

**Pay attention to
what users do, not
what they say.**

Every Usability Expert, ever.

HEART Framework

Happiness: measures of user attitudes, often collected via survey. For example: satisfaction, perceived ease of use, and net-promoter score.

Engagement: level of user involvement, typically measured via behavioral proxies such as frequency, intensity, or depth of interaction over some time period. Examples might include the number of visits per user per week or the number of photos uploaded per user per day.

Adoption: new users of a product or feature. For example: the number of accounts created in the last seven days or the percentage of Gmail users who use labels.

Retention: the rate at which existing users are returning. For example: how many of the active users from a given time period are still present in some later time period? You may be more interested in failure to retain, commonly known as "churn."

Task success: this includes traditional behavioral metrics of user experience, such as efficiency (e.g. time to complete a task), effectiveness (e.g. percent of tasks completed), and error rate. This category is most applicable to areas of your product that are very task-focused, such as search or an upload flow.

Google's UX Metrics: <https://library.gv.com/how-to-choose-the-right-ux-metrics-for-your-product-5f46359ab5be>

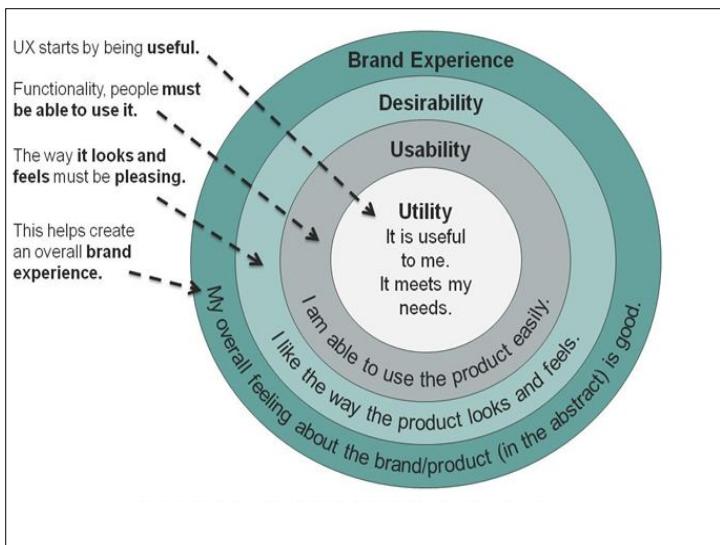
Prioritization

Goals: identify goals before metrics to create framework

Signals: what proves you reached your goal (actions)

Metrics: method of measuring successes (failures) that you'll track over time

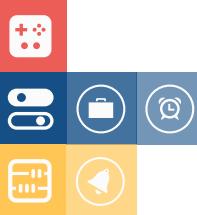
(Same Google's UX Metrics article: <https://library.gv.com/how-to-choose-the-right-ux-metrics-for-your-product-5f46359ab5be>)



Usability Testing

- Definition: a systematic observation under controlled conditions to evaluate how well participants are able to complete critical tasks with your product design.
- Involves setting a series of tasks for people to complete and noting any problems they encounter and their suggestions

Benefits



Usability testing lets the design and development teams identify problems before they are coded. The earlier issues are identified and fixed, the less expensive the fixes are in terms of staff time, impact to the schedule, re-launch and training.

Usability Testing

- What are we testing?
- What do we want to find out?
- Where will we test?
- With whom will we test? and, of course,
- How will we test?
- How will we know if we're progressing?

Usability Testing Outcomes

- Help inform the entire process (Design, Dev, Marketing, Training, etc.)
- Uncover unknown or unexpected issues
- Fix problems early in the process when they are easy to fix
- Test assumptions
- Highlight unnecessary features (dreaded feature bloat)
- Solve team opinion battles
- Measure improvement
- Get team buy-in

Usability Testing Types

1. One-on-One

Typical arrangement when you hear someone refer to a “usability test”. One person facilitates and one participant tests the product. Typically held in a research lab or conference room with cameras set up to record and to broadcast to notetakers and team watching in another room.

2. Remote Usability Test (Moderated)

Same as one-on-one but facilitator and the participant are in different physical locations. Use GoTo Meeting or other web conference service to share your screen with the participant and record the session.

Usability Testing Types (cont)

3. Unmoderated Remote Usability Test (URUT)

Online service that posts tests for participants to find and take without assistance/facilitator. Use if require a large sample of testers and/or a high degree of confidence.

- Loop11
- UserZoom
- OpenHallway
- Validately
- TryMyUI
- YouEye
- Usertesting.com
- WhatUsersDo

10

Costs

- One-on-one in research lab
 - assume 10 tests
 - Hourly fee for researcher
 - Lab Fee
 - Participant compensation
 - \$7k +
- Remote facilitation
 - Hourly fee for researcher
 - Participant compensation
 - \$5k +
- Remote un-facilitated
 - Hourly fee for researcher
 - Lab Fee
 - Participant compensation
 - \$7k +
- Researcher to analyze results
 - Video
 - \$2k +

11

Basic Steps

1. Define the goals of the test
2. Determine remote/in-person, moderated/un-moderated, compensation
3. Profile your desired test participants
4. Create a test participants screener
5. Define your tasks
6. Create prototype or use site/app
7. Write a test protocol with benchmarking
8. Design a post-test survey with scale questions for metrics (SUS)
9. Recruit participants
10. Conduct usability tests
11. Summarize usability testing results with recommendations for corrections and enhancements

12

Schedule

- Do we have the resources and time to commit?
- How often are you producing something new?
 - Established products: weekly quarterly with lots of users (5-10% of users)
 - New with frequent iterations - more tests with 5-7 users

Time & Resources: no reason to increase testing if unable to respond to all the feedback.

13

Test Tools

Minimum:

Audio recordings of participants (ala Think Out Loud method)

Capability to test using mobile devices (Smartphones and tablets)

Better:

+ Video recordings of participants and screen

Ability to edit recordings of test sessions into highlight reels

14

usertesting.com

Test Tools

• Software/Apps:

- Morae: “Granddaddy of testing tools” \$2,000
- Ovo Logger: Premium for large companies, medical devices, more than Morae
- Silverback: only for Macs , \$75
- Go To Meeting: share control and record

• Online Services

- User Testing: \$50-100 / test; DIY and Assisted
- Try My UI: \$35/test
- Fivesecond Test: first impressions test, \$20 per month

15



Think Aloud Protocol

- The test participant narrates their actions and thoughts to provide valuable insight into the thought processes behind their actions.
- Write a series of tasks and ask the subject to verbalize their thoughts and feelings by "thinking aloud."

17

Usability Test Protocol

1 Task Name One

I want to get your feedback on the *Name* feature.

Have you used this feature before? Yes No

Comments on feature:

For our first task we are testing, I am going to ask you to add a new job description.

Add a new job description	
1. Go to File > New 2. Select Feature Name 3. Enter some text 4. Press save	
Buy something	

18

System Usability Scale (SUS)

Please rate each statement on a scale of 1 to 5 where 1 means strongly disagree and 5 means strongly agree.

1. I think that I would like to use this system frequently.
2. I found the system unnecessarily complex.
3. I thought the system was easy to use.
4. I think that I would need the support of a technical person to be able to use this system.
5. I found the various functions in this system were well integrated.
6. I thought there was too much inconsistency in this system.
7. I would imagine that most people would learn to use this system very quickly.
8. I found the system very cumbersome to use.
9. I felt very confident using the system.
10. I needed to learn a lot of things before I could get going with this system.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

19

System Usability Scale (SUS) was created in 1986 by John Brooke to measure perceived ease-of-use, satisfaction, usability and learnability. Items 4 and 10 provide the learnability dimension and the other 8 items provide the usability dimension. SUS is technology independent and has since been tested on hardware, consumer software, websites, cell-phones, interactive voice response (IVR), and even the yellow-pages. It has become an industry standard with references in over 600 publications.

The SUS is a 10-item questionnaire with 5 response options: Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree.

Benchmarking

- Benchmarking is the process of testing a site or app's progress over time. REPEATED USABILITY TESTING
 - Track product's successes and failures over time
 - Clue you in to the ways that iterations of your product are solving problems, like in the graph above
 - Compiling success track
 - Identifying highs and lows to identify if you are on the right path

20

Recruiting Test Participants

- Client contacts
- Banner on client website
- Recruitment agency
- Market research firms
- Twitter
- Craigslist
- Facebook
- Local notice boards and mailing lists

21

Compensation

- Cash
- Gift Cards
- Movie Tickets
- Food
- Nothing

22

Findings & Recommendations

Lessons Learned Sample

- MORE PICTURES: The initial wireframe designs did not provide a good, easy way for the user to share photos and videos of their hikes - an important part of any phone app.
- QUICK TIPS: Users would like tips included on the trail page
- SHARING FOR PLANNING: This age group plans for two main reasons: peer-group buy-in and parental permission.
- PARENTAL CONTROL: Add a filter for parent subscribers to limit choices for pre-teen girls

23



Guerrilla (not Gorilla) Testing

out in the wild of coffee shops, parks, food courts, ... ask likely users if you can have 10 minutes of their time, generally in exchange for a cup of coffee, Tshirt, gift card, etc. Record them on your prototype after they sign a quick NDA.

Conducting the Test

- Don't keep people waiting!
- Have everything already set up and waiting
- Welcome people and thank them for their time
- Explain what you'll be doing and how the test will work
- Ask them to sign a waiver
- Remunerate them in advance so they understand it's not contingent on their performance
- Remind them that you're testing the system, not them
- Record the test
- Encourage them to think aloud
- Wrap up session

25

Things to Look for

- Completion Rates Are users able to complete the task?
- Time on Task How long does it take users to complete?
- Clicks How many clicks or taps does it take to complete task?
- Page Views How many pages does it take to complete task?
- Errors The number and severity of errors per task?
- Satisfaction How does the user rate the system?

26

Tips

- Be friendly and put the person at ease
- Stay objective and detached
- Start with a simple task to make participant automatically feel successful
- Keep instructions simple
- Don't lead the participant or give hints
- Give encouraging but non-committal feedback
- Encourage the participant to think out loud so you can hear their thoughts
- Stop a task before a person gets too frustrated but not too soon!!
- Summarize key findings at the end

27

Prompts to Encourage Participants to “Think Aloud”

- Can you describe what you’re thinking?
- What are your thoughts about this feature?
- Is that what you were expecting?

28

Success Killers

- Not doing a proper run through of the test in advance
- Showing boredom
- Incomplete or buggy prototypes (worse: stopping to fix it during test session!)
- Not scheduling enough time between sessions (30 minutes)
- Bad task design

29

The power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect.

— Sir Tim Berners-Lee

Sir Tim Berners-Lee invented the World Wide Web in 1989. He is the Director of the web standards organization World Wide Web Consortium (W3C),

Section 508

<https://www.section508.gov/refresh-toolkit>
<https://www.ada.gov/508/>
<https://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-ict-refresh/final-rule/text-of-the-standards-and-guidelines>

Not exclusive! Just some samples!

- Dynomapper: <https://dynamapper.com> (visual site map generator and integrates with Google Analytics)
- Deque Systems: <https://www.deque.com/> (for every level imaginable including browser extension and server tools)
- BIA: <https://www.boia.org/> (free but slow)
- Free Manual Checklist: http://romeo.elsevier.com/accessibility_checklist/ (free but manual)

<https://chrome.google.com/webstore/detail/funkify-disability-simula/ocijjjdchelkddboickefhnbdpeajdjg?hl=en>

Funkify Disability Simulator

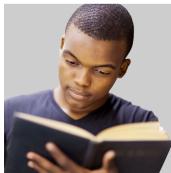


[Start](#) | [Simulators](#) | [Contact](#)

Cognition simulator
With the cognition simulator you will get the essence of what it's like for people with autism, adhd and other neurological conditions to use the web. If you lack the special experience that these conditions can bring, you definitely will get a brand new perspective.



Dyslexia simulator
Discover how people with dyslexia experience the web. Funkify's dyslexia simulator might give you a part of the answer as it will scramble the letters and make them dance - creating a frustration that you will remember.



Motor simulator
Discover how many users with different motor abilities or disabilities may experience the web. Funkify's motor simulator person "Twinkles Twink" will make you lose control.

Vision simulator
The unique vision simulator in Funkify shows how internet users with different vision impairments may experience the web. It has several features which differs user in needs.

Usability Test

The screenshot shows the Resy website homepage. At the top, there's a navigation bar with 'RESY' and 'NEW YORK'. Below it is a search bar with 'Book a Restaurant' and links for 'LOCAL SCENE', 'ABOUT', and 'FOR RESTAURANTS'. A main banner features a photo of a meal and the text 'THE HIT LIST: FRENCHETTE, LILIA, GEORGE WASHINGTON BAR, NOW ON THE RESY HIT LIST'. To the right of the banner is a section titled 'ABOUT RESY' with the text 'Resy powers the world's best restaurants, using technology to imagine the future of hospitality'. It also displays '120 new venues this month' and '707,532 seats booked last 7 days'. Below this are social media links for Twitter and Facebook. At the bottom of the page, there are four smaller sections: 'EVENTS: RESY PRESENTS THE FRANKS!', 'GUIDE: THE FRIEZE-GOER'S GUIDE TO...', 'NEW ON RESY: NEW ON RESY: THE NOMAD...', and 'RESY SPOTLIGHT: MEXICAN TRADITION IS AT THE...'. Each section has a small thumbnail image.

Blank Script: <https://docs.google.com/document/d/1EEBO5IyPMdjhOKDt2Tqk4ds59AZj3G6WZPQo5mxVOX4/edit?usp=sharing>

Site to test: <https://resy.com/>

Questions for Test

- What do you do to find places to eat? (Journey from idea to reservation)
- Open resy.com (have set up in browser before test)

Tasks:

- 1 First impression of the site
- 2 Select location
- 3 Make a reservation for 2 at a time and date at any restaurant that would like to go to
 - Search for Restaurants
 - Make account (have a test account available)
- 4 Make reservation for 9 at the 3rd-best rated restaurant in Chicago
 - Find the menu for that restaurant
- 5 Cancel reservation
 - Go to email

BACK-UP QUESTIONS:

- Reservation at restaurant with gluten free options
- Find place with entrees under \$30 per person

35

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