

# Music Center of North Haven

## User Experience Design Report

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## Executive Summary

This report was queried to look at the usability of the Music Center of North Haven website (<http://www.musiccenternorth.com/>). The report provides detailed evaluation and analysis of the usability of the Music Center of North Haven and offers recommendations for improvement.

The website is for the store and the Musical Forest café – a vegan/vegetarian restaurant located inside the store. It provides information regarding music lessons, musical instrument sales, rentals, repairs and the café.

The results of several usability evaluations and tests show that the website is not functional. The biggest problems discovered are:

- Information isn't organized in a way where users expect to find it. Navigational elements such as a search box, footer navigations, links to content are missing.
- The inconsistent visual layout and poor design hinders the users' ability search the site and locate information.
- Important information such as an inventory of products for sale and menu for the café are not on the website.

The overall user experience is frustrating and not enjoyable. Users need to muddle through to navigate the website.

### Methodology:

Four evaluation methods were used. They are as follows:

- **Persona:** This evaluation method helps gather information about the target audience. It is a framework to learn about the characteristics of the intended users, objectives, motivations and concerns. The persona gives human face and voice to users.
- **Heuristic Evaluation:** It's a task-free evaluation method that identifies a wide range of issues. The evaluation analyzes functionality of a website against a set usability tenets. It notes the website's strengths and weaknesses with regard to usability.
- **Cognitive Walkthrough:** It's a way of conceptualizing a user's thought and action process. It identifies three tasks a user may perform, lists the likely path to achieve the tasks and evaluations each action. The cognitive walkthrough is done without user.

- Usability Testing: This method asks users for feedback of the usability of the website. It involves observing one user at a time try to complete a series of tasks. It is helpful in determining the functionality of the website. After the testing is completed, the usability report is prepared. The report is an extensive analysis of the findings and makes recommendations for improvements.

## Results:

There are three main issues that affect the website's usability and user experience: Information architecture, poor visual layout and design and missing information.

Information architecture:

- The website is not organized in a way that allows users to search and find information. There aren't elements one would expect to find on a website: a search box, footer navigation, company logo, sections page name, links to content.
- Labels are misleading, incomplete or non-existent.

Visual layout and design:

- The inconsistent secondary page layouts makes it difficult for users to successfully navigate the website and complete tasks.
- There isn't a visual hierarchy.
- The copy is wordy. Because of the verbose copy, it makes it difficult to skim.
- There is a lot of clutter on the website with no clear hierarchy. Only two levels of navigation results in information overload in sections. Poor design adds to difficulty prioritizing.

Missing Information:

- The website is missing key information. For example, there isn't rate information for music lessons or a menu for the café. Specific store inventory is not listed on the "Sales" page.

## Recommendations:

The following are recommendations to change and improve the usability of the website:

Information architecture:

- Follow web conventions and include standard navigational elements such as a company logo, footer navigation, social media buttons, store address and phone number, links to content on each page.
- Changes certain labels for clarity. Rename “Sales” page to “Buy.”
- Create a third level of navigation to avoid information overload on the secondary pages.

#### Visual layout and design:

- Create a consistent layout for each secondary page. Place the standard navigational elements on each page and same location on each page.
- Create a simple, clean layout. Eliminate clutter. Create a visual hierarchy.
- Use the same font style and size throughout website.
- Be succinct. Eliminate wordy text.
- Changes certain labels for clarity. Rename “Sales” page to “Buy.”
- Create a third level of navigation to avoid information overload on the secondary pages.

#### Missing Information:

- Include a menu for the café, product information, rate information, about us and contact us secondary pages.

A site map and three wireframes of the redesigned website are in the prototype chapter.

#### Conclusion:

The report concludes that a website is not easy to use. A redesign of the website is necessary to improve functionality and to give a user a positive, enjoyable experience.

# Chapter 1: Website Description

## Purpose:

The Music Center of North Haven website provides users with information and services offered regarding music lessons, rentals, repairs, sales, and vegan/vegetarian café. (<http://www.musiccenternorth.com/>). The tagline is “your neighborhood music store for all your musical needs.”

## Intended Audience:

- Parents/Guardians looking to enroll children in music lessons.
- Students (elementary school to adults) looking for information about various music lessons (instrument and voice) and group performance opportunities.
- Customers (first-time to experienced musicians) looking to buy or rent instruments and equipment.
- Parents with children enrolled in a school band looking to buy or rent instruments.
- Customers in need of instrument repair
- Customers looking for a vegan/vegetarian restaurant.

## Description of Site and Problems:

The website has seven secondary pages: Sales, Rentals, Repairs, Music Lessons, Directions/Hours, The Musical Forest Café, and Photo Gallery.

These pages are clearly identified on the navigation bar at the top of the home page. But finding information on each individual secondary page is difficult.

The website does not make use of web conventions. Elements aren't located where one would expect. Some elements such as a search box, footer navigation, company logo, a breadcrumb trail and links to content are missing completely.

Relevant and necessary information is also missing. For example, the café page doesn't have a menu. On the sales page, there isn't a detailed product inventory.

The website does not follow the principles of design. Pages are cluttered, text is wordy and there is not a clear visual hierarchy. The secondary page layout is inconsistent throughout which adds to the difficulty. Relevant information such as type of lessons offered, cost to rent or buy instruments are scanned documents that are difficult to read and can't be enlarged.

The website isn't functional and it takes a lot of muddling to navigate the website. The header bar on the home page is the only way to successfully navigate the site.

## Chapter 2: Persona

According to Dan Brown, author of *Communicating Design*, “Personas provide the framework for describing the target audience. They are a summary representation of the system’s intended user’s, often described as real people. Personas bring the audience to life and serve as the voice of the user throughout the design process.” (Page 39)<sup>1</sup>

The persona is a potential user of the Music Center of North Haven website. It gives the establishing requirements: name, key distinguishing features, descriptive dimensions, objectives and motivations. The persona also lists concerns and a scenario. Personal background, demographic information, technical comfort and a photo are provided to bring the persona to life.

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<sup>1</sup> Brown, Dan. (2011) *Communicating Design. Developing Web Site Documentation for Design and Planning*. New Riders.

## Persona: Sheila Adams

Age 45

Occupation IT Manager at IBM, works from home.

Education Masters in Computer Science



### Background:

Shelia Adams recently moved with Christian, her 13-year old son, from Portland, Oregon to Hamden, CT. She is a single mother and home schools her son. Shelia is a helicopter mom. “Helicopter mom” is defined as a “parent . . . who pays extremely close attention to a child’s or children’s experiences and problems, particularly at educational institutions. Helicopter parents are so named because, like helicopters, they hover overhead.” Wikipedia.

### Descriptive Dimensions:

With a background in computer science, Shelia enjoys a high level of technological comfort. She is a highly educated, single parent of a very bright and gifted tween. She takes an active role in her son’s education and extracurricular activities. She believes that music education is a vital part of her son’s learning and development.

### Objectives and Motivations:

The Adams recently moved to Hamden from Portland. While in Portland, Christian took violin lessons from the local music shop. Shelia is looking to rent a violin and enroll.

### Concerns:

Sheila believes music plays a vital role in Christian’s education. He has been playing the violin for 5 years and it’s important for Christian to continue his lessons and

progress as a musician. Shelia is looking for an experienced teacher that can take Christian to the next level.

Her concerns are:

- What is the experience level and educational background of the teachers?
- My son is home-schooled. Performances are important. What opportunities are there for recitals?
- What type of equipment can be rented?
- I am a single mother. How much does everything cost?

### Scenario:

The Music Center of North Haven was recommended to Sheila for lessons and a violin rental for her son. She wants more information on the teachers and their musical background and teaching experience. Christian recently told her that he isn't interested in violin anymore and would like to take guitar lessons. Sheila thinks it's a phase and believes that with the right teacher, Christian will become motivated and learn to love the violin again. The website says the music center has access to some of the "best instructors in the state and the instructors provide music instruction for a living." But there isn't any more information. The site asks the user to just call the shop for more information. This frustrates Sheila as she likes to research and vet potential instructors for her son.

## Chapter 3: Heuristic Evaluation

According to Clayton Lewis and John Rieman, authors of *Task Centered User Interface Design*, “a heuristic evaluation, is a task-free evaluation. It is a check-list approach that catches a wide variety of problems.”<sup>2</sup>

The Heuristic Evaluation was based on Andy Budd’s model, *Heuristics for Modern Web Application Development*. Budd states, “Heuristic evaluation is a technique that involves analyzing the usability of a website against a set of general usability precepts. One or more “experts” will analyze the target site, often following a series of pre-defined scenarios. Whenever they encounter an issue that breaks one of the precepts or “heuristics”, they will note the issue and sometimes the severity.”<sup>3</sup>

The Heuristic Evaluation looks at the following heuristics:

- Design for User Expectations
- Clarity
- Minimize Unnecessary Complexity and Cognitive Load
- Efficiency and Task Completion
- Provide Users with Context
- Consistency and Standards
- Prevent Errors
- Help users notice, understand and recover from errors
- Promote a pleasurable and positive user experience

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<sup>2</sup> Lewis, Clayton and Rieman, John. (1994) *Task Centered User Interface Design*. Chapter 4: *Evaluating the Design Without Users*. Lewis and Rieman.

<sup>3</sup> Budd, Andy. *Heuristics for Modern Web Application Development*. *Andybudd.com*. January 17, 2007.  
[http://www.andybudd.com/archives/2007/01/heuristics\\_for\\_modern\\_web\\_application\\_development/](http://www.andybudd.com/archives/2007/01/heuristics_for_modern_web_application_development/)

Category	Description
<p><b>1. Design for User Expectations</b></p>	<p><b>Pros:</b> Most of the section pages are clearly marked on the home page – i.e. the name of the shop and phone number are clearly identified.</p> <p><b>Cons:</b> Processes don't work as expected. The website does not make use of web conventions and is not functional.</p> <ul style="list-style-type: none"> <li>• There aren't elements one would expect to find on a website: a search box, footer navigation, company logo, sections page name, links to features and other information.</li> <li>• The navigational elements and icons aren't consistent from page to page. Some pages have social media icons and contact us forms while some do not.</li> <li>• Pages aren't labeled distinctly.</li> <li>• Layout is inconsistent.</li> <li>• It takes a lot of muddling to get information.</li> </ul>
<p><b>2. Clarity</b></p>	<p><b>Pros:</b> Many of section labels are clear – home, music lessons, rentals, repairs, directions/hours, photo gallery and the musical forest café. The language is natural and free of technical jargon.</p> <p><b>Cons:</b> The copy is wordy. Because of the verbose copy, it makes it difficult to skim. Some of the labels are misleading, incomplete or non-existent.</p> <ul style="list-style-type: none"> <li>• On the “Rentals” page, the copy is six paragraphs long and contains over 700 words. There are also three documents, with important information, look like they were scanned in and are difficult to read.</li> <li>• On the “Music Lessons” page, there is a link called, “Special Free Report: How to get the Most out of a Music Lessons.” The label is not clear and is misleading. The document provides helpful information regarding age appropriateness lessons with each instrument, the benefit of private lessons, and the benefit of taking a lesson at the Music Center.</li> </ul>

	<ul style="list-style-type: none"> <li>• One section label is called “Sales” that could represent different things. Clicking on the heading reveals that the shop sells different instruments, apparel and accessories.</li> <li>• There aren’t any meaningful icons. The social media icons are not up to date. The contact us button is outdated.</li> </ul>
<b>3. Minimize Unnecessary Complexity and Cognitive Load.</b>	<p><b>Pros:</b> None</p> <p><b>Cons:</b> There is a lot of clutter on the website with no clear hierarchy. Only two levels of navigation results in information overload in sections. Poor design adds to difficulty prioritizing.</p> <ul style="list-style-type: none"> <li>• There is too much information on certain section pages. On the “Rentals” page, as noted, there is a large amount of copy with three scans of pages containing additional information.</li> <li>• There isn’t a hierarchy. On the “Music Lessons” page, there is a big white box three-quarters the way down that announces auditions for the competition team. It is the most visually dominant part of the page but it doesn’t seem to be the most important.</li> <li>• Other section pages like “Sales” is cluttered with photos, logos and videos that add to the cognitive load.</li> <li>• There isn’t any use of prioritizing copy, color, font style/typeface, alignment and proximity.</li> </ul>
<b>4. Efficiency and Task Completion</b>	<p><b>Pros:</b> <b>None</b></p> <p><b>Cons:</b> The system is not optimized for common tasks. There aren’t links to common features and functions.</p> <ul style="list-style-type: none"> <li>• Logos and photos aren’t linked to sections for more information. On the “Café” page, the words <i>Musical Forest Café</i> are underlined and italicized. Conventions assume one would be lead to a link. It doesn’t.</li> </ul>

	<ul style="list-style-type: none"> <li>• There is a photo on the home page that says “Band Instruments.” It’s not linked and doesn’t take a user anywhere.</li> <li>• There are several scanned documents with seemingly important information which can’t be enlarged. These documents include: “Should We Rent or Buy an Instrument?,” “Why Chose Us?” and “Rental Rates.”</li> </ul>
<p><b>5. Provide Users with Context.</b></p>	<p><b>Pros:</b> It’s clearly a music shop that offers lessons, rentals and equipment.</p> <p><b>Cons:</b> It’s unclear that it’s also vegan café. There is no sense of direction or location.</p> <ul style="list-style-type: none"> <li>• While the name “Music Center of North Haven” is featured on each secondary page, it does not have a logo – a site ID.</li> <li>• There isn’t a breadcrumb navigation indicator.</li> <li>• There isn’t any indication from the home page that the music center is home to a vegan café. The “Café” page lacks basic information such as a menu.</li> </ul>
<p><b>6. Consistency and Standards:</b></p>	<p><b>Pros:</b> Two important labels are consistent. The name of the website “The Music Center for North Haven” is located on the top left of each page. The phone number is listed on the top right of each page.</p> <p><b>Cons:</b> There isn’t a persistent navigation with some needed elements. Some of the utilities are not in standard locations. Basic navigation elements such as a search box are missing. layouts are not consistent.</p> <ul style="list-style-type: none"> <li>• With respect to utilities - the search box, social media buttons, contact us – are either missing or not in standard locations and where a user would expect to find them.</li> <li>• There isn’t a search box on any page.</li> <li>• The social media buttons are in different locations on the home page and Café page. They are missing entirely on other pages.</li> <li>• The opportunity to email a request for additional information is not on every page.</li> </ul>

	<ul style="list-style-type: none"> <li>• Page names are missing or are not clear. The “Rentals” page has a name, the “Music Lessons” page does not and the “Sales” page name is not clear.</li> <li>• There isn’t a footer navigation on any page.</li> <li>• The secondary page layouts are not consistent. Each one is different which makes navigation a challenge each time the secondary page is visited.</li> </ul>
<p><b>7. Prevent Errors</b></p>	<p><b>Pros:</b> None.</p> <p><b>Cons:</b> The lack of consistency and functionality create errors.</p> <ul style="list-style-type: none"> <li>• Missing elements - search box and footer, page names.</li> <li>• Inconsistent secondary page layouts.</li> <li>• Not using web conventions.</li> <li>• Lack of clear direction and signs</li> </ul>
<p><b>8. Help users notice, understand and recover from errors</b></p>	<p><b>Pros:</b> There is a “back arrow” that takes the user to the previous page.</p> <ul style="list-style-type: none"> <li>• If a user makes a mistake, it’s easy to retrace steps. For example, the link under “Upcoming Events” does not take a user to a schedule as one might expect but to a “YouTube” page. The back arrow takes the user back to the home page.</li> </ul> <p><b>Cons:</b> Signs are not big or in the right places.</p> <ul style="list-style-type: none"> <li>• There isn’t an error message or warning page when a user makes a mistake.</li> <li>• Not every page has a name. The name is buried in the copy and not prominent.</li> <li>• As noted above, there isn’t a breadcrumb trail that alerts the user to a current location.</li> </ul>

<b>9. Promote a pleasurable and positive user experience.</b>	<p><b>Pros:</b> None</p> <p><b>Cons:</b> There isn't any form or function. It not aesthetically pleasing and it needs to be more functional to be a positive experience. Key information is missing or incomplete on every page.</p> <ul style="list-style-type: none"><li>• The design sins include: Too many fonts, bulky borders and boxes, clutter, trapped white space, busy backgrounds, and tacky type emphasis.</li><li>• There website does not follow the elements or principles of design.</li><li>• There isn't a visual hierarchy. A user doesn't know what's important.</li><li>• The website is missing key information. For example, there isn't rate information for "Sales" or "Music Lessons." The rate information for rentals requires one to scroll down the bottom of the page. There isn't a menu for the restaurant. Specific store inventory is not listed on the "Sales" page.</li><li>• The design reflects poorly on the shop and restaurant. It does not create a good first impression.</li></ul>
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## Chapter 4: Cognitive Walkthrough

According to Clayton Lewis and John Rieman, authors of *Task Centered User Interface Design*, a cognitive walkthrough is “a formalized way of imagining people's thoughts and actions when they use an interface for the first time. It is a task-oriented technique that is helpful evaluating an interface without users”<sup>4</sup>

The cognitive walkthrough identifies three tasks users are likely to perform in the site. It lists the ideal path to achieve the tasks. The walkthrough evaluates each action based on four questions. It's important to examine whether each action is believable.

1. Will users be trying to produce whatever effect the action has?
2. Will users see the control (button, menu, switch, etc.) for the action?
3. Once users find the control, will they recognize that it produces the effect they want?
4. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?

It's important to examine whether each action is believable.

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<sup>4</sup> Lewis, Clayton and Rieman, John. (1994) *Task Centered User Interface Design*. Chapter 4: *Evaluating the Design Without Users*. Lewis and Rieman.

## **Task 1**

You recently decided to become a vegetarian and are looking for inexpensive restaurant options in the local New Haven area. A friend recommended the Musical Forest Café. Find out when the café is open.

### **Ideal Path**

1. Go to the Music Center of North Haven home page.
2. Locate at Navigation Bar.
3. Select Musical Forest Café.
4. Lunch hours are located below first paragraph.

### **Will the users try to achieve the right effect?**

- If the user knows the Musical Forest Café is part of the Music Center of North Haven s/he will go to the home page of the Music Center of North Haven.
- By experience, a user will know to look at the navigation bar for selections.

### **Will the user notice that the correct action is available?**

- By experience and a representation of an action, user will look at the navigation bar on the home page.
- The navigation bar provides two representations of potential actions. “Directions/Hours” and “Musical Forest Café. “

### **Will the user associate the correct action with the effect to be achieved?**

- The correct option is “Musical Forest Café.” If the user chooses the “Musical Forest Café”, s/he will see lunch hours written below the first paragraph. The label “Musical Forest Café” connects the action to what s/he is trying to do.
- The incorrect option is “Directions/Hours. “If the user clicks Directions/Hours, s/he will see hours listed on the upper right. The directions listed are for the store only. The label “Directions/Hours” is misleading.

### **If the correct action is performed, will the user see that progress is being made toward the solution of the task?**

- If the user selects “Musical Forest Café,” the user will see s/he selected the correct option. The hours are stated below the first paragraph.
- If the user chooses and clicks “Directions/Hours,” the user does not know it’s the wrong option because the hours are not labeled store only. No feedback is given.

## **Task 2**

Your daughter is taking clarinet lessons. She is interested in performing on stage with a band. Find out if there is an opportunity to play with band.

### **Ideal Path**

1. Go to Music Center of North Haven home page.
2. Locate at Navigation Bar.
3. Select Music Lessons.
4. Read description of Rock Camp and Stagetime Group.
5. Program description gives information about performance opportunities.

### **Will the users try to achieve the right effect?**

- By experience of using a system, a user will go to the home page of the Music Center of North Haven.
- By experience of using a system, a user will know to look at the navigation bar for selections.

### **Will the user notice that the correct action is available?**

- By experience and a representation of an action, a user will look at the navigation bar on the home page.
- The navigation bar provides a representation of the correct action - "Music Lessons."

### **Will the user associate the correct action with the effect to be achieved?**

- If the user chooses the "Music Lessons," s/he will read the descriptions of the programs offered. The label "Music Lessons" connects the action to what s/he is trying to do.

### **If the correct action is performed, will the user see that progress is being made toward the solution of the task?**

- If the user selects "Music Lessons," the user will see s/he selected the correct option. S/he will read the descriptions and see that Rock Camp and Stage Time group offers opportunities to play with a band. However, it does not say if the programs are open to all levels and all instruments. The next logical action would be to contact the shop. A request form is on the right of the screen.

## **Task 3**

You would like to contact the Music Center of North Haven for more information regarding music lessons. But it's not business hours so you can't call the shop yet.

Find out how to request more information and look for an email address.

#### **Ideal Path**

1. Go to Music Center of North Haven home page.
2. Locate at Navigation Bar.
3. Select Music Lessons.
4. Request More Information is on the upper right side of the screen.
5. Click Special Free Report: How to get the most out of music lessons.
6. Read document.
7. Email address is located at bottom of document.

This story is not believable which is the problem.

#### **Will the users try to achieve the right effect?**

- By experience of using a system, a user will go to the home page of the Music Center of North Haven.
- By experience of using a system, a user will know to look at the navigation bar for selections.

#### **Will the user notice that the correct action is available?**

- By experience and a representation of an action, a user will look at the navigation bar on the home page.
- The navigation bar lists several representations of an action. The correct action is “Music Lessons” which is listed.

#### **Will the user associate the correct action with the effect to be achieved?**

- If the user chooses the “Music Lessons,” s/he will see the “Request Information” box on the upper right.
- An email address is located in the “Special Free Report: How to get the most out of music lessons” document. The user would not associate the label “Special Free Report: How to get the most out of music lessons” with the correct action. It is not labeled the way a user expects.

#### **If the correct action is performed, will the user see that progress is being made toward the solution of the task?**

- If the user selects “Music Lessons,” s/he will see that the correct option was chosen. But the “Request Information” box is only located on the “Music Lessons” page. If the user had a question about something else and was not familiar with the website, it would be difficult for the user to find the “Request Information” box since it’s not consistent throughout the website. The only other page its on is “Rentals.”

## Chapter 5: Usability Report

“Usability testing is a technique for soliciting feedback on the design of a website.” According to Steve Krug in the book, *Don't Make Me Think*, “a usability test is about watching one person at a time try to use something (whether it's a Web site, a prototype or some sketches of a new design) to do typical tasks so you can detect and fix things that confuse or frustrated them. It is good for learning whether the site works and how to improve it.” (p.113)<sup>5</sup>

The Music Center of North Haven website usability test was administered to three people. Each participant was asked to complete five tasks. The purpose was to examine the functionality of the website and determine trouble spots.

The usability report was prepared after the usability test was conducted. The report describes the methodology, participants and evaluation tasks. It gives in-depth observations and analysis and examines the results and makes recommendations for improvements.

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<sup>5</sup> Krug, Steve. (2014) *Don't Make Me Think Revisited. A Common Sense Approach to Web and Mobile Usability*. New Riders.

## Introduction:

Musiccenternorth.com <http://www.musiccenternorth.com/> is the website for the Music Center of North Haven. The store offers music lessons, repairs, rentals and sales for adults and children. There is a vegan/vegetarian café located inside the store that is open for lunch.

Miriam Greenfield, a graduate student at Quinnipiac, conducted the Usability Test as part of a final project for ICM 522 User Centered Design.

Before the test, Greenfield asked background questions about participants' occupation, level of familiarity with the computer, internet use and frequency. She recorded user comments and activity of each task. After the test, she received user feedback and critique of the website.

## Summary:

Greenfield administered the test to three people in a private office setting in Bristol, CT on October 23<sup>th</sup>, 2014 (one person) and October 25<sup>th</sup>, 2014 (two people). The testing for all three participants was done on a network office PC using Screen-O-Matic.

The purpose of the testing was to examine the functionality of musiccenternorth.com and to determine if users can efficiently and easily navigate the website.

The participants had not previously visited musiccenternorth.com but all have significant experience navigating retail business websites.

The participants were asked to complete five tasks. The testing lasted 30 minutes per person.

Two participants could not complete 60% of the tasks. One participant could not complete 40% percent of the tasks. All repeatedly voiced their frustration with the poor design and lack of functionality. As the testing progressed, the participants gave up quickly. One person said, "Why bother? I couldn't complete the previous tasks. I doubt I can find the information for this task."

Participant comments included:

- "You've got to be kidding me."
- "I can't find basic information. That says a lot of the store in a negative way."
- "I can't find anything. So the only way to get information is calling the store or submitting a request for more information? I don't want to do that."
- "If I were a customer, I would have left the website a long time ago in search of another shop."
- "I click on what looks like a link but I get nothing."
- "This website is terrible."

All participants quickly navigated to the appropriate subpages. But one of the biggest problems was finding the necessary information on that subpage. Reasons included missing information, page clutter and wordy text.

#### Problems Identified:

- The Musical Forest Café lists sample food served but does not include a menu.
- The sales page lists brand names of instruments but nothing else. Information regarding rental prices was located at the bottom of the page following wordy text, photos and graphics.
- The rental information was in small print and difficult to read. The type of lessons offered was located on the sub-page but all didn't bother reading the wordy text.

Each participant complained about the lack of links to content.

All noted the store phone number immediately and remarked on several occasions that s/he would have to call the store to get the information needed since s/he couldn't find what they needed on the website. One participant said she couldn't locate an email address to contact the store.

## Methodology:

### Sessions:

The participants were a work colleague and family. They had not visited The Music Center of North Haven website before and were not familiar with the store. Each participant was told in advance about the purpose of the usability testing, time commitment and expectations.

Before conducting the usability test, Greenfield explained in detail the purpose of the usability test and stated she was testing the functionality of the website, not the participants. Greenfield encouraged the participants to be honest and talk out loud as they navigated the website. She reminded the participants their feedback would be kept private and would only be used for the class assignments. She asked permission to record the session and asked the participants to sign a waiver. (See Appendix A for Usability Test Preparations)

Greenfield asked all participants the following background questions before revealing the website.

1. What is your occupation?
2. How many hours at work per day do you spend on the Internet?

3. How many hours outside of work per day do you spend on the Internet?
4. What is the percentage per day do you spend on the Internet for business and for pleasure?

Greenfield then showed the participants the homepage. She told the participants to look at the website home page and asked the participants the following questions:

1. What do you think this website is about?
2. What kind of information do you think you will find on the website?
3. What stands out from the homepage?

After the home page tour, Greenfield read aloud the tasks to each participant. The participants gave feedback for each task.

### Participants:

#### Participant #1:

- 43-year old male.
- Married with an 11-year old son.
- B.S Journalism
- Writer and Voice-over Talent.
- Spends 60 hours per week on-line. 75% is work-related.

#### Participant #2:

- 66-year old female.
- Married with two children and two grandchildren.
- B.A. Mathematics Education, M.S. Mathematics.
- Retired College Mathematics Professor.
- Spends 30 hours per week on-line. 50% is work-related.

#### Participant #3

- 67-year old male.
- Married with two children and two grandchildren.
- B.S. Political Science. J.D.
- Mediator and Attorney.
- Spends 50 per week on-line. 75% is work-related.

Frequented websites included:

ESPN: <http://espn.go.com/>

NBA: <http://www.nba.com/>

Priceline: <http://www.priceline.com/>

Frommers: <http://www.frommers.com/>

United: <http://www.united.com/web/en-US/default.aspx?domain=ual.com/>

Lexis-Nexis: <http://w3.nexis.com/new/>

United States District Court: District of New Jersey <http://www.njd.uscourts.gov/>

Superior Court Appellate Division: <http://www.judiciary.state.nj.us/appdiv/>

One usability test took place on October 23<sup>rd</sup> during business hours in an office setting. The other two tests took place on the morning of October 25<sup>th</sup> in an office setting.

### Evaluation Tasks:

Greenfield wrote the following five tasks for the usability testing:

1. You are looking to rent a violin for your child for the school year. Since you are on a budget, find out what is the most inexpensive option is to rent a violin. Determine what the total cost for the school year will be.
2. Your 4-year old son is interested in taking piano lessons. But you aren't sure if he is old enough yet. Find out if the Music Center of North Haven offers lessons for your son.
3. Your 10-year old daughter has participated in the Music Center of North Haven rock camps and would now like an electric guitar for her birthday. Find out what kind of electric guitars the Music Center of North Haven sells.
4. A friend recommended the Musical Forest Café. You would like to go this week. But before you go, find out what kind of food is served.
5. You want to go to the store this week and buy new strings for your child's violin. But you aren't sure what time the store opens. Find the hours of operation.

### Results:

Time spent on each task (in minutes) / Completion Rates

Participant	Task 1	Task 2	Task 3	Task 4	Task 5
1	7	6.5	6.0	7.0	1.5
2	10.5	7.0	5.0	6.0	2.5
3	8.5	8.0	9.5	5.0	2
Average Time	8.66	7.16	6.83	6	2
Completion Rate	33%	0%	0%	100%	100%

- Only one person completed task 1. That participant struggled and it took a significant amount of time locate information.

- No participants completed two tasks (2 and 3). Each became more frustrated with each new task and gave up quickly as the test progressed.
- Task 4 and 5 were the only task completed by each participant.

### Severity in usability observations

Severity	Means
1	Users were able to complete the task without a problem.
2	Users were able to complete the task but had to check their work.
3	Users demonstrated or expressed frustration with the interface but were able to complete the task.
4	Users were unable to complete the task.

Chart from Chapter 12 Usability Reports. Anatomy of a Usability Report

### Participant #1: Severity in usability observations

Task	Severity
1	4
2	4
3	4
4	2
5	1

### Participant #2: Severity in usability observations

Task	Severity
1	3
2	4
3	4
4	2
5	1

### Participant #3: Severity in usability observations

Task	Severity
1	4
2	4
3	4
4	2
5	1

- Task one was completed by one person but with frustration. Task 1 was difficult and not completed by 2 participants.
- Tasks 2 and 3 were difficult and not completed by any participant.
- Task 4 took each participant a few minutes to find the information.
- Task 5 was easy for all participants.

### Detailed Observations:

*Task 1: Determine the total cost of renting a violin for the school year.*

One participant was able to determine the cost of an instrument rental. But she expressed frustration in the amount of time it took to locate the information. One person gave up quickly, the other “muddled” for a while.

Two participants did not find the information on rental cost because of clutter. The information was located after wordy text and scanned documents. The one person that located the information had difficulty reading the prices.

Completion rate was 33%.

*Task 2: Find out what if violin lessons are offered for a young child.*

All three participants had difficulty learning what kind of music lessons were offered for a young child despite the information being in the first paragraph of the “Music Lessons” page. One remarked that it shouldn’t be difficult to find seemingly simple and necessary information. Each again expressed frustration.

The information regarding what kind of music lessons offered to children was in the first paragraph on the “Music Lessons” website. All three skimmed the paragraph and subsequent paragraphs looking for the information. But they all missed it because the text was wordy.

Completion rate was 0%.

*Task 3: Find out what kind of guitars the Music Center of North Haven sells.*

All participants could not locate an inventory of guitars. They all noted the name brands on the Sales page. Two didn’t recognize any of the names. One person knew that “Martin” was a guitar brand but didn’t recognize any other guitar brands. All three tried clicking on the brand names looking for more information. Two clicked on the video hoping for more information but noted the video was not helpful.

Completion rate was 0%.

*Task 4: Find out what kind of food the Musical Café serves.*

All participants clicked on the Musical Forest Café subpage immediately. It took each participant a few minutes to read the paragraph that lists the food items at the café. One participant clicked the Facebook link looking for a menu. After not finding the information on the Facebook page, he incredulously said, “How does a café webpage not have a menu on it? Guess I’m not going there.”

Completion rate was 100%.

*Task 5: Find the hours of operation.*

All participants successfully completed task 5. One remarked that the hours listed were wrong since it said the store opened at 12am and closed at 7am.

Completion rate is 100%.

What worked:

- Everyone noticed the store's phone number on the main page.
- Everyone correctly identified the purpose of the website and what services the store offered.
- Everyone navigated successfully to the appropriate subpage.

What didn't work and problems identified:

- The layout was cluttered.
- The text was wordy and too small.
- Crucial information was missing.
- No links. All participants tried clicking on various photos, graphics and buttons looking for links to information but the elements did not link anywhere.

### Recommendations for Improvements:

The following recommendations are based on the participant comments and problems identified:

Interface Elements:

Recommendation	Justification
Add Links to Content.	Participants looked for a links for a menu. They clicked on photos of brand names for sales inventory.
Include Request Information box on each page.	While all participants noticed the phone number on the main page, they found it difficult to find an email address or another way to ask for more information.

Screen Layouts:

Recommendation	Justification
Simplify screen layout.	Participants complained the layout was cluttered. As a result, it was difficult to find information.
Eliminate wordy text.	Each participant had trouble finding information because of wordy text. They skimmed the lengthy paragraphs but missed information because they didn't read the entire text.
Create hierarchy.	Participants had trouble finding important information because it was buried at the bottom the page. They

	didn't scroll to the bottom and assumed the information was missing.
--	----------------------------------------------------------------------

Overall Themes:

Recommendation	Justification
Missing Information.	<p>The biggest problem participants identified was missing important information.</p> <p>Missing information included:            No menu for the café.            No inventory for sales.            Brand names not identified by instrument.</p>

**Conclusion:**

The participants were highly educated. All spend significant time browsing various websites. But the participants struggled. The information needed to complete two tasks were on the sub-page. But because of the design of the website (clutter, wordy text and no hierarchy), the participants couldn't find the information and gave up quickly. The participants had no interest in muddling through to find the information.

There is an expectation that websites need to be designed well. If not, as the participants remarked, they will go elsewhere.

One participant is still complaining (a week later) about the website.

## Chapter 6: Prototypes

A site map is a tool that is a graphic representation of the organization and content of the website. It outlines the hierarchy of the pages. A wireframe is a visual representation of each page. The site map and wireframe are prototypes that are crucial in the design process. They both offer solutions to the problems identified in the evaluations. <sup>6</sup>

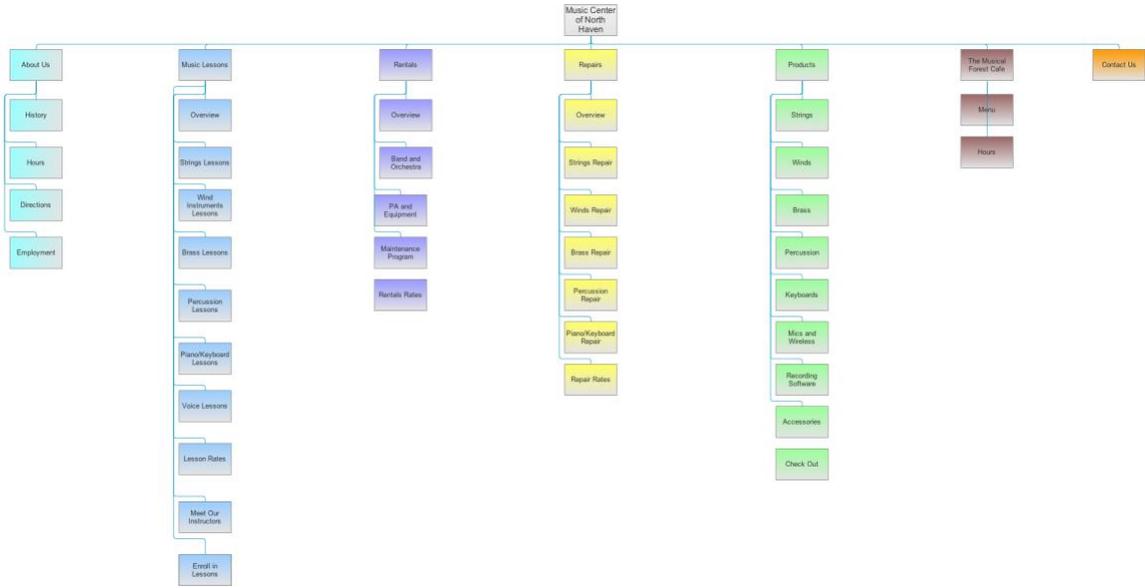
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<sup>6</sup> Callahan, Ewa. *ICM 512DE User Centered Design: Module 9 Site Maps and Module 10 Wireframes*. Fall 2014. Quinnipiac University.

## The Site Map

The results discovered major problems with the information architecture. It was important for the site map to better group the categories, create additional pages and add another level of hierarchy. Adding more categories and pages improved the usability and make it easier to find information.

The results noted the website is missing important information. Adding this information was crucial and one of the biggest changes to the website. New information included lessons, product inventory categories, café menu and hours, rates for lessons, rentals and repairs, meet our instructors, about us and contact us.



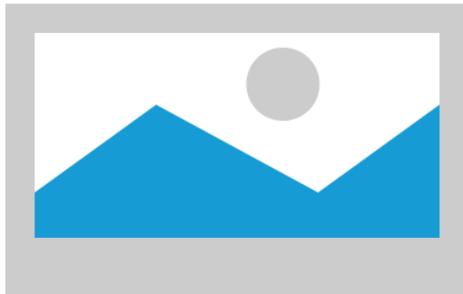
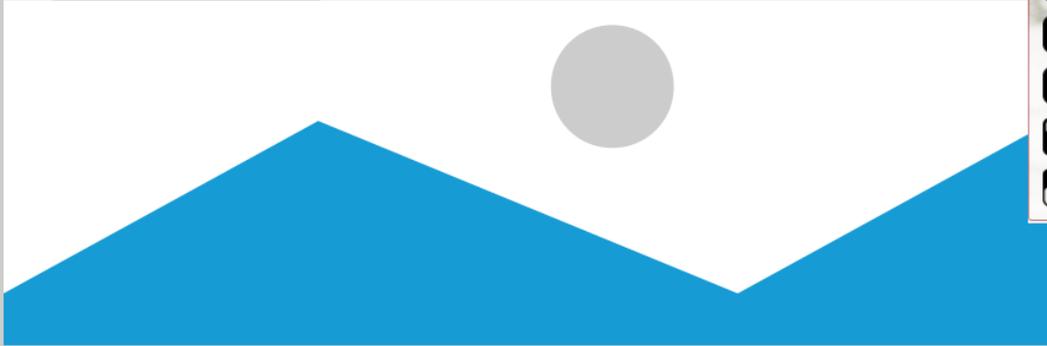
## The Wireframe

There are three wireframe designs – the home page, the music lessons page and rental rates. The home page and music lessons page are existing pages. The rental rates page is a new page. From the research, the major problems occurred on the lessons page and rentals page. One task that participants had a lot of difficulty was finding rental rates. The rates were buried at the bottom of the existing rentals page. For this reason, a new page just for rental rates was created.

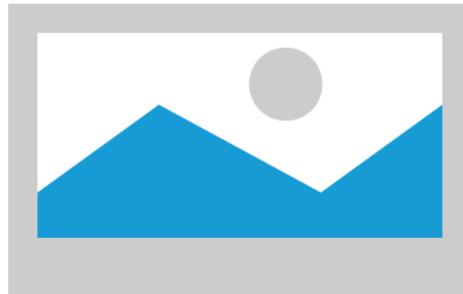
The major goal of the wireframe was to create a simple, clean layout with a visual hierarchy. It achieves this with consistent layout, color, font type, alignment and proximity. The layout isn't cluttered and copy is less wordy. The wireframe also eliminates the design sins. The result is a webpage that is functional.

The second major goal of the wireframe was to include a search box, footer navigation, section page name. These navigational elements and icons are now consistent from page to page.

The wireframe also added more pages to ensure each page didn't have too much information that lead to information overload.



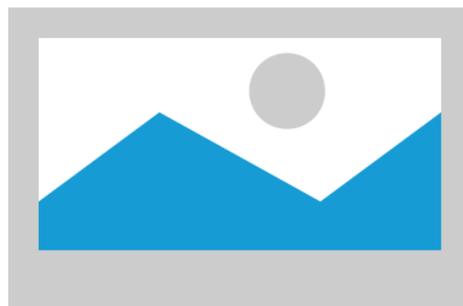
Rentals: Back to School Instruments



Do You Want to Sing or Play Like a Pro? Try a Lesson



Products: We are now the area's DDrum Authorized Dealer.

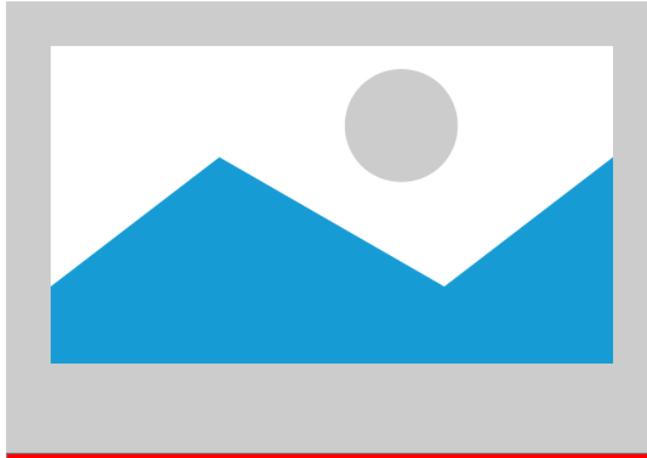


The Musical Forest Cafe: Voted New Haven's Best



**Music Lessons**

- Strings
- Wind Instruments
- Brass
- Percussion
- Piano/Keyboard
- Voice
- Lesson Rates
- Meet our Instructors
- Enroll in Lessons



**Music Lessons Overview**

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**Children's Lesson Options**

**Private Lessons**

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**Group Lessons Ages for kids ages 6-12**

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**Groups Lessons for kids 13 and up**

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**Musical Theatre Group**

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**Rock Camp/Stagetime Group**

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**Adult Lesson Options**

**Private Lessons**

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**Group Lessons**

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**Jam Sessions**

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## Rentals

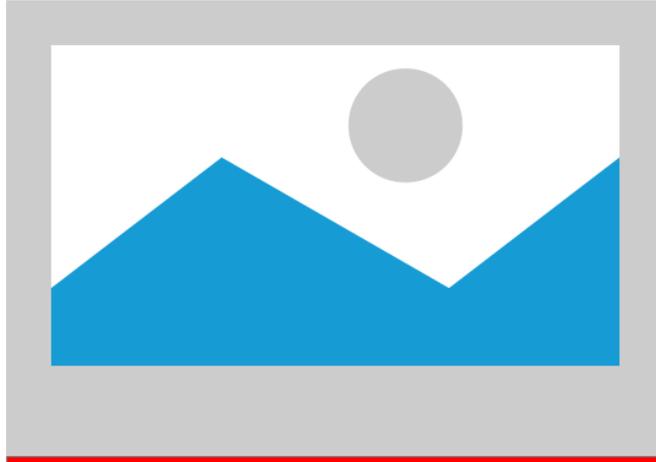
[Overview](#)

[Band and Orchestra](#)

[PA and Equipment](#)

[Maintenance Program](#)

[Rental Rates](#)



## Rental Rates

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## Instrument Rental Options

### Daily Rentals

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### Monthly Rentals

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### 4-month School Rental

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### 10-month School Rental

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## PA and Equipment Options

### Daily Rentals

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### Weekly Rentals

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### Monthly Rentals

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## Book Online

# Appendix A: Usability Test Preparations

## Introduction:

Hi. My name is Miriam Greenfield and I will be the facilitator for this usability test. We are testing a website that we are developing and would like to see how people like you navigate the website.

The test today is a usability test. We are not testing you, we are testing the website. It is important to note that there aren't any wrong answers.

I will ask you to complete a series of tasks listed on this piece of paper. You can refer to the paper throughout the usability test. The session will take about an hour.

Before we begin, I would like to thank you for coming. We appreciate your time and insight. It will help us greatly as we look to improve the website's functionality. The feedback you give will only be used within our company internally. It will remain private.

We want to know exactly what you are thinking so we ask that you talk out loud as you navigate the website. Please be as honest as possible. Again, there aren't any wrong answers.

With your permission, we would like to record the session. It's for my colleagues and I, too, will use it and refer back to it as we evaluate your feedback.

Please read the permission form. It states that you give us permission to record the session and the feedback you give will only be used within our company.

If you have questions during the session, just ask. But I may not be able to answer them right away as we are interested in seeing how someone like you would navigate the website if they didn't have anyone sitting next to them.

Do you have any questions before we begin?

## Background Questions:

Before we look at the site, I'd like to ask you a few questions.

1. What is your occupation?
2. How many hours at work per day do you spend on the Internet?
3. How many hours outside of work per day do you spend on the Internet?

4. What is the percentage per day do you spend on the Internet for business and for pleasure?

### Home Page Tour:

Please look at the website home page. You can scroll if you want to but don't click on anything yet.

1. What do you think this website is about?
2. What kind of information do you think you will find on the website?
3. What stands out from the homepage?

### Begin Tasks:

1. You are looking to rent a violin for your child for the school year. Since you are on a budget, find out what is the most inexpensive option is to rent a violin. Determine what the total cost for the school year will be.
2. Your 4-year old son is interested in taking piano lessons. But you aren't sure if he is old enough yet. Find out if the Music Center of North Haven offers lessons for your son.
3. Your 10-year old daughter has participated in the Music Center of North Haven rock camps and would now like an electric guitar for her birthday. Find out what kind of electric guitars the Music Center of North Haven sells.
4. A friend recommended the Musical Forest Café. You would like to go this week. But before you go, find out what kind of food is served.
5. You want to go to the store this week and buy new strings for your child's violin. But you aren't sure what time the store opens. Find the hours of operation.

### Permission Form:

The purpose of this test is to examine the website's usability and functionality – see if it's user friendly. The session will be recorded. The information and feedback you provide will only be used internally and will not be shared with anyone else or made public.

By signing this form, you agree to have this session recorded.

X: \_\_\_\_\_

Print name

X: \_\_\_\_\_

Signature

## Appendix B: Site Map Rationale

The Heuristic Evaluation and usability report notes the website is missing important information including:

- No menu for the café,
- No inventory for sales.
- No rate information for Sales and Music Lessons
- Brand names not identified by instrument.

The persona scenarios noted there isn't information:

- Teacher backgrounds
- Enrolling in a lesson
- Employment information

Including this information was crucial and one of the biggest additions to the website. The site map includes the following information:

- Employment.
- Lessons Offered
- Meet Our Instructions
- Enroll in Lessons
- Rentals price list
- Rentals Offered
- Repairs Offered
- Product Inventory categorized by instruments.
- Café menu.
- Café hours

The Usability report notes that participants had difficulty finding information. “(They) had trouble finding important information because it was buried at the bottom the page. Participants didn't scroll to the bottom and assumed the information was missing.”

The following information was on the website but difficult to find:

- Lessons offered.
- Rental Rates.
- Instruments to Rent.

Therefore, it was important for the site map to group the information and make it more prominent and easier to find. The first draft of the site map didn't include rate information for repairs, music lessons and rentals. It was added after writing the rationale.

The Heuristic Evaluation notes, “There is a lot of clutter on the website with no clear hierarchy. Only two levels of navigation results in information overload in sections.

Poor design adds to difficulty prioritizing...It takes a lot of muddling to get information. Website not functional”

It was important to create a hierarchy that makes the website more functional. Adding more information and groups helps accomplish this.

The Heuristic Evaluation notes the labeling is confusing and points out that “one section label is called “Sales” and it t could represent different things.” Therefore, the site map changes this label from “Sales” to “Products” to eliminate any confusion.

Participants had trouble identifying products because they did not know the instrument brands. The site map groups the products by instrument.

The Heuristic Evaluation notes, “The opportunity to email a request for additional information is not on every page.” The usability report states, “While all participants noticed the phone number on the main page, they found it difficult to find an email address or another way to ask for more information.” The recommendation in the usability report was to, “Include Request Information box on each page.” That recommendation was not a good idea. As a site map was developed, it was apparent the website needs a separate “Contact Us” page. The “Contact Us” selection needs to be on the home page navigation bar.

## Appendix C: Wireframe Rationale

There are three wireframe designs – the home page, the music lessons page and rental rates. The home page and music lessons page are existing pages. The rental rates page is a new page. From the research, the major problems occurred on the lessons page and rentals page. One task that participants had a lot of difficulty was finding rental rates. The rates were buried at the bottom of the existing rentals page. For this reason, a new page just for rental rates was created.

The rationale looks at the problems identified on the above pages and entire website.

The usability report identified two major problems: The layout was clutter and the text was too wordy and small.

As stated in the report, “Participants had trouble finding important information because it was buried at the bottom the page. They didn’t scroll to the bottom and assumed the information was missing. Each participant also had trouble finding information because of wordy text. They skimmed the lengthy paragraphs but missed information because they didn’t read the entire text.”

The heuristic evaluation noted the same thing:

- The copy is wordy. Because of the verbose copy, it makes it difficult to skim.
- There is a lot of clutter on the website with no clear hierarchy. Only two levels of navigation results in information overload in sections. Poor design adds to difficulty prioritizing.
- There isn’t any use of prioritizing copy, color, font style/typeface, alignment and proximity.
- The design sins include: Too many fonts, bulky borders and boxes, clutter, trapped white space, busy backgrounds, and tacky type emphasis.
- There website does not follow the elements or principles of design.
- Layout is inconsistent.

The usability report recommended were to: Simplify screen layout, eliminate wordy text and create a hierarchy.

The major goal was to create a simple, clean layout with a hierarchy. The wireframe achieves this with consistent layout, color, font type, alignment and proximity. The layout isn’t cluttered and copy is less wordy. The wireframe also eliminates the design sins. The result is a webpage that is functional.

The sitemap and wireframe added more pages to ensure each page didn’t have too much information.

The heuristic evaluation discovered additional problems. The evaluation noted the website does not make use of web conventions and is not functional. Issues included:

There aren't elements one would expect to find on a website: a search box, footer navigation, company logo, sections page name, links to features and other information.

- The navigational elements and icons aren't consistent from page to page. Some pages have social media icons and contact us forms while some do not.

The second major goal of the wireframe was to include a search box, footer navigation, section page name. These navigational elements and icons are now consistent from page to page.

The research did find one element on the website that worked. The usability report noted, "Each participant navigated successfully to the appropriate subpage. The heuristic evaluation stated, "Most of the section pages are clearly marked on the home page." Therefore, the wireframe kept all of the labels except one. The heuristic evaluation said, "One section label is called "Sales" and that could represent different things. Clicking on the heading reveals that the shop sells different instruments, apparel and accessories. " That label was changed to "Buy."

## Appendix D: Mobile Design Rationale

The first step in wireframe mobile design is listing the main features and primary content in order of importance. Lyndon Cerejo wrote in the article *A User-Centered Approach to Web Design for Mobile Devices*, “Reduce the number of categories and levels of navigation, and rearrange based on priority, presenting the most important categories first. These often end up being presented vertically instead of the horizontal model used on desktop websites. Use clear, concise and consistent labels for navigation across the site.”<sup>7</sup>

The main content is listed below by priority and in a vertical view. The labels are identical to the website.

Music Lessons  
Rentals  
Repairs  
Buy  
The Café  
Contact Us

The order is the result of research and testing done throughout the semester. (Of course separate research and testing for mobile would need to be done before offering recommendations.) Cerejo wrote about the questions needed to be asked of users, “Why do they use your site on a mobile device? What features are they using? What features are crucial for (users) when mobile? What are some sources of frustration? What devices do they use to access the mobile Web?”<sup>8</sup>

To view the primary content on the home mobile page (seen above) would not require any scrolling. The *Mobile Web Best Practices* document states, “It is important for the user to gain an idea of the content of the page on initial view, there should be a minimum amount of clutter preceding this - including navigation, decorative images, advertising and other material that is not central to the user's experience of the page. The user should not have to scroll significantly to find the primary content of the page.”<sup>9</sup>

In order to be concise, it is necessary to eliminate and/or combine categories for the mobile design. Cerejo wrote, “Smaller screen sizes require even more careful attention to the content displayed to the user. Put on your editor's hat and cut unnecessary content, then cut some more.” Being concise results in ease of use.

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<sup>7</sup> Cerejo, Lyndon. *A User-Centered Approach to Web Design for Mobile Devices*. Smashmagazine.com. May 2, 2011. <http://www.smashingmagazine.com/2011/05/02/a-user-centered-approach-to-web-design-for-mobile-devices/>

<sup>8</sup> *Ibid*

<sup>9</sup> Rabin, Jo and McCathieNeville, Charles. *Mobile Web Best Practices*. W3C Publications. July 29, 2008. <http://www.w3.org/TR/mobile-bp/>

Nadav Savio and Jared Braiterman wrote in the article *Design Sketch: The Context of Mobile Interaction*, “Ease of use is paramount. On the Web, ease of use can be accomplished by limiting choice and guiding navigation.”<sup>10</sup>

On the website, two subpages have several categories listed. For example, the “Music Lessons” page has 10 categories, and the “Buy” page has 9 categories. These categories need to be edited for ease and likely use.

For example, the “Music Lessons” page may look like:

Instrument Lessons  
Voice Lessons  
Lesson Rates  
Enroll in Lessons  
Meet Our Instructors

The language and copy on the mobile site needs to be edited for brevity. The *WC3 Best Practices* document states “The general prescription to use clear language is of particular importance for mobile delivery, where brevity and directness are generally more desirable than a discursive style.”<sup>11</sup>

The website provides users with detailed information – too much for mobile. For example, the “Music Lessons” page has separate information bullets for children’s lessons and adult lessons and type of lessons for each. For mobile, this information needs to be condensed.

On all pages, the navigation bar and social media elements need to be moved to the bottom of the page. *The WC3 Best Practices* document discusses navigation bars and states, “Many Web pages are designed with significant navigational and other elements at the top of or to the side of the page (e.g. Menu Bars, Breadcrumb Trails and Search Functions). This provides a convenient and well-understood navigational metaphor on large displays. However, on small displays this can result in the navigation appearing instead of the actual content of the page when the page is first retrieved.”<sup>12</sup>

At the bottom, a link for the “full site” would be included. According to Steve Krug in the book, *Don’t Make Me Think*, “Always provide a link to the full website. No matter how fabulous and complete the mobile site is, you do need to give users the option of viewing the non-mobile version, especially if it has features and information that aren’t available in your mobile version.”<sup>13</sup>

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<sup>10</sup> *Ibid*

<sup>11</sup> *Ibid*

<sup>12</sup> *Ibid*

<sup>13</sup> Krug, Steve. (2014) *Don’t Make Me Think Revisited. A Common Sense Approach to Web and Mobile Usability*. New Riders.

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