

NCSA Website RFP

Introduction

Since 1982, the National Cued Speech Association (NCSA) has promoted Cued Speech, a visual mode of spoken communication designed for the deaf and hard of hearing, as well as their families and the professionals who work with them. At nearly 20 years old, the current NCSA website (<http://www.cuedspeech.org>) is badly outdated. We are seeking a complete redesign that is tailored to meet our staff's needs and reach our diverse target audiences in order to effectively champion Cued Speech.

The NCSA website is home to numerous research and journal articles, informational materials, and professional and parent resources. With such an extensive informational structure, we need a site developer who can manage and organize the large amount of content into an easy-to-navigate medium.

Because the site designer will work closely with our Website Redesign Committee, several individuals will have the ability to offer feedback. We will be happy to discuss the most efficient way to collect and present this feedback to the design team.

The deadline for submitting a proposal is February 10, 2019.

Organization Overview

The NCSA is a 501(c)3 organization serving those who use Cued Speech, whether exclusively or in conjunction with other modalities and approaches, such as speech therapy or sign language. Our stakeholders include individuals who are deaf or hard of hearing; their families, especially their parents; and the professionals who work with them. We emphasize complete language access through visual immersion in the language of the home.

Our singular responsibility is to advocate for our stakeholders' right and ability to use Cued Speech in school, home, work, and public life. As such, another primary function of ours is education, answering questions such as:

- What is Cued Speech?
- What is it for?

- How do I learn to cue?
- Where do I get Cued Speech services?
- Who can I cue with?
- What is the research behind Cued Speech?
- Does it work in X situation?
- I have a legal situation involving Cued Speech. What are the laws and who can help me?

Audience

We work most extensively with parents and educators of young children with hearing loss. The parents often come to us feeling overwhelmed and underequipped because of a widening communication gap between themselves and their child, which is usually due to the parents' difficulty in picking up sign language and/or the child's difficulty in picking up spoken language. Educators and school administrators approach us asking how to improve their deaf and hard of hearing students' literacy, not least because program funding hinges on reading and writing test scores— and of course, literacy impacts success in everything else. Cued Speech has been found to effectively close this communication and literacy gap for a great majority of users.

Cued Speech has also been found to benefit those with autism spectrum disorder, Auditory Neuropathy, learning disabilities, speech impediments, and other special needs. As a result, the NCSA fields requests from parents and educators involved with these demographics. We also often receive requests from language service providers such as sign language interpreters seeking to expand their skill set or knowledge base.

Our detailed audience breakdown for the NCSA website includes:

1. **People who know nothing about Cued Speech.** They need readily accessible information to clearly explain what it is, what it's intended for, and how it's typically used. They may also be interested in white papers, position papers, discussions of incorporation into Deaf culture and multilingual teaching approaches, use in conjunction with cochlear implants and LSL, etc., and languages for which Cued Speech has been adapted.
2. **People who want to learn Cued Speech.** They may be looking for classes online or in-person, instructional videos, contacts who may be located near them, materials to help them learn/practice, information about camps, workshops, and classes around the country.

3. **Experienced Cued Speech users.** They would like to get updates on Cued Speech issues, legislative activities such as LEAD-K, read the *On Cue* newsletter, and find out about other resources or events such as Cue Camps.
4. **Researchers, educators, and other professionals.** These individuals typically want to access research studies concerning Cued Speech. For example, some may need data to support a new Cued Speech program at their school, whereas others are trying to verify if it is the right fit for their school. Parents may also want access to studies concerning literacy and language development.
5. **Translitterators, instructors, or trainees thereof.** Typically already fluent cuers, they will be looking for advanced programs such as Cued Language Translitterator or Certified Instructor classes. Some may need credited Continuing Education opportunities for their career. Some may be looking for employment opportunities. Instructors looking for higher level instructional resources may need access to Cued Speech charts adapted for other languages.
6. **Individuals who want to join the NCSA.** This can range from passive membership to board activity. More active members will probably want information about area representatives and local instructors, as well as local board members. Those interested in board or area representation will be interested in the bylaws.
7. **Individuals who want to donate to the NCSA.**

New Website Objectives

Our primary objectives for the website are threefold: to demonstrate and educate about Cued Speech and its benefits for families, provide a comprehensive collection of Cued Speech resources, and centralize information about Cued Speech activities and events throughout the United States. Since Cued Speech is visual, greater emphasis on videos and pictures is expected to demonstrate the communication mode.

We aim to accomplish these through recruiting membership and fundraising; providing tailored support for families and professionals; and disseminating news related to Cued Speech such as classes and cue camps. In particular, one of our goals is the ability to collect and sort contact information from both donation and membership lists for targeted marketing campaigns.

Current Website Vs. New Website

A brand new website must be developed and designed to replace the existing NCSA website. Moreover, the old website must be archived, copied, stored, and decentralized for safekeeping.

In 2017, we commissioned a group of Pratt University students to evaluate the current site. They did so based on usability testing, a walkthrough report, a competitive review comparing us to other sites, and a card sort test. Their findings, which lined up with our observations, specifically identified four major problem areas:

1. visual clutter on the home screen
2. information overload
3. inconsistent formatting
4. low navigability

We have noticed several other problems as well, which we will describe in more detail. Below is a breakdown of identified problem areas and requirements for resolving these.

Current Website Problems

1. **Too many navigational items.** The front page alone has a top menu, a side menu, *and* a slider. A single sub-menu can easily number up to 15 items. Many of these items are also duplicates of the same information.
2. **Too much on the homepage.** The homepage has three columns that scroll down into eternity, and much of it unsuitable— for example, the current site homepage advertises localized Cue Camps, when we are actually a growing national organization.
3. **Too much text, not enough images or video.** Cued Speech is inherently visual. The more that we can show (instead of tell), the better.
4. **Not intuitive or user-friendly enough.** For instance, far too much of our content is something instructive, like, “to find out more, go to...” or “click this button to...” The fewer steps viewers need to take to answer a question or concern they have, the better. The fewer steps viewers need to take to answer a question or concern they have, the better. Our site also does not prioritize accessibility for those with visual impairments.

5. **No clear, easy way to donate.** Donations need a clear destination: is it going to the NCSA, the DCLP, or a state affiliate? Can donations be earmarked?
6. **No clear, easy way to join as a member.** Our membership structure and fees need to be clearly outlined, especially regarding state and national affiliation.
7. **No clear way to show support for NCSA in other ways.** For example, we have small fundraisers through Amazon Smile and Ebay, and we've run fundraising campaigns on social media. Our information on these often takes the user out to an external site, which minimizes trust and incentive to donate.
8. **Lack of Resource Organization.** We have a library's worth of teaching materials, academic studies and publications, cue charts, legal resources, and parent resources. A good chunk of these are PDF's or external links. We need a good way to organize these resources and make them easily, directly accessible on the website itself.
9. **No search function or site map.** Even after organization and decluttering, we will still probably have a lot of content left that requires some additional navigation.

New Website Requirements

Mobile Devices

- Design the new site first for mobile devices, then for desktop computers.
- The mobile site works with a wide variety of resolution sizes, including smartphones and tablets.

Navigation Menu

- Redesign navigation menu but include one menu item for parents and another for professionals.
- Limit menus to no more than 10 items.

Homepage

- Create a clean, simple, attractive homepage
- Include a definition of Cued Speech, a testimonial(s), access to Cued Speech charts, and a donation link.
- Provide clear access to NCSA social media accounts with Facebook, Twitter, YouTube, and Instagram.

Overall Website

- Emphasize visual media such as videos and photographs, especially of cuers in action.
- Limit each webpage to no more than 5 key statements or messages, where possible.
- Provide easy access to and minimize the number of clicks to reach webpages. The donation page, membership page, and cue charts are of a higher priority. Resources that have to be drilled down are of a lower priority.
- Provide a user-friendly message for a 404 error page.
- Include search functionality that allows the public to locate specific information and resources on the site.

Organization of Resources

- Organize all resources, including teaching materials, academic studies and publications, legal resources, cue charts and parent resources, into a logical structure that users can navigate.
- Create webpages for publishing newsletter articles.
- Wherever possible, migrate content from external resources (e.g., newsletter and journal articles, PDF files) onto the website.

Accessibility

- Redesign the website to comply with Web Content Accessibility Guidelines (WCAG) 2.1 (<https://www.w3.org/TR/WCAG21/>).
- Provide accessibility options for visitors with disabilities or special needs. For example, closed captions for the deaf and hard-of-hearing, high-contrast and adjustable text sizes, as well as audible text descriptions, for those with visual impairments.

Content Management System

- Integrate with a content management system that allows administrators without design or programming skills to easily administer the website
 - The roster of administrators is anticipated to change with new boards so the content management system should come with a short learning curve to allow the existing administration team to easily hand off to the new team and the latter can quickly pick up where the former left off.
- Enable administrators to easily create, edit, and delete content (media and text), manage links, and download email contacts.
- Enable administrators to create pages for newsletter and journal articles.

Donation and Support

- Integrate donation page with GiveDirect.
- Include an easy-to-find link to the donation page on every webpage.
- Differentiate between the NCSA, the DCLP, and state affiliates.
- Provide a way to collect and store contact information from donors for administrators.
- Provide a “Support Us” webpage with information on our other fundraising campaigns such as Amazon Smile.

Membership

- Provide easy, simple process for joining the NCSA as a member.
- Define clear membership structure and fees.
- Differentiate between state and national affiliation.
- Provide a way for administrators to store and download contact information from members or interested parties.

Integration

- Include social media share buttons for announcements, journal and research articles, and newsletters.
- Integrate with Google Analytics.
- Integrate with iContact.
- Direct visitors interested in taking online training or purchasing books, learning materials and other products at Cue College (<https://cuecollege.org>).

Website Wish List

In addition to the requirements described above, we also have a “wish list” of items that we would love to see added to the new website, though they are not strictly necessary. As the project progresses, we can determine what to include and what to omit based on budgetary or bandwidth constraints. In particular, we would like to:

- Publish a welcome video to the homepage that demonstrates Cued Speech in action
- Integrate seamlessly with Salesforce or another email collection and marketing tool (a possible future addition)
- Integrate donation and membership pages with PayPal
- Highlight regional representative contact information on the Contact Us page

- Restructure contacts in a user-friendly format
- A video/audio library of Cued Speech resources
- A photo gallery of cuers, especially from classes and cue camps
- Possible integration with the resources on the Daily Cues website at www.dailycues.com

Proposal Requirements

Word and PDF copies of proposals shall be submitted to Charles Musser at cmusser@cuedspeech.org no later than February 10, 2019.

Successful proposals will demonstrate an understanding of the current NCSA website's gaps as summarized in the Pratt Study (see Appendix 1), as well as here, and address potential solutions for each website redesign objective and functionality requirement contained in this RFP.

Additionally, the proposal must include:

- a breakdown of how the project team can incorporate each requirement and "wish list" item into the project budget and schedule.
- a project budget by-line item.
- a sample project timeline, including milestones and deliverables.
- a description of how many staff will be devoted to the redesign effort and their education and work experience in web design. Experience with integrating websites with database information systems (i.e. Salesforce); Google Analytics; and photo, video, and audio media is required.
- at least one "before and after" example of a similar project (screenshots and hyperlinks are acceptable).
- at least two client references with the clients' e-mail addresses and phone numbers.

RFP & Project Timeline Details

RFPs will be evaluated during a two-month period after the submission deadline (February 10, 2019) closes. The finalist will be notified via e-mail no later than April 8, 2019. The NCSA's goal is to have its website redesigned and launched by April 2020. Proposal timelines shall show milestones and deliverables in such a way that the redesigned website's launch date can be met realistically.

Appendix 1

User Test Report Conducted by the Pratt Institute for the NCSA.

Cover Page



User Test Report

Abby Adams
Arushi Jaiswal
Clair Rock
Aaron Sorscher
Saebra Waterstraub



Executive Summary

The **National Cued Speech Association (NCSA)** supports effective communication, language development (international languages) and literacy in families with deaf, hard of hearing or learning disabled infants, children and youth through the use of Cued Speech.

Per the Association's requests, the team focused our efforts most on creating a more streamlined homepage. These changes would include less visual elements and fewer, more specific content categories. In order to determine this new architecture, researchers conducted a series of tests: a cognitive walkthrough, card-sorting test, in-person user tests, and completed a competitive review. Each of these tests provided insights into the information architecture, content, and aesthetic sense of **cuedspeech.org**. To address the comprehensive requests of the National Cued Speech Association's board and administration, a demonstrative digital prototype was submitted at the midpoint of the project. Keeping these results in mind, the team conducted in-person user tests asking users to complete tasks that would specifically address major challenges identified by NCSA staff.

User Tasks

1. Find a clear definition of what cued speech is.
2. Find a diagram that shows the different hand movements involved in cued speech.
3. Make a donation to the National Cued Speech Association.
4. Find a story of one such cued speech user who has benefitted from learning cued speech.
5. Find a way to contact an organization that might be able to help you with this?

Subsequently, researchers developed five high-impact recommendations:

Recommendations

1. Reduce and rename top level navigation categories
2. Reduce homepage content to five key elements
3. Create more direct donation instructions for NCSA and DCLP
4. Update and monitor dead links
5. Reformat Legal Resource listings with hyperlinks

Ultimately, these recommendations will enhance accessibility to NCSA's resources for cuers, professionals, and families.

Detailed test results and protocol are available in the appendices page 26.



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Introduction

The **National Cued Speech Association (NCSA)** works to bring academic, personal, and professional resources to the deaf and hard-of-hearing community. The website provides extensive documentation of legal resources, access to job opportunities, as well as learning materials and opportunities for both children and adults. With such a large amount of information, the site has become cluttered burdening the administrators and users alike. After meeting with a representative from the NCSA administration our team began a series of analyses with and without user input. Through these methods we were able to identify **five recommendations** to optimize the wealth of resources on cuedspeech.org.

To address the comprehensive requests of the National Cued Speech Association's board and administration, a demonstrative digital prototype was submitted at the midpoint of the project. This prototype illustrates both the visual and structural changes the team identified to best create the site that NCSA staff and users sought. This report will outline the research and design process used to make these changes. A complete report of test results is available in the appendices.



Methodology

In order to assess the user experience and usability of the National Cued Speech Association's (NCSA) website, a series of moderated user testing sessions were conducted. Ten interviews were conducted, with participants from 30-62 years old. Through these moderated user tests, usability issues were identified and ranked based on user comments and assessments done by the usability experts conducting the user testing.

Procedure

Usability testing is vital to understanding how users interact with a product or website. By conducting usability testing with a moderator, it is possible to get the most possible information from a user. In a moderated user testing session, one can gather observational data, such as facial expression and tone of a user's reaction, as well as have the ability to ask follow up questions or to clarify tasks in real time (Norgaard & Hornbaek, 2006).

In a moderated usability test, one moderator presents a number of questions and tasks to an individual participant. Tests are typically conducted with the help of a recording device to allow the researcher to return to the specific quotes, reactions, and comments made by testing participants (Rubin & Chisnell, 2008). For the testing of cuedspeech.org, researchers used either Lookback or Silverback, both which capture the facial expressions, voice activity, and record the webpage interface with which users are interacting.

The testing done for cuedspeech.org consisted of three parts. First, there was a pre-test, asking about a person's general knowledge about the website and organization. Following this, participants were asked to complete five tasks on the website. Moderators observed as participants navigated the website, focusing on usability pain points throughout the testing session. Finally, a post-test was administered, where participants were asked about their opinions or feeling about the experience, the website, and the NCSA organization.

As users and moderators progressed through the test, moderators encouraged participants to think aloud as they looked through the webpage. Researchers asked clarifying questions, encouraging participants to share not only what they were looking at but what it made them think of. According to Nielsen, "[researchers] hear their [users'] misconceptions, which usually turn into actionable redesign recommendations: when users misinterpret design elements, you need to change them. Even better, you usually learn why users guess wrong about some parts of the UI and why they find others easy to use." (Nielsen, 2012)

Each participant was given a \$5 gift certificate as incentive at the culmination of the testing session. Please see Appendix 5 for the full testing protocol.



Users

A moderated user testing session relies on having users in the target group to conduct the test with. Generally, visitors to cuedspeech.org are families and parents looking to gain more information on cued speech, and professionals looking for resources. Ideally for this user testing, participants would be a combination of professionals within the deaf or hard of hearing community and people who were unfamiliar with the concept of cued speech.

While researchers attempted to recruit professionals in the deaf community, the logistics and scarcity of these professionals prevented researchers from being able to arrange testing with these folks.

Although there were no professionals tested, researchers were able to test with ten individuals, with varying levels of interaction with the deaf or hard of hearing community. See overall characteristics of participants below, and visit Appendix 5 for detailed demographic information.

Gender of Participants	
Male	3
Female	7

Age of Participants	
20-25	2
26-30	6
31-35	0
36-40	1
41+	1

Level of Experience with Deaf/Hard of Hearing People	
None	5
Some	4
Extensive	1



Tasks

Participants were asked to perform five tasks during the moderated usability test. These five tasks were designed to focus a participant's attention on the most used portions of the website, according to a representative from the National Cued Speech Association. In these tasks, participants were first presented with a scenario, to orient them in a specific context. For example, participants were asked to consider looking at the website through the eyes of a parent looking for information for their child.

The five tasks are as follows:

- 1) Find a clear definition of what cued speech is.**
- 2) Find a diagram that shows the different hand movements involved in cued speech.**
- 3) Locate the page for donating to NCSA.**
- 4) Please find a story of one such cued speech user who has benefitted from learning cued speech.**
- 5) Imagine you are a parent of a deaf child, and are looking to find information about what your child is entitled to, legally. Can you find a way to contact an organization that might be able to help you with this?**

By grounding a participant's actions in these five tasks, researchers were able to focus in on the most visited areas and determine which usability issues affected those parts of the website specifically. For a full transcript of users' tasks please see Appendix 5.



Findings & Recommendations

Findings Summary

Our team conducted a series of tests to evaluate the National Cued Speech Association's (NCSA) website functionality and design through the lenses of expert practitioners and novice users. After evaluating the NCSA site user frustration arose in consistent areas.

Four issues stood out:

1) visual clutter on the home screen, **2)** information overload, **3)** inconsistent formatting throughout the site, **4)** and low navigability.

Users identified these four issues consistently throughout testing. Researchers identified synonymous problems during our inspection. These issues, too aligned with those identified by NCSA representatives and staff. Our team developed five recommendations to address these.

Recommendation 1: Reduce and rename top level navigation categories

Recommendation 2: Reduce homepage content to five key elements

Recommendation 3: Create more direct donation instructions for NCSA and DCLP

Recommendation 4: Update and monitor dead links

Recommendation 5: Reformat Legal Resource listings with hyperlinks

Further details follow and comprehensive documentation of protocol and results are available in the appendices beginning on page 26.



Recommendation #1: Reduce and rename top level navigation categories

The most frequent issue users had on the National Cued Speech Association's website was using the top navigation menu (Figure 1).

One user remarked, "Items don't end up being where I thought they would."

A clear understanding of the top navigation menu is crucial to accessing the invaluable resources on the NCSA site. Users' challenges were often related to the category labels. A lack of clarity and an overabundance of options left users feeling "frustrated," "overwhelmed," and "lost", as self-reported by test subjects.

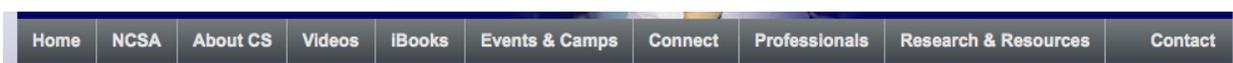


Figure 1. Current NCSA's top navigation bar

In order to address this key issue, it is recommended that the top level categories are renamed (see Figure 2). In doing so, the burden of choice will be eased with fewer navigation options. Using a Card Sorting test (see Methodology page 4) users created their own categories and named them without guidance. After evaluating and standardizing these results, the team recommends re-labeling the top navigation bar as seen in Figure 2.



Figure 2. Revised version of NCSA's top navigation bar

Making such changes in the top navigation would require an overall reorganization of the architecture of the website. Researchers recommend re-structuring the navigation hierarchy based on these results. Provided is a site map integrating the proposed architecture changes. For a more in depth analysis of how this will affect the rest of the site, please see Appendix 4 (Card Sort Results).



Recommendation #2: Reduce homepage content to five key elements

A majority of test participants reported that the site was too busy on first glance. Participants referenced the abundance of links and the amount of text as being overwhelming.

One suggestion offered by both user testing participants and NCSA representatives was to reorganize and reprioritize the cuedspeech.org homepage as addressed in the first recommendation. To enhance these architectural changes a visual re-design can better the initial impression users have of the site and consequently the organization.

Welcome!
The National Cued Speech Association supports effective communication, language development (international languages) and literacy in families with deaf, hard of hearing or learning disabled infants, children and youth through the use of Cued Speech.

What is Cued Speech
Cued Speech is a visual mode of communication in which mouth movements of speech combine with “cues” to make the sounds (phonemes) of traditional spoken languages look different. Cueing allows users who are deaf, hard of hearing or who have language / communication disorders to access the basic, fundamental properties of spoken languages through the use of vision.

College Scholarships For New & Current Students
Carol Shuler and Dr. Orin Cornett Memorial Scholarship Applications
*Note: Submit this years scholarship application before June 1, 2017.
The NCSA awards two scholarships each summer: the R. Orin Cornett Memorial Scholarship and the Carol Shuler Memorial Scholarship. The Cornett Scholarship awards \$1,000 to a college student. The Shuler Memorial Scholarship awards \$500 to a student from the West region (Arizona, Alaska, California, Hawaii, Idaho, Nevada, Oregon, Utah or Washington).
[2017 Scholarship application form \(DOC\) »](#)
[2017 Scholarship application form \(PDF\) »](#)

Generous Ways To Donate
Donate on the secure [GiveDirect site »](#)
Buy & sell on eBay? Do it through our secure MissionFish donation page on behalf of Deaf Childrens Literacy. [Visit our eBay site »](#)
Dr. R. Orin Cornett (Cued Speech inventor)

The Latest Updates
Excellent Docs for New Cuers!
These quality guidelines, “Stages in Cueing Fluency” and “Phases in Learning to Cue” were carefully prepared, rehearsed and written by Barbara Williams-Scott, Betsy Kipila, and Dr. Polly Earl for use by beginner cuers to have a better sense of their progress while learning to cue on their own!

Quick Links
Camps 2017
Job Opportunities
Events
Contact NCSA
Contact InsCert
Become a Member
Cued Speech Bookstore
Deaf Children's Literacy Project
Sign Up for Our eNews
Educational Interpreter Performance Assessment

Support families in need by donating to the Deaf Children's Literacy Project.
Clickable images to articles, sites.

Figure 3. NCSA's busy landing page



To optimize the site's content and functionality, the team recommends an interface with clear headings, relevant and related information appearing proximal to similar content, and limited images.

Users identified similar features as most critical to those outlined by NCSA staff. Through user testing sessions, discussions with NCSA professionals, and usability expert opinions, the following five items are recommended as the sole homepage content.

- Definition of Cued Speech
- Video of cueing in conversation
- Donation information with link
- Access to cued speech chart
- One example of a cue success story

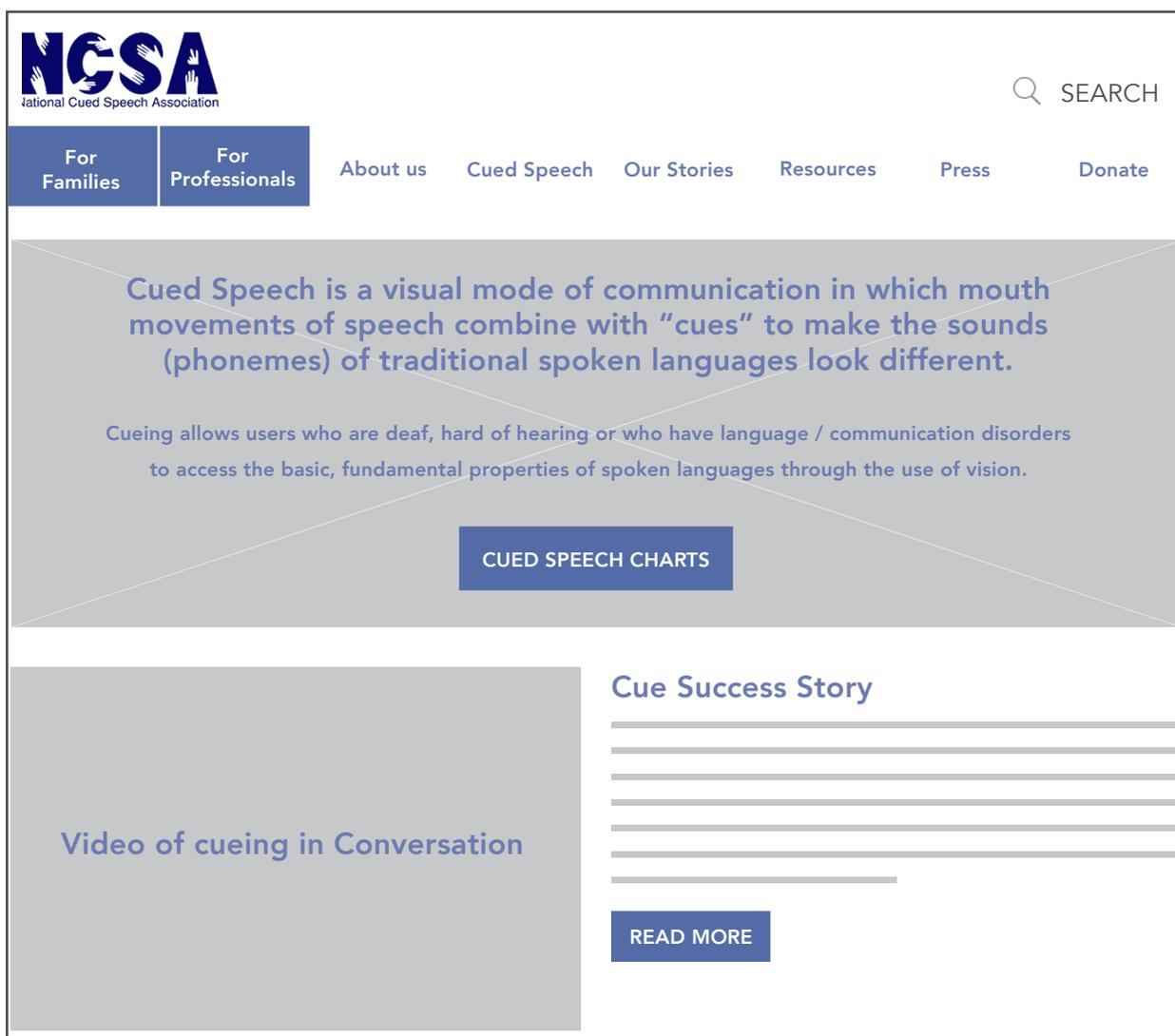


Figure 4. Revised NCSA's landing page with 5 main recommended items



Recommendation #3: Create more direct donation instructions for NSCA and DCLP

Many users had difficulty completing the “donation” task (see Appendix 5 or the Executive Summary on page 1). Because this function is so fundamental to both site users and the organization’s purposes it is essential that it is readily available on the homepage and accessible through multiple paths throughout the site.

Users were frequently unable to make a distinction between Deaf Children’s Literacy Project and NCSA donation options. Not only that, the donations information on the homepage was consistently overlooked, being reported as “lost in all of the text.” As seen below in figure 5, the most prominent donation portal (top right) is not clearly connected nor disconnected to donation options for the National Cued Speech Association.



Figure 5. NCSA’s busy landing page

Generous Ways To Donate

Donate on the secure [GiveDirect site](#) »

Buy & sell on eBay? Do it through our secure MissionFish donation page on behalf of Deaf Childrens Literacy. [Visit our eBay site](#) »

Dr. R. Orin Cornett (Cued Speech inventor) Legacy Society - [read his bio here](#) »

Donate [your vehicle here](#) »

Use GoodSearch for searching online. [GoodSearch: You Search, We Give!](#) »

Similar frustrations occurred with the homepage options for NCSA donation (Figure 6). Expert recommendation is to utilize the new homepage’s structure for clear access to the “Donate” feature. An easily located link can be reinforced by multiple paths throughout the site.

Additionally, we advise that the DCLP donation ad in the top banner be removed. This option can be available on the donation submission page. This decrease in initial options will simplify the process thus increasing feature accessibility.

Figure 6. NCSA’s donation information box



Recommendation #4: Update and monitor dead links

Access to resources is the main function of the NCSA site. During our tests, the team found links to resources that were no longer functioning. Users reported losing trust in the organization because of this. The accessibility of NCSA's legal, professional, educational, and personal resources are diminished by these errors. For example, under "Jobs" (Figure 6) the "Jobs listings" link repeatedly reloads the same page without navigating to listings. The press section on the homepage, "In The Media" highlights a story from Northwestern University (Figure 7). However, neither the hyperlinked heading nor the "click here" link lead to an extant page.

Job Listings

To learn about current job openings around the nation, see our [job listings](#). »

Figure 6. Current heading with non-functioning link

In The Media

Northwestern University article & video

Right To Cue: Cued Speech helps deaf children improve communication

An excellent article that provides a 360 degree view about the benefits of Cued Speech, complemented with top-down facts why this modality helps deaf and hard of hearing children stay ahead of the curve throughout their educations along with the acquisition of vital skills and critical thinking needed for succeeding in life and throughout their careers. To read the article and related online video, [click here! »](#)

northwestern.edu/chicago/news »

Figure 7. Example of non-functional homepage press feature.

Checking each link on the site would be a large undertaking and create a burden on the NCSA design team. Therefore, the team researched the issue within the site and uncovered only these two areas. After exploring the site, asking users to freely explore before testing, and conducting a multitude of professional analyses the team has identified the two listed features as problem areas. Therefore the team recommends re-routing these three links to the accurate addresses. Future testing of links overtime is recommended to prevent issues of inaccessibility to arise.



Recommendation #5: Reformat Legal Resource listings with hyperlinks

Cuedspeech.org provides ample legal resources for myriad needs within the deaf and HOH community. The legal resources page has a variety of quality content that will prove helpful for families and loved ones of deaf or hard-of-hearing individuals. The bibliographic format of resource listing creates accessibility hurdles for users (Figure 8).

Users reported frustration at the lack of hyperlinks. One user commented, "This isn't 1999, give me a link. If I'm on a website it's because I want links." The value of these resources is lost to users due to an omission of contemporary web design and formatting.

Siegel, Lawrence. The Complete IEP Guide: How to Advocate for Your Special Ed Child; 3rd edition 2004. Berkeley CA: NOLO Press, 2004. Written by an attorney who specializes in education of the deaf, this gives you the law, useful forms, letters, lists, contacts, index.

Tucker, Bonnie. IDEA Advocacy for Children Who Are Deaf or Hard of Hearing: A Question and Answer Book for Parents and Professionals. San Diego: Singular Publishing Co, 1997; ISBN# 1-56593-986-8; approximately \$16.95. The author is an oral deaf professor of law.

Figure 8. Current resource listing.

Our team recommends resources be organized by subject and hyperlinked to online documents. Hyperlinks will provide users the opportunity to view a full .pdf, contact authors/lawyers, and purchase the book or journal if available. Creating paths for users to full resources better serves the mission of NCSA by easing the burden of research on users.



Conclusion

Through a series of expert and user testing this team of researchers identified The National Cued Speech Association's users will most benefit by simplifying the site's wayfinding from the homepage specifically within the top navigation menu. Following these five recommendations from our team of experts will optimize the functionality of the website and align the site with the organization's mission. Those recommendations are as follows:

1. Reduce and rename top level navigation categories
2. Reduce homepage content to five key elements
3. Create more direct donation instructions for NCSA and DCLP
4. Update and monitor dead links
5. Reformat Legal Resource listings with hyperlinks

Simplifying the visual elements of the homepage and the re-structuring of navigation tools will make it easier for visitors to learn about Cued Speech and connect with vital resources. A more extensive review of legal and professional resources should be conducted to ensure optimal accessibility through hyperlinks and relevant opportunities. By implementing these recommendations the overall usability of the National Cued Speech Association's website will be greatly improved.



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Appendix 1 - Complete Usability Problems Report

Problem	Location	Category	Severity	Recommendation
Providing multiple areas of the same information i.e. info on cue camps in both the "events and camps" page and the "connects" page	Multiple occurrences- "job opening" category in both Connect drop down menu and professional drop down menu	Information Overload	2	Make sure each issue/information is addressed in only one location
The column identifier and the links below it are the same color but some are links and some are not without clicking/hovering no way if differentiating	Bottom Menu	Consistency / Standards	1	Underline to keep consistency between links
Writing for the web - everything is written in paragraph form, which isn't engaging.	Many Pages - Landing Page	Content	1	Re-write content to be more readable and engaging
Videos should be easier to find/more present	Landing Page / Video	Navigation	1	Include a video on landing page displaying a conversation with cued speech to create engaging and educational content quickly
Outdated format of the website. Gradient is distracting	All Pages	Aesthetics	2	Better layout and design **Older participants felt it was well designed since they can find everything eventually, but younger participants found it outdated, with too much information on one page
Jargon is confusing - if there is a space for specialists and a space for normal people this would be easier	All Pages	Content	4	Divide top navigation into two primary categories - For students & For professionals accordingly
Little indication of links/feedback when selecting	All Pages	Feedback	4	Provide a clear feedback, preferably with a change in color



Problem	Location	Category	Severity	Recommendation
Cannot identify what is part of the site/org and what is a link elsewhere (daily cues, camps, donations)	Landing Page	Information Architecture	3	Make sure each issue/information is addressed in only one location
Legal resources are not categorized- confusing to identify which is for what assistance	Resources Page	Information Architecture	2	Categorize legal resources
Couldn't tell if resources were for what demographic	Resources Page	Content	3	Re-write content and divide the resources accordingly
Consistency in dropdowns - some drop down into subcategories, some don't drop down. But all are clickable.	Top Navigation	Aesthetics	2	either 1) all have a drop down or 2) none drop down and you have to click to access



Appendix 2 - Cognitive Walkthrough Report

One of the means of finding errors in the NCSA website as a preliminary to the User Testing was an analysis utilizing a Cognitive Walkthrough method (Wharton, et al.1994) which was chosen to evaluate how easily the target users of ncsa.org might be able to fulfill specific tasks and goals on the website and also to evaluate the learnability of the site's navigation. Through utilizing this approach, there is an emphasis placed on users' needs.

Four researchers conducted a Cognitive Walkthrough. Before participating in the walkthrough a target user was defined, and two tasks were conceived. The correct action sequence (see below) was designed to allow researchers to assess both parts of the website and the terminology used throughout both sites (Wharton, et al.1994). All four researchers assumed the role of "a first-time user" and conducted the walkthrough together. The combination of experts and novice users enabled the team to name some critical issues users might engage with from the onset.

The first task to be completed in this exercise is to **find and download the American English Cue chart**.The second task was to **learn about Spring Camp Cheerio and visit their website**. Each task requires 3 steps:

Task One- Find and Download the American English Cue Chart

1. choose "About CS"
2. choose "Read More about Cued Speech Charts"
3. choose "American English Cue Chart"

Task Two- Find out about Spring Camp Cheerio and visit their website.

1. choose "Events and Camps"
2. choose "Camps Page"
3. Go to the Spring Camp Cheerio website

Participant Demographics			
Participant number	Gender	Age	Level of Experience
1	Female	26	Some
2	Female	28	None
3	Female	25	None



Participant Demographics			
Participant number	Gender	Age	Level of Experience
4	Male	23	None
5	Male	26	None
6	Female	29	Some
7	Female	38	None
8	Female	26	Extensive
9	Female	62	Some
10	Male	30	None



Appendix 3 - Competitive Review

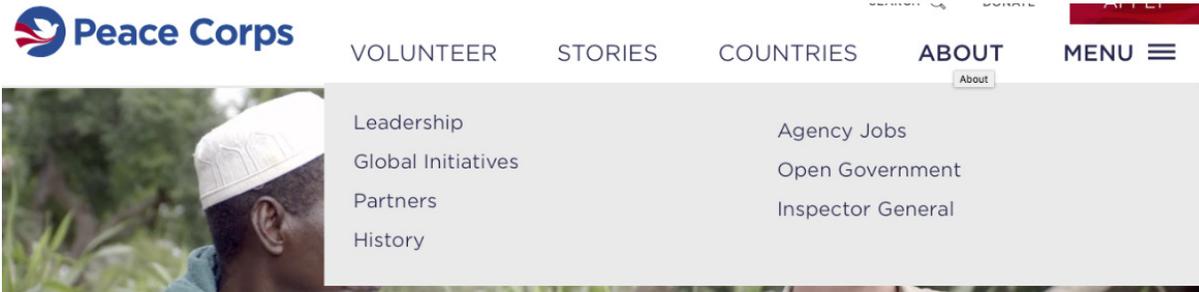
To gain better insight of certain items that could be beneficial to the National Cued Speech Association’s website a competitive review was conducted. Websites reviewed were selected by the presentation of their content, the type of organization, or shared interests with NCSA.

The selected websites were:

- National Cued Speech Association
- Daily Cues
- New York Historical Society
- Peace Corps

The **first criteria** reviewed was the **main navigational menu bar** located across the top of each page.

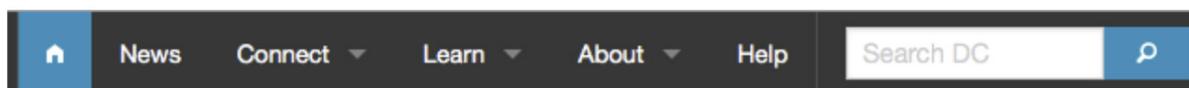
Every website offered a menu bar to offer easy navigation through their sites. Every website’s menu bar was activated by the user hovering their cursor over an item. All sites, with the exception of the Peace Corps had the initial menu options visible without any type of clicking required. For an assumed aesthetic purpose the Peace Corp has their menu tucked away into a hamburger menu, requiring the user to click into to gain access to site navigation. The color of the drop down menus in comparison to main web pages was reviewed. New York Historical Society was the only site that used the same color drop down menu as the main background color. This choice, while seemingly a poor decision actually works very well with the image heavy and colorful displays on the NYHS website. NYHS was once again the only site that did not have contrasting hover effects on menu options. All other sites are designed so menu options are either highlighted or change color when hovered over, making it easier for users to understand where their cursor is, or what action could be taking place.





The **second criteria** of review was their **use of search functionality**.

Out of the sites reviewed the NCSA was the only site that did not offer any kind of search functionality on the site. All of the websites reviewed offer a large amount of content, which would make having a search function that is easy to find very important. Of the remaining sites, all placed the search bars in easily discoverable places on the main page. The Peace Corp website had the most interesting approach to the search bar, rather than having a static bar, it was hidden until selected, which would open the text field allowing the user to conduct a search from there. NYHS was the only site that decided not to use the word 'search' in their search bar, but rather only displayed the common magnifying glass image. While this is a common image, Daily Cues and Peace Corp offer the image and the word 'search' just to clarify any confusion that could occur by only having the image.



For all of these organizations it was decided that having **contact information** apparent on the site was incredibly important, and is present on each website. The amount or type of information however varies from site to site. Each website, except NYHS offers a contact sheet allowing users to reach out to the organization in a pre-structured format. This is an incredibly useful tool for some people, as it makes getting in contact with the organization very easy. In this day and age, if a contact sheet is offered it seems unnecessary to have things like mailing addresses or phone numbers on the site depending on the organization. Daily Cues is the only website that does not link to any social media profile on it's website (this could be due to a lack of social media at this time), but no matter the organization linking to social media from a main website is clearly an important way for people to communicate on those platforms.

Contact Us

We welcome your questions, thoughts, feedback and ideas and or to **sponsor the Deaf Children's Literacy Project**.

To send any letters or mail, here's our address:

National Cued Speech Association
1300 Pennsylvania Avenue, NW
Suite 190-713
Washington, DC 20004
800-459-3529

***Please fill in the required information:**

Fields marked with * are mandatory.

Full Name *	<input type="text"/>
Email Address *	<input type="text"/>
Telephone Number	<input type="text"/>
Your Message *	<input type="text"/>



The **fourth and final criteria** of regarding their offering of **accessibility feature**.

This appears to be a rare feature offered on websites, and of the sites reviewed only the New York Historical Society offers an accessibility feature. While there is just one feature offered, but even having that one feature opens up the site to a wider audience.

[careers](#) | [explore](#) | [press](#) | [media](#) | [blogs](#) | [social](#) | [sign up for e-news](#) | [type size](#)

[ter](#) | [women's history](#) | [children's museum](#) | [education](#) | [rental](#) | [support](#) | [shop](#) | [dine](#)



Appendix 4 - Card Sort Results & Site Maps

A card sort test allows users to take features of the site and organize them into categories (top bar navigation labels) that make the most sense to them. Test users had never used ncsa.org and had no familiarity with the language. This user group allowed the test to evaluate the organization's primary concern: providing introductory information across the widest range of users possible. What we found was that users were typically overwhelmed by information and the categories they created were similar to each other but different from the site in its current state. Our team recommends creating a stronger match between user expectations and top level navigation options.

The NCSA was most frequently broken into the following categories

- About us
- About cued speech
- DCLP
- Events
- Get Involved
- Media
- Learn Cued Speech
- Professionals and
- Resources

The sitemap is a mockup structure using those categories that users created most frequently. Site map and card sort results are attached.

ABOUT US	41	Videos	1.0	1
		Deaf Children's Literacy Projects	1.0	1
		Show 38 more		
About Cued Speech	16	'On Cue' Newsletter	1.0	1
		What is cued speech?	2.0	5
		Definition and History	2.0	1
		Show 13 more		
Deaf Children's Literacy Project	5	Cue Camps	1.0	1
		Deaf Children's Literacy Projects	1.3	3
		Advertise for Deaf Children's Literacy Project	1.7	3
		Show 2 more		
Events	18	Discovery Bookstore	1.0	2
		Dr. Cornett Legacy Society	1.0	1
		Calendar	2.0	3
		Show 15 more		
Get Involved	16	Advocacy	1.0	1
		Donate	2.0	4
		Advertise for Deaf Children's Literacy Project	2.0	2
		Show 13 more		



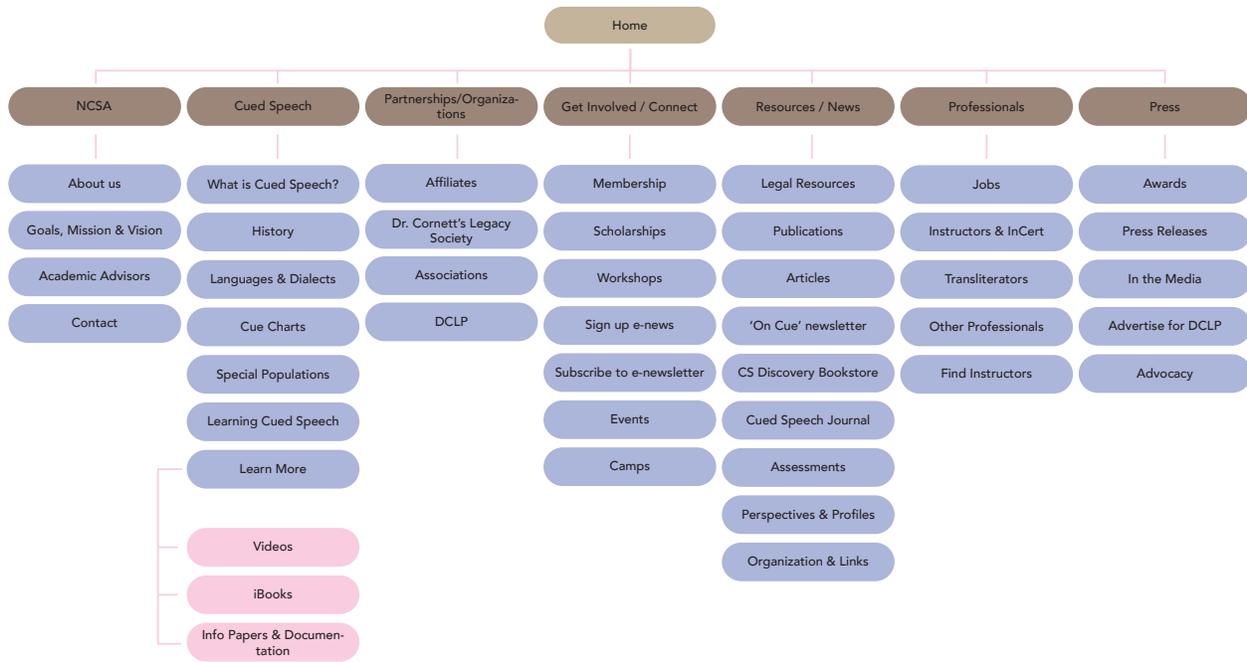
] IN THE MEDIA	17	Sign up for Our eNews	1.0	1
		In the Media	1.2	5
		Articles	1.5	2
		Show 14 more		
] Learn Cued Speech	12	Apply for Scholarships	1.0	1
		Cue Camps	1.0	1
		Legal Resources	1.0	1
		Show 9 more		
] Professionals	15	Find Instructors	1.0	2
		Apply for Scholarships	2.0	2
		Academic Advisors	2.0	1
		Show 12 more		
] RESOURCES	26	Sign up for Our eNews	1.0	1
		Apply for Scholarships	2.0	2
		'On Cue' Newsletter	2.0	1

iBooks

100	Videos																																		
85	85	Articles																																	
85	85	71	Publications																																
42	42	42	57	Legal Resources																															
42	42	57	42	71	Info Papers and Documentation																														
28	28	28	28	42	57	Transliterators																													
14	14	14	14	14	28	57	Instructor Skill Assessments																												
14	14	14	14	14	28	57	100	Instructors and InsCert																											
14	14	28	14	14	42	57	71	71	Find Instructors																										
14	14	14	14	14	28	57	71	71	57	Other Professionals																									
0	0	0	0	0	14	28	28	28	14	57	Job Opportunities																								
14	14	14	14	28	28	14	14	14	28	57	Position Statements																								
0	0	0	0	14	0	0	0	0	14	42	71	Awards																							
0	0	0	0	14	0	0	0	0	14	42	57	57	Board of Directors																						
0	0	0	0	14	0	0	0	0	14	42	57	100	Goals																						
0	0	0	0	14	0	0	0	0	14	42	57	100	100	Mission Statement/Values																					
0	0	0	0	14	0	0	0	0	14	42	57	85	85	85	Definition and History																				
0	0	0	0	14	0	0	0	0	14	42	57	85	85	85	71	Contact Information																			
0	0	0	0	0	0	0	0	0	14	28	28	71	71	71	57	57	Affiliates/Associations																		
14	14	14	14	0	0	0	0	0	14	28	28	28	57	57	57	42	71	Advocacy																	
0	0	0	0	0	0	0	0	0	14	14	14	28	28	28	28	14	42	42	Dr. Cornett Legacy Society																
0	0	0	0	14	0	0	0	0	28	42	42	57	57	57	42	28	28	71	Dr. Cornett's Biography																
14	14	14	28	28	0	0	0	0	14	42	57	28	28	28	28	14	28	14	28	Press Releases															
28	28	14	42	14	0	0	0	0	14	28	42	14	14	14	14	14	14	28	14	14	85	In the Media													
14	14	28	14	14	28	14	14	14	28	14	0	14	28	0	0	0	0	14	0	0	28	28	'On Cue' Newsletter												
14	14	28	14	14	28	14	14	14	0	14	0	0	0	0	0	0	14	0	0	14	14	71	Sign up for Our eNews												
14	14	28	14	14	28	14	14	14	0	0	14	14	14	0	28	28	0	0	0	0	42	57	Membership Services												
0	0	0	0	14	0	0	0	0	14	14	14	14	14	14	14	28	14	0	0	14	14	0	14	42	57	Membership Form									
0	0	0	0	14	0	0	0	0	28	28	28	28	28	28	28	28	0	0	0	28	14	0	0	28	28	71	Donate								
0	0	0	0	14	0	0	0	0	14	28	28	28	28	28	28	42	0	14	0	28	14	0	0	14	28	28	Calendar								
14	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	14	0	0	14	14	28	28	0	71	Events							
14	14	14	14	14	14	42	28	28	28	28	14	0	0	0	0	0	14	14	0	0	0	28	28	14	0	28	42	Workshops							
57	57	57	42	57	57	42	14	14	14	14	0	14	0	0	0	0	28	14	14	0	0	28	28	14	0	0	14	28	Other Resources						
28	28	42	28	28	57	28	42	42	57	42	28	42	14	14	14	14	0	0	14	0	0	28	28	28	0	14	14	0	14	28	Academic Advisors				
14	14	28	14	14	28	14	14	14	28	28	28	0	14	0	0	0	14	0	0	0	0	42	57	42	28	14	0	14	28	28	42	Apply for Scholarships			
14	14	28	14	14	28	42	28	28	57	28	0	0	0	0	0	0	0	0	0	0	42	28	28	0	0	0	28	14	28	28	Cue Charts				
0	0	0	0	0	28	14	14	14	14	14	14	14	14	14	14	14	14	14	0	0	0	0	0	0	14	0	0	14	0	0	57	Learning Cued Sp			
0	0	0	0	0	14	14	14	14	14	14	14	14	14	14	14	14	14	14	0	0	0	0	0	0	0	0	0	0	0	0	42	85	What is cued		
0	0	0	0	14	28	57	28	28	42	28	28	28	14	14	14	14	14	14	0	0	0	0	0	0	14	14	14	0	28	71	57	Language			
14	14	14	14	28	28	42	28	28	28	0	0	14	14	14	14	14	0	0	0	14	14	14	0	0	14	28	14	14	28	42	57	57	Spe		
0	0	0	14	14	0	0	0	0	0	14	14	14	28	28	28	42	28	28	14	0	0	0	0	0	14	0	0	14	0	0	0	0	14	0	14
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42	42	28	28	14	14	14	14	14	14	0	28	14	0	0	0	0	0	0	0	0	0	0	0	14	28	14	0	0	14	14	14	14	14	14	0

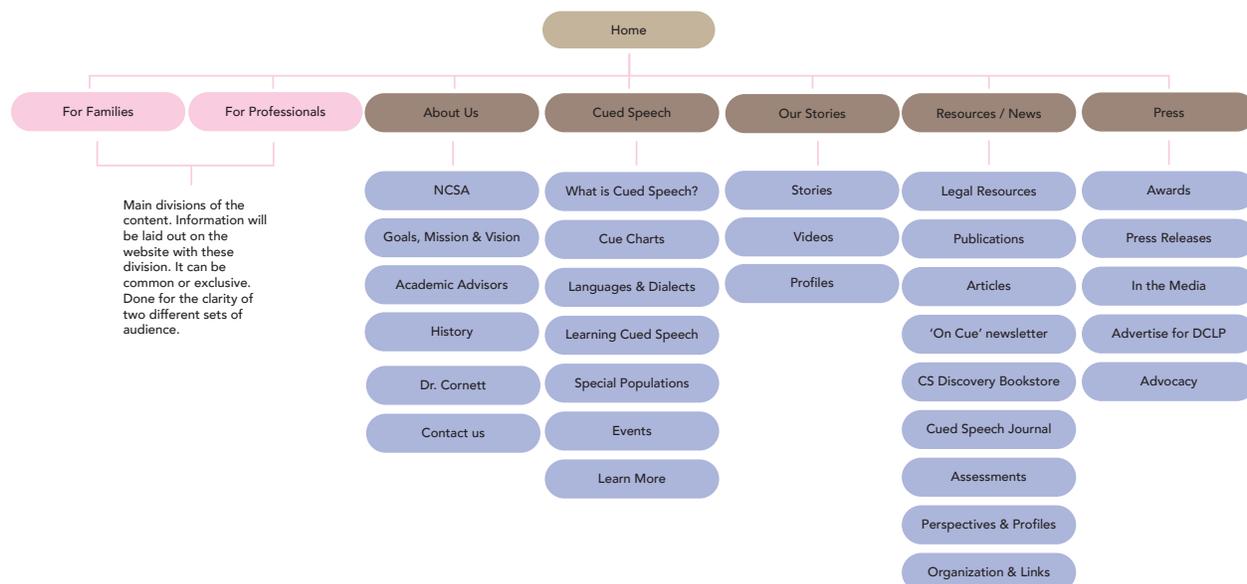


Site Map Iteration 1



Site Map Iteration 2

After more research and discussion on the Information Architecture of the NCSA's website, we further simplified and reduced the sub-options from the top navigation bar.





Appendix 5 - User Test Protocol

Participant Demographics			
Participant number	Gender	Age	Level of Experience
1	Female	26	Some
2	Female	28	None
3	Female	25	None
4	Male	23	None
5	Male	26	None
6	Female	29	Some
7	Female	38	None
8	Female	26	Extensive
9	Female	62	Some
10	Male	30	None



Age:

Gender:

Know or have had any experience with deaf or HOH (hard of hearing) people?

Introduction:

Hi I'm _____ and I'm working to assess the National Cued Speech Association's website. Today we're going to look at their website and talk about what works and what doesn't. I am not the web designer and I'm not affiliated with the Cued Speech Association, so please feel free to share exactly what you're thinking. I won't be offended.

Just so you know, we'll be recording this testing session, but all information, including your name and any identifying information, will stay within our research, and will only be used for research purposes. Is that alright with you?

If you need to take a break or leave for any reason, just let us know and we'll pause or stop the testing session.

There will be a few questions before we begin, you'll have some time to explore the website and complete a few tasks and then I'll ask you a few more questions. And at the end we'll give you a \$5 Amazon gift card for your time. Everything sound good to you? Does that sound good?

1. As I mentioned before, today we'll be looking at the website of the National Cued Speech Association's website. Would you tell me what you know about cued speech? (if user looks alarmed - "It's ok if you don't know anything!")

Response:

2. Here's the homepage of cuedspeech.org. Looking at this page, can you tell me how it makes you feel in a few words?

Response:

3. Based on your initial impression can you tell me what kind of work you think this organization does?

Response:



Scenario:

You're a friend of a hearing impaired person and you're interested in learning about more effective ways to communicate with your friend. You learned of the National Cued Speech Association in your research and think it may be a good resource, so you decide to check out the site and see what you can learn...

Keeping that in mind, there are five tasks I'd like you to try to complete.

Tasks:

- Find a clear definition of what cued speech is. How is it different than sign language?
- You have a hard-of-hearing friend who is learning cued speech. Please find a diagram that shows the different hand movements involved in cued speech.
- On behalf of your hard-of-hearing friend, you want to make a donation to the National Cued Speech Association. Show me how you think you would do this.
- NCSA has been successful for many families and students. Please find a story of one such cued speech user who has benefitted from learning cued speech.
- Imagine you are a parent of a deaf child, and are looking to find information about what your child is entitled to, legally. Can you find a way to contact an organization that might be able to help you with this?

Post:

Thank you for taking the time to complete those tasks. Before we finish, I'm going to ask you a few more questions about your experience.

1. Now that you've looked through the website, do you think you have a better understanding of what cued speech is?

a) What specifically did you learn?

2. As you were exploring as the friend of a hearing impaired person, did you find this website useful?

b) What specifically?

3. Can you tell me 1 or 2 things that you found particularly interesting on this site?

4. Describe your impression of the site overall.

Response:

5. How does this affect your impression of the organization?

Response:

6. Is there anything you can think of that the site could use more or less of?

Is there anything else you'd like to tell me about your experience? Do you have any questions for us?
(Interviewer feel free to bring up questions you may have had during the tasks)

Thank you so much for taking the time to do this with us. Please enjoy this **Amazon gift card!**