Usability Testing Report

Weekday West Coast:

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Usability Testing Report

Executive Summary

This report discusses the usability of the Penny Juice website (www.pennyjuice.com) and uses data derived from observational studies and expert evaluations. The results suggest that users appreciate the simplicity of a few pages but would welcome a slightly altered color scheme. Overall, the users were disappointed with the Penny Juice website and its visual design, navigational design, information availability, and overall quality.

We conducted observational studies and expert evaluations. The five participants for the observational studies were adults who work in industries that order food or drink regularly or provide food and drinks for children, or parents who are actively involved in their children's group activities. The card sort exercise had them sort 38 cards—using wording from the Penny Juice website—into groups that made the most sense to them. The moderated think aloud protocol tasks included a home page scroll; "find the price of one serving size of juice;" and "find nutrition information, refrigeration needs and cost of the juice." The expert evaluations used a predetermined persona and followed industry guidelines.

Positive feedback from the users included liking the simplicity and bright design of the website because it corresponded with the product being made for children, however there was a disconnect between the product's consumers and the product's purchasers. We recommend a slight change to the colors to a "fruit" palette that will still represent the "rainbows of exciting flavors!" of the product but also be more appealing to the adult users of the site. Additionally, the site border at the bottom of each page was not easily recognizable as reflecting children holding hands. We recommend using only the top half of the border to make it more identifiable. Most importantly, the lack of clear images created undue hardship for the users. We recommend using high-quality images across the entire site, and also incorporating key information elsewhere on the site so that it is easily findable and readable.

Users complained universally about the lack of information on the site, and the lack of organization of the information that was there. We recommend restructuring the website and incorporating a FAQ section that contains all of the information needed by purchasers. In addition, we recommend redesigning the purchasing process completely to eliminate user pain points that may hinder or cause them to abandon their purchase process.

All of the users had problems navigating the site and finding needed information. Currently, the Penny Juice website has very little, if any, information architecture (IA). There are no standardized labeling, navigation, or search systems. We recommend restructuring the website in a way that follows user-anticipated language and layouts.

The most painful part of the user experience was the ordering process. All users were extremely put off by how much of the process was their responsibility, from determining the serving size to having to do complex math to determine how much was needed to purchase versus the purchase requirements of full cases. We recommend creating a calculator that purchasers can use to calculate how much product they need. We also recommend creating a storefront that will allow customers to see final costs and create accounts for them to see order status and histories.

Methodology

To learn more about the usability of the Penny Juice website (www.pennyjuice.com) our team conducted observational studies and expert evaluations. The five participants for the observational studies were within our recruitment guidelines:

- Adults who work in customer service industries that order food or drink regularly.
- Adults who work in industries that provide food and drinks for children (e.g., daycares, schools, camps, etc.)
- Parents of children under 10 years old who are actively involved in group activities involving children.

The observational studies consisted of card sorting and a moderated think aloud protocol. The card sort was administered to five participants using OptimalSort (Optimal Workshop, 2023) and required them to sort 38 cards (using titles found on the Penny Juice website) into groups of information that made the most sense to them. The participants were then asked to complete three tasks (listed below), utilizing a moderated think aloud protocol, on the Penny Juice website.

1. Home page scroll
2. "Find the price of one serving size of juice."
3. "Find nutrition information, refrigeration needs and cost of the juice."

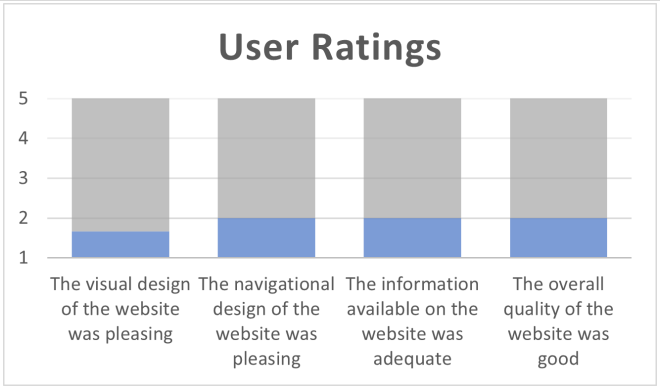
In addition to the observational studies, each of the four team members completed a heuristic evaluation using a predetermined persona and following the guidelines in Jakob's *10 Usability Heuristics for User Interface Design* (2020). All information regarding the methodologies can be found in Appendix A.

Findings

We asked our users to rate the Penny Juice website (www.pennyjuice.com) on a scale of 1-5, with one being *strongly disagree* and five being *strongly agree*. As Table 1 shows, the average rating for each question was never higher than two, which shows that overall, the users were disappointed with the Penny Juice website and its visual design, navigational design, information availability, and overall quality. Despite the universally low ratings, there were a couple of items that some of the users liked.

Table 1

User Ratings of Penny Juice website on a scale of 1 to 5



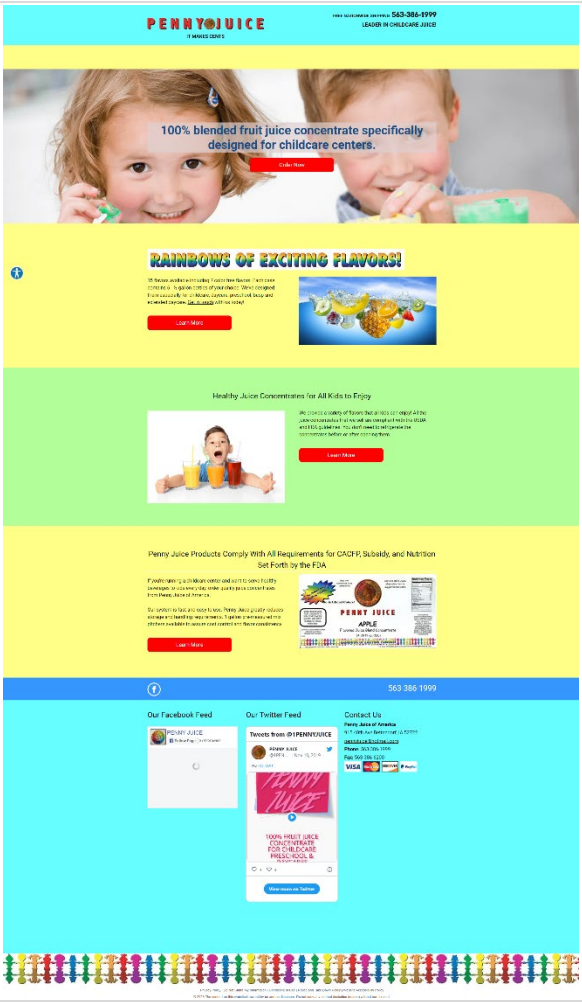
☑ **Simple, low click rate**

Two of the five users really liked the simplicity of the website. There weren't a lot of side panels, ads, or popups that would distract them from their task, and the website was successful in showing what they were selling. We recommend keeping this in mind when addressing any other recommendations in this report and keeping the site small and simple.

☑ Bright design

Three out of five participants liked the bright design of the website because it corresponded with the product being made for children. The Penny Juice website (Figure 1) is highly successful in conveying that their products are for children.

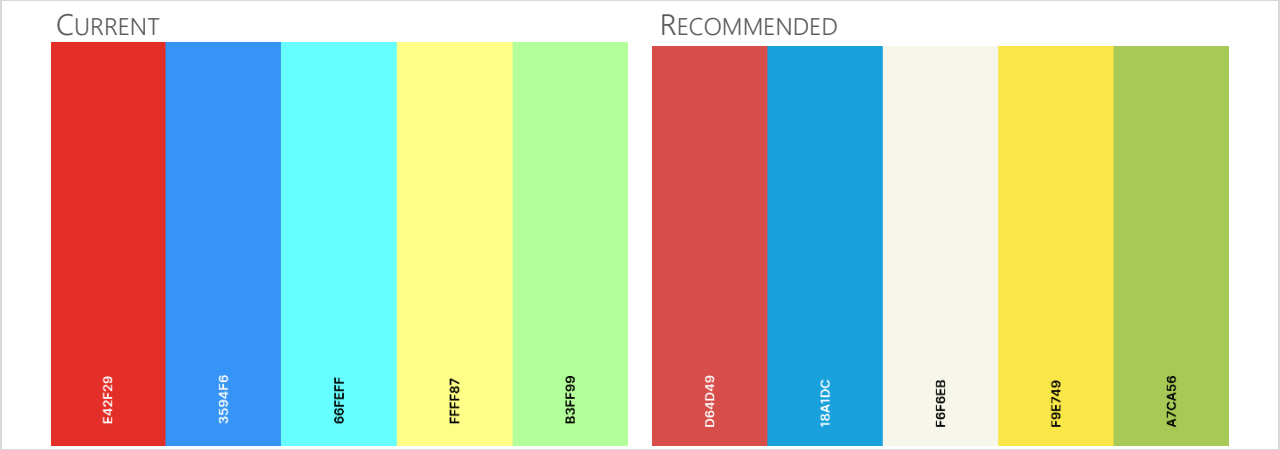
Figure 1
Penny Juice website



☒ Unappealing overall design

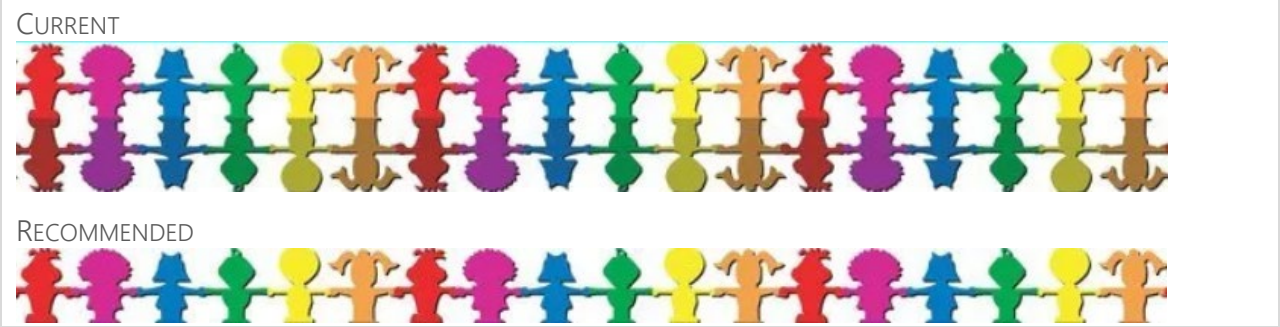
Even though the users liked the bright design, there was a disconnect between the product's consumers and the product's purchasers. Four out of the five users thought the design was too childlike and interfered with the overall usability of the site by its real audience - adults who purchase the product. We recommend a slight change to the colors to a "fruit" palette that will still represent the "rainbows of exciting flavors!" product but also be more appealing to the adult users of the site (Figure 2).

Figure 2
Penny Juice color palette, current and recommended



Additionally, the site border at the bottom of each page was distracting and confusing and was not easily recognizable as reflecting children holding hands. We recommend using only the top half of the border to make it more identifiable (Figure 3).

Figure 3
Site border, current and recommended

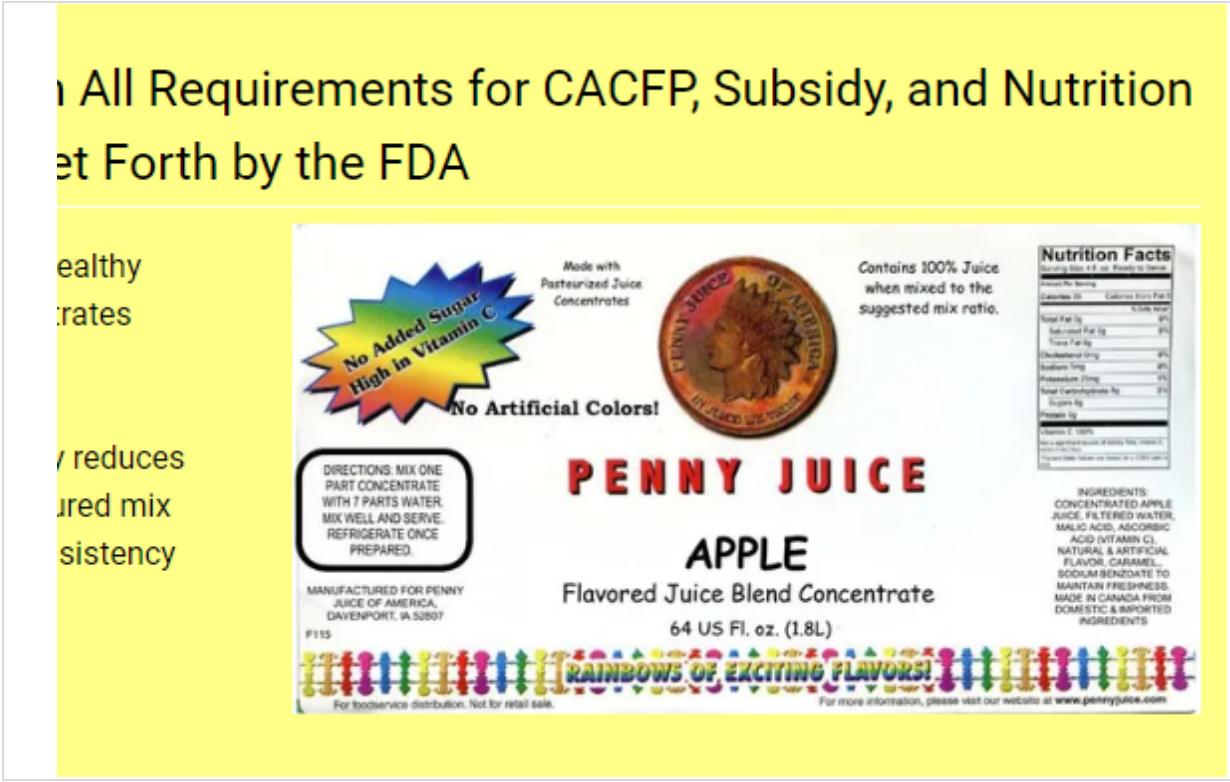


Most importantly, the lack of clear images created undue hardship for the users. 100 percent of users found themselves significantly frustrated when interacting with the product label, an accidentally critical piece of information (Figure 4). Because this label is the only place on the website that states the serving size of the juice, it was where all of the users eventually located the information when completing the task, "find the price of one serving size of juice." When users did locate the image, it could not be read due to the size of the text and degraded image quality. The image could not be zoomed in on and could not be saved. Furthermore, clicking on the image did

not bring the users to the correct information. We recommend using high-quality images across the entire site, and also incorporating nutritional information elsewhere on the site so that it is easily findable and readable.

Figure 4

Product label, full-sized and full resolution



☒ Scattered information

Users complained universally about the lack of information or the lack of organization of the information that was there. When asked to recall information that they should have learned during the home page scroll, only two of the five users were successfully able to recall where the refrigeration information was located. The scattering of the information on different pages made it difficult to recall the information or skim the information during the initial homepage tour.

One user took seven minutes to find all the information pertaining to their task. They rated the findability on the website to be average but the readability of the information to be poor. They expected a scrolling/zooming format for the product label image to be able to better view the information on the label. Another user stated that they would have needed to contact Penny Juice to get the information they needed but admitted that they wouldn't go that far to purchase from Penny Juice. These pain points may be enough to encourage the user to find another company to purchase from.

The information on the website is spread out and not in expected or intuitive places, and there is a lot of missing critical information. The design of the website prevents a smooth search experience for the information pertaining to the task.

Other problems with the information available on the website were noted, including:

- lack of record-keeping documents that schools or other childcare centers may be legally required to keep,
- lack of a centralized FAQ section, and
- lack of a calculator or other easy way to determine how much juice is needed to order, how many containers are needed for a complete order, how to calculate shipping and tax, and how to find information on past orders.

We recommend restructuring the website (see next section) and incorporating a FAQ section that contains all of the information needed by purchasers. In addition, we recommend redesigning the purchasing process completely (see following section) to eliminate user pain points that may hinder or cause them to abandon their purchase process.

☒ **Poor website structure**

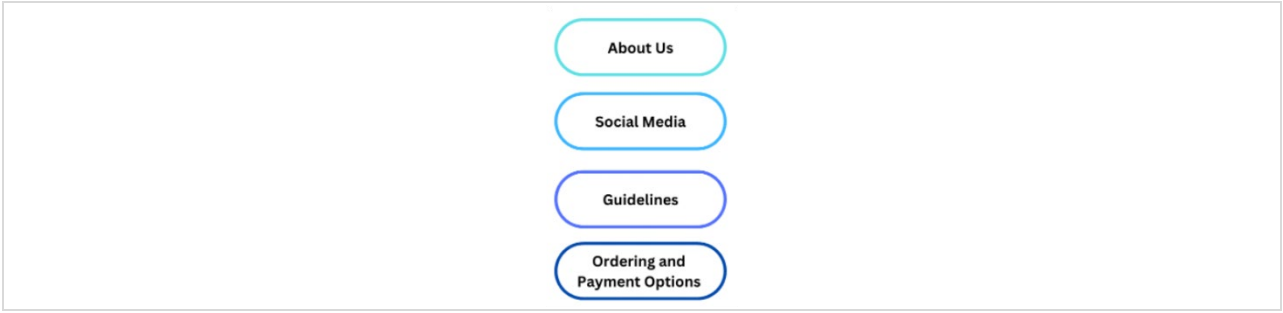
All of the users had problems navigating the site and finding needed information. Specifically, they did not like the lack of navigation pathways, confusing multiple “Learn More” links on the home page that all led to the same page, and information not being where "it should be" based on web design standards and user experience. Only two out of five users were successfully able to recall where the refrigeration information was located, and all five users noted that the nutritional information should be easily accessible from the order page.

Five participants completed the card sorting exercise in an average of 10 minutes and 40 seconds. Only one participant completed the sort in under five minutes. Four out of five participants grouped the cards into six categories and one participant used four categories. None of the participants left cards unsorted.

After analyzing the groups sorted, participants are clearly used to a standardized website language. Some examples of category titles they chose, “Contact Us,” “About Us,” and “Nutritional Information,” show this. However, the current categorization on the Penny Juice site is confusing and does not reflect these groups.

Four categories received 80 percent agreement between the five participants. These categories, as shown in Figure 5, are "About Us," "Social Media," "Guidelines," and "Ordering and Payment Options."

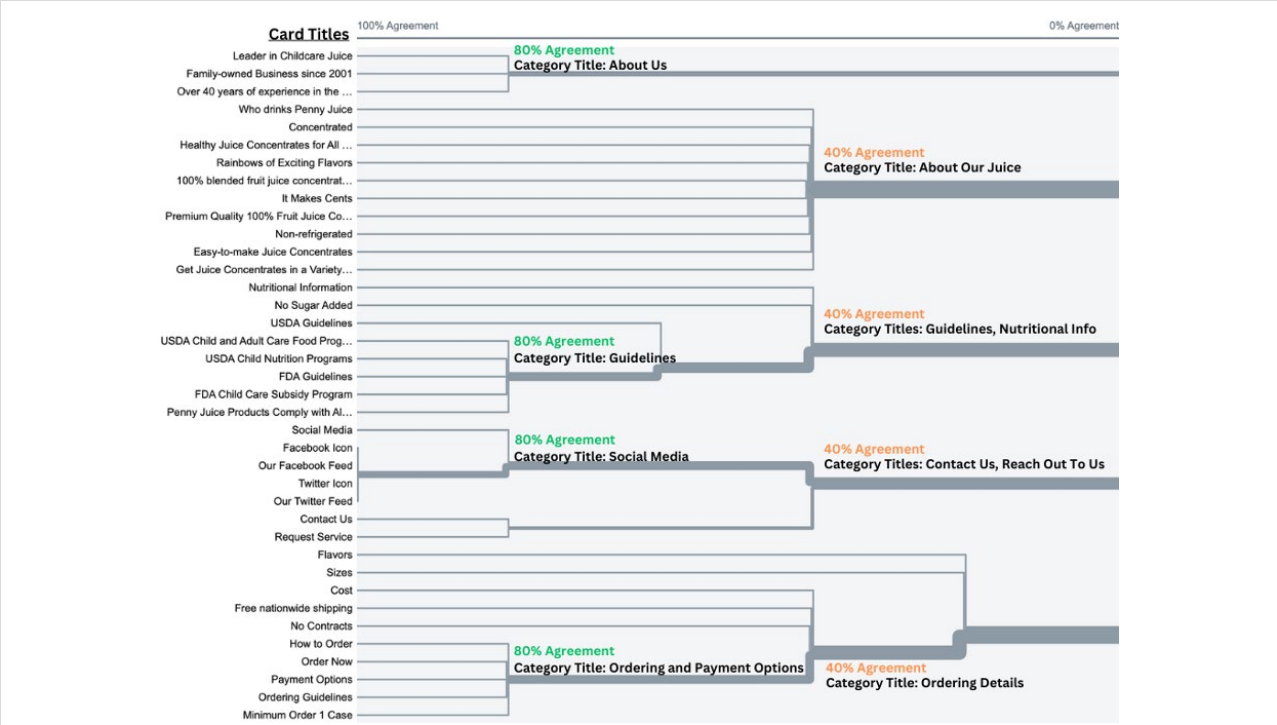
Figure 5
Categories with 80% agreement among users



As seen in the dendrogram pictured in Figure 6, even at only 40% agreement, the category titles are variations of the same phrases rather than separate categorization, such as “About Our Juice”, “Guidelines”, “Nutritional Info”, “Reach Out to Us”, and “Ordering Info”.

Figure 6

Dendrogram from Optimal Workshop showing the actual agreement between participant card sorts



This tells us that users expect this type of information to be found on websites. Currently, the Penny Juice website has very little, if any, information architecture (IA). There are no standardized labeling, navigation, or search systems. After analyzing the participant's card sorts, it is clear that users expect website language to be consistent. We recommend restructuring the website in a way that follows user-anticipated language and layouts:

+. Site-wide Header
    Navigation Menu

Page 1. Home Page
    About Our Juice (marketing content)
    About Us (who we are, why we created the company)

Page 2. Guidelines
    FAQ
    Nutritional Information
    Government guidelines

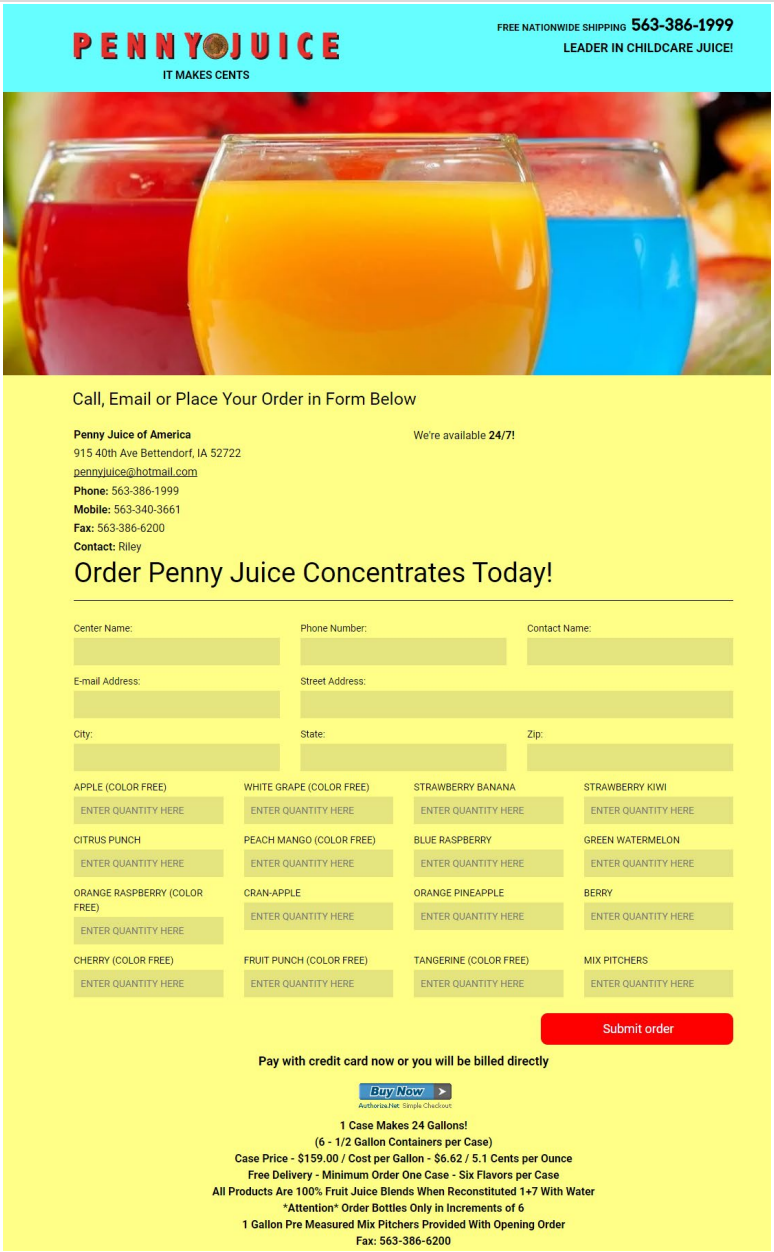
Page 3. Ordering and Payment
    Storefront

+. Site-wide Footer
    Contact Us
    Social Media

☒ Unpleasant ordering process

The most painful part of the user experience for our participants was the ordering process. All our users were extremely put off by how much of the process was their responsibility, from determining the serving size, to having to do complex math to determine how much was needed to purchase versus the purchase requirements of full cases. Three users mentioned that they would expect to use a shopping cart system instead of an order form to make a purchase, and one user wasn't even sure if they could order using the form (Figure 7) or if she would have to call the company to complete her purchase.

Figure 7
Penny Juice website order form



Placing the calculation burden on customers along with the lack of information and product photos are below industry standards. The actions and burdens the users experienced might cause this to be one of the stopping points of the ordering process.

Improving the ordering process would provide a better experience and encourage the user to independently purchase the juice concentrate without spending staff time on customer calls. We recommend creating a calculator that purchasers can use to compute how much product they need to order based on how many children they are feeding and for how many meals, and that considers ordering restrictions such as buying entire cases.

We also recommend creating a storefront with product listings that contain photos, product descriptions, nutritional information, and serving size. This storefront will also allow customers to see final costs including tax and shipping (if applicable) and create accounts for them to log in and see order status and histories.

Conclusion and Recommendations

Our team carried out observational studies and expert evaluations to delve deeper into the usability of the Penny Juice website (www.pennyjuice.com). The observational studies comprised of five card sorting activities, five moderated think aloud protocols, and four heuristic evaluations. The card sorting exercise was conducted on OptimalSort (Optimal Workshop, 2023) with five participants asked to group cards with titles taken from the website in a way that best made sense to them. Following that, the participants were asked to complete three tasks with the aid of a moderated think aloud protocol. Furthermore, each member of the team undertook a heuristic evaluation based on a predetermined persona, following the guidelines outlined in Jakob's *10 Usability Heuristics for User Interface Design* (2020).

In terms of positive feedback, two out of the five users expressed appreciation for the website's simplicity, while three participants praised the bright design that aligned with the target audience of children. However, despite the positive reception of the website's aesthetic, participants identified several noteworthy concerns. Specifically, users raised problems related to a disconnect between the product's intended consumers and purchasers. Moreover, users universally expressed frustration with the lack of information and organization, which posed difficulties when navigating the site. Ultimately, the ordering process proved to be the most challenging aspect of the user experience, with three users identifying the requirement of a shopping cart system as a preferable alternative to the existing order form.

When dealing with any other recommendations stated in this report, consider the following points. Firstly, we recommend keeping the website small and straightforward. Secondly, we propose developing a calculator that enables customers to determine the number of products they need, based on the number of children being served and the number of meals required. The calculator should also consider special ordering requirements, such as purchasing full cases.

In addition, creating a storefront with product images, detailed descriptions, serving sizes and nutritional information is recommended. This storefront would allow buyers to view their order total, including taxes and shipping (if applicable) and allow them to create an account to check order history and status.

References

Nielsen, J. (2020, November 15). *10 Usability Heuristics for User Interface Design*. https://www.nngroup.com/articles/ten-usability-heuristics/

Optimal Workshop. (2023). *OptimalSort*. https://www.optimalworkshop.com/optimalsort/

Appendix A - Methodological Tools

Observation Guidelines

Location: Users will be observed (either virtually or in-person) while on their personal computer.

- Smile in a friendly way and watch carefully while taking notes.
- During and before the sessions, do not engage participants in conversation, offer advice, correct them, or answer their questions, because introducing new information or giving unintentional clues can bias the research results and even invalidate that session's data.
- Explain the basic ideas of the observation and what we expect from the participant:
    - The point of the observation is to see how easy or difficult their experience is.
    - We will give them prompts and then observe them as they try to fulfil them.
    - We will not answer questions or clarify.
    - Think aloud. Make "verbal notes" of what they are thinking and what is good and bad about the site.
    - DO NOT HIT SUBMIT on anything on the site.
- Ask to record the session. Even though you will take notes, recording will allow you to revisit the observation as needed.
- Take good notes!
    - Keep notes in sequence as you write.
    - Write one observation per note so they can be categorized later. Do not write paragraphs.
    - Note mistakes they make; system errors; click paths; strategies; search terms; quotes; anything that seems overlooked, misunderstood, ambiguous, or confusing; and suggestions, questions, and comments.

Think Aloud Protocol (TAP)

[Web browser should be open to Google or some other "neutral" page.] "Hi, _____. My name is _____, and I'm going to be walking you through this session today. Before we begin, I have some information for you, and I'm going to read it to make sure that I cover everything. You already have a good idea of why we asked you here but let me go over it again briefly."

"We're asking people to try using a website that we're working on so we can see whether it works as intended. The session should take about 40 minutes. The first thing I want to make clear right away is that we're testing the site, not you. You can't do anything wrong here. In fact, this is the one place today where you don't have to worry about making mistakes. As you use the site, I'm going to ask you as much as possible to think aloud: to say what you're looking at, what you're trying to do, and what you're thinking. This will be a big help to us. We're doing this to improve the site, so we need your honest reactions."

"If you have any questions as we go along, just ask them. I may not be able to answer them right away, since we're interested in how people do when they don't have someone sitting next to them to help. But if you still have any questions when we're done, I'll try to answer them then. With your verbal permission, we're going to record what happens on the screen and our conversation. The recording will only be used to help us figure out how to improve the site, and it won't be seen by anyone except the people working on this project. And it helps me because I don't have to take as many notes." *[Start the SCREEN RECORDER]*

"First, I'd like to confirm that you know we are recording this session, and that it won't be seen by anyone except the people working on this project." *[Wait for verbal confirmation]*

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

1. First, what's your name, age, and occupation?
2. How many hours a week altogether would you say you spend using the Internet, including Web browsing and email, at work and at home?
3. What kinds of sites (work and personal) are you looking at when you browse the Web?

"Now I'm going to ask you to try doing some specific tasks. I'm also going to ask you to do these tasks without using Search. Try to think aloud as you go along."

Task 1: Home Page Scroll [Time allowed: 3-4 minutes]

[Open Penny Juice website (https://www.pennyjuice.com/)] "First, I'm going to ask you to look at this page and tell me what you make of it: what strikes you about it, whose site you think it is, what you can do here, and what it's for. Just look around and do a little narrative. You can scroll if you want to, but don't click on anything yet."

1. What do you like or dislike about what you've seen on the homepage so far? Why?
2. Based off of what you've seen on the homepage, would you visit this site again?

Task 2: "Find the price of one serving size of juice." [Time Allowed: as long as needed]

1. On a scale of 1 to 5, with 1 being very difficult and 5 being very easy, how hard was it to find the price of one serving size of juice?
2. Why?
3. What's one thing you would change or include in this process?

Task 3: "Find nutrition information, refrigeration needs and cost of the juice." [Time Allowed: as long as needed]

1. On a scale of 1 to 5, with 1 being very difficult and 5 being very easy, how hard was it to find the nutritional information?
2. Why?
3. What's one thing you would change or include in this process?

Post-Think Aloud Protocol Questions

On a scale of 1-5, with 1 being strongly disagree and 5 being strongly agree, please rate the following:

1. The tasks we gave you were easy to comprehend.
2. The visual design of the website was pleasing.
3. The navigational design of the website was pleasing.
4. The information available on the website was adequate.
5. The overall quality of the website was good.

"Thank you for your ratings. I have just a couple more questions."

6. What did you like the most about the website?
7. What did you like the least about the website?

"And that's it!"

8. Do you have any questions for me now that we're done?

"Thank you for taking the time to help us improve this site."

Card Sort

"For this activity we'd like you to sort the cards into groups that make sense to you. If you aren't sure about a card, it's ok to leave it off to the side. [Card Sort Link]

"Now that you've sorted the cards into groups, I'd like you to label them."

(This step will reveal the user's mental model of the topic space. You may get a few ideas for navigation categories, but don't expect participants to create effective labels.)

Tip: It's important to do this naming step after all the groups have been created, so that the user doesn't lock herself in to categories while she's still working; she should be free to rearrange her groups at any moment.)

Debrief: Ask users to explain the rationale behind the groups they created. Additional questions may include:

1. Were any items especially easy or difficult to place?
2. Did any items seem to belong in two or more groups?
3. What thoughts do you have about the items left unsorted (if any)?

Appendix B - Results of Card Sorting

We developed these card titles using the titles and headings, as well as key phrases, from the Penny Juice website (https://www.pennyjuice.com).

Cost
Flavors
Sizes
Who drinks Penny Juice
Concentrated
USDA Guidelines
USDA Child and Adult Care Food Program (CACFP)
USDA Child Nutrition Programs
FDA Guidelines
FDA Child Care Subsidy Program
Nutritional Information
How to Order
Order Now
Contact Us
Social Media
Facebook Icon
Facebook Feed
Twitter Icon
Twitter Feed
Request Service
Healthy Juice Concentrates for All Kids to Enjoy
Rainbows of Exciting Flavors
100% blended fruit juice concentrate specifically designed for childcare centers
Free nationwide shipping
It Makes Cents
Leader in Childcare Juice
Penny Juice Products Comply with All Requirements for CACFP, Subsidy, and Nutrition Set Forth by the FDA
Payment Options
Ordering Guidelines
Premium Quality 100% Fruit Juice Concentrate
No Sugar Added
Non-refrigerated
Family-owned Business since 2001
Over 40 years of experience in the beverage industry
Easy-to-make Juice Concentrates
Get Juice Concentrates in a Variety of Flavors
No Contracts
Minimum Order 1 Case

Card Sort Findings

Five participants completed the card sort in an average of 10 minutes 40 seconds. Only one participant completed the sort in under five minutes. Four out of five participants grouped the cards into six categories and one participant used four categories. None of the participants left cards unsorted.

After analyzing the groups sorted, participants are clearly used to a standardized website language. Some examples of category titles they chose are, “Contact Us,” “About Us,” and “Nutritional Information.” However, the current categorization on the Penny Juice site is confusing and does not reflect these groups.

Four categories received 80% agreement between the five participants: About Us, Guidelines, Social Media, and Ordering and Payment Options. Even at only 40% agreement, the category titles seem to be variations of the same phrases rather than separate categorizations: About Our Juice, Guidelines, Nutritional Info, Reach Out to Us, and Ordering Details.

Appendix C - Results of Think-Aloud Protocol

Task 1: Home page scroll

Design	Information	Confusion	Social media	Disappointment	Catchphrase	Expectation
27	22	4	2	1	1	1

P3.1: User viewed the website as designed to appeal to kids. They enjoyed the bright colors and the motifs that strongly correlated Penny Juice to children. The simplicity of the site creates a clean experience of browsing the website without being inundated with large quantities of information detracting the user from learning or ordering from Penny Juice. They do not like how the website's design seems unprofessional with unclear information panels and questionable clipart.

P4.1: User liked the brightness of the colors and the how the information is designed to draw their attention. The mobile bar menu for navigation is also on par with other mobile website navigation standards.

P5: User understands the products are aimed at children, but they have issues with understanding what exactly the product is. With reference to the containers, the fact that it is concentrated, and other bits of information, it's unclear what exactly the product is. The design of the website is also jarring and dated, leaving the user feeling unconfident in Penny Juice's products and their business.

P6: User views the website as dated and the design very unappealing. Citing the main causes for the lack of appeal being the color palette, irrelevant images, and poor design choices. They don't understand the catchphrase or why kids should drink Penny Juice's juice rather than milk. The lack of appeal and the lack of information causes the lack of interest/consideration to purchase the juice concentrate for children.

P7: User can see that the website is designed to appeal to children. They like how colorful it is but dislike the color scheme. They also dislike the design choices impacting information understanding.

Task 2: Find the price of one serving size of juice.

Information	Design	Disappointment	Ease of use	Confusion	Consumer load	Expectation
12	11	4	3	2	2	2

P3.1: User found a lot of difficulty working with the image displaying the nutritional information. They tried clicking and zooming in, but their expectations of usability were not met. They also stated that they didn't find the information where they'd expect it to be. It also took them 3 minutes to locate and attempt to interact with the image to learn more about the serving size. Stated that the lack of information next to the product was below (beverage) industry standards

P4.1: User just guessed an amount for the serving size since they were unable to locate the serving size on the website. Their experience was confusing, and they were unable to successfully complete the task.

P5: User did not like the burden being placed on them to figure out the serving sizes or the math to know how much it cost for a serving. Interacting with the photo was a major pain point when trying to learn more about the information for serving sizes or nutritional information. The lack of toggle ability or usability for the photo created a stopping point for the user to better understand Penny Juice's product. They also recommended the information being displayed somewhere in a description and provide a price per serving size for future reference.

P6: User found the process confusing and did not like the burden of figuring out the serving size or math for a serving. Was able to find the serving within the image but had a lot of difficulty parsing the information from a blurry and non-zoomable image. Further stated that they needed photos of the products before

making any decisions to purchase. They also recommended a drop-down menu with the ingredients for future reference.

P7: User was unable to locate the serving size and was astonished by the ordering form. Since the ordering form was above the information about pricing, they were distracted and were offput by the unexpected method of ordering. They recommended the information for serving sizes and price per serving be displayed in a more visible (better) location prior to the ordering screen/process.

Task 3: Find nutrition information, refrigeration needs, and cost of the juice.

Design	Information	Time	Expectation	Confusion	Consumer load
33	11	2	3	1	1

P3.1: User took 7 minutes to find all the information pertaining to the task. They rated the findability of the website to be average but the readability of the information to be poor. They expected a scrolling/zooming format for the image to be able to better understand the information on the website. They were able to find the refrigeration needs successfully but the design of the headings impacted their skimming, and they missed the heading a couple times before finally finding the information for the refrigeration needs.

P4.1: User found the information fairly easily. They were able to find the information but were unable to successfully understand all the information in the image. The picture resolution severely impacted the user's understanding of the juice's nutritional facts. "If that's the proof of there being nutritional information, I should be able to see it, right?"

P5: User was able to recall the information from the homepage tour. They were able to locate the nutritional information in the photo but were unable to actually understand any of the information within the image. Stated that they would've needed to contact Penny Juice but admitted that they wouldn't go that far to purchase from Penny Juice (perhaps they would prefer a competitor due to pain points). Realized all the information is spread out on the website and not in intuitive (expected) places. The design of the website prevents a smooth search experience for the information pertaining to the task. User recommends a navigation bar and better design choices for displaying the nutritional label for a better user experience.

P6: User was able to recall the information and was able to successfully navigate to the information pertaining to the task.

P7: User was successfully able to find the refrigeration needs but had some difficulties locating the nutritional needs. The first relevant information they were able to find was how the FDA and the USDA approved the juice. After finding the image of the nutritional label, they had difficulty with understanding the information and experienced confusion on why only the apple flavor was displayed on the website. Due to that, the user was not confident in Penny Juice's products and was apprehensive about buying and giving the juice to children.

Task Totals

Design	Information	Confusion	Expectations	Disappointment	Ease of use	Consumer load	Social media	Catchphrase
71	45	7	6	5	3	3	2	1

Task 1: Penny Juice is successful in conveying that their products are for children but the disconnect between the product's consumers and the product's purchasers creates a confusing experience for the purchasers. The bright colors are seen as very appealing, but the color palette was cited as something that needs to be changed to improve the user experience.

Task 2: Customer burden of figuring out the amount for the serving size and the price per serving cause pain points. While the lack of information next to the photo of the product(s) is the industry standard, the action and burden the users experienced can be assumed that this would be one of the stopping points of the ordering process.

Task 3: It was split 2/5 for the users successfully able to recall where the information was located (for the refrigeration needs). Most of the pain points are when interacting with the picture showcasing apple's nutritional facts (is it for the juice concentrate or the juice after it's been mixed with water?). The scattering of the information on different pages made it difficult to recall the information or skim the information during the initial homepage tour.

Post TAP

Design	Information	Expectations	Consumer Load
12	4	4	1

P3.1: Really liked the simplicity of the website; there weren't a lot of side panels/ads/popups distracting the user from using the website. They didn't like the lack of shopping basket functionality and unclear pricing per oz (as per beverage industry standards).

P4.1: The lack of clear images created undue hardship for the user. They stated that the design of the website could be a little better.

P5: Really likes how simple the website is with showing what they're trying to sell. They do not like how there was a lack of navigation pathways, confusing "Learn More" links on the home page, and how there are gaps of information when looking at the product.

P6: User did not find anything redeeming about the website. They found their experience on the website to be hard to navigate, the confusing "Learn More" links leading to the same page, and the checkout process being unfamiliar and not user friendly.

P7: They liked the photo of the little boy with his mouth open as if he was excited to try the juice. They did not like the current process of ordering on the website. Since the ordering process is seen as convoluted and difficult, calling them would be better. Fleshing out the ordering process would provide a better experience and encourage the user to independently purchase the juice concentrate without spending staff time on customer calls.

Average Ratings

Prompt	Rating 1-5
The visual design of the website was pleasing	1.67
The navigational design of the website was pleasing	2
The information available on the website was adequate	2
The overall quality of the website was good	2

Appendix D - Results of Heuristic Evaluation

Expert Evaluation using Heuristics

Each team member performed a separate expert evaluation under the guide of the persona below, and using the guidelines set forth in Jakob's 10 Usability Heuristics for User Interface Design (2020).

Each of the ten guidelines were rated using the following numbers:

1	An issue that is technically a problem but one that would likely not prevent users from ultimately completing their tasks.
2	An issue that is a problem that will likely affect many, but perhaps not all, users.
3	A catastrophic issue that may not affect many people, but if it does affect them, they will not be able to continue their task.

Overall, none of the categories were completely without problems. The "Help and Documentation" and "Consistency and Standards" categories were rated the highest at 2.5. Focusing solely on these two areas, the consensus from the heuristic evaluations indicated the lack of consumer-focused information, such as an FAQ, navigational menu, shopping cart, product pricing and ingredient list. Ultimately, even if the categories rated as an issue that would ultimately not prevent the user from completing their task, many users would choose a competitor's website over struggling through the ordering process of the Penny Juice website.

Heuristic Guideline	Megn	Lis	Shamia	Michelle	Findings	Rating
Visibility of System Status	There is no visible homepage button or any navigational menu at all. Users have to click on either the *Order Now* or *Learn More* buttons to navigate away from homepage. All *Learn More* buttons lead to the same page	There is no navigation menu. There is no breadcrumb menu (*home* > *products* > *flavors*). There are too many *Learn More* buttons on the home page that all lead to the same page - that creates confusion.	The navigation may be confusing for users. The structure is not properly defined. Information (mainly serving sizes) aren't defined. Each section is directed to one singular page.	Lack of navigation bar or menu. The *Learn More* buttons pass the accessibility test but not the logical test that users have when experiencing the website.	Need navigation bar or path for users to retrace. *Learn More* buttons all lead to the same page regardless of the user's current information need.	2
Match between System and Real World	Only using the terms *Order Now* and *Learn More* as navigational tools can confuse users because of how limited the vocabulary is.	There are too many *Learn More* buttons on the home page that all lead to the same page - that creates confusion. The contact information on the order form goes: center name - phone number - contact name - email - address. This may be how PJ looks up the orders (by center name or phone number. A more natural order for the customer might be: center name - contact name - address - phone number - email.	Outdated information. Social media feed hasn't been updated since 2019. The website has remained the same since 2019, from their last social media feed date. Information on nutrition, sponsors, manufacturers, etc. could also be outdated.	The logical sequence for the contacting and ordering of the juice concentrate places more burden on the user. There was a lack of pricing for each juice; even if all the juices are priced the same, the user would prefer to visually see and understand the pricing. Blurbs are about various different things, create visually separate spaces to differentiate the information to help people easily understand the information.	Buttons like *Learn More* and *Order Now* are used as the only directional pathway for users. There is a lack of transparency in pricing that users would not appreciate. Information is not presented in a way that is friendly to the user.	2
User Control and Freedom	There is no emergency exit for the ordering process. If an order is placed, the screen simply says *Your order has been placed. We will get back to you as soon as possible. You may pay with your credit card now.*" There is no way to backtrack from this action other than submitting the form again.	The *Submit Order* button has no *cancel* or *are you sure?* prompt prior to submission.		The *Submit Order* button doesn't have a copy of their order to reassure the people ordering they've ordered correctly. No cancellation or helpful *are you sure* statements prior to submitting an order.	No control for the user once an order has been submitted. Any "freedom", like emailing the company, places the burden on the user rather than the company.	2

Heuristic Guideline	Megn	Lis	Shamia	Michelle	Findings	Rating
Consistency and Standards	There is a *Submit Order* button as well as a *Buy Now* button. This gives conflicting signals to most consumers since they are used to one button or one avenue to purchase products. The lack of a navigational menu is extremely inconsistent with platform conventions.	The pricing and order requirements should be above the order form. People want to know how to do something before they actually do it. People are used to shopping carts or *are you sure?* prompts before orders are submitted.		Shopping carts are standard to check and evaluate the total cost before purchasing. There is a lack of pricing on the options that do not follow industry conventions.	No navigational menu, shopping cart, transparent pricing, transparent ingredient list, order requirements. These are all industry standards and what users expect from retailers.	2.5
Error Prevention	There is no emergency exit for the ordering process. If an order is placed, the screen simply says "*Your order has been placed. We will get back to you as soon as possible. You may pay with your credit card now.*" There is no way to backtrack from this action other than submitting the form again.	The *Submit Order* button has no *cancel* or *are you sure?* prompt prior to submission. Having a calculator on the site to automatically calculate how much to buy based on how many children need to the served would help reduce math errors. Having a counter or shopping cart would prevent submitted orders that are less than a full case.		There is no double checking prior to the submission of people's orders. There is no shopping cart keeping track and totaling the prices of the order. There isn't a clear understanding of how many servings of juice a case provides.	All burden of error is placed on the user: no emergency exit process, no calculator or shopping cart to assist in ordering, no clear product explanation.	2
Recognition rather than Recall	The lack of a nav menu does not help the user remember where they are on the website. The saving grace is that the website consists of three pages, so it is hard to "get lost." Having multiple *Learn More* buttons under different sections, but all leading to the same webpage, is confusing. The one photo of the juice label is too small to even be helpful for users.	Drop-down navigation menu on every page. Nutrition information and serving sizes on order page. Flavors or ⓘ information pop-ups that explain flavors or describe products.		A navigation menu/bar Nutritional information easily accessible for all juices and serving size.	Need navigation bar/drop-down menu or path for users to retrace. Need nutritional information easily accessible for user.	2

Heuristic Guideline	Megn	Lis	Shamia	Michelle	Findings	Rating
Flexibility and Efficiency of Use	There are no shortcuts because there are only three pathways through the site.	Allow customer accounts that they can personalize, look at previous orders, create favorite orders, and store payment information. Allow a "quick reorder" or "auto ship" option.	Ordering operates as a "sign up" or fill out form function. Confusing order page (one button says *Submit Order*, another button below says *Buy Now*. Confuse customers on how to order (1 user had this issue during the TAP).	Customer accounts to keep track, reorder, and store payment info.	Utilize customer accounts for users to keep track of their orders and payment information. Users should be able to reorder previous orders or even auto ship.	1
Aesthetic and Minimalist Design	There is extra information found on the ordering form for most users. It is overwhelming and confusing. Only having three webpages doesn't count as "minimalist." The use of bright, childish colors is distracting.	The bright colors represent children, but it's very jarring for the adults who order. The banner graphic (kids?) is weird and distracting. Rearrange the information and present it in a more visually appealing way.		The bright colors are nice but there is a lack of consistency of design quality. Rearranging the information to present it in a more visually appealing way to understand.	Overuse of bright colors overwhelms users. The banner graphic follows the user as they scroll which can be distracting. Information needs to be presented in a more visually appealing and relevant (for the user) way.	2
Recognize, Diagnose, and Recover from Errors	No error codes or error messages at all (in my experience).	Having a counter or shopping cart would prevent submitted orders that are less than a full case.		Lack of methods to show the user what they've ordered or what they are currently ordering. (Emailed) record of their order as a record for the user to know if they've ordered incorrectly.	No error codes or any way to recover from an error. Utilizing a shopping cart would minimize some purchasing errors. There is no automatic email system to let customers know whether their order has been received or not.	1
Help and Documentation	There is no documentation to help users understand the ordering system. There is no documentation on how to contact the company, it is simply at the top of the *Order Now* webpage. There is no information about when a response should be expected or even to order.	There should be a FAQ page that answers common questions. Include downloadable nutritional and other documentation that childcare centers are required to keep.		Q&A page to for commonly requested information.	There is no documentation to help users understand the ordering system or even the company's credentials. Creating a FAQ page could answer most questions users had without them having to email the company every time.	2.5