VIDEO TRANSCRIPT

Working with Color

Hello and welcome to the video lesson on working with color. Obviously color is a very broad subject. In this video, I would like to give you a few tips and recommendations and a few things to consider when using color in your websites. I hope it will help you work more thoughtfully, and with better results.

Color Systems

Let's talk about different color systems first. You are probably familiar with HEX and RGB color formats, as they are the most common for representing color on the web, but you should know that they are not the most useful. I recommend switching to the HSL color format when working with color, when defining your color palettes and choosing color variations. The main problem with HEX or RGB is that colors which are visually similar look nothing alike in code. HSL fixes it by representing colors using attributes the human eye intuitively perceives, which is: hue, saturation, and lightness.

Hue is a color's position on the color wheel - it's the attribute of a color that lets you identify two colors as "blue" even if they aren't identical. Hue is measured in degrees, where 0° degrees is red, 120° is green, and 240° is blue. Saturation is how colorful or how vivid a color looks. 0% saturation is grey (no color), and 100% saturation is vibrant and intense. Without saturation hue is irrelevant - rotating the hue when saturation is 0% doesn't actually change the color at all. And lightness is just what it sounds like - it measures how close a color is to black or to white.

0% lightness is pure black and 100% lightness is pure white, 50% lightness is a pure color at the given hue. Very important here, don't confuse HSL for HSB. Lightness in HSL is not the same as brightness in HSB. Because with HSB color format 0% brightness is always black, but one 100% brightness is only white when the saturation is 0%. That's the difference when saturation is 100%. Brightness 100% in HSB it's the same as 100% saturation and only 50% lightness in HSL. HSB is more common than HSL in design software, but browsers only understand HSL, so since we're designing for web HSL would be a better choice for us. You can actually paste HSL values inside Divi and it will convert automatically to a HEX code for you. One design tool which does support HSL, and also happens to be free - is 'Figma' and I highly recommend you check it out. It even has this browser-based version, where you can just open it up in your browser and then use it to play with colors or obviously to design if you wish.

Choosing a Color Palette

Now, let's talk about choosing the color palettes for your projects. I'm sure you've used one of those color palette generators where you pick a starting color, tweak some options, and then you get the five perfect colors you should use to build your website. This calculated approach to picking the perfect color scheme is extremely seductive and I've done it myself many times. It's awesome to play with those generators, but I'm afraid it's not very practical because you can't build anything with five HEX codes. To build something real, you need a much more comprehensive set of colors to choose from.

Color Palette Categories

You can break a good color palette down into three categories.

Greys - almost everything in an interface is grey, text, backgrounds, panels, form controls, and you'll need more greys than you think, too - three or four shades may sound like plenty but it won't be long before you wish you had something a little darker than shade number two but a little lighter than shade number three. In practice, you want eight to ten shades to choose from. Obviously not so many that you waste time deciding between shade number 51 and 52, but just enough to make sure you don't have to compromise too much.

Most sites need one, maybe two colors that are used for primary actions, active navigation elements etc. Just like with greys, you need a variety of lighter and darker shades to choose from.

On top of your primary colors, every site needs a few accent colors for communicating different things to the user. For example, you might want to use an eye-grabbing color like yellow or pink or teal to highlight a new feature. You might also need colors to emphasize different semantic states, like red for confirming some destructive action like 'delete this' or yellow for a warning message or green to highlight a positive trend or a confirmation. You'll want multiple shades of these colors too, even though they should be used pretty sparingly for the UI. You will find that you need different shades as well.

It's a great idea to define a fixed set of shades up front that you can choose from as you work. Start by picking a base color for the scale you want to create - the color in the middle that your lighter and darker shades are based on. There's no real scientific way to do this, but for primary and accent colors, a good rule of thumb is to pick a shade that would work well as a button background for example. Next, pick your darkest shade and your lightest shade. It helps to think about where they will be used and choose them using that context.

The darkest shade for example is usually reserved for text, while the lightest shade of a color might be used to tint the background of a section or an element. Once you've got your base, your darkest, and lightest shades, you just need to fill in the gaps in between them. For most projects, you'll need at least five shades per color, and probably closer to 10 if you don't want to feel too constrained. Once you actually start using your colors in your designs, it's almost inevitable that you want to tweak the saturation on the shade, or make a couple of shades lighter or darker. Well, trust your eyes, not the numbers. Just try not adding new shades too often if you can avoid it. If you're not diligent about limiting your palette, you might as well have no color system at all. With greys the base color isn't as important, but otherwise, the process is the same. Start at the edges and fill in the gaps until you have what you need. Pick your darkest grey by choosing a color for the darkest text in your project, and your lightest grey by choosing something that works well for a subtle off-white background. By definition, true grey has a saturation of 0% - it doesn't have any actual color in it at all. But in practice, a lot of the colors that we think of as grey are actually saturated quite heavily. If you want your greys to feel cool saturate them with a bit of blue. To give your greys a warmer feel, saturate them with a bit of yellow or orange.

Importance of Grey

Now, I would like to take the moment to talk about the importance of grey - and by grey, I mean everything from black to white and also very low saturated colors. Grey is everywhere in your designs. It is the most important color, but it is also the only color that doesn't draw any attention to itself. Is the base behind everything else. I would like you to consider the idea of designing a page using grey only - without any

additional colors. Once you'll be able to achieve the visual hierarchy of your design without using colors to draw attention - you'll find yourself in a great position - because from there - adding a splash of color in different places will be super easy and it will make your design look truly great. One of the most common beginners' mistakes - is that they rely too much on color in their designs. If you look through the best websites out there - you'll notice that a lot of them do not use a lot of color and usually, it's just a monochromatic color scheme, beautiful imagery and the images provide the color and there are just simple splashes of color here and there. If you'd like to practice - try creating a page layout and only use different shades of grey and other tools like spacing, alignment, font styling to define the visual hierarchy. Once you nail your design without any colors - adding them later will be super easy and surely give you great results.

Defining Color Variations

Now, the most important color-related skill a web designer can have - is being able to create variations of color. How to do it exactly? In the HSL color space, as the color gets closer to 0% or 100 % lightness, the impact of saturation is weakened - the same saturation value at 50% lightness looks more colorful than it does at 90% lightness. That means that if you don't want the lighter and darker shades of a given color to look washed out, you need to increase the saturation as the lightness gets further away from 50%. It's quite subtle but little details like this add up, especially when a color is being applied to a large section of a page, like the background. What if your base color is already heavily saturated? How do you increase the saturation if it's already at 100%? Now, if you take a look at these two colors - which one do you think is lighter? The yellow obviously, well, it turns out both colors actually have

the exact same "lightness" in terms of HSL. Why do we see the yellow as lighter?

Working with Luminosity

Every hue has a different perceived brightness due to how the human eye sees color. It's called luminosity. If we look at different hues with 100% saturation and 50% lightness and change their blend mode to luminosity - we can get a good sense of the perceived brightness. As expected, yellow has a higher perceived brightness than blue. But what's interesting here is that perceived brightness doesn't simply change linearly from the darkest hue to the lightest hue. Instead, there are three separate local minimums: red, green, and blue and three local maximums: yellow, cyan, and magenta. This is very important - red, green, and blue are perceived as dark hues and yellow, cyan, and magenta as light. Trust me, this is a very useful thing to understand about color. Things get really interesting when you realize how you can use this knowledge in your designs. Normally, when you want to change how light a color looks, you adjust the lightness component. While this does work to lighten or darken a color, you often lose some of the color's intensity - the color also looks closer to white or to black not just lighter or darker. As I mentioned earlier - one way to fix it is by increasing the saturation but if the saturation is already at 100% there is a different method. Now that we know that different hues have a different perceived brightness, another way you can change the brightness of a color is by rotating its hue. To make a color lighter, adjust the hue towards the nearest bright hue at 60°, 180°, or 300°. To make a color darker, adjust the hue towards the nearest dark hue - 0°, 120°, or 240°. Just remember, while this is a great way to change a color's brightness without affecting its intensity, it works best in small doses.

Don't rotate the hue more than 20° or 30°or it will look like a totally different color instead of just lighter or darker. You can of course combine all these approaches too, getting some of the brightness by adjusting the hue and some by adjusting the lightness and saturation if possible.

Creating Gradients

Finally, let's talk about gradients for a moment. Gradients are one of the easiest ways to make a boring design a little more interesting. Creating nice looking gradients is not as straightforward as picking two random colors. To make sure a gradient looks great there is a bit more science behind it. If you've ever noticed that grey dead spot in the middle of your gradient, that is caused by the colors being too far from each other on the color wheel. The simplest rule to make sure the gradient you are using is nice and saturated is to use two colors that are not more than 50 degrees apart on the color wheel. Simple as that.

So next time you sit down to start working on a design, switch your color picker over to HSL, recall this power of choosing different color variations, and give it a shot. I found these concepts to be a game-changer and I hope it will help you make better color decisions, too.