

Online Card Sorting Tools

Information Architecture and Web Usability 2023

Group 1

Inge Gsellmann, Martin Heider, Lukas Leitner, Vrutanjali Patel

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Card Sorting

- Method for categorising items.
- Performed by potential end users of an interface.
- Card sorting is used to investigate the following characteristics:
 - Terminology (what people call things)
 - Relationships (proximity, similarity)
 - Categories (groups and their names)

Card Sorting Procedure

- Items (concepts) are prepared are prepared on real or virtual cards.
- Study explained to users.
 - “There are no wrong answers.”
 - Explanation how to deal with unknown items.
 - “How would you organise these items?”
- Participants then sort the items into groups on their own.
- Categories are labelled by users.


Types of Card Sorting

- Open card sorting:
 - Lets users create their own categories.
- Closed card sorting:
 - Has predetermined categories, users only sort items into them.
- Hybrid card sorting:
 - Is a combination of the other two methods.
- Open card sorting usually the best.

Analysis

Challenges

- Different users have different sorting strategies (mindsets).
- Not one truth.
- Differences might correlate with demographics.
 - Gender, cultural background...
 - (Dis)abilities
 - Education, experience
- Data sets sometimes very large (up to 100 items).
- Large number of participants (50 - 100).
- Manual vs. automatic sorting.



Know your target audience!

Manual Methods

- Mindset management
- Category standardisation
- Interpretation by individual researchers.
- Can provide valuable insight.
- High effort and time requirements.
- Difficult for huge datasets.

Statistical Methods

- Statistical analysis of data.
- Used to help facilitator.
- Some manual steps always necessary.

Our Criteria for Tool Comparison

Study Setup Criteria [Study Owner]

- Trial version limitations.
- License: free, open source, commercial.
- Type: open, closed, hybrid.
- Offers pool of participants.
- Import cards: Format (CSV, ...), paste, manual.
- Export results: Format (CSV, ...).
- Shuffle cards for each user.
- Card images.
- Recording: None, Audio / Video / Screen / Clickstream
- Save / load studies.
- Perform study with 100 cards and 100 participants for free, even if limited time.

Sort UI Criteria [Study Participant]

- Keyboard accessibility: None, Bad, Okay, Good
- Study pausing
- Freely position groups.
- Scale cards for large card decks.

Analysis Tools Criteria [Study Owner]

- Mindset Management
- Category Standardisation
- Standardised Matrix
- Similarity Matrix
- Dendrogram
- Similarity Map
- Label suggestions for final group

Our Sample Card Deck

Number	Name English	Name German
1	Eagle	Adler
2	Tiger	Tiger
3	Panther	Panther
4	Owl	Eule
5	Audi	Audi
6	Pigeon	Taube
7	Cat	Katze
8	Fiat	Fiat
9	Mercedes	Mercedes
10	Dog	Hund

Tools

Tool Overview

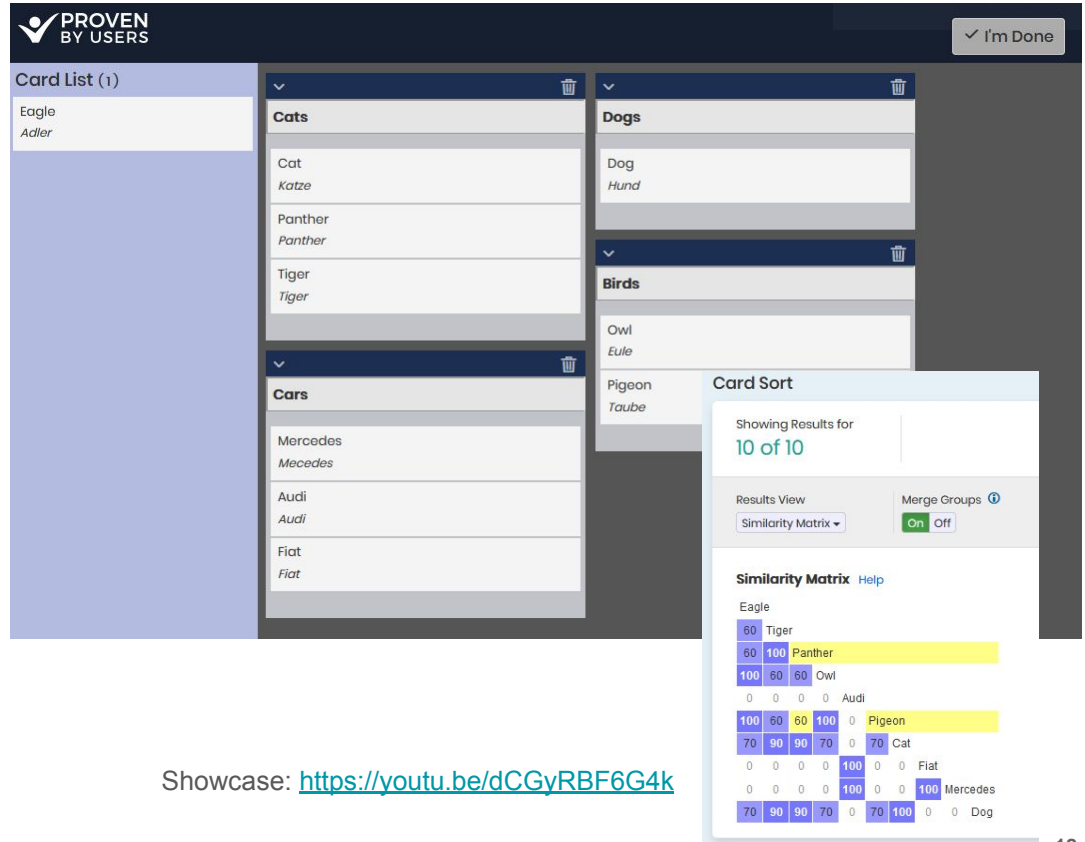
- Commercial with trials:
 - Proven by users
 - UserBit
 - PlaybookUX
 - Userlytics
- Freely usable for 100 cards with 100 participants:
 - Card Sorter
 - Useberry
 - OptimalSort
 - UXArmy

Commercial Tools (with Trials)

1 – Proven By Users

provenbyusers.com

- Free option allows only 10 participants.
- Possibility to duplicate studies.
- Very easy to use.
- Easily merge group names.
- Many analysis tools.
- Good free option for small studies.



The screenshot displays the Proven By Users interface. On the left, a 'Card List (1)' shows a card for 'Eagle' with the German word 'Adler' below it. The main area is divided into four categories: 'Cats' (Cat, Katze; Panther, Panther; Tiger, Tiger), 'Dogs' (Dog, Hund), 'Birds' (Owl, Eule; Pigeon, Taube), and 'Cars' (Mercedes, Mercedes; Audi, Audi; Fiat, Fiat). A 'Card Sort' modal is open, showing 'Showing Results for 10 of 10'. It includes a 'Results View' dropdown set to 'Similarity Matrix' and a 'Merge Groups' toggle set to 'On'. The 'Similarity Matrix' table shows similarity scores between items:

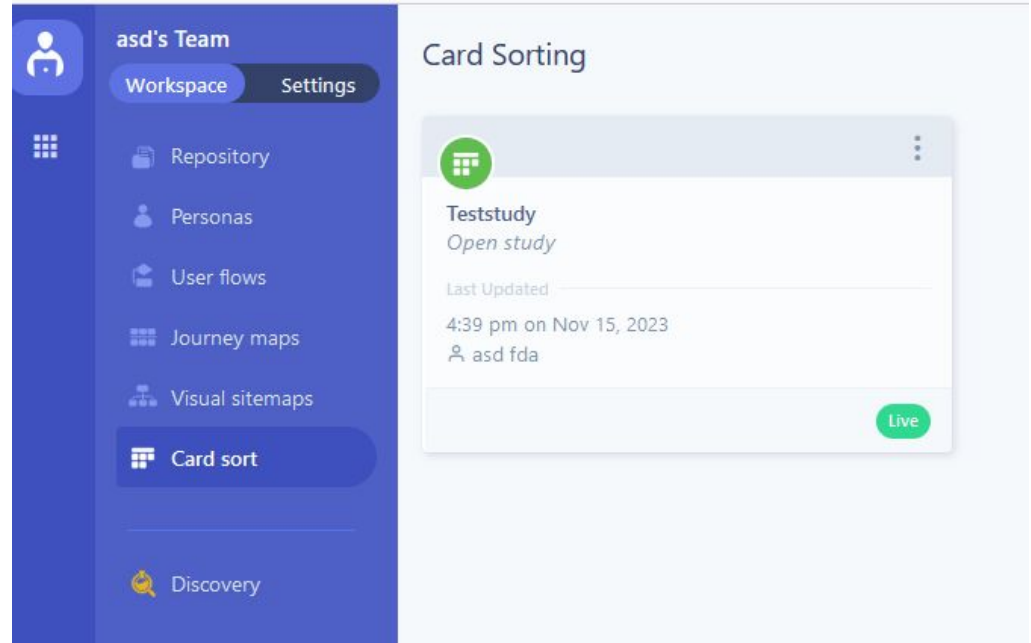
	Eagle	Tiger	Panther	Owl	Audi	Pigeon	Cat	Fiat	Mercedes	Dog
Eagle	100	0	0	0	0	0	0	0	0	0
Tiger	60	100	0	0	0	0	0	0	0	0
Panther	60	100	100	0	0	0	0	0	0	0
Owl	100	60	60	100	0	0	0	0	0	0
Audi	0	0	0	0	100	0	0	0	0	0
Pigeon	100	60	60	100	0	100	0	0	0	0
Cat	70	90	90	70	0	70	100	0	0	0
Fiat	0	0	0	0	100	0	0	100	0	0
Mercedes	0	0	0	0	100	0	0	100	100	0
Dog	70	90	90	70	0	70	100	0	0	100

Showcase: <https://youtu.be/dCGyRBF6G4k>

2 – UserBit

<https://userbit.com/>

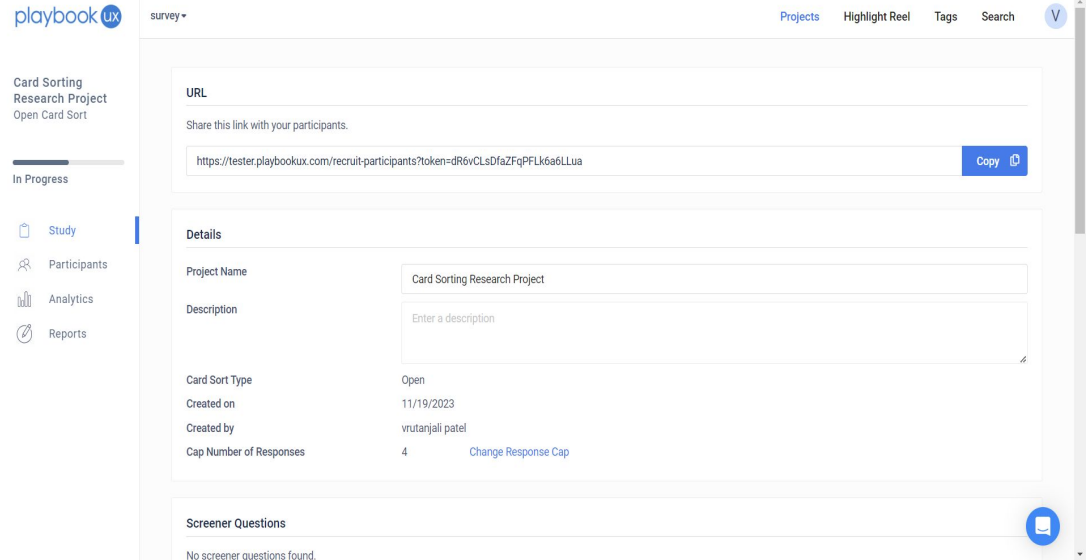
- Commercial
- Free trial - afterwards limitations.
- Setting up studies is simple.
- Exporting results not possible.
- Offers category standardisation and a similarity matrix.



3 – PlaybookUX

<https://tester.playbookux.com/>

- Commercial
- Free trial for 7 days.
- Easy to understand and use.



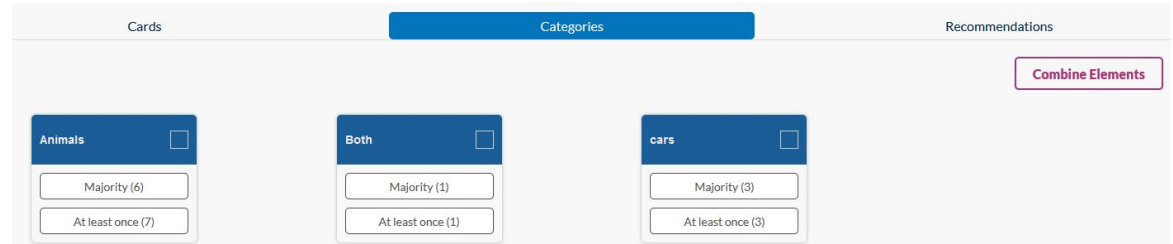
The screenshot displays the PlaybookUX interface for configuring a survey. The top navigation bar includes the PlaybookUX logo, a 'survey' dropdown, and links for 'Projects', 'Highlight Reel', 'Tags', 'Search', and a user profile icon. The left sidebar shows the project name 'Card Sorting Research Project' and a progress indicator 'In Progress'. Below this, a navigation menu lists 'Study', 'Participants', 'Analytics', and 'Reports'. The main content area is divided into sections: 'URL' with a shareable link and a 'Copy' button; 'Details' with fields for 'Project Name' (Card Sorting Research Project), 'Description' (with a placeholder 'Enter a description'), 'Card Sort Type' (Open), 'Created on' (11/19/2023), 'Created by' (vrutanjali patel), and 'Cap Number of Responses' (4) with a 'Change Response Cap' link; and 'Screener Questions' (No screener questions found).

4 – userlytics



<https://www.userlytics.com/>

- Commercial
- In-depth tool for various studies.
- Required thinking aloud and screen recordings.
- High barrier to entry for study participants.
- No real analysis tools.
- Transcription and annotation tools for session recordings.
- Offers pool of (screened) participants.



Showcase Video: <https://youtu.be/ScEu5p1JZmE>

Freely Usable Tools

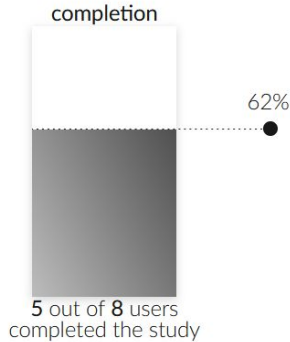
100 Cards with 100 Participants

5 – Card Sorter

usability.csd.auth.gr/card-sorter

- Open Source
- Easy to use
- Few features
- No import/export
- Similarity matrix
- Dendrogram

Card Sorter
← to Front



CardSort  

 Active | Launched on 20 November 2023

Participant Cards Categories Similarity Matrix Clusters

Participant no	Time taken	Cards sorted	Categories created
#1	1 m 2 s	100%	3
#2	1 m 37 s	100%	3
#3	23 s	100%	2
#4	41 s	100%	3
#5	11 s	30%	1
#6	10 s	0%	0

Showcase Video: <https://youtu.be/QZppKiNoKIY>

6 – Useberry



<https://www.useberry.com/>

- Commercial
- Free trial available but cannot export results.
- Easy to understand and use.
- Many features like recording audio, video, screen and clickstream with free trial version.

A screenshot of the Useberry web application interface. The top navigation bar includes 'Card Sort > New Project' and a 'More' dropdown. The main content area is titled 'New Version' and has tabs for 'Create', 'Share', and 'Results'. A 'Share results' button and 'Collecting responses' status are visible. The left sidebar shows 'Blocks' with 'Overview' and 'Card Sorting' options. The main panel displays a 'Study Overview' for 'Card Sorting' with 3 responses collected. It shows 'Completed' at 100% (3 users) and 'Not-completed' at 0% (0 users). The overall average time is 1m 13.4s. Below this is a table of blocks used in the study.

BLOCK	TOTAL	COMPLETED	NOT-COMPLETED	TIME ON TASK
Card Sorting	3	2	1	1m 13.2s

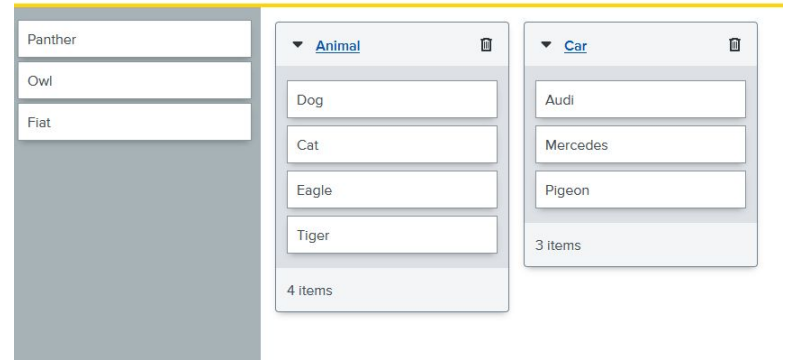
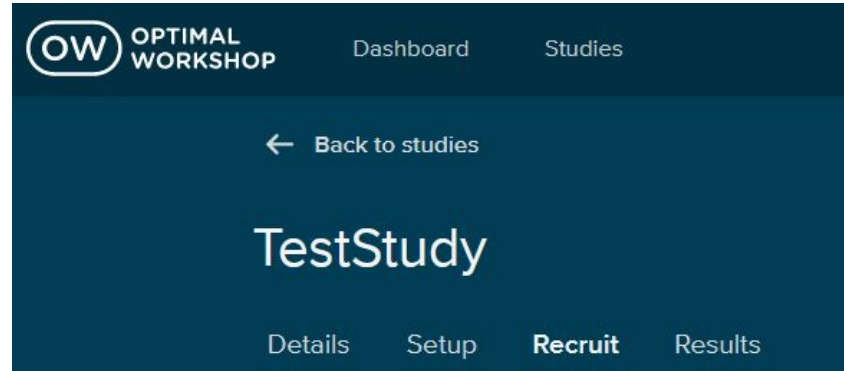
A 'View results' button is located to the right of the table. The bottom section shows 'Completion Rates'.

Showcase Video: <https://youtu.be/H4xcV3n0I3g>

7 – OptimalSort

<https://app.optimalworkshop.com/>

- Commercial
- Free trial possible - afterwards limitations
- Offers a pool of participants
- Good keyboard accessibility
- Variety of analysis tools.

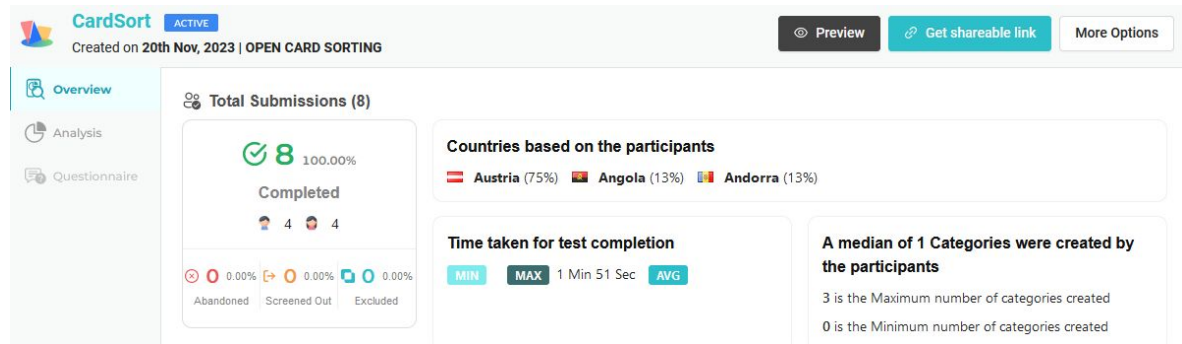
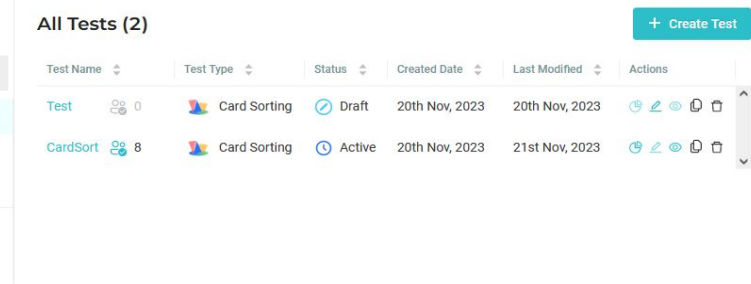
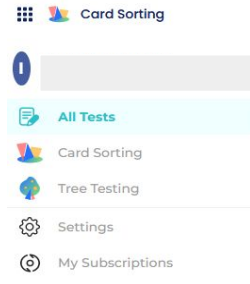


Showcase Video: <https://youtu.be/CVuN0VjRCBo>

8 – UXArmy

ux-toolkit.uxarmy.com

- Commercial
- Free trial for 7 days.
- Many features
- Import & export
- Category standardisation
- Similarity matrix
- Confidence
- Standardised matrix



Showcase Video: <https://youtu.be/7idHcfE7No4>

Tool Recommendation

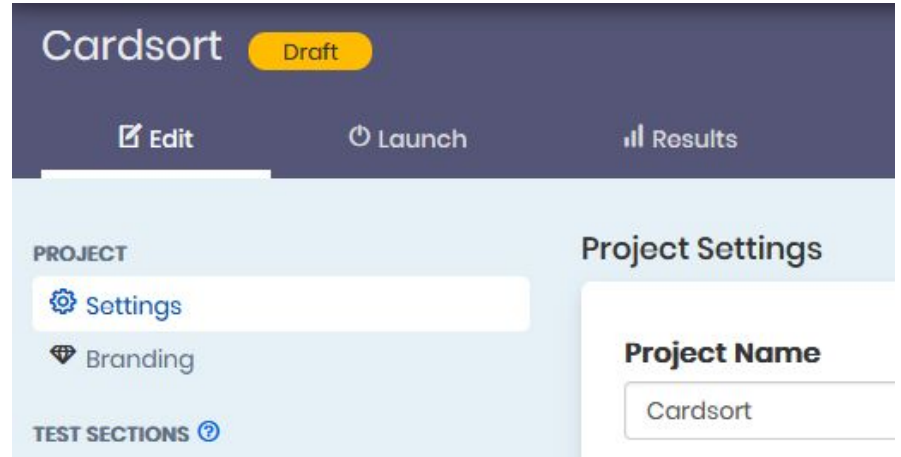
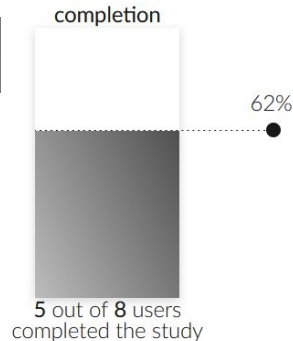
Commercial solution:

- Proven By Users



Free solution:

- Card Sorter



Participant no	Time taken	Cards sorted	Categories created
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