

ChildSafe

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Research Objective

The research objective is to find out if the application/website on mobile, tablet, and desktop is cohesive and easy to follow. Also, the designers wanted to discover if there is anything else the user would like to add, change or remove from the application itself. After collecting the data from the participants the goal is to find if the tool "Locate my Child" is easy to access and easy to use. We want to make sure that parents know what steps to take in order to locate their child in the least amount of time possible. We want the tool to be used intuitively, and making it easy to use through all of the devices, desktop, tablet, and mobile.

Executive Summary

ChildSafe is an application and Website that allows users to track their children as they get on the bus to and from school. A test was conducted using Trymyui.com, using a sample size of five participants for the mobile and tablet prototypes and a sample size of seven for the website prototype. Based on the responses of the users it was determined that while in general ChildSafe was easy to use, further changes are still necessary before the final product is released. Prospective changes include:

- Change of navigation bar information on the about/home page on the website
- Bottom navigation needs a word to describe the icons to represent what the icon is for on mobile/tablet devices
- Icons need to be labeled and text size needs to be increased by a few points.

Usability Research Findings

The designers of the ChildSafe application conducted a usability test using a desktop, tablet, and mobile prototypes of the application by sending the link to 27 participants. The users had to interact with the prototypes in order to complete multiple tasks from each device. These tasks were as simple as to log in and log off from the application and as complex as to locate their child using the application. The Product designers reached out to peers, relatives, and friends to participate in the test. All participants were informed on how to access the software and how to perform the test.

The test had a maximum allotted time of 20 minutes, however, each individual session lasted about 10 minutes long. During the beginning of the test, the participants were informed about what state of mind they were supposed to be in when performing the test. Of all the participants

only 12 had children, the participants reviewed the task scenarios and tried to complete them on the prototype application.

After each task, the software asked the participant to score the task they performed on a 7-point Scale with measures ranging from Very Difficult to Very easy. Post-task scenario subjective measures included:

- How difficult or easy did you find this task?
- Could you complete this task?

After the eight tasks were completed, the software asked the participants to rate the application by using a 5-point scale (Strongly Disagree to Strongly Agree)

- Frequency of Use
- The complexity of the application pages
- Ease of Use
- Technical support from a third party provider needed
- Were the functions very well integrated
- Inconsistency in the system
- Most people would learn to use the application very quickly
- Was the system awkward to use
- Was the participant confident using the application
- Did the participants felt they needed to learn the application

Evaluation Takeaways

- Do not assume every participant has experience with a Desktop, Tablet or Mobile applications.
- Avoid using vocabulary that is used among designers such as Interface.
- Always ask participants if they are comfortable downloading and installing software in their computers.
- Always maintain communication with online participants to keep the information about the test clear.

Likes, Dislikes, and Participant Recommendations

Upon completion of the tasks, participants shared feedback for what they liked most, what they like the least, and also offered recommendations for improving the mobile application.

Liked Most

The following comments capture what the participants liked most:

- I really liked the ability to track my kids live using the map tool.
- I liked the big icon used to locate the child.
- The implementation of the school calendar was great I can see future school events.
- I liked the calendar page showing the events taking place on that specific day.

- I liked the size of the kid's profile pictures.
- The message page was great for me since I know what the school is doing.

Liked Least

- The following comments capture what the participants liked the least:
- The text was very small to read in the menus and the login page for the mobile.
- I did not like the fact that I had to download software on my computer to run a test. I should not need to install anything on my computer, I should be able to go to the website itself.
- I got confused with the menu icon at the bottom of the mobile application. The bell looked like an alarm icon you use to set your wake up alarm instead of messages.
- I did not know where to go for the messages until I clicked on the bell.

Recommendations

- The following comments capture what the participants recommended most:
- The size of the text can be increased a little more in the login screen and the sidebar menu in the mobile application
- Add labels to the bottom of the menu icons in the mobile application
- The child's profile should include information about the bus number they are assigned to and plate number of the bus

Improvements needed on tablet:

1. Use words beneath the icons on the bottom navigation
2. Change "message center" to "alert center" because of the "alerts" icon (bell)
3. On the bus schedule page, departure and Arrival fonts did not stand out. The font should be bolder to a different color.
4. Change the color on the calendar page
5. The task questions could have been simplified like "where is my kid?" and "locate where did he arrive?"

Appendix

Test design:

The test administrators contacted and recruited participants that were both peers, relatives, and friends. The test administrators sent emails informing them of the test logistics and requesting their participation. The website provided the participants with a tutorial and tasks that were written by the test administrator. Participants were firsts required to watch a tutorial on how to

use the program, they then proceeded to read the task scenarios and try to complete each task on the prototype. After the session, the participants were required to fill out a questionnaire, followed by a written commentary. After each task, the administrators asked the participants to rate the interface on a seven-point scale with measures ranging from Very Difficult to Very Easy. Post-task scenario subjective measures included a user commentary. Through these questions, it was hoped that insight could be gained about how to further improve the ChildSafe prototypes.

Data collection:

Data was collected using the answers from participants, and they were recorded through screenshots, video capture, and written document reports. Surveys created by “tryMyUI” website allowed the designers to access the data in order to refine the final product. After the participants completed taking the surveys and usability test reports, the data was collected and reviewed.

Participant information:

All participants were peers, relatives, or friends of the test administrators. 27 participants performed the usability test on the following days: March 16, 2019 (3 participants), March 17, 2019 (4 participants), and March 2018 (1 participant). Of the 27 participants, 15 were female and 5 were males ages ranged from 25-65. Of the participants 12 have children. Out of the 27 participants only 4 had used Trymyui.com prior to the test.

Screening questions:

All participants qualified for our user testing of ChildSafe, however, it was important to the test administrators to ask the following questions:

- Do you have children?
- Do your children take the bus to school?

Test questions and tasks:

Desktop User questions and tasks:

Questions

- 1)What was the worst thing about your experience?
- 2)What other aspects of the experience could be improved?
- 3)What did you like about the website?
- 4)What other comments do you have for the owner of the website?

Tasks

- 1)You are on our about page, scroll down the page till you get to the orange sign up button.
- 2)Click on the sign-up button
- 3)You are now on our sign up page. click on the first name input to fill in your information.
- 4)Click on the sign-up button

- 5)Click on the upload photo button to add your picture
- 6)Click on the first name input to fill in your child's information
- 7)Click register
- 8)Now click register new
- 9)Click register to complete Sam's registration
- 10)Now, click the green locate button to locate your kids
- 11)Click on Cooper's picture to view his profile
- 12) Now Click on the "profiles tab" in the navigation menu to go back to the home profile page
- 13)Now view Sam's profile
- 14)Go to the calendar
- 15)Go to messages
- 16)Go to the contact page
- 17)Log out

Mobile User questions and tasks:

Questions

1. What was the most confusing thing about your experience?
2. What other aspects of the experience could be improved?
3. What did you like about the mobile application?
4. Was the "ChildSafe" interface easy to navigation mobile?

Tasks

1. "Sign up" to the application by entering the username, email, and password:
- 2.Track your kid in the map using the "Locate my Kid" button
3. Review messages and alerts using the Alert icon (Bell)
4. Locate your child in the map using the locate Icon
5. Select the menu in the top left corner and log out form the application
6. You forgot to review the calendar Log back in using the Sign In Button
7. Select the "Calendar" icon to review the school events
8. Select the menu in the top left corner and log out form the application

Tablet User Tasks:

1. Sign up or log into the application
2. Locate Cooper Doe's profile
3. Track your kids in the map using the "locate my kid" button
4. Review the bus schedule information, and see when your children will arrive at school.
5. Review messages and alerts using the alert icon (bell)
6. Select the "calendar" icon to review the school events
7. Locate John Doe's profile

Tablet User Questions:

1. What was the worst thing about your experience (e.g functionality, confused, navigation of app)? Please be specific.

2. What other aspects of the experience could be improved (e.g. functionality, interface, navigation, colors)? Please be specific.
3. What did you like about the website (e.g. interface, navigation, colors, usability)?
4. What other comments do you have for the owner of the website (e.g. functionality, interface, navigation, usability)?

Logistics:

Mobile design research:

Marcelo Cazon

Prototype link

<https://invis.io/T6QFR7OVWAE>

Instructions you have on testing for Mobile

- Pay close attention to keywords that are in between quotes. For example: "Sign Up" or "Calendar"
- Read the tasks at least twice before performing the assignment.
- Be as specific possible when providing suggestions, advise or criticism. For example: "The text was too small on the Calendar page" or "The Colors were too Bright"

Tablet design research:

Emily Weincek

Link to prototype:

<https://projects.invisionapp.com/d/main#/console/16760850/348470234/preview>

Instructions you have on testing for Tablet

- Read the tasks at least twice before performing the assignment
- Be as specific possible when providing suggestions, advise or criticism. For example: "The text was too small on the Calendar page" or "The Colors were too Bright"
- Must complete each task before advancing to a new one
- Make sure to read the tasks and what you are thinking out loud

Desktop design research:

Olivia Finholm and Kristina Robbins

<https://projects.invisionapp.com/share/XMQX3D3YR75#/screens>

When testing, keep in mind that this is a prototype and not all links are accessible.

Designs:

Mobile design:

Mobile ChildSafe Prototype

BY: Marcelo Cazon



The video player shows a mobile app interface with a map. A task overlay is visible on the right side of the screen. The task overlay contains the following text:

Task 5 of 5 (3:00)

Your Name of child...

Perform these tasks:

PROCEED: 1 2 3 4 5 6 7 8

Follow the steps in the task list until you reach the end of the task.

How difficult or easy did you find this task?

Could you complete this task?

NEXT TASK

Annotations: Video Index Survey Questions Notes

Showing all [Clear all](#)

00:44 [Marcelo Cazon](#) [Sign Up Text](#)

Small text needs to be increased in size a point or two

02:05 [Marcelo Cazon](#) [Message icon](#)

The Message icon is not clear and should be exchange by a different icon

02:47 [Marcelo Cazon](#) [Locate /Map ic](#)

In this question the tester thought there was a map icon update icon or label the icon

Please rate this tester: ☆☆☆☆

Mobile ChildSafe Prototype

BY: Marcelo Cazon



The video player shows a mobile app interface with a map. A task overlay is visible on the right side of the screen. The task overlay contains the following text:

Task 5 of 5 (3:00)

Your Name of child...

Perform these tasks:

PROCEED: 1 2 3 4 5 6 7 8

Follow the steps in the task list until you reach the end of the task.

How difficult or easy did you find this task?

Could you complete this task?

NEXT TASK

Annotations: Video Index Survey Questions Notes

Showing all [Clear all](#)

02:06 [Marcelo Cazon](#) [Name icons](#)

The icons should be label for easy access

03:11 [Marcelo Cazon](#) [Small text](#)

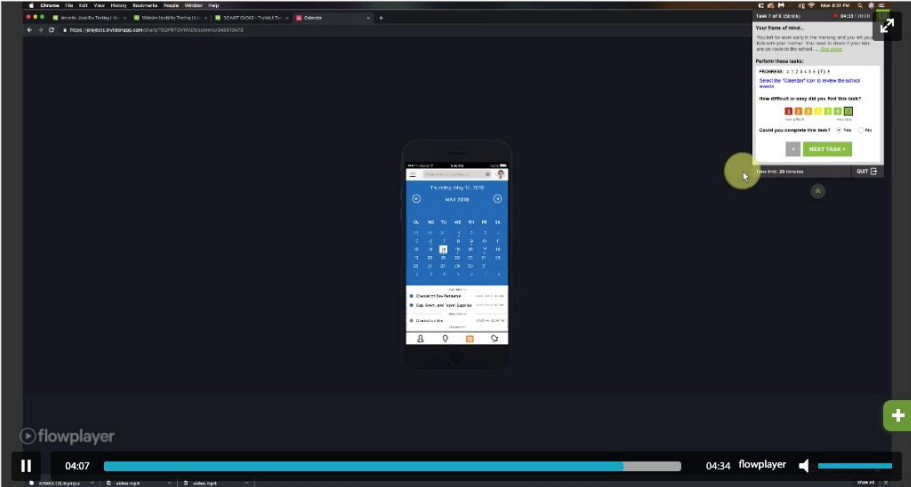
Text too small should be increased for readability

Please rate this tester: ☆☆☆☆

Mobile ChildSafe Prototype

BY: Marcelo Cazon





Annotations Video Index Survey Questions Notes

Showing all [Clear all](#)

03:27 [Marcelo Cazon](#) [add info in the](#)

More information should be added in the child's profile may be a bus number or license plate

04:03 [Marcelo Cazon](#) [Calendar Size](#)

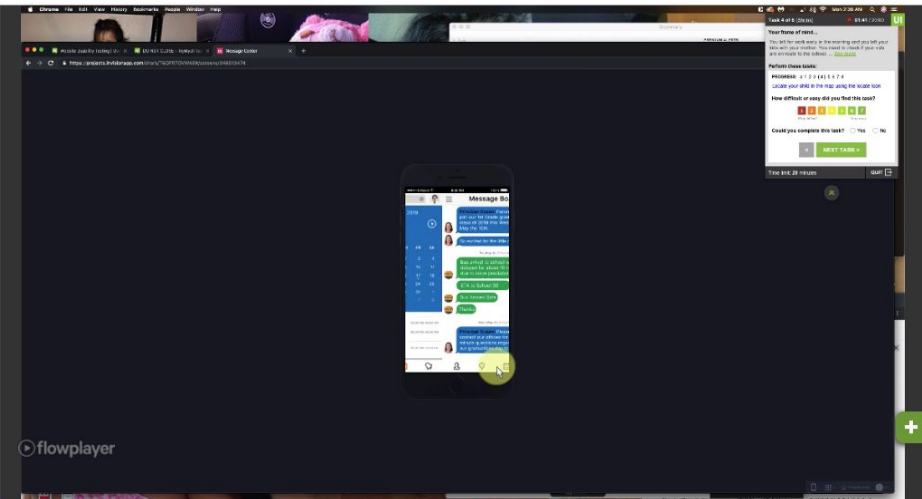
Make the calendar smaller so more information about the school events can be displayed

Please rate this tester: ☆☆☆☆

Mobile ChildSafe Prototype

BY: Marcelo Cazon





Annotations Video Index Survey Questions Notes

Showing all [Clear all](#)

00:20 [Marcelo Cazon](#) [increase text](#)

The Sign Up text was too small to read the tester missed it completely

00:46 [Marcelo Cazon](#) [Alerts icon](#)

Icons need to be labeled Testers kept getting confused when asked to check messages

Please rate this tester: ☆☆☆☆

System Usability Scale (SUS): How usable is the system for the users? On a scale from 1-5, 5 being easiest and 1 being the hardest to complete the task.

System Usability Scale (SUS)	Tester1	Tester2	Tester3	Tester4	Tester5
Question 1: I think that I would like to use this system frequently	5	5	5	5	5
Question 2: I found this system unnecessarily complex	2	2	1	3	1
Question 3: I thought the system was easy to use	5	5	5	4	5
Question 4: I think that I would need the support of a technical person to use this system	1	1	1	2	1
Question 5: I found the various functions in this system were well integrated	2	4	5	5	5
Question 6: I thought there was too much inconsistency in this system	2	2	1	1	2
Question 7: I would imagine that most people would learn to use this system very quickly	5	5	4	5	5
Question 8: I found this system very awkward to use	1	1	1	2	1
Question 9: I felt very confident using this system	5	4	5	5	4
Question 10: I needed to learn a lot of things before I could get going with this system	1	1	1	1	4

Written Summary Responses:

System Usability Scale (SUS)	Tester1	Tester2	Tester3	Tester4	Tester5
Question 1: What was the most confusing thing about your experience?	The transitions from the map confused me a little, and when I was asked to locate the child in the map I could not find the map icon until I found out I was supposed to click on the GPS icon	The questions were not as clear as I want them to be. One of the questions asked me to locate my child on the map but I could not find the map icon so I had to choose the GPS icon	The icons at the bottom of the menu were hard to recognize, especially the message or alert icon	Menu Icons, I could not find the Map Icon	The was very small and hard to read also there should be names under the little icons in the menu for quick recognition
Question 2: What other aspects of the experience could be improved	Naming the icons so the people using the application do not get confused with the icons	Text size could be increased, it was hard to read the text on some of the screens	The text could be increased in size a bit more and reduce the calendar size to give a little more room for the actual events	Add labels to the menus at the bottom of the screen and change message icon it should be a letter or a bubble message ico	Increase text size on the sidebar menu. Add labels to the bottom of the menu
Question 3: What did you like about the mobile application?	The message board was interesting, I liked the fact that I could receive information from the school like twitter	The option to locate the child at the very beginning	The tool that locates the child was easy to use and not complicated at all	The calendar events and messaging system	Simple to use and user-friendly.
Question 4: Was the "Child Safe" interface easy to navigate on Mobile?	the navigation was a little weird at first but once I know what the icons meant I understood the concept	The navigation was simple but I would suggest adding names to the icons	The location of the menu was convenient and simple	Menu icons were a little confusing at first	Yes, the navigation was easy once I realize what were the icons for. I believe that adding the labels on the bottom would increase usability

Tablet Annotations:

The screenshot shows a tablet interface with a map and user profiles. A task overlay on the left reads: "Task 8 of 8 (Shrink)", "Your frame of mind...", "ChildSafe is an application for parents to use to know the location of their children. ChildSafe provides an advanced mobile tracking system... \$65,000/yr", "Perform these tasks:", "PROGRESS: a 1 2 3 4 5 6 7 (8)", "Locate John Doe's profile", "How difficult or easy did you find this task?", "1 2 3 4 5 6 7", "Could you complete this task? Yes No", "FINISH TEST", "Time limit: 20 minutes", "QUIT". The map shows "Conard Elementary School" and "John Doe" (ONLINE). Below the map are profiles for "Cooper Doe" and "Sam Doe", both at "Conard Elementary" with "Last Updated: 1:30 PM" and "Bus Arrives: 2:30 PM".

Annotations: Video Index Survey Questions Notes

Showing all Clear all

01:58 Emily Weincek Bus Info

03:54 Emily Weincek Parents profile

Did not understand how to get to parents profile (multiple clicks)

Please rate this tester:

The screenshot shows a tablet interface with a map and user profiles. A task overlay on the right reads: "Task 8 of 8 (Expand)", "Locate John Doe's profile". The map shows "Conard Elementary School" and "John Doe" (ONLINE). Below the map are profiles for "Cooper Doe" and "Sam Doe", both at "Conard Elementary" with "Last Updated: 1:30 PM" and "Bus Arrives: 2:30 PM".

Annotations: Video Index Survey Questions Notes

Showing all Clear all

05:08 Emily Weincek Parents profile

05:17 Emily Weincek Parents profile

Wanted to access profile like I did with the kids profile

Did not get the parents profile right away but I eventually found it

Please rate this tester:

Tablet Data:

System Usability Scale (SUS): How usable is the system for the users? On a scale from 1-5, 5 being easiest and 1 being the hardest to complete the task.

System Usability Scale (SUS)	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5
Question 1: I think that I would like to use this system frequently	4	5	5	5	4
Question 2: I think that I would like to use this system frequently	1	1	1	1	1
Question 3: I thought the system was easy to use	4	4	5	5	5
Question 4: I thought I would need technical assistance before using this system	2	1	1	1	1
Question 5: I found various functions were well integrated	4	4	5	5	5
Question 6: I thought there was too much inconsistency in the system	1	1	1	1	2
Question 7: I would imagine people would learn to use this system very quickly	4	4	5	5	5
Question 8: I found this system awkward to use	1	1	1	1	1
Question 9: I felt confident using this system	4	5	5	5	5
Question 10: I needed to learn a lot of things before I could go on and use the system	1	1	1	1	1

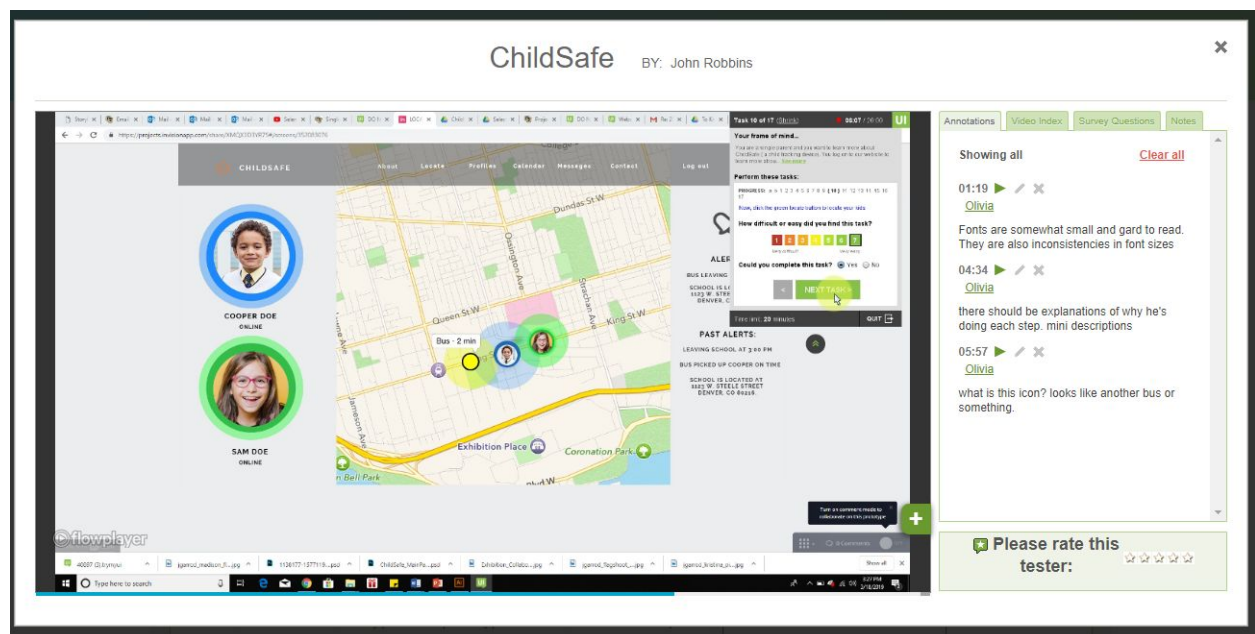
Written Summary Responses:

	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5

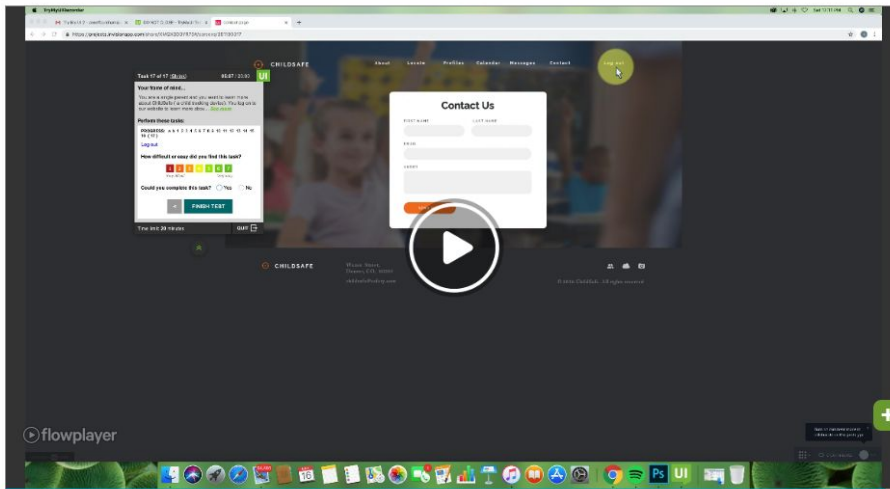
<p>Q1: What was the worst thing about your experience (e.g functionality, confused, navigation of app)? Please be specific.</p>	<p>The safari window was very large, making the mobile device very long so I had to scroll down to see the icons on the bottom of the mobile app. There were no alerts in the alert (bell icon) only messages, I got confused if I was in the right place</p>	<p>I would have I liked to know to look for icons at the bottom of the screen.</p>	<p>Couldn't locate John Doe's Profile and nothing happened when you clicked on it.</p>	<p>For me was getting John Does profile and could not get a profile.</p>	<p>Task 5 I think got repeated by accident? I don't know if I was meant to find the "locate" icon on the map too?</p>
<p>Q2: What other aspects of the experience could be improved (e.g. Functionality, interface, navigation, colors)? Please be specific.</p>	<p>The bus schedule didn't use words like departure or arrival that stood out to me when looking at the bus schedule.</p>	<p>For me, the colors did not work on the calendar because the font was conflicting with the colors. The icons at the bottom of the screen could have been a little larger.</p>	<p>To find John Doe</p>	<p>For my experience, it flowed very smoothly.</p>	<p>I think what could be improved is the "message center" is under the "alerts" icon and maybe I would say it's an alert center instead of message center? I am not sure if that matters at all. I also noticed the bus times did not align with where the kids were located on the map so I think that needs to be updated a little bit.</p>
<p>Q3: What did you like about the tablet (e.g. interface, navigation, colors, usability)?</p>	<p>It was mostly easy to understand and navigate. Finding a child on the map was easy to recognize and follow. It was easy to setup a profile and all the screens were logical in sequence.</p>	<p>I like seeing the faces of the children because as a parent that's what I want to see. It is simple and great! I liked seeing the bus schedule and the alerts from the principle to keep updated. To me, it is providing the functionality for a parent without having to go to many prompts.</p>	<p>I like the way it was set up and it was easy to follow for the most part.</p>	<p>User-friendly and I could navigate the question to answer pretty quickly. The layout was clear and could have my kid very clearly and the map was useful. The text was easy to read for me. Everything worked for me.</p>	<p>I really liked the layout of the tablet app. It was easy to read and was easy to navigate through which is good for parents to use.</p>

<p>Q4: What other comments do you have for the owner of the tablet (e.g. functionality, interface, navigation, usability)?</p>	n/a	<p>The tasks could be simplified. Where is my kid? What time did he arrive? Questions like I just provided.</p>	<p>I like it is only accessible by parent use and the app was laid out clearly and easy to get too.</p>	<p>I think it is a great product. It serves the purpose I want it to do as a parent.</p>	<p>The feedback I can give to the owner is to make the improvements I said in the question above, and I think this would make a wonderful app for parents to use!</p>
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Desktop design:



ChildSafe BY: Anne



Annotations Video Index Survey Questions Notes

Showing all [Clear all](#)

02:38 [Olivia](#)

User seems to be navigating easily, buttons are visible and tasks appear to be clear.

04:05 [Olivia](#)

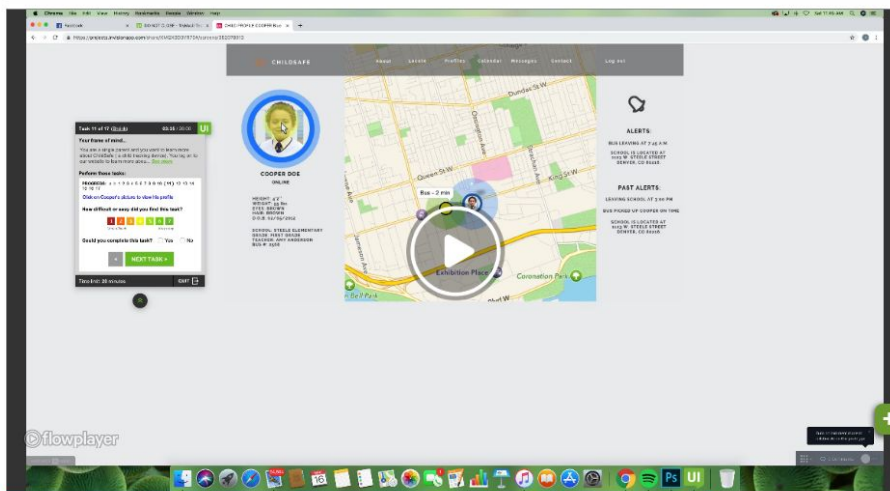
user finds profiles easily on navigation bar

04:42 [Olivia](#)

user utilizes navigation well

Please rate this tester: ☆☆☆☆

ChildSafe BY: Jacquie



Annotations Video Index Survey Questions Notes

Showing all [Clear all](#)

01:52 [Olivia](#)

There seems to be an additional step looking for sign up twice

02:29 [Olivia](#)

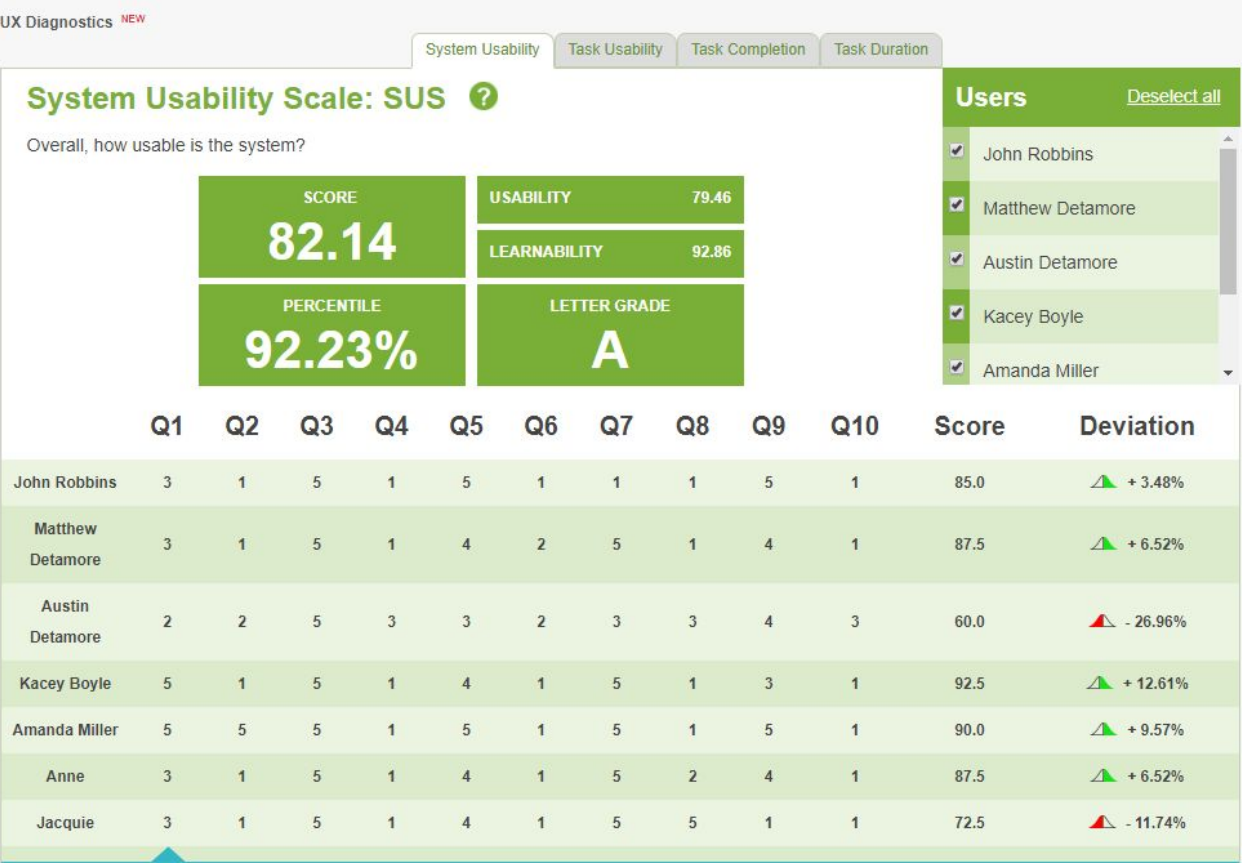
the register box changes to a add child box when you go to upload photo

03:50 [Olivia](#)

buttons are visible, user navigates easily through locating children and viewing profiles, utilizing navigation bar as well.

Please rate this tester: ☆☆☆☆

Desktop Data:



▼ What was the worst thing about your experience?

<i>John Robbins</i>	the font size was too small on the test instructions
<i>Matthew Detamore</i>	There wasn't anything bad to report.
<i>Austin Detamore</i>	signing up was confusing
<i>Kacey Boyle</i>	There seemed to be some confusion when I was first signing up. There were multiple sign up instructions, but the button said register.
<i>Amanda Miller</i>	The worst thing about the experience was not seeing that I completed my own profile before adding a new profile. Maybe the wording for adding a child was unclear to me but I was a little confused on that part originally.
<i>Anne</i>	very user friendly
<i>Jacquie</i>	nothing

▼ What other aspects of the experience could be improved?

<i>John Robbins</i>	i have no suggestions
<i>Matthew Detamore</i>	The sign up button was really far down on the bottom of the page. I was expecting it to be up at the top.
<i>Austin Detamore</i>	mostly easy. locating was easy
<i>Kacey Boyle</i>	It would be nice to have a place where you could customize profile colors. It seems like the beginning home page should not have a locate or profile button on the task bar.
<i>Amanda Miller</i>	I immediately wanted to click on the profiles button to create my own profile before going to the sign up/register link. So maybe include a link from the profile page that also brings me to the sign-up page if I haven't already registered.
<i>Anne</i>	none
<i>Jacquie</i>	it was great

▼ What did you like about the website?

<i>John Robbins</i>	good idea
<i>Matthew Detamore</i>	User friendly.
<i>Austin Detamore</i>	it was cool design
<i>Kacey Boyle</i>	User-friendly, easy to navigate. Legible icons and buttons. The design was simple and clean.
<i>Amanda Miller</i>	I liked that all the home buttons were easily assessable no matter what page I was navigating. I could easily jump from the profile page to the calendar etc without having to navigate back to other pages to find what I was looking for,
<i>Anne</i>	not complicated & user friendly
<i>Jacque</i>	simple

▼ What other comments do you have for the owner of the website?

<i>John Robbins</i>	what was the little emoji on the map? some of the font on the about us page was too small
<i>Matthew Detamore</i>	The color brown on the message page didn't match the orange used throughout the website.. Different map views would be helpful and to be able to track where they have been in addition to where they are currently. Note how long they were stopped in a single location.
<i>Austin Detamore</i>	it would be nice to see who the bus driver is
<i>Kacey Boyle</i>	I like this concept. I would have liked to understand more about the technology on the about page.
<i>Amanda Miller</i>	I thought the colors and images were inviting and the concept for the website was something I would consider registering for. Knowing that my kid is safe and I can keep an eye on them at all times puts my mind at ease when she is away from my reach.
<i>Anne</i>	none
<i>Jacque</i>	none.