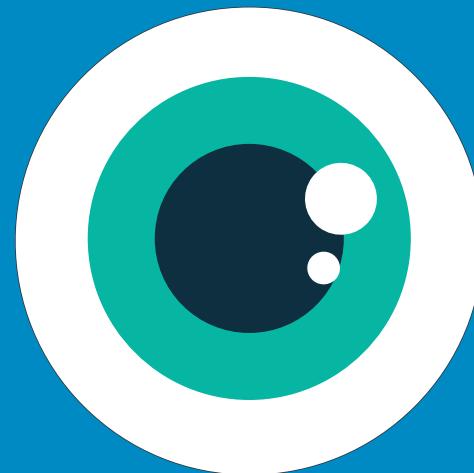




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Designing a brilliant user experience

Color, font, and icons

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Intro

It takes a special combination of skill, talent, and inspiration to create a beautiful interface for a website, app, or product.

But the design of an interface needs to be more than just beautiful. It needs to help its users do what they need to do.

To create a design that's not just attractive, but also serves the user experience, you'll need to have a clear understanding of how your design choices help or hinder your users.

At UserTesting, we've seen a lot of effective (and not-so-effective) visual design choices in the hundreds of thousands of usability studies we've run and analyzed. Now we want to share some of what we've learned through our research.

This eBook is about how the different elements of visual design impact the user experience on your site, app, or product. We'll cover:

- ✓ COLOR
- ✓ TYPOGRAPHY
- ✓ ICONS
- ✓ TESTING YOUR DESIGN WITH USERS
- ✓ EXAMPLES FROM OUR RESEARCH

You'll learn how to make design choices that are user-friendly and lead to the best results for your company.

Color

Color is one of the most powerful tools in the designer's toolkit.

You can use color to impact users' emotions, draw their attention, and put them in the right frame of mind to make a purchase. It's also one of the main factors in customers' perception of a brand.

With an infinite number of possible color combinations out there, it can be hard to decide what colors will make the biggest impact on your site or app. It would be impossible to test everything, but we've picked up a few tricks and trends about how color affects users' attitudes and behavior.

COLOR THEORY AND UX

The principles of basic color theory are a great starting point for crafting your user experience.

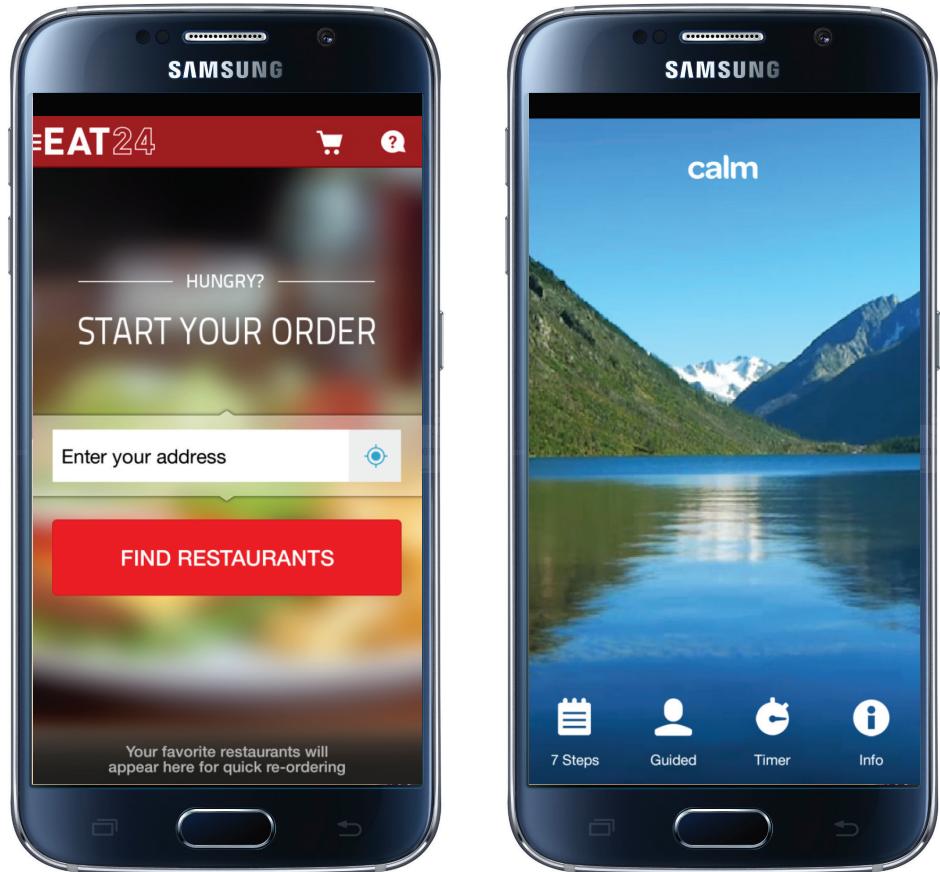
Complementary colors can be used to attract the viewer's attention and build energy, whereas analogous colors can be used to create a sense of harmony and continuity in a design. Consider how you can use complementary or analogous color schemes on a homepage or home screen to set the tone for the user and put them in the right mindset to take the action you want them to take.

When you're using colors in text, be aware that placing two colors with low value contrast next to each other can make your copy very difficult to read (whether they are complementary or analogous colors).

Harder to read

Easier to read

This is especially true on mobile screens, where users are more likely to be outdoors or in bright places that cause screen glare.



The **Eat 24** food delivery app uses a complementary color palette to make users feel hungry, excited, and ready to spend.

Calm, a meditation app, uses analogous colors to help users feel relaxed and peaceful, generating a positive link between the product and the action of meditating.

OUR STUDY RESULTS:

Women's preferences vs. men's preferences

In a recent study here at UserTesting, we chose a sampling of 30 websites that fit into three different color scheme categories: bright, dark, and white/minimal. We asked 25 women and 25 men to rate how unpleasant or pleasant the websites made them feel, on a scale of 1 to 5 (1 = very unpleasant; 5 = very pleasant).

We learned that women preferred the bright sites most strongly, giving them an average rating of 4.35. While men also liked bright sites best (giving them an average score of 4.18), they ranked the dark sites as a close second (4.04, on average). By contrast, women gave dark websites the lowest rating with a score of 3.38. Both genders felt almost equally "meh" about the white/minimal websites, giving them an average rating of 3.6 (women) and 3.54 (men).

Men who gave dark websites a high rating were more likely to describe those sites using very positive words like "happy," "fun," and "amazing." By contrast, women who rated the dark sites highly tended to use more reserved descriptions, like "expensive," "professional," and "elegant."

(Note: this study was a fairly small sample size, and the differences were not large enough to conclude that all women like bright websites and hate dark ones! Keep gender differences in mind, but be sure to run your own tests to see how men and women respond to your site.)

Keep in mind that color associations vary from culture to culture and from person to person. Men and women often have different color preferences, and colors that are en vogue this year might be much more effective with a younger or higher-income audience.

COLOR PSYCHOLOGY AND ASSOCIATIONS

It's a well-known fact that colors can provoke emotions. Here are some **emotions traditionally associated with colors:**

- Red: Power, passion, appetite, love, danger
- Orange: Confidence, cheerfulness, friendliness
- Yellow: Youth, happiness, warmth, sun
- Green: Growth, money, healing, environment, envy
- Blue: Trust, peace, loyalty, masculinity, safety
- Purple: Royalty, mystery, spirituality, creativity
- Brown: Outdoors, food, conservatism, earth
- Black: Formality, luxury, sophistication, death
- White: Purity, simplicity, goodness, freshness

BRAND AND INDUSTRY

Many popular companies have used color to evoke a particular emotion in their customers long before the point of purchase.



GREEN | HEALTHY



BLUE | DEPENDABLE



RED | EXCITEMENT

Customers also form color associations for certain industries, such as blue for tech, green for health, and red for fast food. While some companies choose to match customer expectations by using their industry's common colors, others have found that going against the grain can be a very effective way to make an impression.

Here's an example. Blue is a very common color for websites and apps in the travel industry. Take a look at the following websites' home pages:

The Hipmunk homepage has a bright blue header with the brand name and navigation links for FLIGHTS, HOTELS, MOBILE, and DEALS. Below the header is a large banner with the text "The fastest, easiest way to plan travel". It features two search boxes: "Search Flights" with fields for "From" and "To" and a "Search" button; and "Search Hotels" with a "Where" field and a "Search" button. The background is a light blue gradient with white clouds at the bottom.

Blue represents reliability, which is a good thing for travel companies. But there's no hard and fast rule that all travel sites have to be blue.

Virgin America chose to go against the grain with the design on their site.

While it might not be what users would expect from an airline website, it certainly stands out. Choosing unexpected colors can be an effective way to add delight to an experience—and to make users remember your company.

- Think about how traditional your target customer is.
- How would they react to a change from the norm?
- Would it be delightful or disorienting for them?
- What message would your company be sending if your color scheme broke away from traditional expectations?

The Virgin America homepage has a dark purple header with the brand name and navigation links for BOOK, CHECK IN, and MANAGE. Below the header is a search bar for flight details: "Guests 1 ADULT", "From SAN FRANCISCO", "To CITY", and a "SEARCH FLIGHTS" button. The main content area features three promotional cards: "Bust Out Of Town" (with a Golden Gate Bridge icon), "Win A #Hawaiiscape" (with a Virgin logo), and "Take Off Faster" (with a credit card icon). Each card includes a brief description and a "GRAB A SEAT", "ENTER NOW", or "LEARN MORE" button.

ACCESSIBILITY TESTING TOOLS

There are some great tools available to help you test your site's accessibility.

- Download [Color Oracle's color blindness simulator](#) for Windows, Mac, and Linux.
- Upload your static images into [Coblis](#) to experience them with nine different types of color vision.
- You can even user test your site with someone who has color blindness to find out whether anything was difficult for them to see.

COLOR AND ACCESSIBILITY

How does your site or app appear to your users who have visual impairments?

Approximately 8% of men and 0.5% of women are affected by some form of color blindness. While there are multiple forms of the condition, red/green color blindness is the most common. Folks with red/green color blindness have trouble distinguishing reds, greens, and yellows of similar values, especially when the greens have more yellow than blue in them, like the olive background in the picture below.



The same button as seen with full color vision (left) and a type of red/green color blindness (right)

If you're using colors with low value contrast, be aware that users who have color blindness might not be able to make out the words or the images at all. This is especially a problem around the winter holidays, when lots of websites are decked in festive red and green. Remember, if 8% of your male visitors can't see the words on the button telling them to Buy Now, then you're probably missing out on quite a few conversions.

If you're in a situation where you have to use a color combination that could be difficult for people with color vision impairments, you can still improve accessibility by increasing the value contrast between the colors. For example, take a look at the picture below. It's a lot easier to see a very dark red against a very light green (even if you aren't color blind).



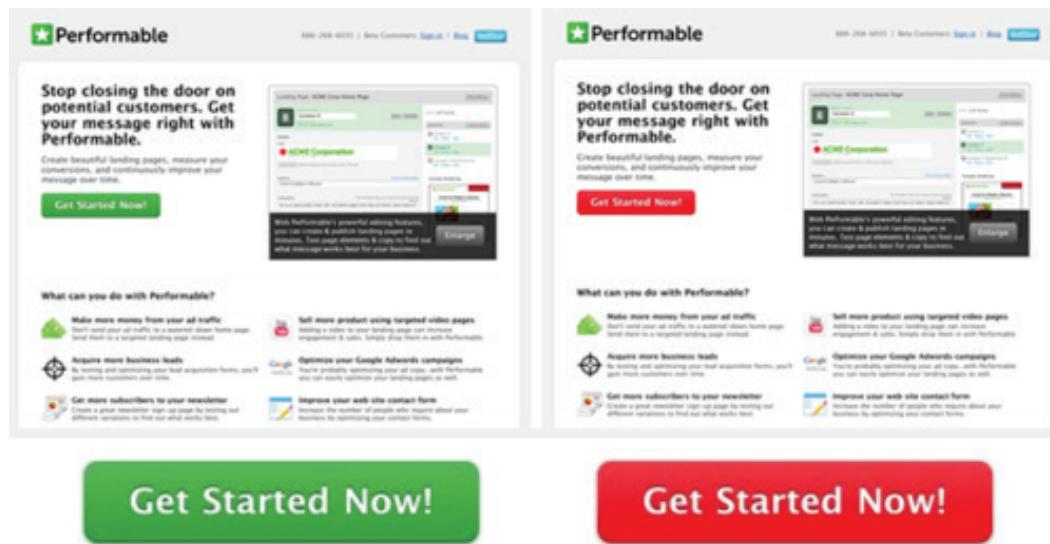
This button is easy to see with full color vision (left) OR with color blindness (right).

Other accessibility concerns: Don't forget about the people who will be using screen reader software to view your website. Have you ever gotten an error message when you're filling out a form that says something like, "The fields marked in red are required"? This can be an extremely frustrating experience for people who can't see the red characters. It's better to avoid referencing the colors on the site or app, and give more specific error messages like, "An email address is required."

THE IMPACT OF COLOR ON CONVERSION RATES

For every conversion rate optimization expert out there who claims that a bold, eye-catching red is the best color for a button, there's another who says that green is the best because green means "go."

There are plenty of A/B test results that show how a change in the color of a CTA button made a drastic impact on signups. [HubSpot shared this famous test](#) from their early days when they were known as Performable:



Even though they originally predicted the green button would perform better, the red button resulted in 21% more clicks. But they also warned their readers that this test result alone shouldn't make everyone run out and change their buttons to red. It's possible that their audience simply prefers red, even though other audiences might prefer green. Or, more likely, the red button got more attention because it was one of the only red objects on the page.

The bad news is that there isn't a magical color that consistently performs best for all websites. The good news is that there are some rules of thumb that can help you use color to your advantage.

RULES OF THUMB

Contrast is key

It seems obvious, but we'll go ahead and say it anyway: If you want users to click something, make it stand out. If your site or app uses a lot of orange, users probably won't notice an orange button right away, no matter how well orange buttons performed in another company's A/B test.

In our study, we asked users to indicate the first thing they would click on each website. Not surprisingly, users were much more likely to click a CTA button that strongly contrasted with the background.

Bright is memorable

As the final question in our 50-person study, we asked users which of the sites they visited was the most memorable.

50% chose one of the bright sites as the most memorable. It's interesting to note that many of the users who chose one of the dark or white websites did so because of something unrelated to the design. For example, one user thought Dropbox was the most memorable because she already had an account with them.

Font

The main goal of your text is to help your users do what you need them to do—whether it's finding out more about a product, learning how to play a game, or browsing through some entertaining stories.

Unfortunately, there are a lot of conflicting opinions out there about typography for web and mobile, and there isn't one strict set of rules that apply in every case. (That would just be too easy!) But there are several things you can do to make sure the fonts you choose for your website or app are working with you and your users, not against you.

SIZE AND LINE LENGTH

The size and layout of your text can make a huge impact on the experience of reading something online. Older users or folks with visual impairments especially struggle with small text. Even people with perfect vision experience eye fatigue from staring at screens for too long—and get irritated when they have to squint or zoom in to read text.

A screenshot of a news article page. At the top, there's a header with a logo and the text "It's like Amazon and YouTube combined: free videos with links to buy related items". Below the header, there are two columns of text. The left column discusses Amazon's Video Shorts site, mentioning it's like a combination of Amazon and YouTube, featuring video clips related to products. The right column discusses the general idea behind the site. At the bottom, there's a section about the content being like YouTube, with a short description and a comments and review section.

Take a look at this example: For desktop, **50-75 characters per line at 16 pt font or higher** is a good rule of thumb for body text.

A screenshot of a news article titled "Yelp Plunges: What Wall Street's Saying". The article is written by Laura Berman and dated 07/31/14 at 2:12 PM EDT. It mentions that Yelp shares tanked due to lower than anticipated business accounts growth. Shares were falling 10.8% in mid Thursday trading, having last traded at \$67.42. The second quarter revenue grew 61.4% year-over-year to \$88.8 million, beating the consensus estimate of \$86.3 million. The article also notes that Yelp had a profitable quarter, earning 4 cents per share, up from a 1 cent loss per share a year earlier. Analysts polled by Thomson Reuters expected the company to lose 3 cents per share this quarter. Year-over-year, reviews increased 44% to 61 million, monthly unique visitors rose 27% to 138 million, and monthly unique mobile visitors grew 61% to 68 million. A sidebar on the right lists "MORE HEADLINES" with links to other articles like "Tesla Q2 Earnings Live Blog" and "Glu Mobile Plunges, Sony Surges: Tech Winners & Losers".

Compare that with a similar page that uses about 100 characters per line in a much smaller font size.

This issue gets amplified on mobile. Tiny type on a small, bright screen can be a headache for users. A good rule of thumb is to use **30-40 characters per line for mobile**. Here are the same two sites when viewed on a smartphone. The first site uses the optimal 30-40 characters, while the second uses exactly the same format as its desktop site.

Since hard-coded font sizes (for example, 16px) can display differently on different devices, try sizing your fonts using rem units.

COLOR CONTRAST IN TEXT

There are two schools of thought around text color and readability.

- One claims that higher contrast is better, and black on white is the most readable combination.
- The other says too much contrast is actually harder on the eyes, and some shade of grey is more accessible.

The right amount of contrast is a tricky balance. Because of the drastic variation between screens, a grey that seems dark enough on the designer's screen could appear much lighter on the user's.

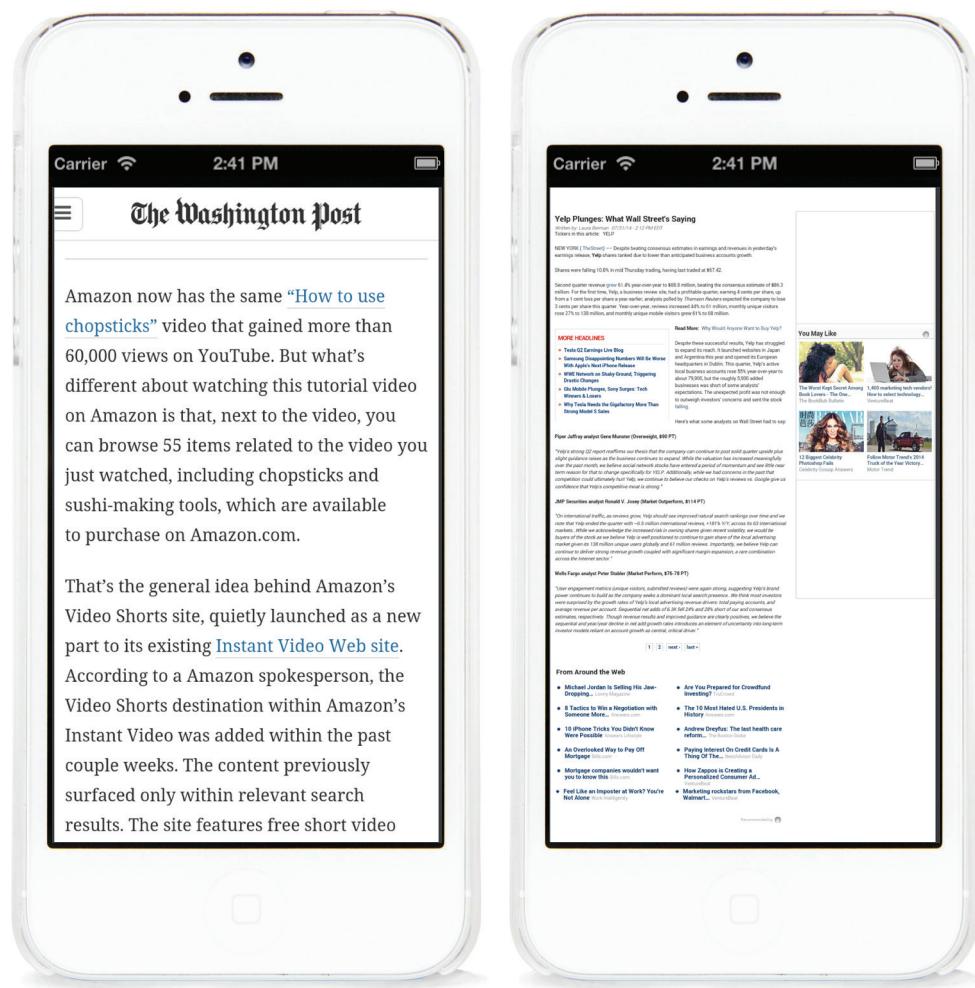
It's especially important have enough contrast on mobile, where users might be outdoors or in bright spaces that cause screen glare.

WC3's Web Content Accessibility Guidelines are a good place to start. They set minimum standards for contrast so that users with moderately low vision can read your text. You can use a **contrast ratio tool** to quickly find out if you're within the optimal range.

But pure black text (#000000) can be **more difficult for dyslexic readers**, and it can cause more eye fatigue over long periods of time.

Many designers opt for a very dark grey or "real" (as opposed to "pure") black, like #0D0D0D, #0F0F0F, or #141414.

Once you've made your color choice, it's absolutely necessary to test it out with real users in natural environments, on every device imaginable. If any of the test participants have trouble reading your copy, then you can bet your customers are having exactly the same problem.



We recently ran a UserTesting study on two mobile sites with similar layouts to the ones above: one with optimal type size and one without. Not surprisingly, users strongly preferred the site with the larger text.

OUR STUDY RESULTS:

Serif vs. sans

In classic print typography, common knowledge is that serifs improve readability and reading speed by gently guiding the eye in a horizontal direction.

But studies examining the practical differences between the two font styles are [largely inconclusive](#). We had to test it out for ourselves, so we ran a UserTesting study with 30 users measuring reading time and comprehension on two pages that were identical except in font (the A version used Arial and the B version used Times New Roman.)

Our results? Also inconclusive.

While the average reading speed was 9% faster for the group that read the sans serif passage, that difference was not statistically significant. Plus, the comprehension rates were very nearly identical: The group that read the serif passage had a 1% higher comprehension score on average, which was also not statistically significant.

The only notable difference between the two groups was that the serif group complained about the text twice as often as the sans serif group. (6 members of the serif group and 3 members of the sans serif group said the passage was difficult to read.)

So what's the problem with serif fonts? A couple of things.

First, serifs alter the outline of each letter, so they can be more difficult to make out for people who have dyslexia or visual disabilities.

Second, because those little horizontal lines are so small, they tend to reproduce poorly on older computer screens, which have much lower resolutions than print. (Retina screens on smartphones and tablets, however, have higher resolutions that make serifs easier to see.)

Does that mean we should only use sans serif fonts in digital products?

Absolutely not. It does mean that if you choose to use a serif font, be sure to select a clean and precise [web font](#), and—you guessed it—test your choice with real users.

sans serif

2X

More complaints from the serif group about the text than the sans serif group from our font focused study.



DETERMINING WHICH FONT IS RIGHT FOR YOUR USERS

The fonts you choose are a major part of the user's overall experience on your site or app. Consider the whole context, rather than just relying on a set of rules when you make your design choices.

What are your users expecting?

Is it something more sophisticated? Fun? Minimalist? What do users already know about your brand before they come to your site or open your app? What kind of first impression do you want to make?

What devices are customers using?

For most digital properties, your users are reading your text on the train, in front of the TV, and on sunny patios. Make sure you keep their attention, and don't drive them away with hard-to-read copy.

What are users trying to accomplish?

Shopping? Learning? Being entertained? Make sure the experience you're providing matches your users' needs (and your business goals).

If you want customers to quickly understand your product's features so they can make a purchase, then choose fonts that can be understood at a glance. If you want to engage readers' attention with a long and captivating story, then choose fonts that will make it easy for them to keep their eyes glued to the page.

Icons

Any icon in your interface should serve a purpose, whether you're designing a website or an app. Sure, icons are there to save space on the screen. But more importantly, they're there to aid your users. When done correctly, icons can help you guide users quickly and intuitively through a workflow without relying on too much copy. But when done wrong, they can confuse your users, lead them down the wrong paths, and ruin their experience with your product.

Since so many apps and websites use confusing icons, we wondered: what does it take to make an icon user-friendly?

We set up a remote usability study exploring the user experience with icons on mobile apps. We watched 35 users interact with 190 icons on a series of Android apps. Some of the icons were obvious, like a magnifying glass indicating the search function. Some were less so, like a flag indicating group membership. Some had text labels, and some didn't.



Imagine you see this icon below an image in an app. What does this mean? What happens if you tap it? It's clear that this icon is used to indicate that you like something.

But does it save that image or item to a list of favorites? Does it notify someone that you've liked it? Will it shape your preferences and add similar images or items to your feed? Or is it just a general expression of approval?

Like the heart, there are quite a few icons we're used to seeing in multiple contexts, but they perform slightly different functions from one product to the next. Consider these common icons that have multiple meanings:

ICONS TYPES AND THEIR IMPACT ON USER EXPERIENCE

Easy icons. Some icons are nearly universal. It's a pretty safe bet that a house-shaped icon will take you to the homepage or home screen, and a shopping cart will let you purchase an item.

In most cases, icons aren't the place to be creative. You can rely on your other design elements to convey your brand message. Your icons' first job is to guide your users to where they need to go. Fancy or overly clever icons for basic functions can ruin the user experience. Keep it simple.

The job of an icon is to guide your users. Keep it simple.

Confusing and conflicting icons. The trouble comes in when you're implementing commonly-used icons that have contradictory or mixed meanings.



Even in the context of the app itself, these symbols can be really confusing when the user is expecting one outcome and gets a different one.

And that's not to mention the differences between **iOS** and **Android** conventions. Standard bar icons can vary drastically from one OS to another, creating extra confusion for users. If you're not convinced on [this, just read this article showing 12 different variations of the Share icon](#), including several that could easily be mistaken for something other than Share.



Outdated icons

Lots of commonly used icons reference outdated or obsolete technology. Most of us who remember using floppy disks have no problem with the Save icon still seen in lots of applications, but many users born after 1995 just think it's a strange quirk that old folks insist on clinging to. Continuing to use icons like the floppy disk can make your brand feel old-fashioned to a younger user base. Even the symbol for a telephone may have to evolve as younger users are less likely to recognize a phone receiver.

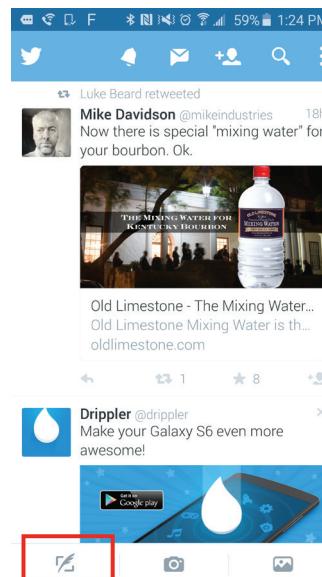
Unique icons

One of the trickiest icon challenges is what to do when your product has unique functions beyond the standard actions of sharing, favoriting, uploading pictures, writing text, and so on. How can you convey more abstract concepts—like viewing your upcoming trips, sending an audiobook to a friend, reviewing your order history, or tracking your sleep patterns—with a single symbol?

A lot of designers try, and a lot of designers fail. No matter how much sense an icon makes once you know what it's supposed to represent, it can be a completely different experience for first-time users.

That's not to say you always have to stick with common icons if you want to create a usable interface. Some unique icons are very effective at conveying their meaning for first-time users as well as returning users.

Twitter's famous quill pen icon is a great example. Despite having no label, in our study, 80% of users correctly guessed what it would do.



LET'S TAKE A LOOK AT WHAT TWITTER GOT RIGHT WITH THIS ICON:

- **Placement.** Twitter separates its icons for doing (writing a tweet, taking a photo, and uploading an image) vs. exploring (feed, notifications, messages, people, and search). If users want to create a post, the bottom of the screen is their one-stop shop.
- **Label on the desktop version.** Lots of folks use Twitter for the first time on their computer. If they do, they'll see the word "Tweet" prominently next to the quill.
- **Memorability.** While the quill pen could certainly be considered outdated technology, like the floppy disk, it's highly unique and easy to remember. You don't find quill pens in very many apps, so users don't have to try to recall slight differences between functions from other products.
- **Branding.** The feathers on the pen reflect the feathers on Twitter's logo. This creates a sense of unity between the brand and the action of writing a tweet.

LABELS AND USABILITY

This may come as a disappointment to those who say a picture is worth a thousand words:

Labels dramatically increase the usability of icons.

It's easy to hope that users (especially mobile users) will tap around and play with all the different icons cheerfully until they discover what each icon does.

In reality, users are often intimidated by new interfaces and don't explore outside their comfort zone as much as we would like them to. Users want a clear idea of what will happen before they take an action in an unfamiliar product.

Your icons need to set clear expectations for users before they click or tap on them, and that often means using text labels.

OUR STUDY RESULTS:

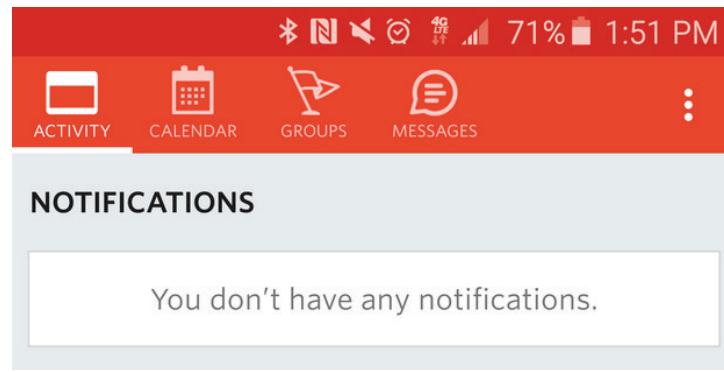
Labels vs. no labels

In our study, we found that for icons with labels, users were able to correctly predict what would happen when they tapped the icon 88% of the time.

For icons without labels, this number dropped to 60%.

And for unlabeled icons that are unique to the app, users correctly predicted what would happen when they tapped the icon only 34% of the time.

For example, the Meetup app uses a nametag icon to indicate group activity and add a little extra brand identification. But, since a blank nametag doesn't make most folks automatically think of activity or notifications, they added a label. 100% of our test participants were able to correctly guess what this unique, labeled icon would do.



Workarounds

Some designers find that labels defeat the purpose of using icons and clutter up their interface. To avoid using labels, they'll include instructions for using icons in tutorials or coach screens, hoping to train users on how to interact with the icons.

While this can be a great way to introduce unique or uncommon icons, **it shouldn't be a substitute for a more intuitive design choice**. And remember: users often skip through the tutorial or quickly forget everything they've learned. Tutorials should be a tool, not a crutch.

Testing and validating your design choices

Following best practices like high-contrast buttons and easily readable typefaces are a great place to start when you're creating a new design. But ultimately, the right design decision is the one that leads to results. Find out if your design choices make intuitive sense to your users and affect them in the way you want.

Confirm your hypotheses

Think of your designs as hypotheses that you're constantly trying to confirm, disprove, or improve upon. This will give you the confidence to try lots of experiments and find out what leads to the best results for your business and delights your users.

Run regular user tests to hear how users describe their experience with your site, app, or product. You'll be able to hear them describe the emotions they associate with your brand, and you'll see any places where they become frustrated because of a confusing icon or hard-to-read piece of text.

But you don't have to wait until you have a fully coded, live product to start getting user feedback; you can start user tests in the prototyping phase. This will help you either validate your decisions and move forward with confidence, or quickly identify and fix anything that's not working.

Once your design is live, A/B test it to determine whether your design choices affect your users' behavior, your conversion rates, and your revenue in the way you predicted.

SAMPLE USER TESTING QUESTIONS

Here are a handful of test questions you can ask users when you're testing out your designs:

- Before visiting [this site/app], please tell us what you would expect from a company that does [what your company does]. What do you expect to be able to do? How do you expect the site/app to look?
- What is the first thing you would click/tap?
- What are three words you would use to describe this site/app?
- On a scale of 1 (very unpleasant) to 5 (very pleasant), how did this site/app make you feel?
- How likely or unlikely would you be to trust this company?
- How did this site/app compare to your expectations?
- Without tapping on it yet, tell us what you think will happen when you touch the icon shaped like [shape]. Then go ahead and tap it. What happens?
- Was anything confusing or difficult in your experience with this site/app?

If your design choices make sense to your users and guide them through your interface, then they'll be able to do what you need them to do. That's not just an effective design—that's a smart business move, too.



Create great experiences

UserTesting is the fastest and most advanced user experience research platform on the market. We give marketers, product managers, and UX designers on-demand access to people in their target audience who deliver audio, video, and written feedback on websites, mobile apps, prototypes, and even physical products and locations.

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