Card Sorting

Card sorting is a method used to help design or evaluate the information architecture of a site. In a card sorting session, participants organize topics into categories that make sense to them and they may also help you label these groups. To conduct a card sort, you can use actual cards, pieces of paper, or one of several online card-sorting software tools.

Benefits of Card Sorting

Card sorting will help you understand your users' expectations and understanding of your topics. It is often most useful once you have done some homework to find out about your users and understand your content. Knowing how your users group information can help you:

- Build the structure for your website
- Decide what to put on the homepage
- Label categories and navigation

Open and Closed Card Sorting

Depending on your needs, you may choose to do an open or closed card sort. They differ as follows:

- **Open Card Sort**: Participants are asked to organize topics from content within your website into groups that make sense to them and then name each group they created in a way that they feel accurately describes the content. Use an open card sort to learn how users group content and the terms or labels they give each category.
- **Closed Card Sort**: Participants are asked to sort topics from content within your website into pre-defined categories. A closed card sort works best when

you are working with a pre-defined set of categories, and you want to learn how users sort content items into each category.

You may also choose to try a combination of the two. You could conduct an open card sort first to identify content categories and then use a closed card sort to see how well the category labels work.

Choosing a Technique

Techniques and Descriptions	Pros	Cons
One on Ones are in-person sessions with an observer. Participants think aloud while sorting, giving a clearer picture of their reactions and thought processes.	This type of sort may be completed with physical cards or with online card-sorting software and the facilitator looking on and asking questions as needed.	n/a

Group / Independent - Concurrent In-person Sessions have participants sort a set of cards independently. The facilitator may brief the participants at the beginning and debrief the participants at the end, but the participant works alone for most of the session.	Because of the limited interaction, you can have many sessions at the same time with one facilitator.	You must have as many sets of cards as concurrent sessions or have each participant at a separate computer if using online card-sorting software.
Group - Concurrent In-person Sessions have participants sort a set of cards as a group. The facilitator may brief the participants at the beginning and debrief the participants at the end, but the participant together for most of the session.	Working collaboratively, or as a team, may quickly bring about grouping and labeling of main content areas.	Group dynamics might come into play and should be monitored.

Remote, Computer-based Sessions require participants to work independently. Participants sort the cards independently on their own computers. You can do open or closed card sorts remotely. Several software programs exist to help you with large-scale remote card-sorting studies. Using the software is an advantage because it analyzes the data for you.	Allows you to have many participants in many locations.	You do not get information on why participants sort the cards the way they do, because you cannot see the participants or hear them thinking out loud.

Best Practices for Card Sorts

- Limit the number of cards. It is tempting to want the participant to sort "ALL" of your content, but be mindful of participant fatigue. We would recommend 30 to 40 at the absolute outside, especially for an open sort.
- If possible, randomize the order of presentation so that each piece of content has a chance to be sorted earlier in the session.
- Provide the participants with an estimate of how long the card sort will take before beginning the session to help them better gauge the required time and effort.
- Consider the benefits of requiring participants to complete your sort. For an open sort, if possible consider requiring them to sort the cards, but perhaps not to label them, since that might be the more challenging part of the task, providing you have limited your items as suggested in point 1)

- Consider an open sort as part 1 and a closed sort as part 2 of your process. One allows you to learn what goes together, while 2 allows you to really test out your labels to see if they are intuitive to your participants.

How to Conduct a Card Sort

Prepare the cards

1. Create your list of content topics. Topics can be phrases or words, very specific or more general. As a suggestion, limit yourself to 50-60 topics or less. This means there might not be a card to sort for every page on the site.
   - For a new site, list the content topics of types of information that you are likely to have on the site
   - For an existing site, list the most important / popular types of content
   - To create this list:
     - Review the content listed in your content inventory.
     - Identify the most important or most frequently used content
2. Decide whether you will be doing a physical card sort or using online card-sorting software.
   - If you are using online card-sorting software, consult the software instructions.
   - If you will be conducting a card sort using physical cards, write each topic on a separate index card.
     - Use self-adhesive labels and a word processor. The cards will be neat, legible, and consistent. You'll have the list of topics in the computer for later analysis.
     - Number the cards in the bottom corner or on the back. This helps you when you begin to analyze the cards.

- Have blank cards available for participants to add topics and to name the groups they make when they sort the cards.
- Consider using a different colored card for having participants name the groups.

Set-up the session

1. Plan about one hour for each session, longer if you have many cards.
2. Arrange the space.
   - For paper card sorts, ensure the participant has enough room to spread the cards out on a table or tack/tape them up on a wall. A conference room works well.
   - For online card-sorts, ensure there is a computer with an internet connection available as well as room for both the participant(s) and facilitator to sit comfortably.
3. Plan to have the facilitator or another usability team member take notes as the participant works and thinks aloud.
4. As with other techniques, arrange for payment or other incentives to thank the participant for spending the time and effort helping you.

Lead the session

1. Show the participant the set of cards. Explain that you are asking for help to find what categories of information should be on the site's homepage and what those categories should be called.
   - In an open card sort, explain that you want to see what groupings of cards make sense to the participant, and that you will ask for a name for each group of cards once the participant has grouped them.

- If you are conducting a closed card sort, explain that you want to see how the participant thinks the cards fit within the defined groups.
2. Ask the participant to talk out loud while working. You want to understand the participant's thoughts, rationale, and frustrations.
3. Let the participant work. Minimize interruptions but encourage the participant to think aloud. Allow the participant to:
    - Add cards - for example, to indicate lateral hyperlinks or additional topics.
    - Put cards aside to indicate topics the participant would not want on the site.
4. If, at the end, the participant has too many groups for the homepage, ask if some of the groups could be combined.
5. Ask the participant to name each category.
    - In an open card sort, give the participant a stack of different colored cards. Ask the participant to use the colored card to name each group. Ask what words the participant would expect to see on the homepage or second-level page that would lead the participant to that particular group of content items.
    - In a closed card sort, asking about word expectations, their final card organization, and other follow up questions can provide valuable insight and observations for your research.
6. At the end, thank the participant and give the payment or other gift if promised.

Remote sorting sessions
1. Create your list of content topics. Topics can be phrases, words, etc., and can be very specific or more general. It might be tempting to have a card for every topic on your site, but in this case, more might not be better. Consider the

cognitive load on the participant. You want them to be as on task for your first card as your last. As a suggestion, limit yourself to 50-60 topics or less.

2. Prepare the cards according to the software instructions.

3. Email your participants a link to the study. Provide instructions for the sort (whether open or closed) and let them know approximately how long the session should take to complete.

4. If a comment box is available, urge participants to use the field to record any observations or questions. While you will not be able to answer them in real time for the participant, these comments can be useful for your analysis.

5. Thank the participant for his or her time and provide instructions for receiving payment or other gift (if promised).

Analyze Your Data

1. Prepare your data for analysis.
   - If you used online card-sorting software, consult the software instructions. The software will analyze participant data in a variety of ways.
   - If you used physical cards for the test, either photograph the sort or use the numbers on the cards to quickly record what the participant did. Photograph or write down the names the participant gave to each grouping and the numbers of the cards the participant included under that name. Then you can reshuffle the cards for the next session.
     - Create a computer file for each session to gather a complete picture of the detailed site map each user creates.
     - Work from your original list of topics and move topics around to recreate each participant's groupings and enter that participant's name for the groupings.

- If you used a physical card sort, you can also take a photograph of the finished card sort for reference later.
2. Analyze qualitative information based on user comments.
3. Analyze quantitative information based on:
   - Which cards appeared together most often
   - How often cards appeared in specific categories
4. For a less detailed analysis of the results, use your notes and recordings of the participants' names and card numbers under each person's name to find commonalities from different sessions.
5. For a more detailed analysis, consider using an Excel spreadsheet to show the relationship between the cards or use one of the available software programs to analyze your data.
6. Pull together your findings in a report to share with your team and stakeholders.

After you analyze the data from card sorting, you should have useful information for structuring the information architecture of the site. You should use the results of your card sort to help you define the navigation of your site.

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