



Atlas Sitemap Tree Test

May 2018

Conducted by Lauren Ruggeri

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REPORT OVERVIEW

- This report describes the usability assessment of the proposed **Atlas** website navigation menu
- This report describes one tree test performed at one point in the iterative design process for **Atlas**.

BACKGROUND AND GOALS

The UX team is redesigning the Atlas Design System website and needs user research **to evaluate and to validate the redesign of the site's information architecture.**

GOALS

The goal of this study is to test the findability of a proposed revised sitemap for the Atlas site and to answer the following questions:

- Does the revised sitemap **improve the findability** of the contents/pages in the Atlas site?
- What are the potential issues in terms of the **organization and the labelling of the contents in the Atlas site?**

METHODOLOGY

TREE TEST

Tree testing is a usability technique for evaluating the findability of topics in a website.

- Tree Tests help:
 - Detect navigational issues early in the design process.
 - Measure findability and intuitiveness of the tree.
 - Measure how well users can find items in a hierarchy.
- Tree Tests focus only on the structure and naming of information architecture.
 - Participants are not able to see visual elements that might aid or hinder navigation.

TEST SETUP

Remote Unmoderated Study using the online software **UserZoom**. Study was open May 23-28th, 2018.

TEST STAFF

Research/Analysis: Lauren Ruggeri and Liwei Dai

STUDY DESIGN

JANUARY 2018 TREE TEST

In January 2018 a tree test was conducted on the existing sitemap of the Atlas site, including 5 tasks. The full results of that test can be accessed in this report: [2018 JAN - Standards Website Card Sort & Tree Test Report](#).

Compare Jan vs. May study results

- We copied the **same 5 tasks** from the Jan study to this study and compared the results between these two studies as a way to measure the improvement in the Atlas sitemap design.
- There were only 22 participants in the January Study compared to the 30 participants in the May study.

INTENTIONAL DIFFICULTY

Besides the 5 tasks from the Jan study, we also added **7 new tasks** in this study so that we include *one task for each section/category in the new sitemap design*. When selecting the new tasks (i.e., the pages to find for each section), we intentionally selected the pages that might be hard to locate to help us identify the potential findability issues.

Thus, the results from this study, especially those from the 7 new tasks, are **not indicative of the overall findability** of the new sitemap design.

TREE TEST DESIGN

- We extracted the **proposed sitemap** for the Nielsen Atlas Design System
- We created 12 tasks that ask the participant to find a specific piece of information by navigating through the tree structure.
- Tasks were **randomized**, so participants did not get the tasks in the same order, to alleviate the learning effect.
- Participants had an option to skip a Tree Test task by clicking the *"I don't know"* button in case they are unable to respond to the task/question.

You want to find out what sections of the Atlas site have recently been updated. Where would you go to find the recent updates?

Mark correct answer/s to success question

- ▼ ABOUT
 - CHANGELOG **SUCCESS**
 - CONTACT US
- ▶ COLLABORATION
- ▶ CONTENT MODIFICATION
- ▶ DATA GRID & CHARTS
- ▶ FILTER & SORT
- ▶ LAYOUT
- ▶ MSG | ALERTS
- ▶ NAVIGATION
- ▶ ORIENTATION
- ▶ SELECTORS
- ▶ STYLE
- ▶ UI CONTROLS

**Tree Test Exercise
using the UserZoom
online platform**

TREE TEST TASKS

TASK 1 | CHANGE LOG ALSO TESTED IN JAN 2018 AS TASK 2

You want to find out what sections of the Atlas site have recently been updated. Where would you go to find the recent updates?

TASK 2 | REPORTING COLOR PALETTE ALSO TESTED IN JAN 2018 AS TASK 3

You would like to find the hex values of colors in a report. Where do you think hex values of recommended reporting colors would be found?

TASK 3 | DATE PICKER ALSO TESTED IN JAN 2018 AS TASK 4

You would like to see instructions on how to implement a date picker in your design. Where would you go to find the information about a date picker?

TASK 4 | ERROR PAGES ALSO TESTED IN JAN 2018 AS TASK 5

You would like to see recommended examples of error (404 and 500) notifications. Where would you go to find out more information about errors?

TREE TEST TASKS

TASK 5 | MASTER LIST DETAIL

You are working on a data grid that allows users to drill into each line item for more detail. Where would you look to see if there is a standard for this design?

TASK 6 | HUB & SPOKE TABLES

A table in your product requires that users be able to add new rows. Where would you find information on designing a feature for adding new rows to a table?

TASK 7 | STEPPER

You need to design a wizard, which will allow users to create price simulations through a set of steps. Where can you find out how to design a wizard?

TASK 8 | HELP

You are introducing a new feature and you want to provide help / tips to educate and direct users to this new feature. How can you find out the standard for designing help?

TREE TEST TASKS

TASK 9 | HUB & SPOKE

The User Experience team has defined a pattern called 'Hub & Spoke' for instances of adding items to an existing page or panel. Where would you look to learn about this pattern in detail?

TASK 10 | BUTTON

Where can you find out the difference between a primary and accent button in the Atlas Design System?

TASK 11 | FOLDERING

You want to design a new feature which would allow users to group similar reports into folders. Where would you look to find information on moving items into folders?

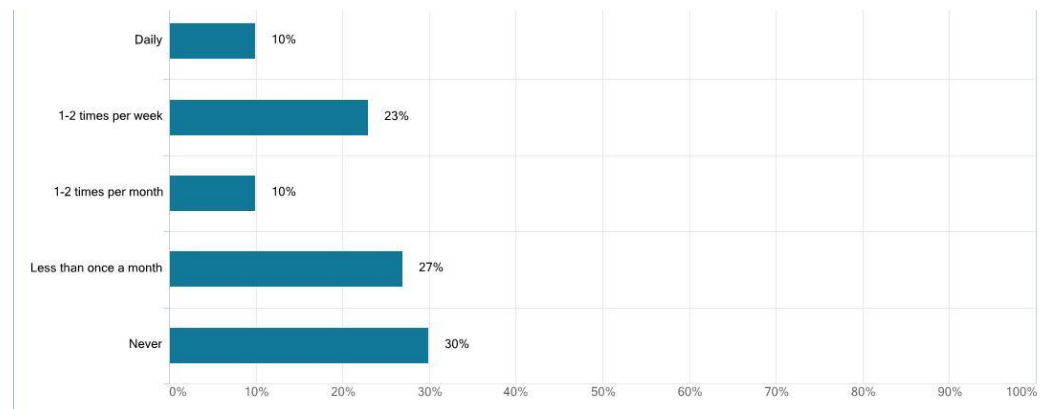
TASK 12 | ICONS ALSO TESTED IN JAN 2018 AS TASK 6

You would like to download the SVG file for the hamburger menu icon. Where would you go to find the icon?

PARTICIPANTS

We distributed the UserZoom study to 100 Nielsen associates who have voluntarily signed up to receive Atlas Design System updates.

- 35 attempted the study (35% response rate)
- Among those, **30 completed the UserZoom study**
 - Participants hold roles in *Development, Product Leadership, QA, Customer Solutions, Analytics, Ops, and Marketing*; representing many roles and departments at Nielsen.
 - **The majority of the study participants had no or only limited experience with the Atlas site** prior to the study. Almost $\frac{1}{3}$ of the participants had never used the Atlas site before and another $\frac{1}{4}$ had only used it less than once a month. The following chart is self reported average usage of the Atlas Design System.





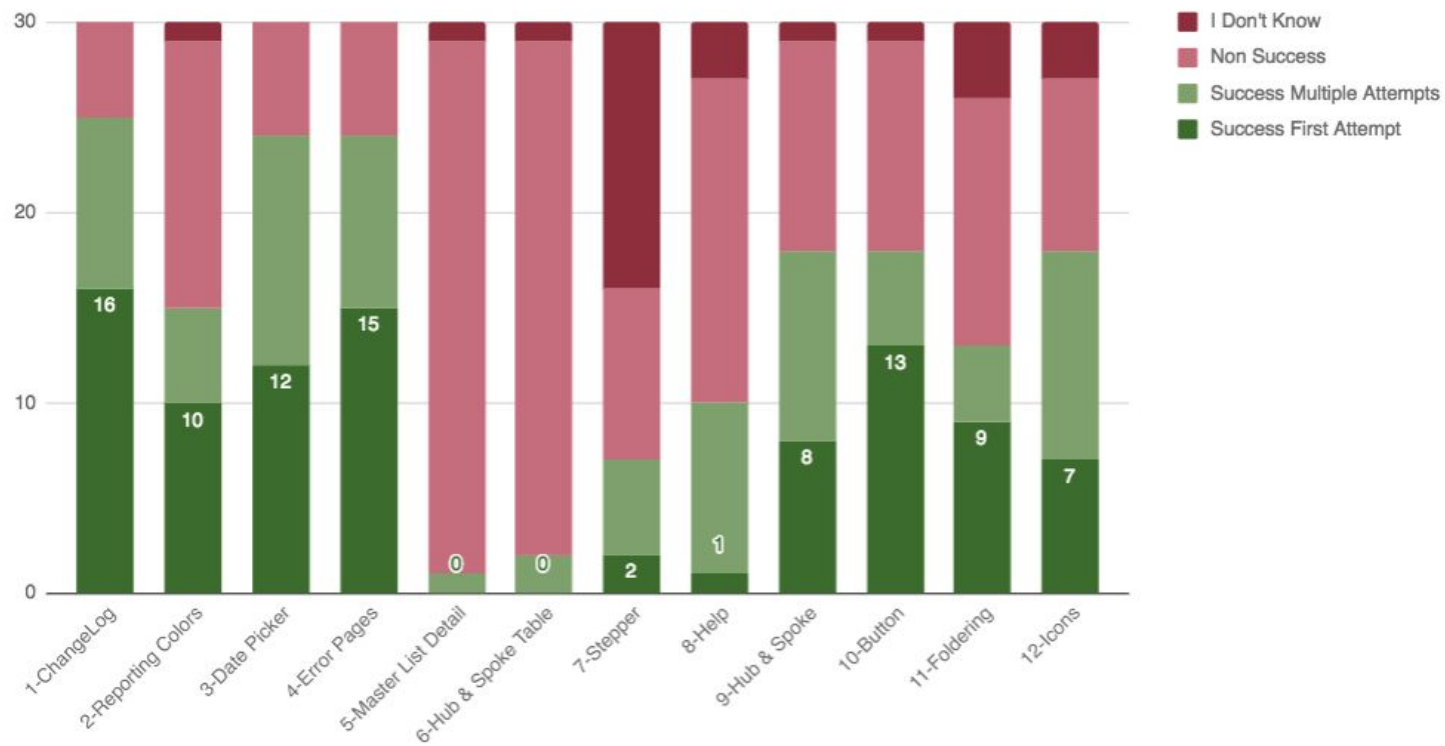
KEY FINDINGS

OVERALL TASK PERFORMANCE

Success vs. failures for all 12 tasks in the tree test

Changelog, Date picker and Error pages were located successfully most often.

Master list detail, Hub and spoke table, Stepper, and Help were not often successfully located, with less than 40% success rate .

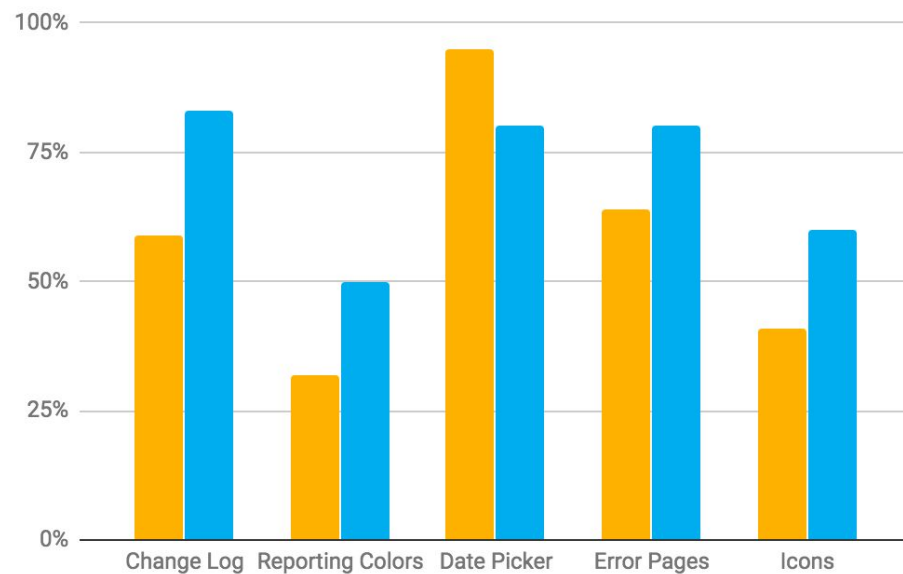


TASK PERFORMANCE JAN VS. MAY

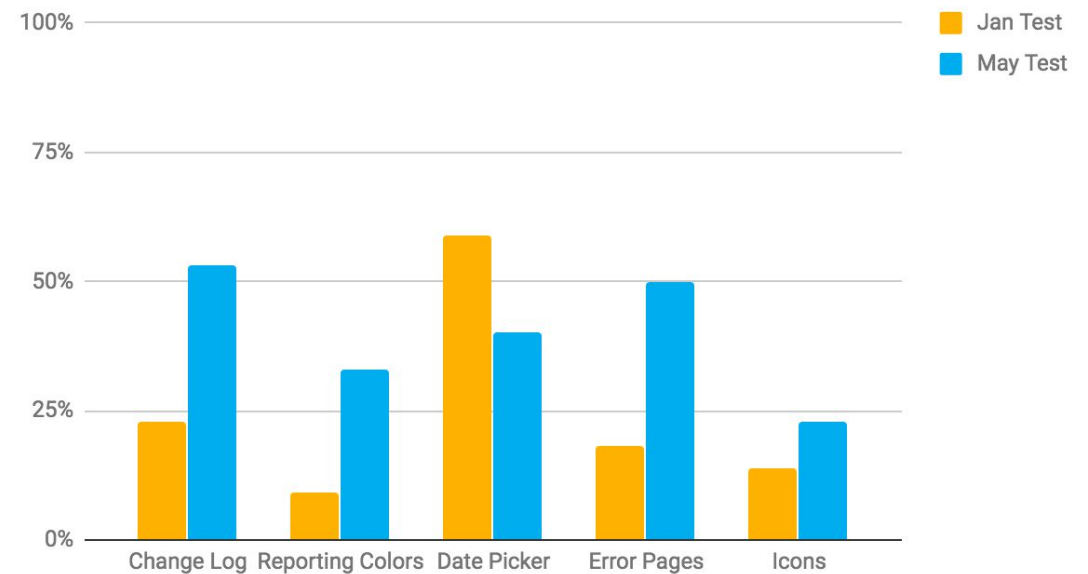
Comparing results of January and May Tree Test

All except for the Date Picker task had better performance than in the Jan study, suggesting that the revised Atlas sitemap is better than the current sitemap in terms of findability.

Task Success Rate: Jan Test vs. May Test

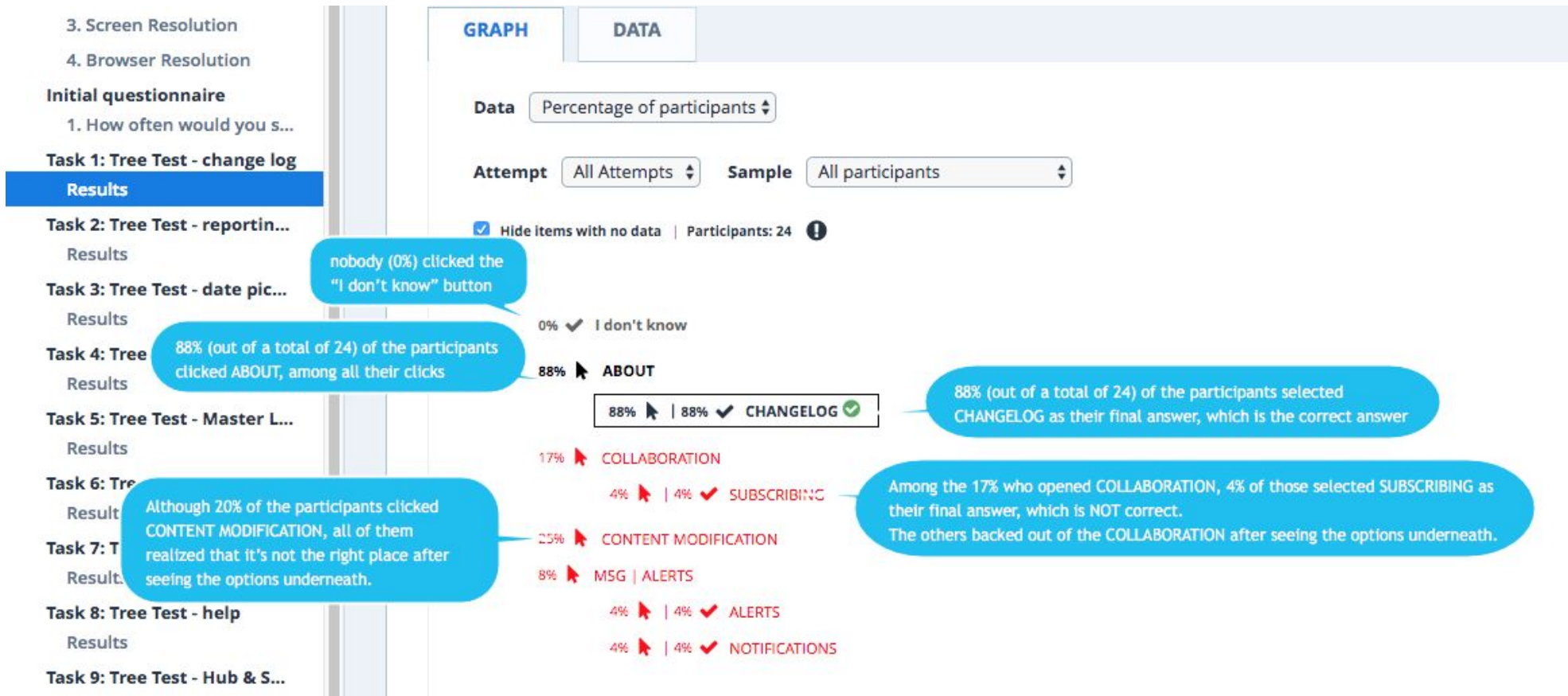


Success First Attempt: Jan Test vs. May Test



- **Success first attempt** means the participants selected the right answer without backtracking, i.e., each item was selected in the shortest number of possible clicks
- Refer to the [Jan Atlas Card Sort & Tree Test report](#)

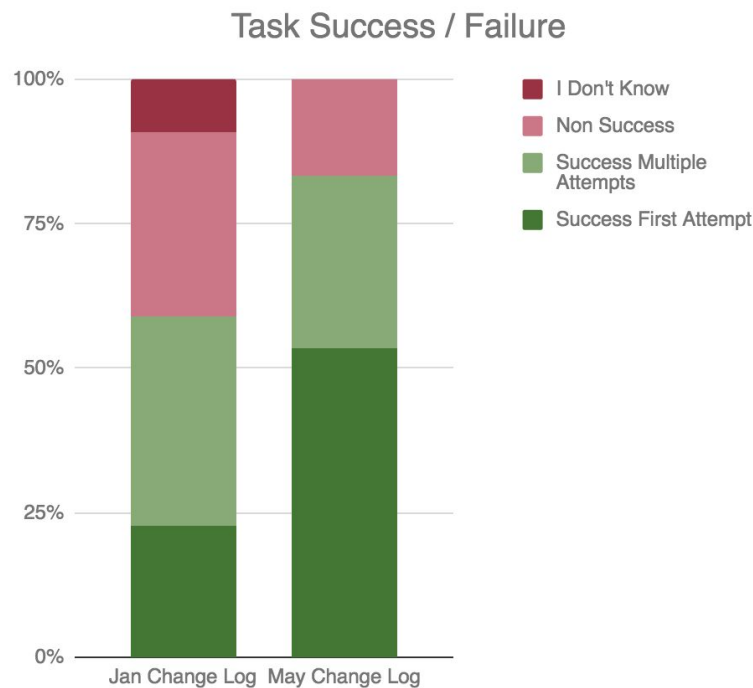
Tree Test Click Analysis: how to interpret the data



TASK 1 - CHANGE LOG | PERFORMANCE

ALSO TESTED IN JAN 2018 AS TASK 2

You want to find out what sections of the Atlas site have recently been updated. Where would you go to find the recent updates?



Overall, the task was rather successful. More than ½ of the participants found *Change Log* in their first attempt. 83% of the participants found it in the end.

Compared to January test result, participants were a lot more successful finding *Change Log* in this test using the new Atlas sitemap.

TASK 1 - CHANGE LOG | CLICK ANALYSIS

First Click: More than 1/2 of the participants went to ABOUT immediately. Almost 1/4 first clicked *Content Modification* and a few clicked *MSG|Alerts* or *Collaboration*.

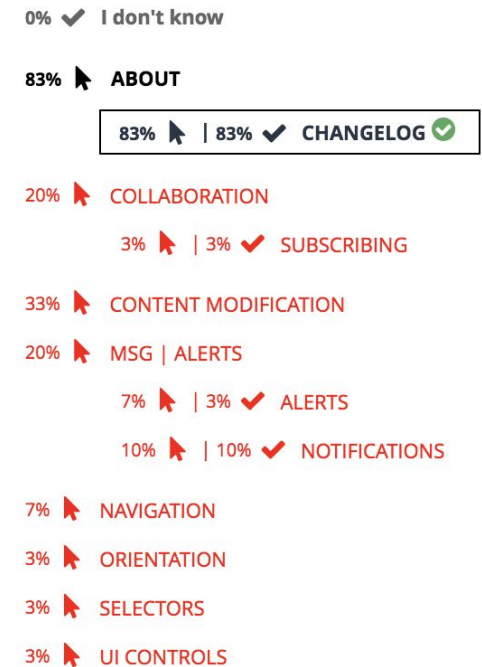
All Attempts: In the end, 83% of the participants click ABOUT and all of those selected the right option.

- Even though almost 1/3 of the participants clicked *Content Modification*, once they opened that menu and saw the options underneath, they all backed out. This indicates that the section header “Content Modification” might be misleading/vague.
- A few participants selected the options under MSG|Alerts or Collaboration.
 - **Recommendation:** In the Atlas site page design, consider separating the ABOUT from the other menu options to avoid confusion.

First Click



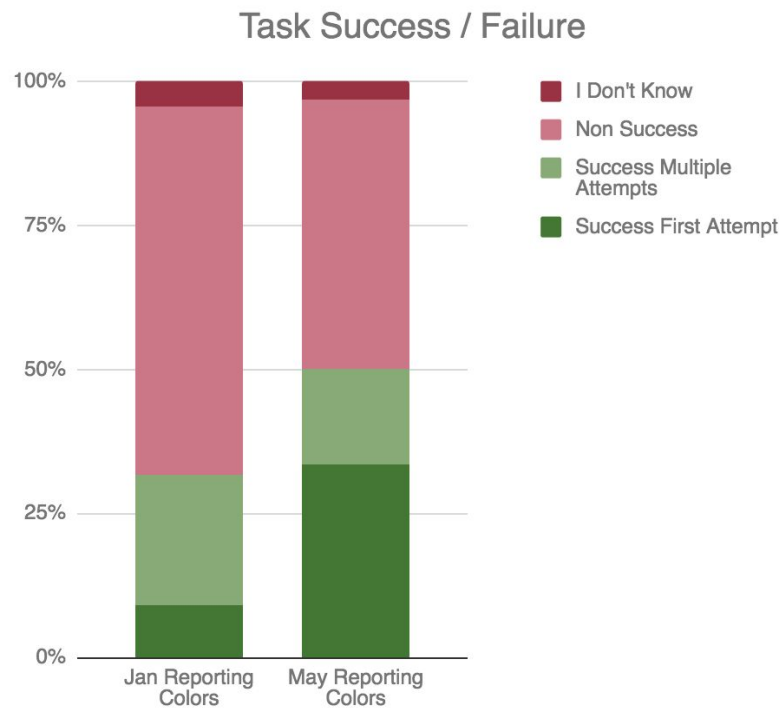
All Attempts



TASK 2 - REPORTING COLOR PALETTE | PERFORMANCE

ALSO TESTED IN JAN 2018 AS TASK 3

You would like to find the hex values of colors in a report. Where do you think hex values of recommended reporting colors would be found?



Half of the participants successfully found *Reporting Color Palette* in the new Atlas site map.

Although this result is better than the Jan test result where only $\frac{1}{4}$ of the participants succeeded the task, it can still be improved

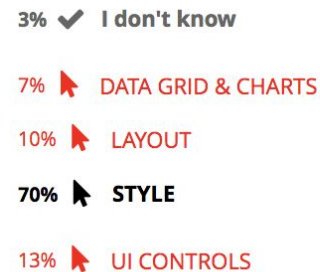
TASK 2 - REPORTING COLOR | CLICK ANALYSIS

First Click: Most participants (70%) went to STYLE immediately.

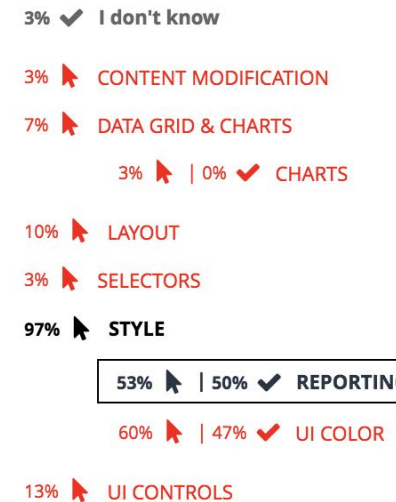
All Attempts: In the end, all except for one participant click STYLE. However, only half of those selected the right option; the other half chose UI Color instead.

- This indicates that the two labels “Reporting Color Palette” and “UI Colors” are not distinctive and descriptive enough.
 - Recommendation:** consider relabelling the two pages “Reporting Color Palette” and “UI Colors” to better differentiate them.
- Even though a few participants first clicked *UI Controls*, *Layout*, or *Data Grid & Charts*, none of them chose the options underneath.

First Click



All Attempts



TASK 3 | DATE PICKER | PERFORMANCE

ALSO TESTED IN JAN 2018 AS TASK 4

You would like to see instructions on how to implement a date picker in your design. Where would you go to find the information about a date picker?



Participants performed better at this task in January than they did in May.

55% selected the correct item on first attempt in January, compared to 40% in May. In January 95% eventually selected the right answer, compared to 80% in May

TASK 3 | DATE PICKER | CLICK ANALYSIS

First Click: Only 43% Went to *Selectors* immediately.

All Attempts: In the end, a majority of 80% selected Date Picker.

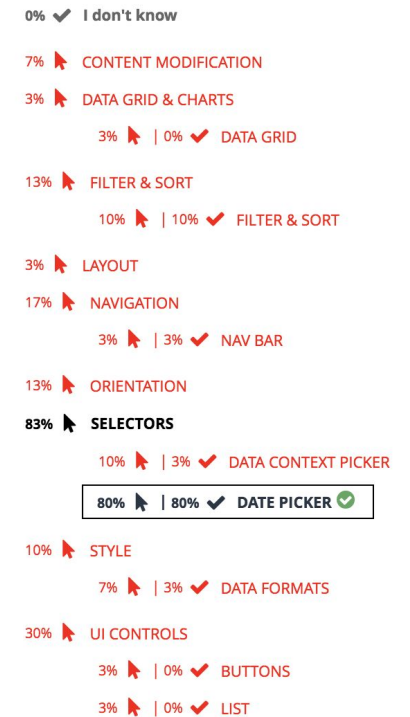
- 30% looked at *UI Controls* (was first click for 27%) but they backed out of that list once seeing the options, indicating that the section header “*UI Controls*” might be misleading/vague
- 10% of the 13% who looked in *Filter and Sorted* selected the wrong answer of *Filter and Sort*, likely due to the misunderstanding of the task instruction, i.e., misread “Date Picker” as “**Data** Picker”

Recommendation: No recommended changes.

First Click



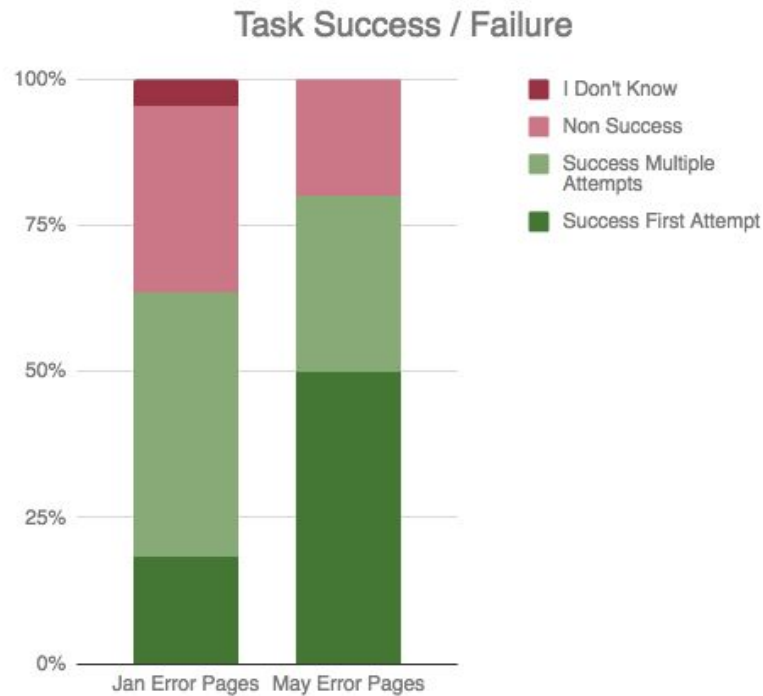
All Attempts



TASK 4 | ERROR PAGES | PERFORMANCE

ALSO TESTED IN JAN 2018 AS TASK 5

You would like to see recommended examples of error (404 and 500) notifications. Where would you go to find out more information about errors?



Participants performed better at this task in May than they did in January

50% selected the correct item on first attempt in May, compared to 18% in January. In May, 80% eventually selected the right answer, compared to 63%.

TASK 4 | ERROR PAGES | CLICK ANALYSIS

First Click: 63% Went to *MSG/ALERTS* immediately

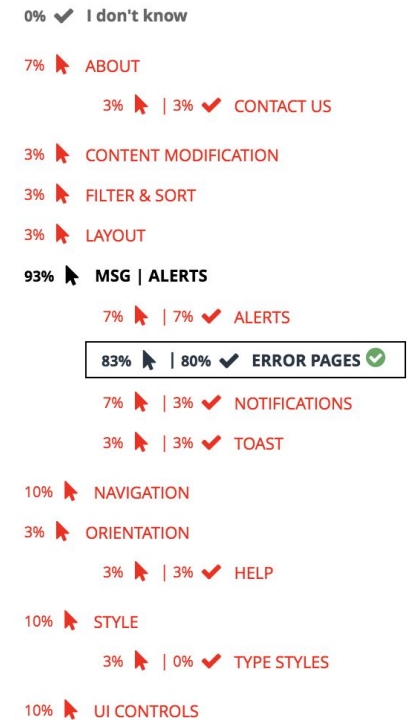
All Attempts: In the end, 93% of the participants selected an option under *MSG/ALERTS*, and a majority of those selected the right answer.

- A few participants looked at other sections and selected wrong pages in the end, but there is no clear trend in their navigation.

Recommendation: No recommended changes.



All Attempts



TASK 5 | MASTER LIST DETAIL | PERFORMANCE

You are working on a data grid that allows users to drill into each line item for more detail. Where would you look to see if there is a standard for this design?



This task is the least successful among all 12 tasks, with only one success via multiple attempts and no success first attempt.

The poor task performance is partially due to the misleading task instruction, with a reference to “*data grid*”, which happens to be a section title. Furthermore, the page title “Master List Detail” is not a common/familiar term

TASK 5 | MASTER LIST DETAIL | CLICK ANALYSIS

First Click: Only 1 participant (3%) clicked *LAYOUT* first

All Attempts: Only 17% of the participants went to *LAYOUT* at some point; and among those, only 1 participant made a selection, which happens to be the correct one. This result indicates that both the section “Layout” and the page title “Master List Detail” are unintuitive.

- 70% of the participants went to *Data Grids & Charts* on their first click and 93% looked there at some point. Further, an 80% majority selected *Data Grid* as their final answer.

Recommendation: Consider changing the name of *Master List Detail* or place it under *Data Grid & Charts*

First Click

3% ✓ I don't know

7% 🖱️ CONTENT MODIFICATION

70% 🖱️ DATA GRID & CHARTS

3% 🖱️ FILTER & SORT

3% 🖱️ LAYOUT

3% 🖱️ NAVIGATION

7% 🖱️ SELECTORS

7% 🖱️ STYLE

All Attempts

3% ✓ I don't know

3% 🖱️ COLLABORATION

3% 🖱️ | 0% ✓ SHARE

10% 🖱️ CONTENT MODIFICATION

3% 🖱️ | 0% ✓ EDITING

93% 🖱️ DATA GRID & CHARTS

3% 🖱️ | 3% ✓ CHARTS

80% 🖱️ | 77% ✓ DATA GRID

7% 🖱️ | 7% ✓ HUB & SPOKE TABLES

10% 🖱️ FILTER & SORT

17% 🖱️ LAYOUT

3% 🖱️ | 3% ✓ MASTER LIST DETAIL ✓

3% 🖱️ | 0% ✓ RESPONSIVE GRID SYSTEM

3% 🖱️ | 0% ✓ WHITEFRAME

10% 🖱️ NAVIGATION

3% 🖱️ ORIENTATION

10% 🖱️ SELECTORS

10% 🖱️ STYLE

7% 🖱️ | 7% ✓ DATA FORMATS

3% 🖱️ UI CONTROLS

TASK 6 | HUB & SPOKE TABLES | PERFORMANCE

A table in your product requires that users be able to add new rows. Where would you find information on designing a feature for adding new rows to a table?



This is another difficult and poor-performing task, with only two success via multiple attempts and no success first attempt.

“Hub and Spoke” is a term that is very specific to UX/UI. It would be unfamiliar to people not in those fields.

TASK 6 | HUB & SPOKE TABLES | CLICK ANALYSIS

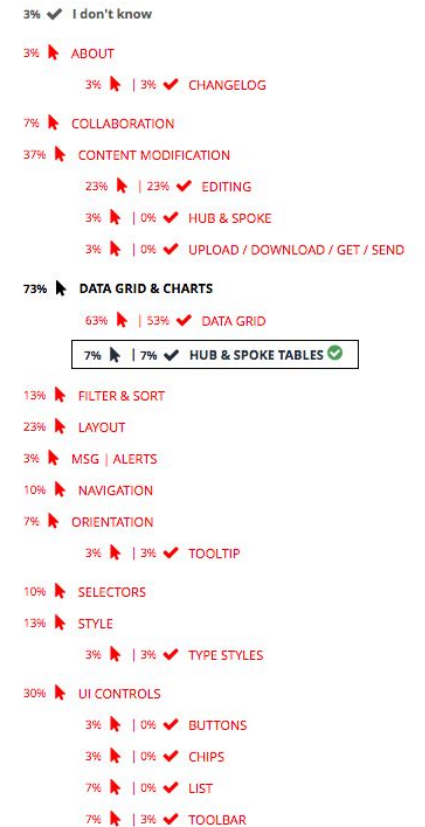
First Click: 53% did select *Data Grid and Charts* on first click.

All Attempts: Despite successful first click, only 7% selected the correct item in that section, with 53% ultimately choosing *Data Grid*. This result indicates that the page title “Hub & Spoke Tables” caused the findability issue, not the section.

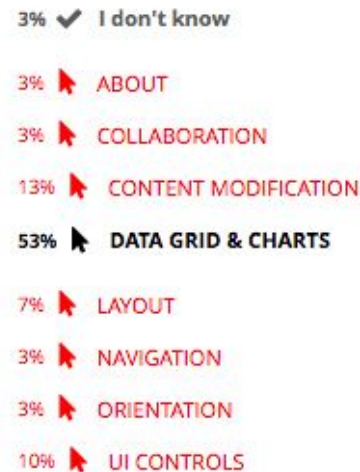
- Besides *Data Grid & Charts*, quite a few participants looked into *Content Modification* and *UI Controls*, indicating that the section headers “Content Modification” and “UI Controls” might be misleading/vague. This is consistent with the [Task 1](#) and [Task 3 click analysis](#) results.

Recommendation: Consider explaining and linking to *Hub & Spoke Tables* in *Data Grid*

All Attempts

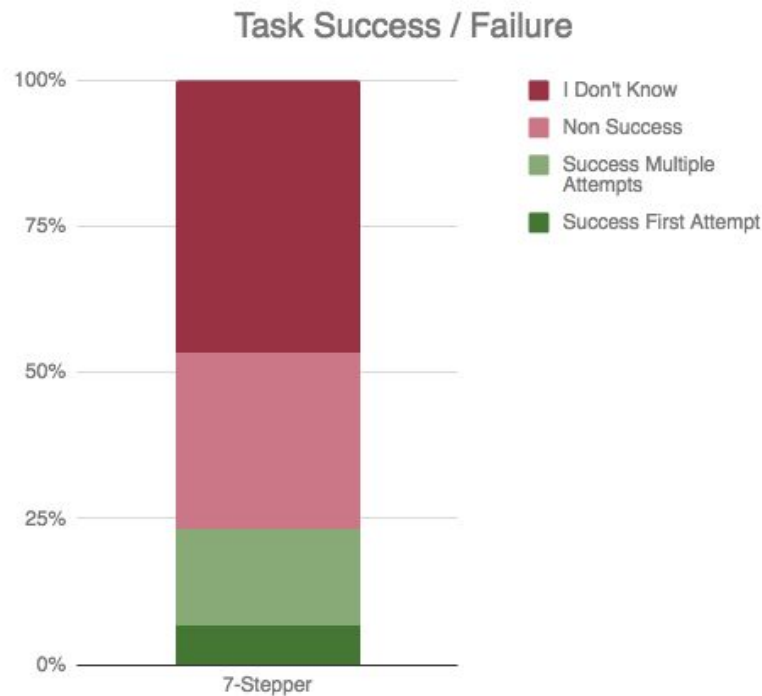


First Click



TASK 7 | STEPPER | PERFORMANCE

You need to design a wizard, which will allow users to create price simulations through a set of steps. Where can you find out how to design a wizard?



This is another difficult and poor-performing task, with a 25% task success rate and only one success first attempt. Almost 1/2 of the participant quit the task, by clicking the “I don't know” button.

The stepper was formally called “Wizard” so this caused confusion.

TASK 7 | STEPPER | CLICK ANALYSIS

First Click: Only 27% of the participants clicked *Navigation* first and the others went to various sections in the tree.

All Attempts: In the end, 77% went to *Navigation* at some point, but only 23% selected *Stepper*. This result suggests that even when they saw stepper they didn't relate it to wizard.

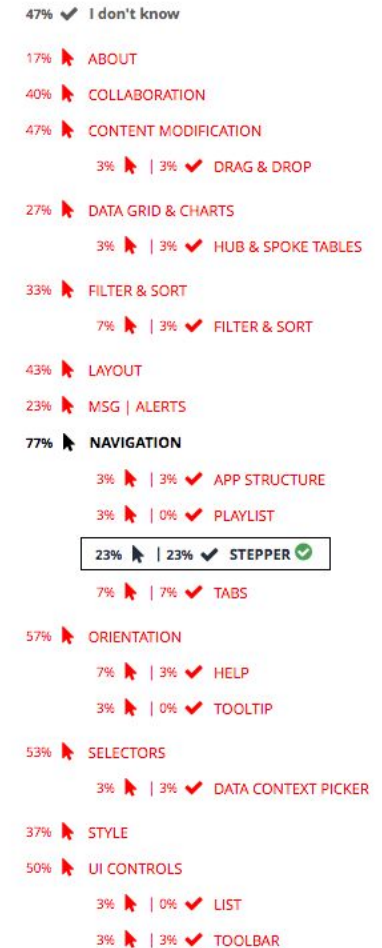
- Clicks were very wide spread. Besides Navigation, three other sections (Orientation, Selectors, UI Controls) were visited by more than ½ of the participants at some point; suggesting that there is no clear trend where the users would go to find wizard and that users would likely use the **Search function** instead in real life.

Recommendation: Consider renaming to: *Stepper (formally Wizard)*

First Click



All Attempts



TASK 8 | HELP | PERFORMANCE

You are introducing a new feature and you want to provide help / tips to educate and direct users to this new feature. How can you find out the standard for designing help?



The Help task had 10 successes (33% success rate), including 1 Success First Attempt and 9 Success Multiple Attempts.

The poor task performance is partially due to the misleading task instruction; some participants looked for *new features* rather than help

TASK 8 | HELP | CLICK ANALYSIS

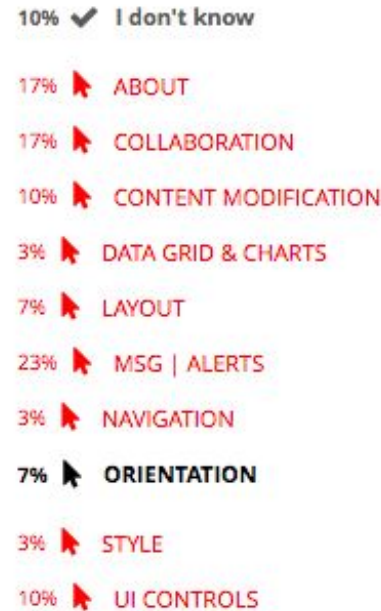
First Click: Only one person went to *Orientation* first. The majority when to *MSG | Alerts*.

All Attempts:

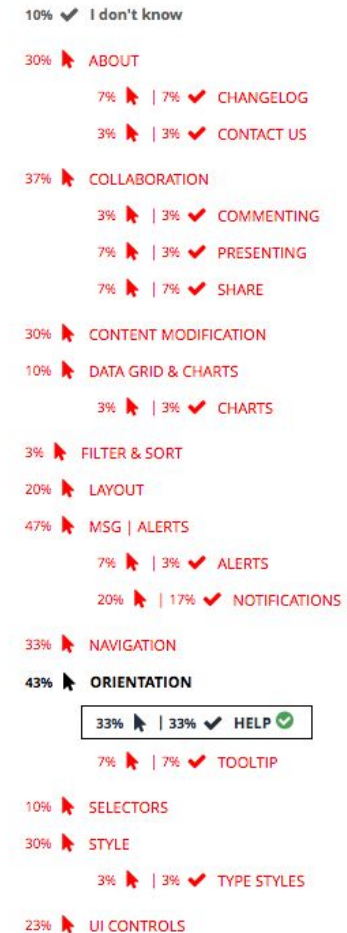
- *MSG | Alert* was clicked by 47% of participants. This could be related to the task mentioning a new feature.
- 43% looked in *Orientation* and did not select help supporting the idea that the task may have been confusing.

Recommendation: Likely the poor results are related to poor task design/instruction. No recommended changes.

First Click



All Attempts



TASK 9 | HUB & SPOKE | PERFORMANCE

The User Experience team has defined a pattern called 'Hub & Spoke' for instances of adding items to an existing page or panel. Where would you look to learn about this pattern in detail?



This task performed relatively well. 18 participants (60%) correctly located Hub and Spoke, among which 8 were Success First Attempt (a 27% direct success rate).

Note: Calling out the page name in the task instruction likely helped.

TASK 9 | HUB & SPOKE | CLICK ANALYSIS

First Click: About ¼ of the participants clicked the right section - *Content Modification* first. A similar amount went to the *Data Grid & Charts* first (23%) and a slightly fewer (17%) went to *Collaboration*.

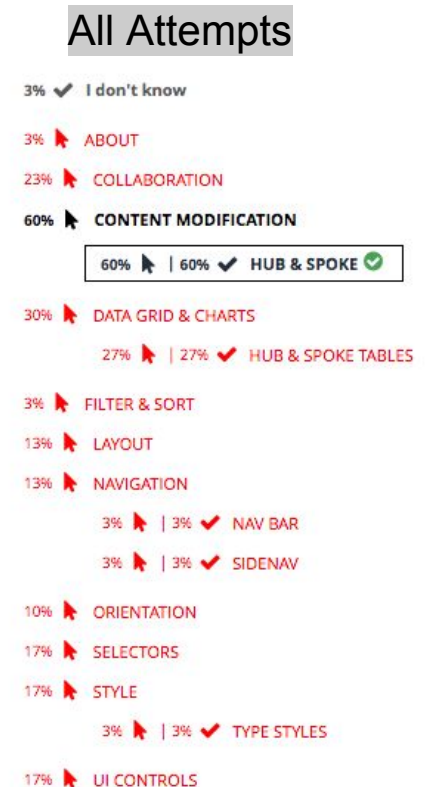
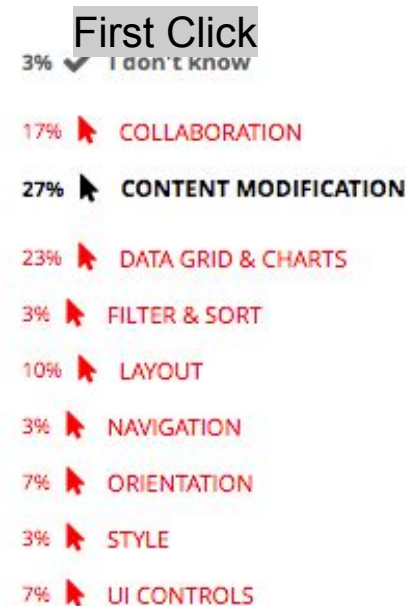
- This result suggests that it's **not intuitive** where to find the Hub & Spoke page via the menu/tree navigation; users would likely use the Search function instead in real life.

All Attempts: In the end, 60% of the participants click *Content Modification* and all of those selected the right option.

- However, **more than ¼ of the participants selected *Hub & Spoke Tables* due to the similarity in the page title.**

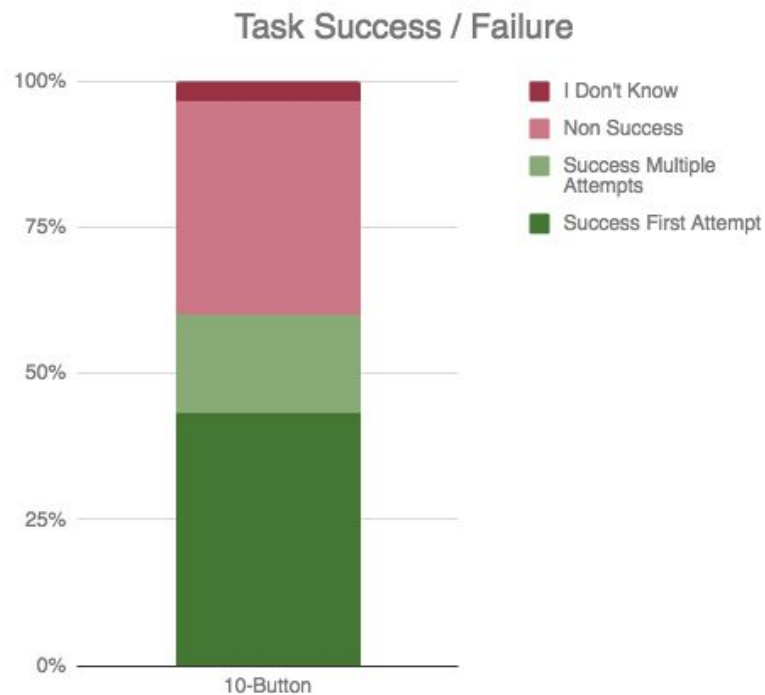
Recommendation: Consider explaining and linking to *Hub & Spoke Tables* in *Data Grid* *

*Same recommendation as task 6.



TASK 10 | BUTTON | PERFORMANCE

Where can you find out the difference between a primary and accent button in the Atlas Design System?



This task performed relatively well, with a 60% success rate. 13 participants (almost ½) correctly located “Button” on first attempt, another 5 succeeded after multiple attempts.

TASK 10 | BUTTON | CLICK ANALYSIS

First Click: 47% correctly looked in *UI Controls* first, but 37% looked in *Style* first.

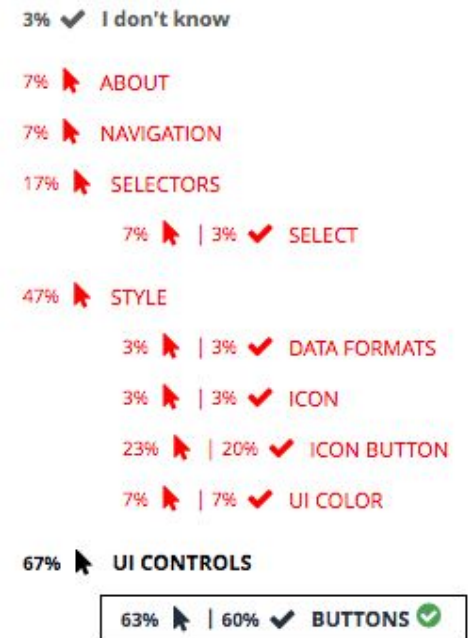
All Attempts: In the end, 2/3 of the participants click UI Controls and most of those selected the right option.

- However, almost 1/2 of the participants went to *Style* at some point, indicating potential confusion between the *UI Controls* and *Style* sections.
- There was some confusion between *Icon Button* under *Style* and *Buttons* under *UI Controls*. 1/3 of the participants selected *Icon Button* under *Style* in the end.

Recommendation: Consider the confusion of *Button* and *Icon Button*. Consider putting *Button* and *Icon Button* in the same section, or linking the two through related pages.

UI Controls and *Style* could not be clear enough sections, however results are not strong enough to suggest a need for a change.

All Attempts

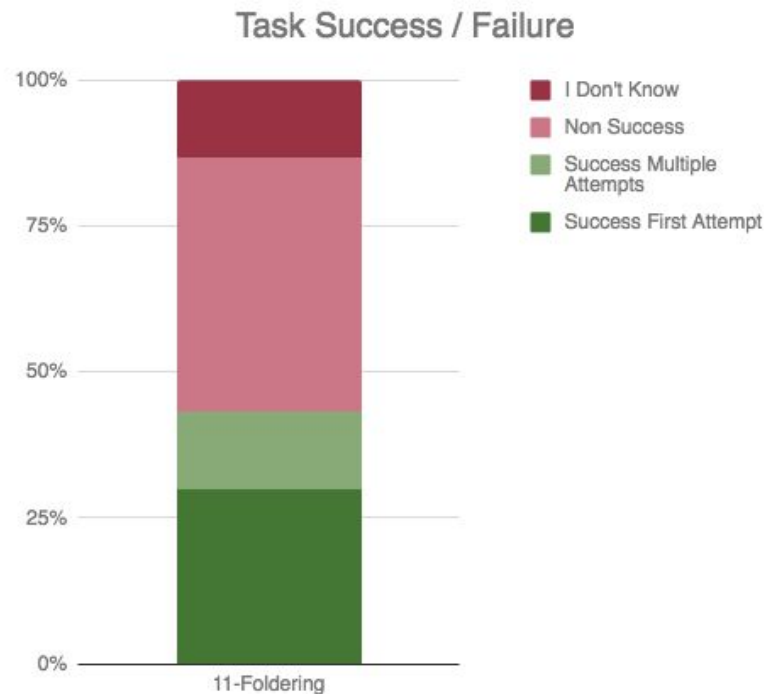


First Click



TASK 11 | FOLDERING | PERFORMANCE

You want to design a new feature which would allow users to group similar reports into folders. Where would you look to find information on moving items into folders?



The Foldering task had 13 successes (a 43% success rate), which is not great. 9 participants succeeded in their first attempt (30%) and 4 eventually selected the correct item after multiple attempts.

Note: Foldering does not currently exist in the patterns so that may have caused some confusion.

TASK 11 | FOLDERING | CLICK ANALYSIS

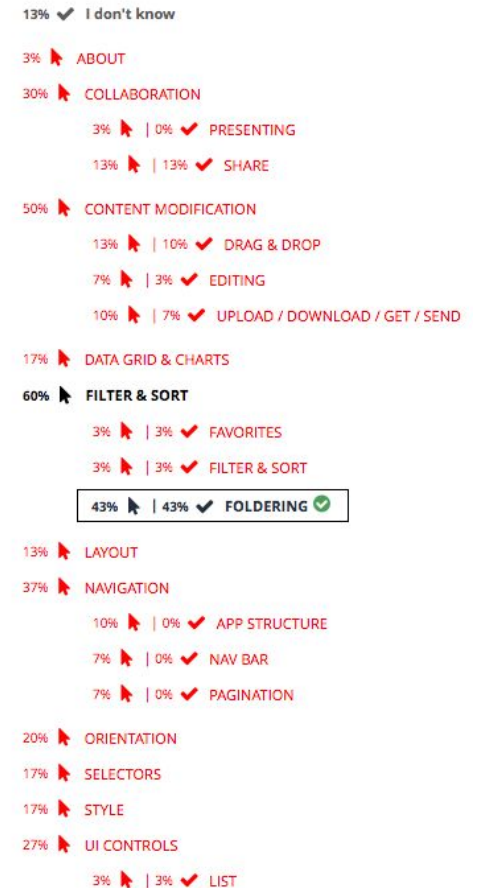
First Click: Only about 1/3 of the participants clicked the right section - *Filter and Sort* first and the others went to various sections in the tree.

All Attempts: 60% looked in *Filter & Sort* at some point and but only 43% selected the right option *Folders*, suggesting that the task instruction may have been confusing.

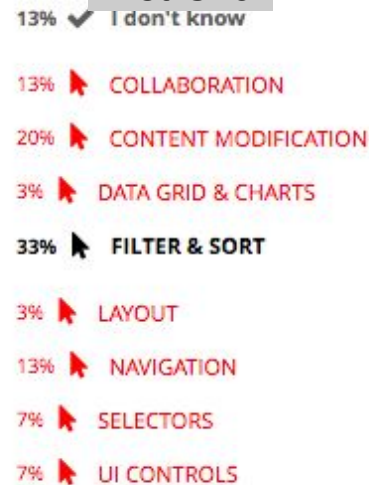
- *Content Modification* was clicked by 50% of the participants at some point, again suggesting that this section header maybe too vague. This was also mentioned in [Task 1](#) and [Task 6 click analysis](#) results.
- 1/3 of the participants looked in *Navigation* at some point, but eventually backed out. This could be related to the way folders work in other applications outside of Nielsen.

Recommendation: Consider if *Content Modification* is too vague. Also consider the conflict there maybe with a *Filter & Sort* section header and pattern.

All Attempts



First Click



TASK 12 | ICONS | PERFORMANCE

ALSO TESTED IN JAN 2018 AS TASK 6

You would like to download the SVG file for the hamburger menu icon. Where would you go to find the icon?



Participants performed better at this task in May compared to January, with a 60% success rate (vs. 41% in January) and a 23% direct success rate (vs. 14% in January).

TASK 12 | ICONS | CLICK ANALYSIS

First Click: Consistent with the results from the [Task 10 \(Buttons\) click analysis](#), there seems to be some **confusion between the UI Controls and Style sections**. More participants selected *UI Controls* first than the correct section - *Style*.

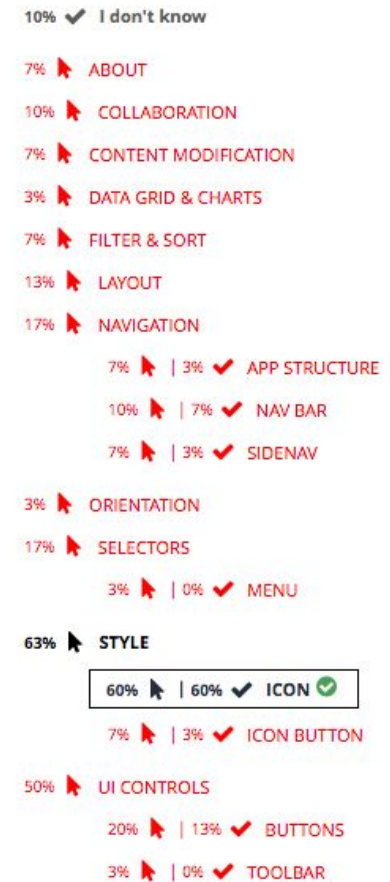
All Attempts: There was a significant amount of clicking around but **60% did correctly complete this task**.

- A few participants selected the Buttons option under UI Controls section. This again suggests the potential confusion between the Icon, Icon Button and Buttons options, as indicated in [Task 10 \(Buttons\) Click Analysis](#). Icon can be a button, which maybe the source of confusion.

Recommendation: Consider the confusion of *Icon* and *Icon Button*. Perhaps rename *Icon* to *Icon Style*. Additionally, consider putting *Button* and *Icon Button* in the same section, or linking the two through related pages.

UI Controls does have some indications of being a catch all similar to *Content Modification*, could consider a different name.

All Attempts



First Click





Additional Feedback

ADDITIONAL FEEDBACK

In addition to the tree test we asked one final question of participants:

“DO YOU HAVE ANY FINAL THOUGHTS ABOUT THE STUDY OR ABOUT YOUR EXPERIENCE USING THE NIELSEN ATLAS DESIGN SYSTEM WEBSITE?”

FEEDBACK HIGHLIGHTS ABOUT TEST

- “ I felt pretty clueless about which "buckets" to look in, but that could be because I'm totally unfamiliar with the Atlas Design System and what it's used for!
- “ There are too many menu items. I have a much better personal experience navigating sites that consolidate their menu into fewer choices.
- “ Would probably be useful to give at the end an overview of which elements one got right or not.... i know you are not being evaluated... but it does trigger the curiosity to understand how well one has done in the study.. i think usability tests should be conducted with this tool as much as possible :)
- “ Didn't seem to have the 'usual' help or tutorial routes into assisting the user ...

FEEDBACK HIGHLIGHTS ABOUT ATLAS

- “ Please provide standard hamburger functionality. When clicked it should toggle open/closed but retain the state that I selected. It is frustrating to constantly have to click to open the menu when searching for multiple items. Terminology has changed many times over the years for the same types of UI controls. Please label items consistently and refrain from changing standard UI controls to the latest trendy name. Our customers also reference the site and are confused by the difference in UI control names. As always... we reference the site almost daily. Thank you for a job well done. Good work!!!
- “ Atlas design is a very useful website with rich and high detailed style/pattern guidelines. But the search and navigation features are painful, sometime it's hard to find the page you need. Great news if you planned to enhance those features
- “ The video examples of use are really helpful when helping understand when to use the different 'sizes' of a pattern.
- “ Its an very useful tool that allow us find the information quickly, avoiding development time investment.

FEEDBACK HIGHLIGHTS ABOUT ATLAS

- “ Whenever I try to use it I run into dead ends. I click on a topic and get a page not found error. An example is finding the latest UX for the user help system.
- “ I love that I no longer have to be connected to VPN to access it. It's quite nice. I also love the fact that we have nice looking design system. The search system is also really nice, making it easy to find things that I'm looking for. I wish there was a pre-built Axure RP or Sketch library to be able to create wireframes with the new guidelines.

The background of the entire image consists of a series of horizontal, wavy lines in various shades of blue, creating a sense of depth and movement, similar to water ripples or a topographical map.

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THE SCIENCE BEHIND WHAT'S NEXT™

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