelines, the JISC

⁶⁶ *Id.*

⁶⁷ *Id.* at 1.

⁶⁸ *Id.* at 1–2.

⁶⁹ *Id.* at 2.

⁷⁰ Bevan, *supra* note 60, at 108.

⁷¹ *Id.*

⁷² Bevan, *supra* note 61, at 1–2.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.* at 10.

guidelines are also easy to use and implement.⁷⁶ However, because they are written for a very specific audience, higher education, they are not as suitable as the HHS guidelines when evaluating a state government's website.⁷⁷ This article applies and uses the HHS guidelines to evaluate the usability of the statutory code websites examined.

Statutory Code Website Usability Study

In order to determine how easy or difficult it is to locate controlling statutes, I evaluated the statutory code websites of all fifty states and the District of Columbia. I analyzed the websites using two different types of assessment. The first compared the results of a simple search of the statutory code website for a given issue to the laws listed on a fifty state survey for that same issue.⁷⁸ The second applied website usability guidelines from the fields of human computer interaction and user experience.⁷⁹ After evaluating all fifty-one jurisdictions' websites, I found that locating the relevant laws on a specific issue is difficult when using a majority of the state statutory code websites. While this is troubling, there are some straight-forward solutions that state governments can implement to make their websites more usable and the laws more easily findable, and thus promote access to justice.⁸⁰

⁷⁶ *Id.* at 9.

⁷⁷ *Id.* at 1–2.

⁷⁸ A 50 state survey lists the statutory provisions concerning a designated topic for all 50 states. The surveys include charts comparing the laws, citations to the relevant statutes, and the subject matter of the cited statutes. Because these surveys compile and list the laws on a particular topic alphabetically by state, it is a useful tool to use to determine if a result list contains the relevant statutes on a topic. One of the preeminent 50 state surveys is Richard A. Leiter's National Survey of State Laws, which is available on HeinOnline. I relied on Leiter's survey of custody laws for evaluating the findability of state custody laws. NATIONAL SURVEY OF STATE LAWS, Child Custody (Richard Leiter ed., 8th ed. 2019). The National Survey of State Laws did not include a survey of state eviction laws. Instead I turned to Westlaw and LexisNexis, both of which have their own 50 state statutory survey databases. LexisNexis is the only platform that has a 50 state survey dedicated to eviction laws. I thus relied on that survey to evaluate the result lists of the state statutory code websites for eviction laws. LexisNexis 50 State Surveys Statutes & Regulations, Real Property Law-Landlord & Tenant: Eviction, Unlawful Detainer, and Tenant Protections at Foreclosure (2019)

⁷⁹ See discussion *supra* HCI & UX Usability Standards & Guidelines: Assessing Reasonable Access.

⁸⁰ See discussion *infra* Findings and Recommendations.

In considering the statutory code websites, I applied a specific subset of the HHS guidelines, the search and navigation guidelines, to determine whether access to an online state statutory code is reasonable. The HHS search guidelines center on a user's ability to search a web page and retrieve results that are both usable and understandable.⁸¹ The search guidelines help assess whether a user can find and use the information they need. This assessment is central to determining reasonable access.⁸² The HHS navigation guidelines also focus on a researcher's ability to locate the information they need, but instead of centering on a site's search functionality, the navigation guidelines highlight the methods and tools used to find information within a website.⁸³ Applying both the search and navigation guidelines to a state's statutory code website allowed me to evaluate whether a researcher can use the site's tools to successfully find the law they need.

As mentioned previously, the HHS guidelines use a ranking system to help developers prioritize which guidelines to implement.⁸⁴ There are two scores listed for each guideline. One is a relative importance score and the other is a strength of evidence score.⁸⁵ The rankings are measured from one to five, with five being the highest.⁸⁶ The relative importance scale assesses the importance of the guideline to the overall usability of the website.⁸⁷ Relative importance was determined by sixteen external reviewers and the guidelines.⁸⁸ These reviewers assigned each guideline a rating based on the question "how important is this guideline to the success of the

⁸¹ U.S. DEP'T OF HEALTH & HUM. SERVS., RESEARCH-BASED WEB DESIGN AND USABILITY GUIDELINES, at ii (2006) https://www.usability.gov/sites/default/files/documents/guidelines_book.pdf.

⁸² *Id.* at 179.

⁸³ *Id.* at 82.

⁸⁴ *Id.* at 18.

⁸⁵ *Id.*

⁸⁶ *Id.* at 24.

⁸⁷ *Id.* at 22.

⁸⁸ *Id.*

web site?”⁸⁹ All guidelines included were deemed somewhat important while those guidelines that were not deemed important were excluded from the final document.⁹⁰ The strength of evidence scale was created by eight usability researchers, practitioners, and authors.⁹¹ These reviewers constructed a set of criteria for judging the strength of the evidence for each guideline.⁹² A guideline’s strength of evidence rating is based on the nature and quality of supporting research for the guideline, and the ratings are intended to help web designers determine in which guideline they can place the highest confidence.⁹³ When evaluating the usability of a state government’s statutory code website, this article will rely on guidelines that received a four or five on the relative importance scale and at least a two on the strength of evidence scale. Strength of evidence scores are consistently lower than relative importance scores, because there is a lack of research in these fields.⁹⁴

Below are the HHS guidelines I used to evaluate the state code websites. I discuss each of these guidelines and how well the state code websites meet them.

Search Guidelines Used in Evaluation:

- Ensuring usable search results
- Designing search engines to search entire site or clearly communicate what part of site is searched
- Making upper and lowercase search terms equivalent
- Designing search around user’s terms

Navigation Guidelines Used in Evaluation:

- Providing navigational options
- Differentiating and grouping navigation elements
- Offering a clickable list of contents
- Providing feedback on user’s location

⁸⁹ *Id.*

⁹⁰ *Id.* at 21.

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.* at 17.

⁹⁴ *Id.* at 21.

HHS Search Guidelines

The HHS search guideline that is ranked the most important, and also shows strong evidence of support is ensuring usable search results.⁹⁵ This guideline stresses that search results should display the precise information being sought, and in a format that matches the users' expectations.⁹⁶ When users do not understand what their results are or do not immediately find what they are looking for, they become frustrated.⁹⁷ In applying this guideline to state government statutory code websites, it means that a researcher must be able to understand and interpret their search results. When a researcher browses a result list, they should be able to tell what title, chapter, and section of the code a result falls within. They should be able to tell if the result is a statute or some other document like a bill or a press release. Another way a website helps a user understand their results is to contextualize them by highlighting the researcher's search terms in the result list.⁹⁸

In evaluating the result lists, more than half of the jurisdictions provide usable search results, as thirty jurisdictions display where the search terms appear in the document.⁹⁹ In addition, twenty-two of the twenty-seven jurisdictions not only show where the search terms appear in the document, they also display the title name, chapter name, and section name of where in the code the result is found.¹⁰⁰ These contextual clues are very helpful for a litigant's understanding of their legal situation because they show litigants where in the code's hierarchy their legal dispute is addressed. Although thirty jurisdictions display where the search terms

⁹⁵ *Id* at 204.

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ *See infra* Appendix 1 (Column 1 "Usable Search Results".)

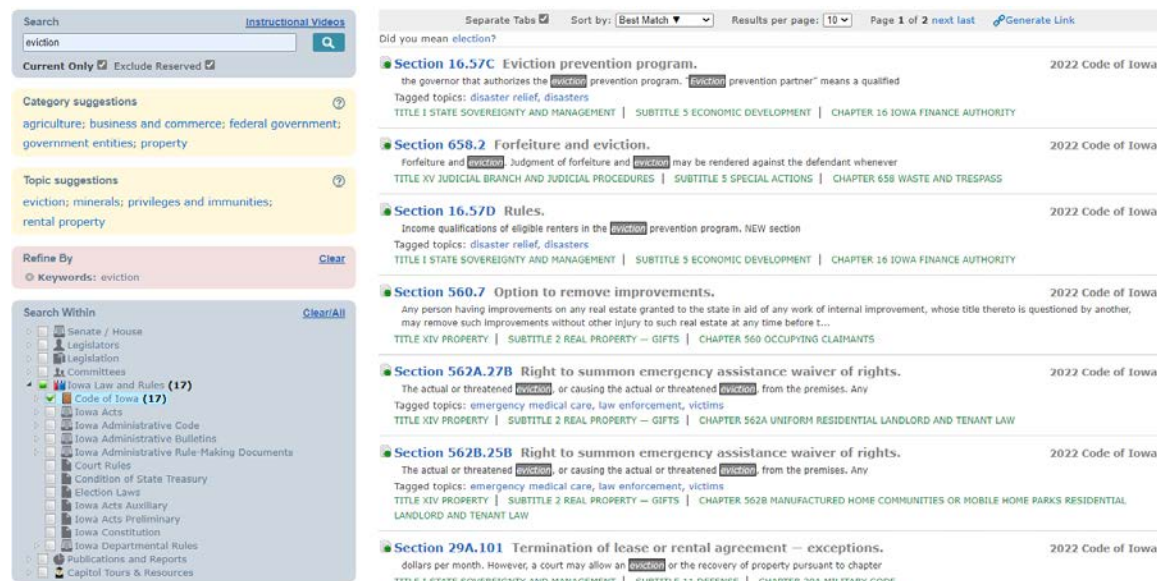
¹⁰⁰ *Id.*

appear, twenty-one do not, and some of those result lists are unintelligible as they only list the section and title number of the code and provide no other contextual clues for the user.¹⁰¹

Figures 1 and 2 show one website that provides usable search results and another that does not.

Figure 1 is from the Iowa Legislature’s website. The Iowa results show users what title, subtitle, chapter, and section of the code their result falls within and they also highlight where in the retrieved document the search terms appear. Figure 2 is from the Oklahoma Legislature’s website, and the result list provides the researcher with little context, making it difficult to understand what the search retrieved.

Figure 1

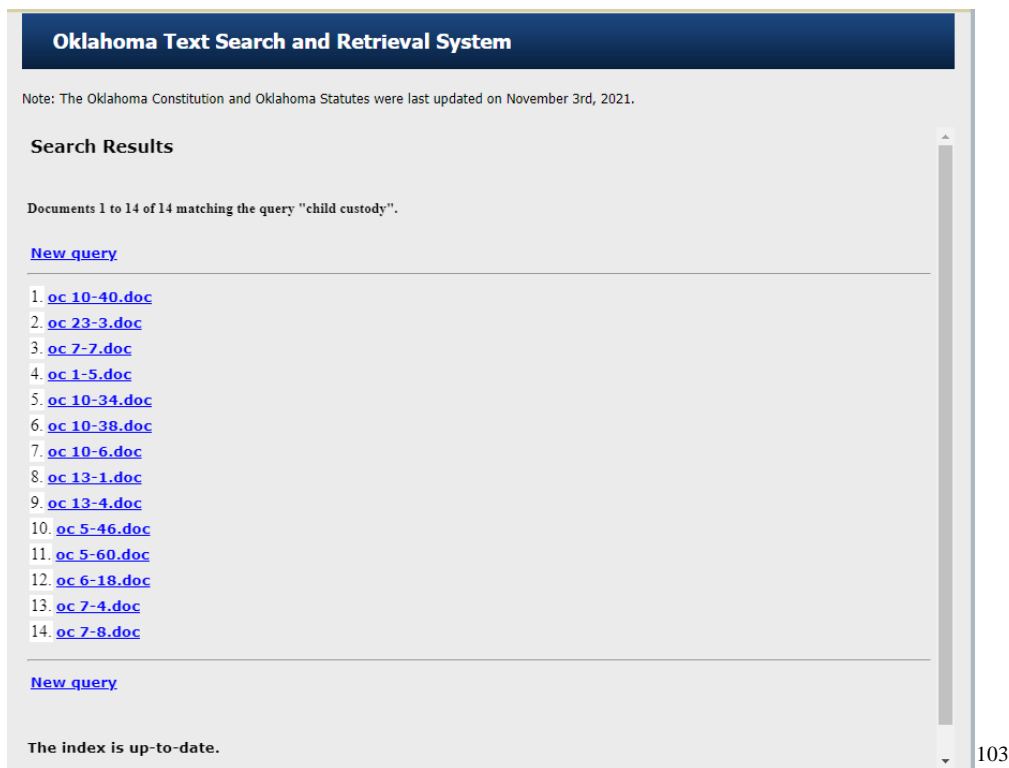


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Figure 2

¹⁰¹ *Id.*

¹⁰² The Iowa Legislature, Legislative Document Research, <https://www.legis.iowa.gov/publications/search?tc=true&fq=11%3A%22law%3A1code%7CCode%20of%20Iowa%22> (last visited Dec. 27, 2021).



A website can also contextualize results by clustering similar results in a panel to the left of the result list.¹⁰⁴ This clustered panel is like those seen on subscription-based legal research platforms like Westlaw or LexisNexis. This panel provides users with context by showing where their results fall within the broader scope of the searched content and further allows users to filter their results to retrieve relevant material.¹⁰⁵ Figure 3 is from a search of Iowa’s code on Westlaw Edge. The clustered panel on the left contextualizes the search results by allowing a user to quickly identify which titles their results fall within. It further allows that user to filter their results to retrieve the relevant laws for their legal issues. None of the state government statutory code websites provide this clustered panel and filtering.

¹⁰³ OKLAHOMA STATE LEGISLATURE, OKLAHOMA TEXT SEARCH AND RETRIEVAL SYSTEM, http://www.oklegislature.gov/tsrs_os_oc.aspx (last visited Dec. 27, 2021).

¹⁰⁴ U.S. DEP’T OF HEALTH & HUM. SERVS., *supra* note 81, at 204.

¹⁰⁵ *Id.*

Figure 3

The screenshot shows the Westlaw Edge interface for Iowa Statutes & Court Rules. On the left, there is a 'Filters' sidebar with sections for 'Content type: Iowa Statutes & Court Rules (181)', 'Select multiple filters' (with 'Restore previous' and 'Clear' buttons), 'Search within results' (with a search bar), 'Jurisdiction' (with a '+' button), and 'Content Type' (with a '+' button). Below these is a 'Statute Title' section with a 'Narrow Statute Title' input field and a list of statutes with checkboxes and counts: 'Constitution of the State of Iowa (Annotated)' (2), 'Iowa Court Rules' (5), 'Title I. State Sovereignty and Management [Chs. 1-38D]' (4), 'Title IV. Public Health [Chs. 123-158]' (1), 'Title IX. Local Government [Chs. 331-420]' (114), and 'Title VI. Human Services [Chs. 216-255A]' (1). The main content area is titled 'Iowa Statutes & Court Rules (181)' and shows a list of statutes. The first result is '16.57C. Eviction prevention program' (IA ST § 16.57C - Effective: June 16, 2021 - Iowa Code Annotated). Below this is a snippet of the statute text: '... Under the **eviction** prevention program, the authority shall award grants to eligible renters and to **eviction** prevention partners for purposes of this section....' and '...b. Grants awarded to **eviction** prevention partners pursuant to this section shall be used to pay for rent or services provided to eligible renters for the purpose of preventing the **eviction** of eligible renters....'. The second result is '562B.32. Retaliatory conduct prohibited' (IA ST § 562B.32 - Iowa Code Annotated). Below this is a snippet of the statute text: 'Title XIV. Property [Chs. 555-594A] Subtitle 2. Real Property--Gifts [Chs. 557-569] Chapter 562B. Manufactured Home Communities or Mobile Home Parks Residential Landlord and Tenant Law Article IV. Remedies'.

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The next most important search guideline in terms of relative importance and strength of evidence is designing a search engine to either search the entire site or clearly communicate which part of that site is being searched.¹⁰⁷ Many large sites (like state government websites) have various subsections that are maintained by different designers.¹⁰⁸ Because of this, users may view a website differently from its designers who may see the same website as several individual sites.¹⁰⁹ The important thing is to make it clear to users which part of the site is being

¹⁰⁶ WESTLAW EDGE, IOWA STATUTES AND COURT RULES, <https://www.westlaw.com/SharedLink/cc5e515636184114be8fea866480b673?VR=3.0&RS=cblt1.0> (last visited on Dec. 27, 2021).

¹⁰⁷ U.S. DEP'T OF HEALTH & HUM. SERVS., *supra* note 81 at 205.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

searched.¹¹⁰ In addition, users should be provided with a means to narrow the scope of their search to specific subsites.¹¹¹ This guideline is key to helping a user understand what they searched so they can in turn understand what they found.

For state statutory code websites, it is important to explicitly communicate to researchers whether they are only searching the state's statutes or the entire website. If they are searching the entire website, there should be a way to limit the search to the statutory code. If researchers cannot limit their initial search to the statutory code or filter their results to only display results that are statutes, the relevant statutes that pertain to their legal issue may get lost in the result list. Further, research may be impeded if a user is unable to distinguish the statutes in their result list from bills and other legislative documents. A state legislature's website contains a lot of information: such as information about proposed legislation, legislative members, committee calendars, and other news and information. A researcher who is trying to identify the laws that govern their legal question must be able to restrict their search to the code so that they do not retrieve other information that they may mistake for the law.

All jurisdictions surveyed make it clear what content a user is searching, either on the initial search page or on the result list page. An example of providing clarity on the initial search page is seen on the Pennsylvania General Assembly's website (Figure 4). Because there is a clear title, "Consolidated Statutes," and the search box is located immediately under the title, it is obvious that you are searching Pennsylvania's Consolidated Statutes. When comparing Pennsylvania's website to Ohio's website (Figure 5), Ohio's search box's location does not make it apparent that it is only searching the Ohio Revised Code. The search box is located away from

¹¹⁰ *Id.*

¹¹¹ *Id.*

the Ohio Revised Code's table of contents and immediately under the heading, Ohio Law & Administrative Rules Legislative Service Commission. Because of the position of the search box and the lack of a clear label near it, it is unclear whether the search box will search both the statutes and administrative rules for the state of Ohio or only the Ohio code. However, once searched, it is apparent that your results are only from the Ohio Revised Code, as they are labeled as such.

Figure 4

Pennsylvania General Assembly

Legislation Quick Search
 Enter a search term...
[Advanced Search](#)

Home / [Statutes of Pennsylvania](#) / Consolidated Statutes

Share: [Twitter](#) [Facebook](#) [LinkedIn](#)

Consolidated Statutes

i [Provisions set to expire in 2021 and 2022](#)

[View the Pennsylvania Unconsolidated Statutes](#)

Search by Keyword

[Keyword Search Tips](#)

Search by Title Number

Title Chapter Section -

Browse by Title Name

Title	Name		Statute Text		
	CONSTITUTION OF PENNSYLVANIA	History	HTML	PDF	Microsoft Word
1	GENERAL PROVISIONS	History	HTML	PDF	Microsoft Word
2	ADMINISTRATIVE LAW AND PROCEDURE	History	HTML	PDF	Microsoft Word
3	AGRICULTURE	History	HTML	PDF	Microsoft Word
4	AMUSEMENTS	History	HTML	PDF	Microsoft Word
5	ATHLETICS AND SPORTS	History	HTML	PDF	Microsoft Word
6	BAILEES AND FACTORS	History	HTML	PDF	Microsoft Word

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¹¹² PENNSYLVANIA GENERAL ASSEMBLY, CONSOLIDATED STATUTES, https://www.legis.state.pa.us/cfdocs/legis/LI/Public/cons_index.cfm (last visited Dec. 27, 2021).

Figure 5

OHIO LAWS & ADMINISTRATIVE RULES
LEGISLATIVE SERVICE COMMISSION

HOME LAWS ABOUT CONTACT RELATED SITES GO TO 101.01 Go Keyword Search

Welcome! Effective April 1, 2021, the Legislative Service Commission has assumed publication of the Ohio Revised Code and the Ohio Administrative Code at this site. The Lawriter site has expired.

The Legislative Service Commission staff updates the Revised Code on an ongoing basis, as it completes its act review of enacted legislation. Updates may be slower during some times of the year, depending on the volume of enacted legislation.

Ohio Revised Code

Title
General Provisions
Title 1 State Government
Title 3 Counties
Title 5 Townships
Title 7 Municipal Corporations
Title 9 Agriculture-Animals-Fences
Title 11 Banks-Savings and Loan Associations
Title 13 Commercial Transactions

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¹¹³ Legislative Service Commission, Ohio Laws & Administrative Rules: Ohio Revised Code, <https://codes.ohio.gov/ohio-revised-code> (last visited Jan. 28, 2022)

Figure 6

The screenshot displays the Ohio Laws & Administrative Rules website. The header features the Ohio state seal and the text "OHIO LAWS & ADMINISTRATIVE RULES" and "LEGISLATIVE SERVICE COMMISSION". A navigation bar includes links for HOME, LAWS, ABOUT, CONTACT, and RELATED SITES. A notice states: "The Legislative Service Commission staff updates the Revised Code on an ongoing basis, as it completes its act review of enacted legislation. Updates may be slower during some times of the year, depending on the volume of enacted legislation." Below this is the "Ohio Revised Code Search" section. A search bar contains the word "eviction" and a magnifying glass icon. To the right of the search bar is a dropdown menu labeled "Title" with a downward arrow. Below the search bar, a box indicates "Keywords : eviction". Further down, a status bar shows "Results 1 - 11 of 11", "Sort: Best Match" with a dropdown arrow, and "Show: 25" with a dropdown arrow. The main content area is titled "Section" and lists two sections: "Section 1923.12 | Eviction of resident or resident's estate from manufactured home park; notice to remove home or vehicle." and "Section 1923.13 | Writ of execution." Each section has a brief description of its contents.

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The final two highly ranked search guidelines relate to the website's search algorithm. The first of these guidelines is the search engine's ability to equate uppercase and lowercase search terms.¹¹⁵ For example, the search query "DOG" would retrieve the same results as the query "dog" or "Dog." Generally, researchers do not believe that uppercase and lowercase letters

¹¹⁴ Legislative Service Commission: Ohio Laws & Administrative Rules; Ohio Revised Code Search, <https://codes.ohio.gov/ohio-revised-code/search?start=1&pageSize=25&sort=BestMatch&keywords=eviction> (last visited Jan. 28, 2022).

¹¹⁵ U.S. DEP'T OF HEALTH & HUM. SERVS., *supra* note 81 at 205.

matter for a search query, so a search engine should not make a distinction between them.¹¹⁶ All fifty-one jurisdictions equate upper and lowercase letters.¹¹⁷

The other search guideline that relates to a user's search query is the algorithm's responsiveness to the user's terminology.¹¹⁸ When searching, it is important for users to succeed on their first try, because if they fail they may try another site or abandon the search altogether.¹¹⁹ To ensure that the algorithm responds to the users' terminology, designers should use search engine logs and surveys to determine the most common searches and then use that data to make those frequently searched terms easy to find through the site's search engine.¹²⁰ These guidelines are particularly important for state government statutory code websites because a non-lawyer searching for a statute may not search using the code's terminology. Finding relevant search results should be as simple as possible to avoid frustration and to allow users to find the law that addresses their legal situation.

When evaluating whether a search engine is responsive to a user's query, a user's search results should be assessed by comparing the results retrieved to the expected results. Another way to evaluate the responsiveness of a search algorithm is to assess whether the algorithm recognizes that quotation marks indicate a phrase. In addition, when two or more words are searched, do results containing those words in close proximity to one another rise to the top of the result list? In my study, the state code websites' responsiveness to a user's search query was somewhat of a mixed bag. A majority of the jurisdictions failed to bring the expected results to

¹¹⁶ *Id.*

¹¹⁷ See *infra* Appendix 1 (column labeled "Upper and Lower Case Searched the Same.")

¹¹⁸ U.S. DEP'T OF HEALTH & HUM. SERVS., *supra* note 81 at 207.

¹¹⁹ *Id.*

¹²⁰ *Id.*

the top of the result list.¹²¹ Another problem was that when searching for more than one word, most search algorithms did not promote the results with the terms in close proximity to one another to the top of the list.¹²² Rather, the results where the two terms appear close together are often scattered throughout the list. This is an obstacle to litigants who may not be sophisticated researchers and not know to use quotation marks to indicate a phrase. However, on the positive side, forty-two out of fifty-one jurisdictions recognize that you are searching for a phrase when using quotation marks.¹²³

HHS Navigational Guidelines

The next subset of usability guidelines that aid a researcher in finding or locating information on a website are the navigational guidelines.¹²⁴ Navigational tools are used primarily to locate and link to destination pages within the website.¹²⁵ These tools include tabs, table of contents, and breadcrumb trails. They are important to implement for a statutory code website, because statutory codes are organized by subject and hierarchical. By helping a researcher navigate through a code's hierarchy, these tools aid a researcher in accessing the relevant sections of a code. An example of this is when a search result contains a clickable breadcrumb trail that allows a researcher to access the chapter or title of the code in which that document is contained.

One significant navigational guideline in terms of relative importance is providing navigational options to a user.¹²⁶ This means that a website should not lead a user to a page

¹²¹ See *infra* Appendices 3 & 4 (columns labeled “Eviction Laws Top of the List” and “Child Custody Laws Top of the List”).

¹²² See *infra* Appendix 4, (columns labeled “Child Custody Laws Mixed” and “Child Custody Laws Middle”).

¹²³ See *infra* Appendix 4 (column labeled “Quotation Marks”).

¹²⁴ U.S. DEP’T OF HEALTH & HUM. SERVS., *supra* note 81 at 82.

¹²⁵ *Id.*

¹²⁶ *Id.* at 83.

where they cannot get to a different part of the site or return to their previous screen.¹²⁷ An example of this is when webpages contain links that open new browser windows and the back button does not work in the new window.¹²⁸ If the new window opens into a full screen, users may not even realize that they have been redirected to a new window, and may become frustrated because they cannot return to the previous page.¹²⁹ If these types of links are incorporated into a website, the newly-opened window should contain a prominent way for the user to close the new window and return to the original browser window.¹³⁰ Most users expect this feature in a website, and when this functionality does not exist, users may give up on their search.¹³¹ When assessing the state statutory code websites, only three jurisdictions disable the browser's back button.¹³² In those few instances, researchers may find themselves stuck in the wrong section of the code, frustrated and unable to easily return to the full version of the code or to their result list.

Another navigational guideline that is of high relative importance for user success is the differentiation and grouping of navigational elements.¹³³ This means that websites should create a common and consistent navigational scheme to help users learn and understand the site's structure.¹³⁴ Locating tabs, lists, the search box, and the site map in the same location on all webpages helps users find their way to the right location on a website and makes it easy for them to go back to an earlier stage of their research.¹³⁵ Another way to do this is to position similar

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² Appendix 2 *infra* (column labeled "Navigational Options Provided to the User".)

¹³³ U.S. DEP'T OF HEALTH & HUM. SERVS., *supra* note 81 at 84.

¹³⁴ *Id.*

¹³⁵ *Id.*

elements close together and to locate critical navigational elements in places that suggest clickability, like panels on the right or left.¹³⁶ Grouping similar items reduces the amount of time that users need to locate and identify navigational elements.¹³⁷ For state government statutory code websites this is significant. Researchers should be able to navigate their way to the code, and also within the code, using a consistent navigational scheme. If they end up in the wrong section of the code, the site should allow them to easily retrace their steps by relying on that scheme. Forty-five jurisdictions provide tabs on their webpages that allow a researcher to quickly return to an earlier point in their research process.¹³⁸

An example of a consistent navigational scheme is taken from the Nebraska Legislature’s website. Figure 7 shows the “Search Laws” part of the Nebraska Legislature’s website and Figure 8 displays the result list. In both, the panels on the left and right are the same. The left panel allows the user to visit different sections of the legislature’s website. The right panel provides researchers with a consistent location to search the legislature’s bills or search the legislature’s laws. At any point in their research, users can rerun their search or navigate their way to a different part of the website using this common and consistent scheme.

Figure 7

¹³⁶ *Id.*

¹³⁷ *Id.*

¹³⁷ *Id.*

¹³⁸ Appendix 2 (column labeled “Grouping and Differentiation of Elements”).)







NEBRASKA LEGISLATURE

The official site of the Nebraska Unicameral Legislature

1 Home

Chamber Viewer

Legislature

Bills and Laws

Calendar

Committees

Legislative Divisions

Legislative Histories

News

Reports

Senators

Session Information

Transcripts

For Agencies

For Citizens

For Journalists

For Lobbyists

For Students and Teachers

Search Laws

Last updated October 1, 2021

Search by Keyword

To perform a keyword search of Nebraska laws, enter a search term in the keyword field on the left. The drop down list provides the ability to limit searches to specific portions of the laws.

To browse an individual portion of the laws, use the links at the bottom of the page.

To find a specific statute put quotes around the statute number. For example "2-106". Or use the Search by Statute Range below.

eviction

All Laws (Select to Limit)

Q

Use Expanded Search

(Expanded Search returns results based on the root of the keyword)

Search by Statute Range

To search a range of statutes, enter the beginning and ending statute numbers in the range fields. For example, enter 2-106 in the Beginning Section field and enter 2-110 in the Ending Section field to return all statutes within that range.

To find a specific statute, just enter the statute number in the beginning section field and leave the ending section blank.

Beginning Section

Ending Section

Q

Browse the Laws

Nebraska Revised Statutes - Browse the Nebraska Revised Statutes by chapter and article. Includes full chapters as well as individual sections.

Nebraska Revised Statutes Appendix - Browse the Appendix for the Nebraska Revised Statutes by article.

Nebraska State Constitution - Browse the Nebraska State Constitution by article. Includes the full Constitution as well as individual sections.

Nebraska Uniform Commercial Code - Browse the Nebraska State Uniform Commercial Code by chapter. Includes full chapters as well as individual sections.

Search Current Bills

LB

#

Q

Search Past Legislation

Search Laws

Q

Browse Statutes by Chapter

Live Video Streaming

Nebraska Public Media

PBS

Streaming video provided by Nebraska Public Media

Find Your Senator

Enter Street Address, City State Zip

Q

Legislative Calendar

December

28

Today

December

	1	2	3	4
5	6	7	8	9
10	11	12	13	14
15	16	17	18	19
20	21	22	23	24
25	26	27	28	29
30	31			

Month View

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Figure 8

¹³⁹ NEBRASKA LEGISLATURE, SEARCH LAWS, <https://nebraskalegislature.gov/laws/laws.php> (last visited Dec. 28, 2021).

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A third highly ranked navigational guideline is to create a clickable list of contents.¹⁴¹ For web pages that require a researcher to scroll through several distinct sections that are not visible from the top of the page, a short, clickable list of sections is an important navigational aid.¹⁴² These links' serve two purposes: they provide an outline of the page so users can quickly determine if it contains the desired information, and they allow users to quickly navigate to specific information.¹⁴³ This guideline is pivotal for state statutory code websites. State codes are arranged by subject and are hierarchical. Having a clickable "table of contents" that allows a user

¹⁴⁰ NEBRASKA LEGISLATURE, NEBRASKA REVISED STATUTES SEARCH RESULTS FOR EVICTION, https://nebraskalegislature.gov/laws/search_keyword.php?keyword=eviction&search_by= (last visited Dec. 28, 2021).

¹⁴¹ U.S. DEP'T OF HEALTH & HUM. SERVS., *supra* note 81, at 85.

¹⁴² *Id.*

¹⁴³ *Id.*

to drill down through the titles, subtitles, and chapters, provides a user with an opportunity to browse the statutory code to find the relevant sections for their legal situation. This is similar to how a user would conduct research in the print version of the code. Most state legislatures offer a “Browse Statutes” option that allows a user to access the code in the same way they would in print. The “Browse Statutes” page often contains a clickable and expandable table of contents, which links users to the relevant section in the code. Figure 9 is from the Oregon State Legislature’s Bills and Laws webpage. At the bottom of the screen is a clickable list of contents for the Oregon State Code. A researcher can use this tool to easily expand Oregon Code’s volumes and titles to identify relevant chapters. When you click on a chapter, it opens into a new page with the text of the entire chapter.

Figure 9

ORS - Select Volume, Section, then Chapter	
▶ Volume : 01 - Courts, Oregon Rules of Civil Procedure - Chapters 1-55 (48)	
▶ Volume : 02 - Business Organizations, Commercial Code - Chapters 56-88 (34)	
▲ Volume : 03 - Landlord-Tenant, Domestic Relations, Probate - Chapters 90-130 (36)	
▲ Title Number : 10. Property Rights and Transactions - Chapters 90-105 (13)	
Chapter 090	Residential Landlord and Tenant
Chapter 091	Tenancy
Chapter 092	Subdivisions and Partitions
Chapter 093	Conveyancing and Recording
Chapter 094	Real Property Development
Chapter 095	Fraudulent Transfers and Conveyances
Chapter 096	Line and Partition Fences
Chapter 097	Rights and Duties Relating to Cemeteries, Human Bodies and Anatomical Gift
Chapter 098	Lost, Unclaimed or Abandoned Property; Vehicle Towing
Chapter 099	Property Removed by High Water
Chapter 100	Condominiums
Chapter 101	Continuing Care Retirement Communities
Chapter 105	Property Rights
▶ Title Number : 11. Domestic Relations - Chapters 106-110 (5)	
▶ Title Number : 12. Probate Law - Chapters 111-121 (11)	
▶ Title Number : 13. Protective Proceedings; Powers of Attorney; Trusts - Chapters 124-130 (7)	
▶ Volume : 04 - Criminal Procedure, Crimes - Chapters 131-169 (34)	
▶ Volume : 05 - State Government, Government Procedures, Land Use - Chapters 171-200 (31)	
▶ Volume : 06 - Local Government, Public Employees, Elections - Chapters 201-260 (42)	
▶ Volume : 07 - Public Facilities and Finance - Chapters 261-297 (42)	
▶ Volume : 08 - Revenue and Taxation - Chapters 305-324 (20)	
▶ Volume : 09 - Education and Culture - Chapters 326-365 (32)	

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A final navigational guideline of high relative importance is to provide users with information on their location within the website.¹⁴⁵ Developers can do this by providing paths or breadcrumbs trails, matching link text to the destination page's heading, and creating URLs that relate to the user's location on the site.¹⁴⁶ On state government statutory code websites, this is important for a user to understand where they are in the code in relation to the other sections of the code, and it can greatly aid them in finding the law they need. In fact, forty-eight jurisdictions offer a clickable table of contents and thirty-two jurisdictions have a clickable breadcrumb

¹⁴⁴ OREGON STATE LEGISLATURE, BILLS AND LAWS, https://www.oregonlegislature.gov/bills_laws/Pages/ORS.aspx (last visited Dec. 29, 2021).

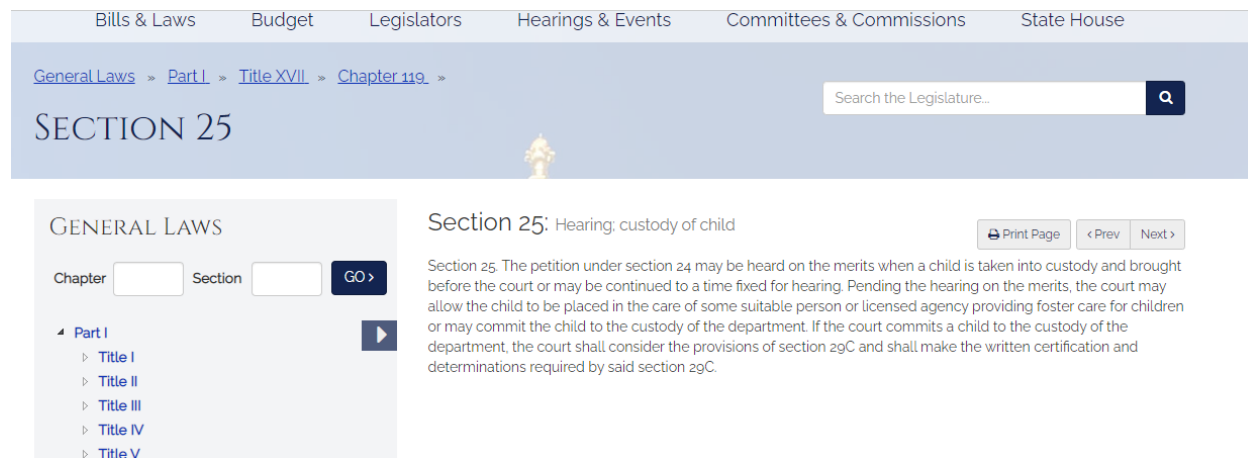
¹⁴⁵ U.S. DEP'T OF HEALTH & HUM. SERVS., *supra* note 81, at 86

¹⁴⁶ *Id.*

trail.¹⁴⁷ In addition, nine jurisdictions have a breadcrumb trail, but do not allow a user to click on the trail to access the different parts of the code.¹⁴⁸ Because statutory codes are organized by subject, with many interrelated sections, it is crucial that code websites allow a litigant into that structured hierarchy either through a clickable table of contents or a breadcrumb trail.

An example of this is seen in the Massachusetts Legislature’s statutory code website. Figure 10 shows Mass. Gen. Laws ch.119 § 25 (2021) from the website. On the top left side of the page, the researcher can see a breadcrumb trail that displays where they are on both the website and in the Massachusetts code. They are in the General Laws, Part 1, Title XVII, Chapter 119. If a researcher is not in the right location of the website or the code, they can easily navigate to a different part.

Figure 10



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¹⁴⁷ Appendix 2 (columns labeled “Feedback on Location” & “Clickable List of Contents”).

¹⁴⁸ *Id.*

¹⁴⁹ THE 192ND GENERAL COURT OF THE COMMONWEALTH OF MASSACHUSETTS, GENERAL LAWS, <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVII/Chapter119/Section25> (last visited Dec. 29, 2021).

An Assessment of State Government Statutory Codes' Websites Usability

Employing the guidelines described above, I evaluated the fifty-one states' (plus D.C.) government statutory code websites. I focused on state statutes as these form the basis by which most litigants are brought into court,¹⁵⁰ including the areas of law where litigants often represent themselves, namely landlord-tenant law and family law.¹⁵¹ Another reason that this assessment evaluates state government websites and not other online sources for a state's code, is because democracy requires governments to be transparent and to provide access to the laws that regulate their citizens' way of life.¹⁵² Governments that are based on the rule of law have a duty to provide their citizens with the text of those laws.¹⁵³ Additionally, state governments draft and enact laws, and consequently they are the only bodies that can attest to a law's authenticity.¹⁵⁴ Other organizations and educational institutions that provide free online access to statutory codes do not share that same duty nor have that same authority.¹⁵⁵

I began the assessment by selecting search terms to use on each of the fifty-one jurisdiction's statutory code websites. I settled on two common claims from the areas of landlord-tenant law and family law: eviction and child custody. These topics are a good measure of a website's usability because they allow testing of a search algorithm's capability to retrieve

¹⁵⁰ See J. Lyn Entrikin, *The Death of Common Law*, 42 HARV. J. L. & PUB. POL'Y 351, 382 (2019) (stating that "the American legal system, like that of nearly every other developed nation in the world, relies almost exclusively on positive law--written laws in the form of constitutions, codes, statutes, and rules.")

¹⁵¹ See Rhode, *supra* note 9; see also LexisNexis 50 State Surveys Statutes & Regulations, Real Property Law-Landlord & Tenant: Eviction, Unlawful Detainer, and Tenant Protections at Foreclosure (2019) and National Survey of State Laws, Child Custody (Richard A. Leiter ed., 8th ed. 2019); Wentz, *supra* note 19, at 646.

¹⁵² See *id.*

¹⁵³ See *id.*; see also National Conference of Commissioners on Uniform State Laws, *supra* note 21, at Prefatory Note 2; Endter, *supra* note 22 at 298.

¹⁵⁴ See National Conference of Commissioners on Uniform State Laws, *supra* note 21 at Prefatory Note 1; and Endter, *supra* note 22, at 295.

¹⁵⁵ I did not, for example, rely on other free sites like Justia Law, <https://law.justia.com/codes/>. Justia publishes unannotated versions of state codes on its website. Interestingly, many other sites, such as Finlaw.com and Cornell's Legal Information Institute, link to the state legislature's site to provide access to the text of the state statutory codes.

relevant laws by searching for either an individual term (“eviction”) or a phrase (“child custody”).¹⁵⁶

Next, I determined which child custody and eviction laws a litigant must find to understand their legal stance and access justice. To do this, I relied on two fifty-state statutory surveys: one for child custody laws and the other for eviction laws.¹⁵⁷ I used the laws listed in the two surveys as a measuring stick to determine if a self-represented litigant could access the laws they needed with a simple search of the statutory code’s website. I did this by running two keyword searches using the search box on the state statutory code websites, and then comparing the results with the laws listed in the surveys. I ran one search for the term *eviction*, and the other for the phrase *child custody*. When evaluating the search results, I also noted the number of results, as this factors both into the usability of the result list and the findability of the controlling statutes. If a researcher retrieves hundreds of results, the result list itself becomes cumbersome as the sheer quantity of results makes it difficult to understand what was retrieved. Furthermore, if there are hundreds of results, it makes it hard to identify the relevant ones, especially if the relevant results are not at the top of the result list.

In considering the challenges users face when trying to identify relevant laws so they can access justice, I compared the results from these free government platforms with the results from the fee-based subscription services of Westlaw Edge and Lexis Plus. I wanted to determine if there was a distinction between the top results found through these free platforms with those found on Westlaw Edge and Lexis Plus in order to determine if those with means to afford the fee-based services had a greater chance of accessing justice. As a point of comparison, I selected

¹⁵⁶ U.S. DEP’T OF HEALTH & HUM. SERVS., *supra* note 81, at 207.

¹⁵⁷ LexisNexis 50 State Surveys Statutes & Regulations & National Survey of State Laws, *supra* note 151.

ten jurisdictions of different population sizes and in different geographic locations and ran the exact same searches in Westlaw Edge and Lexis Plus as I ran on the free platforms. I then compared the first 10 results to see which, if any, of the laws listed in the *50 State Surveys* appeared on each platform. Additionally, eight of the jurisdictions use Lexis to provide the free online version of their statutory code. So I ran an additional search in Lexis Plus for those eight jurisdictions and compared the results from the free site with those listed on Lexis Plus.

In addition to comparing the search results to the laws listed in the *50 State Surveys*, I also evaluated the state statutory code websites based on the usability guidelines previously described in this article. First, I considered the search usability guidelines, looking at the display of search results and evaluating whether a user could interpret those results. For example, did the search results provide context to the researcher or was it just a list of items with no apparent meaning? I also evaluated whether the website made clear what part of it was being searched. Was the user searching the whole website or only the statutory code? I then noted whether the search engine responded to the user's terminology. A search engine is responsive if, when searching for more than one keyword, the top results displayed are ones in which both terms appear. Lastly, I checked to see if the search engine retrieved the same results when searching with uppercase and lowercase letters.

Next, I applied the navigational usability guidelines to evaluate the browsability of a state statutory code website. I did this by noting the navigational options provided on the webpage. Can you use a browser's navigation buttons to go backward or forward a page in your browsing history? Are there other navigation options such as tabs that group similar elements, a clickable list of contents, or a breadcrumb trail?

Last, I evaluated whether the statutory code websites of the jurisdictions that have adopted UELMA indicate if the laws listed on the website are official and authentic. Twenty-one states and the District of Columbia have adopted UELMA.¹⁵⁸ UELMA requires states that no longer publish print versions of their laws provide official and authentic electronic access to their statutory codes.¹⁵⁹ When a user researches the laws found through the government platforms of jurisdictions that have adopted UELMA, it should be clear that the laws provided are both the official version of the law and an authentic version of the law so that a researcher can feel confident relying on the law's text.

Findings and Recommendations

When I searched for child custody and eviction, a majority of the statutory code websites failed to bring all of the laws listed in the *50 State Surveys* to the top.¹⁶⁰ For example, when searching for the term eviction, ten out of fifty-one jurisdictions list the *50 State Surveys* laws at the top, while twenty jurisdictions missed many, if not all, of the statutes listed in the *50 State Surveys*.¹⁶¹ A similar variation was seen in the search results for the phrase "child custody". While eleven out of fifty-one jurisdictions listed the laws in the *50 State Surveys* at the top, most jurisdictions had the *50 State Surveys*' laws scattered throughout the result list.¹⁶² The scattering of relevant laws throughout a long list creates an accessibility issue, and forty-two of the fifty-one jurisdictions returned over one hundred results for the phrase child custody.¹⁶³ In fact, five jurisdictions returned more than one thousand results. Even when quotation marks were used

¹⁵⁸ American Association of Law Libraries, *supra* note 41.

¹⁵⁹ American Association of Law Libraries, *supra* note 42.

¹⁶⁰ See *infra* Appendices 3 and 4.(columns labeled "Eviction or Child Custody Laws at Top of Results".)

¹⁶¹ See *infra* Appendix. 3 (columns labeled "Eviction Laws at Top of Results" and "Eviction Laws Not Listed".)

¹⁶² See *infra* Appendix 4 (columns labeled "Child Custody Laws Top of List" and "Child Custody Laws Mixed".)

¹⁶³ *Id.* (column labeled "Number of Results".)

around the term “child custody,” nine jurisdictions returned over one hundred results.¹⁶⁴ In comparison, when searching for the term eviction, most result lists were manageable in terms of length. For example, only one jurisdiction listed more than one hundred results.¹⁶⁵ However, many of the result lists missed the laws listed in the *50 State Surveys*.¹⁶⁶ In contrast to the eviction search, only ten jurisdictions missed most of the child custody laws or had many irrelevant results.¹⁶⁷

After evaluating the search results in comparison to the *50 State Surveys*, I then compared the laws found through the free government sites with the laws found on the fee-based services, Westlaw Edge and Lexis Plus. The results were mixed as to which website lists the most relevant results in the top ten. For example, in comparing the relevant Maryland eviction statutes retrieved, the government site search produced no relevant results in the top ten, while Westlaw Edge produced four relevant results in the top ten and Lexis Plus listed three relevant results in the top ten.¹⁶⁸ In contrast when searching Utah’s code on each of the three platforms, all three failed to bring the relevant results to the top ten.¹⁶⁹ However, in general, the searches conducted on Westlaw Edge and Lexis Plus retrieved more relevant results in the top ten than the government sites.¹⁷⁰ In eight of the ten jurisdictions, when searching for the term eviction, Lexis Plus and Westlaw Edge either retrieved more relevant results in the top ten or the relevant results were located higher in the top ten than the government websites.¹⁷¹ When searching for the phrase “child custody,” the ten official websites surveyed performed much better in comparison

¹⁶⁴ *Id.* (column labeled “Quotation Marks”, noting that five jurisdictions did not recognize quotation marks.)

¹⁶⁵ *See infra* Appendix 3 (column labeled “Number of Results”).)

¹⁶⁶ *Id.* (column labeled “Eviction Laws Missed”).)

¹⁶⁷ *See infra* Appendix 4 (column labeled “Child Custody Laws Missed”).)

¹⁶⁸ *See infra* Appendix 6 (column labeled “Compare Relevancy of Eviction Laws”).)

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

to Westlaw Edge and Lexis Plus than when searching for the term eviction.¹⁷² In nine of the ten jurisdictions, the searches conducted for “child custody” on the government platforms retrieved either the same or better results than the searches conducted on Westlaw and Lexis.¹⁷³ In addition, I also compared the results from the eight jurisdictions which adopted Lexis as their platform for their statutory code with the results found through Lexis Plus. In contrast to the ten jurisdictions surveyed above, five of the eight which adopted Lexis as their platform had equivalent results to Lexis Plus for both the search queries: *eviction* and *child custody*.¹⁷⁴ For the other three jurisdictions which adopted Lexis as their platform, they found fewer relevant laws than Lexis Plus or no relevant laws for either query.¹⁷⁵ While some of the government websites performed equal to or better than Lexis Plus or Westlaw Edge, many government websites retrieved less relevant results or no relevant results in the top ten.¹⁷⁶ This distinction highlights the additional burden that people who cannot afford Westlaw and LexisNexis face when attempting to access the laws that are relevant to the legal problem they are researching.

After comparing the laws found in the result lists to the *50 State Surveys*, I then applied the HHS search and navigational guidelines to the state statutory code websites. In applying the search guidelines, I found that while slightly more than half of the jurisdictions provide usable search results, a large portion of the fifty-one jurisdictions’ result lists provide little to no context for a researcher.¹⁷⁷ In addition, when evaluating a search algorithm’s responsiveness to a user’s

¹⁷² See *infra* Appendix 6 (California’s state site provided all relevant results in the top ten while both Westlaw and Lexis listed some relevant and some irrelevant results in the top ten for California. Also see Florida, Georgia, Texas, and Utah where their websites retrieved approximately the same number of relevant results in the top ten or their relevant results were located in approximately the same numerical order as the result lists on Westlaw or Lexis.)

¹⁷³ See *infra* Appendix 6 (column labeled “Compare Relevancy of Eviction Laws”).

¹⁷⁴ See *infra* Appendix 5 (columns labeled “Compare Results for Eviction” & “Compare Results for Child Custody”).

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ See *infra* Appendix 1 (column labeled “Usable Search Results”).

query, most of the government websites failed to bring the most relevant results to the top of the list.¹⁷⁸ Furthermore, when searching for a phrase, most jurisdictions did not promote the documents to the top of the result list where the terms appeared in close proximity to one another.¹⁷⁹ On a positive note, the vast majority of jurisdictions recognized that quotation marks indicate a phrase, and all jurisdictions equated upper and lowercase letters.¹⁸⁰ Additionally, all jurisdictions made it clear that a researcher is either searching the entire website or only the statutory code.¹⁸¹ In addition, if researchers are searching the entire website, researchers can limit the result list to the statutory code.

As for the navigation guidelines, a majority of jurisdictions properly apply these to their websites.¹⁸² The overwhelming majority allow a researcher to use the browser's back button or tabs to return to an earlier stage of litigation or to a different section of the website.¹⁸³ In addition, a majority provide a clickable table of contents into the code and a breadcrumb trail that allows users to see where within the code their result falls.¹⁸⁴ These tools help a researcher to retrace their steps to a previous stage of the research process, and they also help them to understand where in the code's hierarchy their legal dispute is addressed.

One last aspect I evaluated was whether the statutory code website indicated if the laws listed on the site were official and authentic. Twenty-one states and the District of Columbia have adopted UELMA.¹⁸⁵ Only ten of the jurisdictions that have adopted UELMA note that the

¹⁷⁸ See *infra* Appendices 3 & 4 (columns labeled "Eviction Laws Top of Result List" & "Child Custody Laws Top of Result List".)

¹⁷⁹ See *infra* Appendix 4 (columns labeled "Child Custody Laws Mixed", "Child Custody Laws Middle" & "Number of Results".)

¹⁸⁰ See *infra* Appendix 4 (column labeled "Quotation Marks".)

¹⁸¹ See *infra* Appendix 1 (column labeled "Search Entire Site or Communicate What Search".)

¹⁸² See generally *infra* Appendix 2.

¹⁸³ See *id.* (columns labeled "Navigational Options Provided" & "Grouping and Differentiation of Elements".)

¹⁸⁴ *Id.* (columns labeled "Clickable List of Contents" & "Feedback on Location").

¹⁸⁵ American Association of Law Libraries, *supra* note 41.

laws on its website are official and/or authentic.¹⁸⁶ The other twelve UELMA jurisdictions either do not mention whether the laws are official and authentic or they are unclear about whether the version you are viewing is official and authentic.¹⁸⁷ For example, when looking at Washington state's Revised Code on the state legislature's site, it does not say whether the online version is the official version or unofficial version, rather it states only, "The official version of the RCW is published by the Statute Law Committee and the Code Reviser."¹⁸⁸ From the wording on the website, it is not apparent that the online version provided is published by the Statute Law Committee and the Code Reviser.

When evaluating the websites, I found that some jurisdictions are in fact designing user-friendly websites and algorithms, and this helps to make their laws accessible.¹⁸⁹ While no jurisdiction ticked all the boxes, a few met many of the usability guidelines and also identified most of the relevant laws listed in the *50 State Surveys*.¹⁹⁰ For example, a search on the New Hampshire government site found most of the relevant laws both for the term *eviction* and for the phrase *child custody*.¹⁹¹ In addition, the relevant New Hampshire laws were located near the top of the result list.¹⁹² Also, while New Hampshire did not display where the search term appeared in the result, it did provide some context listing the title, chapter, and section name of the result.¹⁹³ Further, New Hampshire's website allows you to use the browser's back button, has tabs that help a researcher move around the website, and provides a clickable table of contents,

¹⁸⁶ See *infra* Appendix 1 (column labeled "Official/Authentic".)

¹⁸⁷ *Id.*

¹⁸⁸ Washington State Legislature, Revised Code of Washington, <https://apps.leg.wa.gov/rcw/> (last visited Feb. 8, 2022)

¹⁸⁹ See generally *infra* Appendices 1 & 2.

¹⁹⁰ See *infra* Appendices 1-6 for the states of New Hampshire, Louisiana, Oregon and California.

¹⁹¹ See *infra* Appendices 3 & 4 (columns labeled "Eviction Laws Not Listed" & "Child Custody Laws Not Listed".)

¹⁹² See *id.*

¹⁹³ See *infra* Appendix 1 (column labeled "Usable Search Results.")

as well as a breadcrumb trail, although it is not clickable.¹⁹⁴ So while New Hampshire's website is one of the few whose website is user friendly, there is still room for improvement. However, the majority of websites, while they do meet some of the usability guidelines, fail to design user friendly websites and fail to design their search algorithms that responsive to a user's terminology.

So how can state legislatures rectify this problem and make their laws more accessible? To ensure that individuals are able to locate the correct laws that govern their legal issue, state governments should institute a number of best practices for their statutory code websites.¹⁹⁵ First, all jurisdictions should provide a table of contents to their state's statutory code on the website. Second, when viewing a search result or an individual section of the code, users should have access to a clickable breadcrumb trail or a clickable version of the code's table of contents. These features would be extremely useful for litigants to locate additional relevant sections.

Other navigational tools that should be instituted on statute legislature's websites are browser navigational buttons and a uniform tab scheme. A uniform tab scheme allows researchers to easily navigate their way around a website to get to the correct location. If a litigant can easily make their way around a website and retrace their steps, that researcher will be more likely to find the source they need to understand their legal stance.

Besides these navigational tools, websites can institute additional measures to improve their search functionality even more. One way would be to take their cue from online library catalogs and tag the online version of state statutory codes with subject headings or other

¹⁹⁴ See *infra* Appendix 2 (row labeled New Hampshire).

¹⁹⁵ While I only examined statutory codes for this articles, these best practices could also be instituted for regulatory codes.

common terms or phrases that non-lawyers use to describe a legal action. Developers can find these terms by examining the search logs and then use that data to create embedded tags in the statutory code.¹⁹⁶ These tags or subject headings would compensate when legal language changes or when the phrases non-lawyers use to discuss the law do not coincide with the statutory language. State governments could and should utilize their librarians to categorize and classify laws, and thus make the online statutory codes more accessible to litigants.

Another way websites could improve their search functionality would be to make their search results more manageable. First, they can do this by displaying the name of the title, chapter, and section along with highlighting where in the result search terms appear. This provides a researcher with key contextual clues to help them determine if the result is relevant to their legal issue. Second, the website should provide a clustered panel of where the results fall within the statutory code. Third, results lists should be manageable. A researcher should not retrieve thousands of results with one search and if they do so, the most relevant results should rise to the top. Fourth, the result list should be ranked based on the document's relevancy to the search query. If searching for more than one term, results where all the terms appear in close proximity to one another should rise to the top. Fifth, in order to help a researcher search a statutory code, simple and clear instructions could be added under the search box. For example, because most search engines recognize a phrase when quotation marks are used, the instructions should indicate that and provide an example of how to use quotation marks. All of these measures can help a researcher find and access the laws that control their legal issue.

U.S. DEP'T OF HEALTH & HUM. SERVS., *supra* note 81, at 207.

Lastly, if the laws on a website are the official version of the law, then the website should clearly inform the researcher of such. There is no reason not to include this information. Litigants need to know that they are relying on an official and authentic version of the statutes. They should feel confident in the law that is provided to them by the state and know that they can rely on that text to understand their legal rights and responsibilities.

Conclusion

Unfortunately, on the majority of state statutory code websites, finding the controlling statute for a given legal issue is not easy. Researchers encounter many barriers to access including unmanageable result lists, results that provide little or no context, search algorithms that do not respond to a researcher's terminology, and websites that lack clickable breadcrumb trails or tables of contents. These barriers impede an individual's access to the laws they need to understand their legal rights and remedies and to therefore enforce those rights and remedies. Fortunately, this problem can be remedied by implementing the best practices described above. When state governments ensure that their statutory code websites are usable, they fulfill their duty to provide reasonable access to their laws. State governments must provide researchers with search and navigation tools that allow them to efficiently and effectively access the controlling statutes that govern their legal problem. When state governments do so, they promote access to justice and the rule of law.

Appendix 1

State	Usable Search Results	Search Entire Site or Communicate What Search	Responds to Users Terminology
AL	Provide context; missing some relevant laws	Yes, clear you are searching code	Yes, but retrieved a lot of results for phrases
AK	Provide context; but retrieved a lot of results	Yes, clear you are searching code	Yes, but retrieved a lot of results for phrases
AZ	Some context: displays title, section number and section name; does not show where search term appears; many results to sort through	Yes, clear you are searching code	Yes, but retrieved a lot of results for phrases
AR	Provide context (Lexis platform)	Yes, clear you are searching code	Yes
CA	Some context: displays one line where term appears; also provides section name; child custody search lists many results	Yes, clear you are searching code	Yes, but for eviction added evict etc., brought up extra irrelevant results
CT	Little context: it lists section name and number	Yes, clear you are searching code	No
CO	Provide context (Lexis platform)	Yes, clear you are searching code	Yes
DC	Provide context (Lexis platform)	Yes, clear you are searching code	Yes
DE	Some context: displays one line where term appers; also provides section name; do not rank by relevancy	Yes, clear you are searching code	Yes
FL	Provide context	Yes, clear you are searching code	Yes
GA	Provide context	Yes, clear you are searching code	Yes

Appendix 1

HI	Some context: displays where search terms appear; but only displays a string of letters and numbers to identify statute	Yes, clear you are searching code	Yes, searches phrases as individual words, but then it does make suggestions child custody suggested child-custody (much more relevant results)
ID	Some context: displays where search terms appear; but only displays a string of letters and numbers to identify statute	Yes, clear you are searching code	Yes
IL	Some context: displays title, section number and section name; does not show where search term appears	Yes, clear you are searching code	Yes
IN	Some context: displays title, section number and section name; does not show where search term appears; many results to sort through	Yes, clear you are searching code, but need to select content to search	Yes
IA	Provide context	Yes, clear you are searching code	Yes, does not search as a phrase but searches for documents and ranks where both words appear first higher
KS	Some context (Google search): does not show title, section name or chapter	Yes, clear you are searching code	Yes, but retrieved a lot of results for phrases
KY	Some context: displays section name and section number; does not show where search term appears	Yes, clear you are searching code	Yes
LA	Some context: displays the section title only	Yes, clear you are searching code, but need to select content to search	Yes
ME	Some context: displays title, section number and section name; does not show where search term appears	Yes, clear you are searching code, but also provides alternative Google search which searches entire legislature's site	Yes
MD	Provide context	Yes, clear you are searching code, but need to select code otherwise search the entire legislature's site	Yes
MA	Provide context	Yes, clear you are searching code	Yes
MI	Little context: it lists section name and number	Yes, clear you are searching code	Yes, but ranks list by number of code title rather than relevancy

Appendix 1

MN	Little context: displays chapter name and section name	Yes, clear you are searching code	Yes, but does not recognize quotation marks
MS	Provide context (Lexis platform)	Yes, clear you are searching code	Yes
MO	Little context: it lists section name and number	Yes, clear you are searching code	Yes, searches as a phrase
MT	Little context: it lists section name and number	Yes, clear you are searching code, but need to know MCA is the statutes; option to search other things	Yes
NE	Little context: it lists section name and number	Yes, clear you are searching code, but need to select code otherwise search the entire legislature's site	No
NV	Provide context	Yes, clear you are searching code	Yes, but does not recognize quotation marks
NH	Some context: displays title, section number and section name; does not show where search term appears	Yes, clear you are searching code	Yes, but does not recognize quotation marks
NJ	Some context: displays title, section number and section name; does not show where search term appears	Yes, clear you are searching code	Yes
NM	Provide context	Yes, clear you are searching code	Yes
NY	Some context: displays section name and section number; does not show where search term appears	Yes, clear you are searching code	Yes
NC	Some context: displays section name and section number; does not show where search term appears	Yes, clear you are searching code	Yes
ND	Provide context; but many results to sort through	Yes, clear you are searching code, but need to select content to search	Yes
OH	Provide context	Not completely clear just searching code and not the rules and statutes. But once open results then see searching code	Yes
OK	No; list only section number	Yes, clear you are searching code	Yes

Appendix 1

[illegible]

Appendix 2

State	Navigational Option Provided	Grouping and Differentiation of Elements
AL	Yes, can use browser back button	Yes, tabs at the top when search code; but not when select browse code
AK	Yes, can use browser back button	Yes, tabs at the top and on left
AZ	No, browser back button is disabled	Yes, tabs at the top
AR	Yes, can use browser back button	No tabs (Lexis platform)
CA	Yes, can use browser back button and previous and next section buttons	Yes, tabs at the top
CT	Yes, can use browser back button and previous and next section buttons	Yes, tabs at the top
CO	Yes, can use browser back button	No tabs (Lexis platform)
DC	Yes, can use browser back button	No tabs (Lexis platform)
DE	Yes, can use browser back button	Yes, tabs at the top
FL	Yes, can use browser back button	Yes, tabs on left
GA	Yes, can use browser back button	No tabs (Lexis platform)
HI	Yes, can use browser back button and previous and next section buttons	Yes, tabs on left and right; in search results, tabs on top
ID	Yes, can use browser back button	Yes, tabs at the top
IL	Yes, can use browser back button	Yes, tabs at the top and on left
IN	Yes, can use browser back button	Yes, tabs at the top and on left
IA	Yes, can use browser back button and previous and next section buttons	Yes, tabs at the top and on left
KS	Yes, can use browser back button and previous and next section buttons	Yes, tabs at the top and on left
KY	Yes, can use browser back button. Also when run search and click on result, result appears in panel on right and your list is in a panel on the left	Yes, tabs at the top

Appendix 2

LA	Yes, can use browser back button and previous and next section buttons (but browser button disabled when open up result)	Yes, tabs at the top and on left
ME	Yes, can use browser back button and previous and next section buttons	Yes, tabs at the top and on left
MD	No, browser back button is disabled	Yes, tabs at the top and on left
MA	Yes, can use browser back button	Yes, tabs at the top and on left
MI	Yes, can use browser back button and previous and next section buttons	Yes, tabs at the top and on left
MN	Yes, can use browser back button and previous and next section buttons	Yes, tabs at the top and on right
MS	Yes, can use browser back button and previous and next section buttons	No tabs (Lexis platform)
MO	Yes, can use browser back button and previous and next section buttons	Yes, tabs at the top; in search results must use drop down menu on top right to access tabs
MT	Yes, can use browser back button and previous and next section buttons	Yes, tabs at the top
NE	Yes, can use browser back button and previous and next section buttons	Yes, tabs on left
NV	Yes, can use browser back buttons. Search result opens in entire chapter; select section you need and open list of sections with text	Yes, tabs on upper right and lower right
NH	Yes, can use browser back button. Some results take you to whole chapter; can scroll through from section to section	Yes, tabs at the top
NJ	Yes, can use browser back button and previous and next section buttons; panel on left with table of contents	Yes, tabs at the top
NM	Yes, can use browser back button	Yes, tabs at the top
NY	Yes, can use browser back button	Yes, tabs at the top
NC	Yes, can use browser back button	Yes, tabs at the top

Appendix 2

ND	Yes, can use browser back button	Yes, tabs at the top
OH	Yes, can use browser back button and previous and next section buttons	Yes, tabs at the top
OK	Yes, can use browser back button. Search result opens in rtf file	Yes, tabs at the top
OR	Yes, can use browser back buttons. Search result opens in entire chapter	Yes, tabs at the top and on left
PA	Yes, can use browser back button	Yes, tabs at the top
RI	Yes, can use browser back button	Yes, tabs at the top
SC	Yes, can use browser back button, also option to go back to results	Yes, tabs at the tap and on left
SD	No, browser back button is disabled; but can use previous or next button	Yes, tabs at the top and on left
TN	Yes, can use browser back button and previous and next section buttons	No tabs (Lexis platform)
TX	Yes, can use browser back button, but browser button disabled when open up result	Yes, tabs at the top
UT	Yes, can use browser back button and previous and next section buttons	Yes, tabs at the top
VT	Yes, can use browsers back button (On Lexis can use previous and next section buttons)	Yes, for VT site tabs at the top and on left; No tabs for Lexis platform
VA	Yes, can use browser back button and previous and next section buttons (but browser button disabled when open up result)	Yes, tabs at the top and on left
WA	Yes, can use browser back button	Yes, tabs on left
WV	Yes, can use browser back button, also option to go back to results	Yes, tabs at the top
WI	Yes, can use back button. Search results open in entire chapter with a table of contents	Yes, tabs at the top

Appendix 2

[illegible]

Appendix 3

State	Eviction Laws Top of Result List	Eviction Laws Mixed Top/Middle/Bottom	Eviction Laws Middle of Result List
AL		Yes	
AK			
AZ		Yes, but list is short	
AR	Yes		
CA		Most relevant is 4th; but some relevant on page 9	
CT			
CO	Most relevant number 1		
DC		Yes, but most relevant ones rose to top	
DE			
FL			
GA			
HI		First relevant is 6th and the other relevant results are on pages 3 & 4	
ID			
IL	Most of the relevant sections were on first page		
IN			Second on list of four results
IA			Most relevant one is third on list
KS			Most relevant one is 5 out of 8
KY			
LA		Most relevant one is 8th on list others further down	
ME		Most relevant one is 4th one down and the other is toward the bottom	
MD		Most relevant is 4th and at bottom of list	
MA	Most relevant ones appeared at top		
MI			

Appendix 3

MN	
MS	Top, Middle and Bottom of list
MO	Mixed throughout
MT	Mainly on first page of results
NE	
NV	Most near top but one in middle
NH	Most near top but some in middle
NJ	Many near top but some in middle and one is last
NM	First one is most relevant. (Entire Chapter then open to find section)
NY	Few towards top; most in the middle and a few towards bottom, listed alphabetically by topic
NC	Some near top but many in middle and a few towards bottom
ND	In top 4
OH	Some on top but also mixed
OK	One near top but also in the middle
OR	Mixed one near top one at bottom
PA	Mixed top, middle and bottom
RI	Most in middle
SC	One at top of list; others towards bottom
SD	In top 4
TN	Results near top and in middle
TX	Results near top and near bottom
UT	Results near middle and bottom

Appendix 3

VT	Results near middle and bottom on both platforms
VA	Results mixed near top and middle
WA	Results mixed top, middle bottom
WV	Third one from top
WI	Near top
WY	Only two relevant results; listed at number 2 Lexis first result number 4 second result was 12 out of 17

Appendix 3

Eviction Laws Bottom of Result List	Eviction Laws Not Listed	Number of Search Results	Column8
	Not all relevant laws listed	7	
Yes	Not all relevant laws listed	32	
	Not all relevant laws listed	8	
	Most relevant laws listed	34	
	Most relevant laws listed	109	
Yes	Most relevant laws listed but missing key 8-169r	33	
	Last result was link to article of code containing eviction laws	37	
	Most relevant laws listed	72	
	Missing most relevant laws	7	
Only relevant hit on 3 of 4 pages	Missing most relevant laws	37	
	No relevant laws	8	
	Missing many	35	
	No relevant laws	7	
	Most relevant laws listed	64	
	Missing many	5	
	Missing many	14	
	Missing many	8	
Of the ten found, the most relevant was the last	Missing most relevant laws	10	
	Most relevant laws listed	49	
	Missing many	15	
	Missing many	69 /filter to code 9	
	Missing many	23	
	No relevant laws	8	

Appendix 4

State	Child Custody Laws Top of Result List	Child Custody Laws Mixed
AL		Mixed
AK	Most of relevant at top, but list is long	
AZ	Most relevant one is 4th	
AR	Most relevant ones are at top	
CA	Most relevant ones rise to the top	
CT	Most relevant one is 4th down	
CO		Yes, but most relevant is 71 on list
DC		Mixed: most relevant one is 12th
DE		
FL		Most are at top, but continue to middle only one is towards the end
GA		Most at top but some in middle
HI		Many on first page, but also mixed in middle and one on last page
ID		Many on first page, but also mixed in middle and some appeared around 100 on the list
IL		Many on first page but many also in middle and at the end
IN		Mixed throughout
IA		Most relevant ones is eighth on list, but then some three pages in and some further on
KS		Most relevant one is fourth result, the next relevant one is bottom of second page
KY		

Appendix 4

LA	Some were near the top, but some were also in the middle and toward the bottom
ME	Most relevant were near top but some in middle too
MD	Many were near top but relevant one was 106 on list
MA	Many were at top, but some a little further down on second and third page
MI	
MN	One found near top, but most found toward bottom of list, because ordered by number
MS	Toward top, bottom and middle of list
MO	Throughout list
MT	Mixed beginning middle and end
NE	Mixed beginning, middle, and end
NV	Most at top but one at bottom
NH	Most at top
NJ	Most at top, but some in middle none at very end
NM	Mixed at top bottom and middle
NY	Most a top of list some in middle
NC	Relevant ones in top, middle and bottom
ND	Most at top; it is chapter list of sections
OH	Many at near top but also many toward middle
OK	Most found in top 40
OR	At top of list
PA	Most near top but some in middle
RI	When use quotes found near top but not find all and middle.
SC	One at top and one at bottom

Appendix 4

SD	Mixed some at top, some middle and one at very end
TN	Some at top and some middle, some toward end, but not very end
TX	
UT	Mixed throughout
VT	
VA	Mixed in top and middle
WA	Mixed from first page to last
WV	Mixed near top and middle
WI	Near top
WY	Near top on legislature found within first 10 results of 106/ Lexis: at top and at bottom

Appendix 4

Child Custody Laws Middle of the List	Child Custody Law Bottom of Result List	Child Custody Laws Not Listed	Number of Results
		Found all	248
		Found all	1085
Most are towards the bottom of the first page and on second.		Found all	1000
		Found all	150
		Most relevant laws listed	112
		Missing most relevant laws	39
		Found all	201
		Found all	165
Middle of List/Results are ranked numerically by title so relevant one is title 13 it came on fourth page		Missing many relevant laws	169
		Found all	278
		Found all	206
		Most relevant laws listed	179
		Most relevant laws listed	163
		Most relevant laws listed	334
		Most relevant laws listed, but many irrelevant results	3061
		Most relevant laws listed, but many irrelevant results	264
		Missing most relevant laws	497
Toward bottom of first result page and top of second page (two pages total) reason sorts by title number not relevancy		Found all	199

Appendix 4

	Most relevant laws listed	75
	Most relevant laws listed	213
	Found all	196
	Most relevant laws listed	195
Most results in middle because listed by section number had to scroll down to 722	Most relevant laws listed	247
	Most relevant laws listed	275
	Most relevant laws listed	123
	Most relevant laws listed	55
	Most relevant laws listed	302
	Found all	226
	Found all	55
	Most relevant laws listed	53
	Found all	238
	Most relevant laws listed	51
	Most relevant laws listed, but many irrelevant results	3040
	Most relevant laws listed	156
	Found all	84
	Found all, but many irrelevant results	1387
	Most relevant laws listed, but many irrelevant results	300
	Found all	132
	Found all	100
	No relevant laws	500
	Most relevant laws listed	8

Appendix 4

	Found all	301
	Found all	240
Relevant laws found in middle	Found all	178
	Most relevant laws listed, but many irrelevant results	1709
Most in the middle on both platforms	Found all	133 Lexis/186 state site
	Found all	564
	Found all, but many irrelevant results	332
	Most relevant laws listed, but many irrelevant results	200
	Found all	251
	Found all	166 Lexis/106 state site

Appendix 4

Quotation Marks	
	58
	26
	38
	84
	112
	39
	95
	85
	23
	0
	92
	50
	65
	49
	129
	115
	64
	45

Appendix 4

73
108
38
22
94
275
62
55
169
226
55
53
38
9
2340
23
14
46
64
10
100
52
8

Appendix 4

62
118
17
51
73 Lexis/50 State
61
77
11
79 Lexis/12 State

Appendix 5

State	Lexis Results from Legislature Eviction	Lexis Plus Results Eviction	Lexis Results State Legislature Child Custody	Lexis Plus Results Child Custody	Compare Results for Eviction	Compare Results for Child Custody
AK	34	48	150	199	Both retrieved relevant results, similar order	Both result lists retrieved relevant ones and the most relevant were at the top of the list.
CO	47	39	208	176	The eviction laws were scattered throughout with both. The last result on list was result link to entire article on eviction.	Child custody laws somewhat similar but in different order on two platforms
DC	72	154	165	214	Both platforms found most of the laws relating to eviction, similar order. Plus found more.	More relevant ones rose to very top of lexis plus, not that much different than state, but first result was not relevant on states site
MS	14	40	123	223	State leg version missing some laws, Lexis Plus missing a few, but had more than state Lexis version	Relevant Laws on Lexis Plus found in third and fourth result while state site relevant law found in seventh result
TN	12	44	247	310	State leg version missed many eviction laws, lexis plus did not.	Both platforms found all, but Lexis Plus results were most relevant at top instead of being mixed.
VT	23	36	133	171	Both platforms found most of the laws relating to eviction	Both platforms found the results, but on Lexis Plus the most relevant were at the top.
GA	8	87	214	407	Lexis Plus have much more than GA website version. It found none of the relevant laws	Lexis Plus nine out of top ten relevant; on state site, eight of top ten relevant, similar order
WY	17	17	170	169	Results are the same	Results are mostly the same, except in slightly different order

Appendix 6

State	WL Edge Eviction	Lexis Plus Eviction	State Eviction	Compare Relevancy for Eviction	WL Child Custody	LN Child Custody	State Child Custody	Compare Relevancy for Child Custody
AZ	190	26	8	The state site missed many laws, only relevant one is 6, in top 10 for Lexis numbers 1, 4, 9 and 10, but WL had not relevant results in the top 10	603	176	1000	Lexis provides a much more manageable result list with 176 results, v. WL 600 and the State Site list of 1000. For lexis most relevant ones on first page, but after a lot of irrelevant results. For Westlaw, most relevant ones appeared within first 50. For state site, most relevant ones are towards the bottom of the first page and on second.
CA	428	382	109	The lexis site brought the two most relevant sections to the top (this is because Deering is published by Lexis), on WL numbers 5, 8, and 9 relevant and state site, number 5 is relevant	2779	895	114	State site provides a manageable list around 114 where the results are all relevant toward the top. Lexis is also manageable with some results that aren't so relevant. Westlaw has relevant results on top, but also on top is court rules mixed in. May be confusing.
FL	229	140	37	State top result number 2 but next closest is 13. Westlaw most relevant 6 and then 8. Lexis is closer to top. 2nd results, 4th, 5th, 6th and 7th most relevant.	1084	337	285	Westlaw first 11 are all relevant. Lexis of first ten, first three relevant and next 6 and 7 are relevant. For state is 2,3, 5 are relevant for first 10.
GA	126	87	8	Both Westlaw and Lexis have many more results than Georgia's platform. First results on Lexis Plus relevant and 14th relevant, but many not relevant. Westlaw first and sixth relevant Georgia state site found none	1361	407	214	State site 1, 3-5, 7-9. Westlaw: 1-4, 6-7, 9-10; Lexis: 1-10 all relevant

Appendix 6

IA	180	52	17	Iowa state code the 5th one is relevant. Others are not relevant. Westlaw third and fourth relevant than 39th next. Lexis Plus first and fourth relevant and then 12th relevant.	566	239	266	State site 1, 4, and 5 relevant out of top ten. Westlaw: first 10 all relevant and Lexis: 1-2 relevant and 4-10 relevant.
MD	128	71	9	State search missed most of laws. Lexis 69 filter Plus the 6th, 8th and 9th were most to code relevant. Westlaw 3, 7, 8, and 11 are most relevant.	529	183	147, limit to code 14	State site no relevant hits in first 10 both filtered and not filtered. Westlaw all first 10 relevant. Lexis 2, 3, 6, 8, and 9.
MN	116	145	64	Lexis most of the top 10 results are relevant. Westlaw most of the top 10 results are relevant. State site 24th result is the most relevant.	964	451	387	Lexis provides a much more manageable result list with 176 results, v. WL 600 and the State Site list of 1000. For lexis most relevant ones on first page, but after a lot of irrelevant results. Lexis: 1, 2, 3, 5, 8, 9, 10 are all relevant; Westlaw: 1, 3-10 are all relevant; State site: none are relevant in first 10.
TX	203	170	11	Lexis most relevant 1, 5, 6, 8, 10. Westlaw 2, 3, 4, 5, 8, 10. State 7 and 9.	1246	799	181	Lexis No results in first 10 relevant (TX refers child custody as conservatorship); Westlaw also not relevant same issue; State site also not relevant (right law was 68th on list)
UT	74	51	29	Lexis most relevant 20, 22, 23, 26, and 28. Westlaw 11, 13, 15, 16. State 11, 20, 22.	599	235	1710	Westlaw: 1, 3, 7 and 8 are relevant in first 10. Lexis: 1st one is relevant; State 1 and 2 are relevant rest are not.
VT	54	36	23	Lexis most relevant 2, 4, 6, 7, and 9. Westlaw 1, 2, 8, and 7. State site: 4, 5, 6, 15, and 16 not a lot of context	377	171	185	Westlaw: 1-6 8-10 are relevant; Lexis: 2-7 are relevant; State: first 10 are not relevant