

# Using Taxonomy Testing to Prove It Will Work

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# Research planning

## Overview

- ❖ Testing Goal
- ❖ Testing Activity
- ❖ Target Audience

## Tactics

- ❖ Validation Tasks
- ❖ Participant Invitations

<p><b>Medline.com Catalog Improvement Initiative: Validation Research Plan</b></p> <p>This research plan outlines the goals, activities, and participants that will govern the validation testing Taxonomy Strategies will conduct on the product classifications.</p> <p><b>Research Goals</b> The purpose of this validation testing is not to verify that every label in the proposed classification is perfect. Rather, our intent is to have participants explore the new classification system and see if it will support them.</p> <p><b>Main Research Goals:</b></p> <ul style="list-style-type: none"><li>Learn if users will browse to items via facets other than product type.<ul style="list-style-type: none"><li>Are other facets such as purpose, setting and expertise any helpful to finding items?</li></ul></li><li>Explore if the new structure to the product type facet will support users finding items.</li></ul> <p><b>Research Activities</b></p> <p><b>Tree Testing</b> The validation testing will use an online tool called <a href="https://www.optimalworkshop.com/treejack/">Treejack</a> by Optimal Workshop [https://www.optimalworkshop.com/treejack/]. Treejack is a tool that allows for evaluating a classification system. Participants will be given five-eight tasks to complete and then are shown the new classification. They must click on the path they would take to find the item and then indicate where they believe the item would be found. After each task, users will be asked how difficult it was to complete the task, on a scale of 1 – easy to 3 – hard. The last question will ask users what changes they most want to see in the product classification. The analysis of the results includes a task by task breakdown and detailed path analysis to see if users looked for the item in the same place our taxonomists would place it in the classification.</p> <p><b>Target Audiences</b> Participants will include both Medline customers and employees. From the responses to the site survey that ran in February 2019 we collected a list of names of customers willing to participate in user research studies. We will email this list directly asking them to participate in the validation testing.</p> <p>For Medline employees, Jenny and Fatrine will email those employees that are on the core project team, interact with the product classification, or otherwise will be impacted by this project to participate.</p>	<p>Our goal is to have 50-100 participants complete the testing, representing both customers and employees.</p> <p><b>Validation Tasks</b> As part of the <a href="#">Treejack</a> test, users will be presented with five-eight tasks to complete. Taxonomy Strategies reviewed the search query logs to find commonly search for items, as well as looked at areas of the classification we wanted to explore, to come up with the proposed list of tasks.</p> <ol style="list-style-type: none"><li>Your clinical team needs you to find a dressing that will reduce swelling and improve circulation, such as an ugg boot.<ol style="list-style-type: none"><li>ANSWERS: Advanced Wound Care Dressings (Product Type); Wound Care (Purpose); Advanced Wound Care (Expertise)</li></ol></li><li>An oncologist has asked for a different type of Huber needle that will allow for higher pressure and flow rates for their new port system.<ol style="list-style-type: none"><li>ANSWERS: Huber Needles (Product Type); Chemotherapy (Purpose); Oncology (Purpose)</li></ol></li><li>The nurses at your clinic have complained that their current exam gloves rip much easier than the old, discontinued ones. Find an option that will stand up to their wear and tear.<ol style="list-style-type: none"><li>ANSWER: Exam Gloves (Product Type)</li></ol></li><li>The physical therapists at your nursing home have asked that the gait belts they have to be replaced because they are starting to fray. They want to see the options available so they can decide which one they want.<ol style="list-style-type: none"><li>ANSWERS: Physiotherapy (Purpose); Physical Medicine and Rehabilitation (Purpose); Gait Belts (Product Type)</li></ol></li><li>One of the medical assistants is wondering if it's possible to get <b>more plush underpads</b> since patients have been complaining that the beds are too hard.<ol style="list-style-type: none"><li>ANSWER: Underpads (Product Type)</li></ol></li><li>During case review, it came up that the typical barrier skin cream isn't working for one of the patients; it looks like she has a fungal infection too. Does Medline have any information about how to care for this patient's skin condition?<ol style="list-style-type: none"><li>ANSWERS: Prescription Drugs (Product Type); Infection Prevention (Purpose)</li></ol></li><li>A home health nurse has a patient with a pressure ulcer on their sacrum. She's looking for options on what to use to cover the wound.<ol style="list-style-type: none"><li>ANSWERS: Wound Care (Purpose); Advanced Wound Care (Expertise)</li></ol></li><li>You need a way to secure tubing to the patient's skin during surgery. What are the best options?<ol style="list-style-type: none"><li>ANSWERS: Surgical Tapes (Product Type); Surgery (Specialty)</li></ol></li></ol> <p><b>Email Invites</b> The following email will be sent to customers inviting them to participate:</p>	<p><b>Subject Line:</b> We need your input to improve Medline.com</p> <p>Hello!</p> <p>We are contacting you because you previously provided very helpful feedback for improving Medline.com, and expressed interest in participating in future research opportunities. We appreciate your time and highly value your input for improving the site.</p> <p>We'd love to get your feedback again, this time in looking at product categories in the online catalog. This activity should only take 10-15 minutes to complete.</p> <p><a href="#">Complete the brief Medline online activity now!</a> (← will link to <a href="#">Treejack</a> test)</p> <p>Again, thank you for your time! If you no longer wish to be contacted for Medline feedback, please reply to this email to let us know.</p> <p>Best regards, The Taxonomy Strategies Team</p> <p>The following email will be sent to employees inviting them to participate:</p> <p><b>Subject line:</b> We need your input to improve <a href="#">Medline.com</a></p> <p>Hello!</p> <p>We have a project underway to improve the <a href="#">medline.com</a> online catalog. Essentially, we want to make it easier for customers to browse, search, find and compare items on our site.</p> <p>We are looking at how we organize our products and we'd love to get your input on the proposed product classification that we are developing as part of our initiative. We are contacting you because you have been identified as someone at Medline who is currently or will be involved with the product classification.</p> <p><a href="#">Complete the 10-min Medline online activity now!</a> (← will link to <a href="#">Treejack</a> test)</p> <p>If you have any questions or comments about this activity or the project, please email me at <a href="mailto:jfreedman@medline.com">jfreedman@medline.com</a> or call me at (847) 643-4358.</p> <p>Thank you for your time and input for improving <a href="#">Medline.com</a>.</p> <p>Best regards, Jenny Freedman</p>
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# Testing goals

- ❖ Is the taxonomy “good enough” to implement?
  - E.g., walk-through and discuss taxonomy in a focus group.
- ❖ Gather evidence that is persuasive for stakeholders to be confident that the taxonomy is worth implementing.
  - E.g., explore the new classification system and see if it will support them.
- ❖ Early testing and evaluation of the taxonomy before a lot of content has been tagged so adjustments can be made if needed.
  - E.g., tag some content to see how complete and consistent it is.
- ❖ Identify areas for improving the taxonomy once it is has been implemented and is being used in production.
  - E.g., respond to variety of change requests.
- ❖ Incremental and continuous improvement throughout the taxonomy lifecycle.
  - E.g., identify categories to be split or merged based on usage.

# Qualitative taxonomy testing methods

Method	Process	Who	Requires	Validation
Walk-through	Show & explain	<ul style="list-style-type: none"> <li>Stakeholders</li> <li>SMEs</li> </ul>	<ul style="list-style-type: none"> <li>Rough taxonomy</li> </ul>	<ul style="list-style-type: none"> <li>Approach</li> <li>Appropriateness to task</li> </ul>
Walk-through	Check conformance to editorial rules	<ul style="list-style-type: none"> <li>Taxonomist</li> </ul>	<ul style="list-style-type: none"> <li>Draft taxonomy</li> <li>Editorial Rules</li> </ul>	<ul style="list-style-type: none"> <li>Consistent look and feel</li> </ul>
Usability Testing	Contextual analysis (focus group, card sorting, scenario testing, etc.)	<ul style="list-style-type: none"> <li>Users (internal &amp; external)</li> </ul>	<ul style="list-style-type: none"> <li>Draft taxonomy</li> <li>Tagged content</li> <li>Tasks &amp; Answers</li> </ul>	<ul style="list-style-type: none"> <li>Consensus on categories</li> <li>Tasks are completed successfully</li> </ul>
User Satisfaction	Focus group Survey	<ul style="list-style-type: none"> <li>Users (external)</li> </ul>	<ul style="list-style-type: none"> <li>Draft Taxonomy</li> <li>UI Mockup</li> <li>Search prototype</li> </ul>	<ul style="list-style-type: none"> <li>Reaction to taxonomy</li> <li>Reaction to new interface</li> <li>Reaction to search results</li> </ul>
Tagging Content	Tag content with taxonomy	<ul style="list-style-type: none"> <li>Taxonomist</li> <li>Stakeholders</li> <li>Indexers</li> </ul>	<ul style="list-style-type: none"> <li>Representative content</li> <li>Draft taxonomy</li> </ul>	<ul style="list-style-type: none"> <li>Complete indexing</li> <li>Consistent indexing</li> <li>Provides basis for quantitative methods</li> </ul>

# Quantitative taxonomy testing methods

Method	Process	Who	Requires	Validation/Action Items
Indexing Analytics	Analyze how many items in each category	<ul style="list-style-type: none"><li>▪ Taxonomist</li></ul>	<ul style="list-style-type: none"><li>▪ Taxonomy</li><li>▪ Indexed collection</li></ul>	<ul style="list-style-type: none"><li>▪ Expected Zipf distribution</li><li>▪ Merge &amp; split candidates flagged</li></ul>
Consistency	Closed card sort of representative items	<ul style="list-style-type: none"><li>▪ Indexers</li><li>▪ Users</li></ul>	<ul style="list-style-type: none"><li>▪ Taxonomy</li><li>▪ Indexed collection</li></ul>	<ul style="list-style-type: none"><li>▪ Consistent categorization</li><li>▪ Inconsistencies flagged</li></ul>
“Fit” (between content and taxonomy)	Counts of terms & items summed within taxonomy hierarchy	<ul style="list-style-type: none"><li>▪ Taxonomist</li></ul>	<ul style="list-style-type: none"><li>▪ Taxonomy</li><li>▪ Indexed collection</li></ul>	<ul style="list-style-type: none"><li>▪ Expected Zipf distribution</li><li>▪ Mismatches between term% and document% flagged</li></ul>

❖ Query logs, click trails and content analytics provide the data for quantitative taxonomy testing.



# Target audience

**Customers**



**Employees**

Existing lists

Screening criteria (demographics)

Incentives

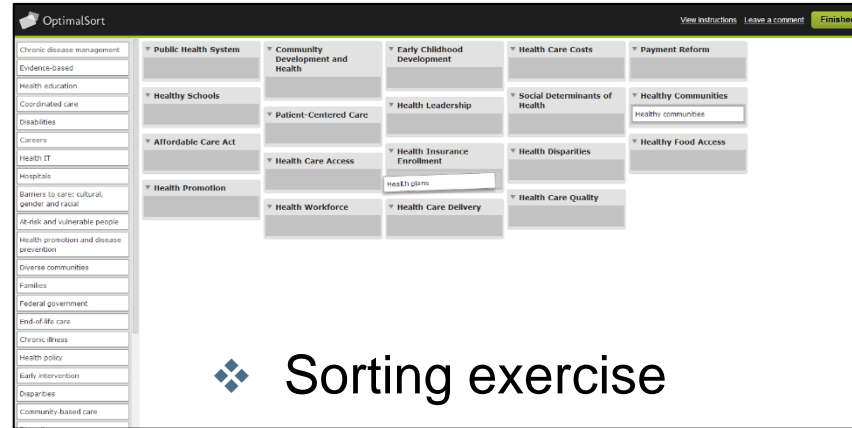
How many

# Usability testing

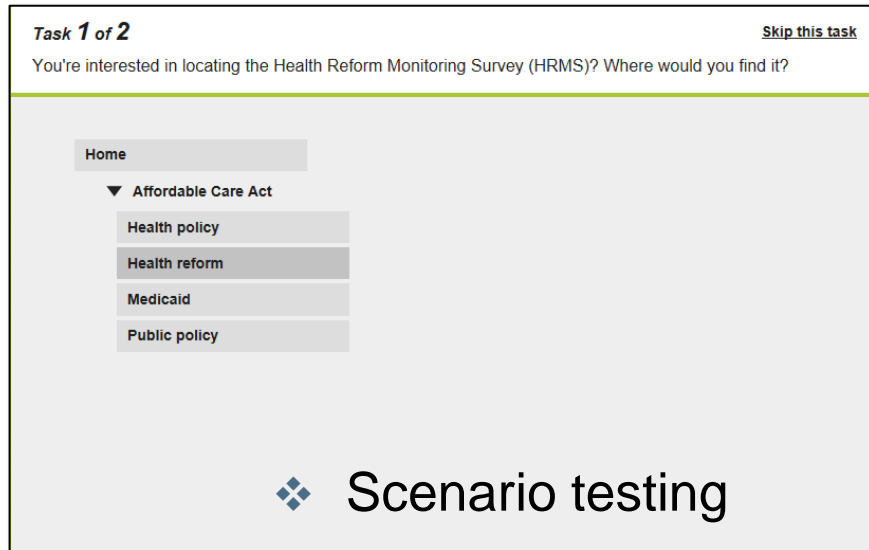
- ❖ Test taxonomy with stakeholders and subject matter experts (SMEs).



❖ Facilitated focus group



❖ Sorting exercise



❖ Scenario testing



# Focus group

Group interview involving a small number of participants who have common traits. Their reactions to specific facilitator-posed questions are studied. – *Wikipedia*



## Questions

- ❖ What do you think about these Topics overall?
- ❖ Are there any Topics that you did not understand?
- ❖ Are there too many or too few Topics?
- ❖ Are there any Topics that can be combined?
- ❖ Are there any Topics you expected to see, that you think are missing?

## Draft Topics (Home Living)

Architecture & Design	Mold & Mildew
Arts & Crafts	Pest Control
Cleaning	Pets
Décor	Remodeling
Driving	Safety
Energy Saving	Saving Money
Green Living	Security
Know-how	Smart Home
Lifestyle	Storage & Organization



# Closed sorting exercise

Helps reveal the degree to which the participants agree on which cards belong under each category. – *Wikipedia*



[View instructions](#) [Leave a comment](#) **Finished**

<p>Landmark Study Reveals Connection Between Workforce Health and Community Health <b>i</b></p> <p>Beyond the Four Walls: Why Community is Critical to Workforce Health <b>i</b></p> <p>RWJF Sports Award <b>i</b></p> <p>The Oregon Health Insurance Experiment <b>i</b></p> <p>RWJF Statement on King v. Burwell Decision <b>i</b></p> <p>A New Way to Talk about the Social Determinants of Health <b>i</b></p> <p>2016 RWJF Culture of Health Prize <b>i</b></p> <p>Want a Healthier Workforce? Investing in Community Health Can Pay Off <b>i</b></p> <p>Future of Nursing Scholars <b>i</b></p>	<p><b>Brief</b> <b>i</b></p> <p>0 items</p>	<p><b>News Release</b> <b>i</b></p> <p>0 items</p>	<p><b>Program/Initiative</b> <b>i</b></p> <p>0 items</p>	<p><b>Funding Opportunity</b> <b>i</b></p> <p>0 items</p>
	<p><b>Tool/Resource</b> <b>i</b></p> <p>0 items</p>	<p><b>Staff/Leadership Bio</b> <b>i</b></p> <p>0 items</p>	<p><b>Report</b> <b>i</b></p> <p>0 items</p>	<p><b>Blog Post</b> <b>i</b></p> <p>0 items</p>
	<p><b>Grant Record</b> <b>i</b></p> <p>0 items</p>	<p><b>Story/Profile</b> <b>i</b></p> <p>0 items</p>	<p><b>Job Opportunity</b> <b>i</b></p> <p>0 items</p>	

# Scenario testing

Testing activity that uses hypothetical stories to help the tester work through a complex problem or test system. – *Wikipedia*



## Tree Testing

Task 1 of 8 [Skip this task](#)

The nurses at your clinic have complained that their current exam gloves rip much easier than the old, discontinued ones. Find an option that will stand up to their wear and tear.

- Home
  - Product Types
    - Apparel & Personal Protection
      - Footwear
      - Gloves
      - Lab Coats
      - Patient Clothing
      - Protective Apparel & Accessories
      - Scrubs
      - Uniforms

## Use Cases

1. Your clinical team needs you to find a dressing that will reduce swelling and improve circulation, such as an unna boot.
2. An oncologist has asked for a different type of Huber needle that will allow for higher pressure and flow rates for their new port system.
3. The nurses at your clinic have complained that their current exam gloves rip much easier than the old, discontinued ones. Find an option that will stand up to their wear and tear.
4. The physical therapists at your nursing home have asked that the gait belts they have to be replaced because they are starting to fray. They want to see the options available so they can decide which one they want.
5. One of the medical assistants is wondering if it's possible to get more plush underpads since patients have been complaining that the beds are too hard.
6. ...

# Summary

❖ Develop a research plan that identifies your testing

- Goal,
- Activity, and
- Participants,
- Then define your tasks.

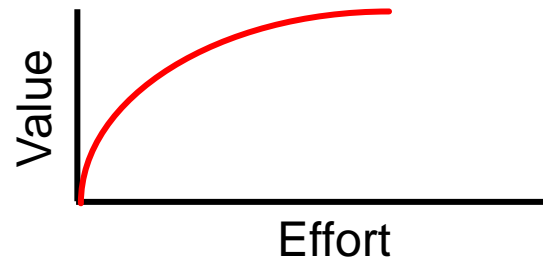


❖ Remember, your stakeholders must approve the plan.



❖ Testing is a means to an end, not an end in itself.

- A taxonomy is never perfect—
- The goal of testing is to provide evidence that the taxonomy is **good enough** to go.



# Resources

## Tools

- ❖ [Optimal workshop](#).
- ❖ [PoolParty card sorting](#).
- ❖ [Userzoom](#).

## Articles

- ❖ Joseph Busch. “[Taxonomy Testing and Usability](#),” presented at the ASIS&T 7th Information Architecture Summit, March 23, 2006 in Vancouver, British Columbia.
- ❖ Ron Daniel. “[Testing Your Taxonomy](#),” presented at Taxonomy Boot Camp 2006, November 3, 2006, San Jose, CA.
- ❖ Kathryn Whitenton. “[Tree Testing: Fast, Iterative Evaluation of Menu Labels and Categories](#).” Nielsen Norman Group, 2017.
- ❖ [Usability.gov Methods](#). Last updated: November 8, 2021.
- ❖ Indi Young. *Mental Models: Aligning Design Strategy with Human Behavior*. Brooklyn, NY: Rosenfeld Media, 2008.

# Questions

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# Abstract

- ❖ You've used quantitative and qualitative methods to build your taxonomy. You've engaged stakeholders to develop the requirements and use cases and briefed them along the way, sharing interim deliverables, drafts, and prototypes. Aside from this engagement during the development process, what else can you do to demonstrate that a taxonomy will work before it is implemented? Busch provides practical advice on how to prove that the taxonomy you've created will work. Each method is illustrated with examples from projects that use tools such as Optimal Workshop and focus groups.