



The impact of colour psychology in User Experience

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Abstract

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<p>This thesis aims to explore the impact of colour psychology in user experience. Through the technological advancements in IT, user experience has become a major focal point that grabs a lot of attention. Through colour psychology the professionals are able to create products and services that captivate the users and create an environment that is beautiful.</p> <p>Usability, however, is a major factor of user experience, as it's essentially the metric that shows how easily a product or service can be used that is also satisfactory for the end users. Combining usability with colour psychology, allows the designers to achieve the best possible outcome for their projects.</p> <p>This thesis provides detailed research results from conducted interviews. The results showcase in depth insights and analysis of how colour and usability compliment one another through the responses of the participants.</p> <p>The thesis also contains a thorough discussion of the results and views of the research questions. A conclusion is provided at the end to summarize the major points of the thesis.</p>
Key words User experience, usability, colour, design, accessibility

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1 Introduction

The theme that will be examined in this thesis is the impact of colour psychology in user experience. Understanding how impactful colour is in the human eye makes it even more interesting in learning to utilize it properly. In today's world everyone is trying to find their own way to be unique and to make a statement, and colour is a prevalent factor in this aspect. Combining the right set of colours can showcase a sense of style or invoke a certain emotion, all these different factors make a big difference when it comes to designing anything including user experience design. So what is colour psychology? Colour psychology is the study of colour impacting human behavior, emotions and mental processes. Colour psychology is applied to a plethora of different aspects of life such as marketing, branding, architecture and it even affects the way we see our food, meaning that colour influences other human senses apart from the visual sense.

Returning to user experience, the essence of UX is to make optimal and beautiful concepts and designs that are aesthetically pleasing and fit the audience of the designer. Don Norman, a publicly notable professor of cognitive science at the university of california quoted "Design is really an act of communication, which means having a deep understanding of the person with whom the designer is communicating".(The Design of Everyday Things 1988,2002)

Colour psychology in UX is a multi-faced analysis that includes many different key pieces that all come together to create an aesthetically pleasing design. Colour, however, is a versatile concept and tool that attracts all types of studies and sciences. Investing time and effort in understanding how human behavior reacts to colour will be able to enhance the quality of work and create a better experience for everyone.

As we delve with more detail into colour psychology in UX we will navigate through many topics. The topics will tackle ideas such as colour usage and perception in different cultures, colour interpretation and how colour is used for industry standards. Another important topic will be accessibility as it is a crucial part when it comes to UX. Exploring the mysteries of colour psychology has become a core element in designing and since the user-centered design principles are most prominent there needs to be consideration of every colour aspect.

2 Theoretical Background

The theoretical background of this thesis aims to cover the most prevalent topics of colour psychology in UX design. It will explain how its topics play an important role and how designers are able to utilize these topics in today's world.

2.1 Colour psychology

Colour is a unique concept that affects our daily lives, everything we see or touch and even taste. It also affects how we make decisions and behavior. The essence of colour psychology is to connect colour with emotions and behavior (Stephanie Nicola, 2022). Colour psychology is implemented in a great variety of industries, many businesses rely on how to brand their products based on the colour of choice. "The effect of colour in people has been recorded even in ancient times, where Greeks, Egyptians and Chinese used to rely on colour to evoke emotions and aid in treatments"(Stephanie Nicola, 2022). Coming back to modern times, many aspects of colour have been subjected to a considerable amount of scientific research.

"There are some well-defined and developed literatures that focus on the way colour is developed and modeled" (Elliot, Maier). "Some examples are color physics, the way that the eye and brain process colour stimuli, color linguistics and categorization, the way that colour terms are presented in a language and various practical issues such as colour reproduction, colour deficiency and colour appearance phenomena such as illusions and synesthesia" (Elliot, Maier). However, the way that colour affects the psychological part of the human brain is still a work in progress as there hasn't been any robust and well-defined literature. Nevertheless, research activity in this area has been growing exponentially in the past decade and the number of theoretical and empirical findings have surfaced.

2.2 Colour in design

Now I will discuss all modern ways that colour is used in user experience. This is connected to colour psychology due to the fact that in any usage of colour the psychology part of it is always taken into consideration by the designers. Previously, I mentioned how colour psychology is viewed outside of user experience and in this chapter I will focus on methodologies that are used in today's market by professional UX designers. When it comes to designing there are a lot of factors that come into play. The most prevalent is how colour is used to highlight the layout, structure and make the platform or product aesthetically pleasing while maintaining a balance in its usage.

Designing with colour usually comes as a second nature to designers as market trends change every couple of years, they have to adapt in the new format and utilize the popular colours to their advantage. There are many different methodologies and techniques that are used to achieve balance and not overload the users with different colours. For instance, colour harmony that uses the triadic method which uses three colour not from the same hue (red, green, yellow). This is used when there is a need for a more vibrant looking platform.

Next I will go into detail on how different methods work with colour in design.

- Branding

This is an important step for any designer and business. Branding requires careful consideration and risk-taking when it comes to its design as it is in the forefront of all businesses (Adam Maidment, 2023). Colours enhance the brand identity and make it stand out from the competition (Julia Sagar, 2018). Using the correct colours for the message that the brand wants to convey is crucial to its future success. Many brands that have established themselves in today's world have memorable designs and vibrant colours that do not undergo many changes over time unless a form of rebranding takes shape and form. Designers need to always be updated with the latest logo and branding trends in order to assure the success of their designs.

- Emotional impact

Every designer wants to impress and evoke emotions with their designs. Emotional impact has that feature, the choice of specific colours has the ability to convey different feelings and emotions to the users. This is an important factor when it comes to designing as it leaves the users with a lasting experience which can be either positive or negative. Different colours can convey a different message, however it is also crucial that the overall design and layout of the platform matches the emotion that the colours want to convey. Emotional impact has plenty of advantages when measuring it as well, as it provides data that the users have responded to during their experience with the platform. This helps UX designers to recognize mistakes or realize which features were good in order to enhance them. According to Don Norman's Book called "Emotional Design" he puts emotional impact into three categories.

1. Visceral : is the first reaction to the product

2. Behavioral : is the emotions felt while using the product
3. Reflective : is the emotions felt after using the product

- Readability

When it comes to readability it is important to understand the efficiency of text and legibility (Mariia Kasym). Text colour should be in par with the background colour and assure that the reader is able to understand the text without difficulties (Mariia Kasym). It is also important to mention that readability also functions as an inclusive method that allows everyone to follow the design with ease. For instance, developing a design that includes colour blindness and people with impaired vision, allows that group of people to browse the platform with the best possible experience and get them engaged. There are many factors that provide us with information of bad readability, most of the time when looking at an application or a website the first sign of bad readability is if it is really slow to follow the content that is presented (Jakob Nielsen, 2015). Having the text be indistinguishable from its surrounding elements or making it seem as if it's not as important to the design makes the case of bad readability. Sometimes, the content that is provided for reading can be important information that the user needs to be able to distinguish and guide themselves through the correct path that is intended by the designers to reach the end goal. Some examples could include booking a doctor's appointment online, booking plane tickets or looking for instructions on how to complete a specific task.

- Cultural considerations

Cultural considerations is a very interesting topic that allows a different set of rules to take place and construct a design that follows the culture's values and norms. It is important to realize the impact of a culture when it comes to colour in design (Andra Cipman, 2020). Some cultures may share similar values and habits but there are the ones that are completely different from one another. This is why designers need to be aware of the difference of how cultures perceive colours and design models (Andra Cipman, 2020). Hofstede's cultural dimensions theory explains in great detail how different cultures react and follow their norms and habits. By grasping the difference in cultures a designer can create an impactful design that will be inclusive and easy to understand by many cultures. As the world becomes more and more familiar with each other due to the connection to the internet, many people who become accustomed to it start to form a general sense of how design in a globalized market works. However, this doesn't mean that personalized design

for each country will cease to exist, there is a lot to learn by a country's culture and creating something that abides to their view of the world. Users who can easily identify their cultural features of a product are more likely to be engaged. With that being said, realizing the cultural significance of creating designs that people can follow is crucial and understanding what colours and interactions are appropriate or simple to grasp allows the designer to create an influential product that people can relate to.

- Consistency

Consistency entails that all the content is aligned with the goals of the designer, and all the UI elements are not redundant (Radiant). This means that all the elements follow a series of actions that the user goes through in order to achieve what was intended by the designer. The content should follow similar themes as well as similar colour patterns. Having cohesive colour progression in an application allows the user to become familiar with the product unconsciously. Developing an experience of familiarity with the user provides them with a sense of trust for the product, thus allowing them to explore the product with ease. Enhancing the sense of consistency provides the user with better usability and overall satisfaction (Marina Yalanska). The usage of colour consistency in digital products is deemed as important as any other designing method, through colour the users are able to understand how to navigate and delve deeper into the product. This also helps designers realize which parts of their design have been impactful and which need improvement. Consistency is a powerful tool that UX designers can use to their advantage for the sake of creating user-friendly products or services and build trust with their users.

There are a few types of consistency (Marina Yalanska).

1. Functional Consistency provides navigations, interactions and UI patterns.

- Navigation : menus, buttons and links should follow a consistent pattern across the product.
- Interactions : actions that the user does while using the product or service. Such as scrolling, clicking, swiping, typing.
- UI patterns : using the same elements throughout the product ensuring familiarity with each object and user.

2. Interactive Consistency provides feedback confirmation and error handling

- Feedback and confirmation : reports back to the designers important feedback from the users such as submissions and transactions and chatting to confirm their actions were understood.
- Error Handling : having a system that is able to receive error messages and respond to them with efficiency when they happen.

- Aesthetics

Aesthetics have a vast impact on the user's behavior with the product. Whether it is digital or tangible, an aesthetically pleasing product will grab people's attention, as it is a natural response for humans to be drawn to beautiful designs (Interaction Design Foundation). Aesthetics as a notion is used in every field that design is involved in, designers strive for better aesthetics in each design to increase the possibility of the product's success. As the world advances into a more and more aesthetically pleasing place we see an increase in beautiful things. From houses to cars and other vehicles, there is a prevalent feature that all designers follow to create something beautiful. So it is quite important to mention that aesthetics are all around us even if we unconsciously let it pass us by.

Now I will focus more on aesthetics in user experience. Using colour to create aesthetically pleasing designs is at the forefront of any project (Anton Nikolov, 2017). Visualizing what the users will experience in real time is important when moving forward, as it allows the designer to understand how the users will react to their first time seeing the product. Nevertheless, as important the visual is so is usability, having a product that functions as it is intended to is crucial to users and their needs. Sometimes really beautiful designs convince the user that everything will work accordingly (Anton Nikolov 2017). However, problems can arise due to the fact that users tend to ignore usability issues, due to the design being aesthetically pleasing. This creates confusion for the designing team because they will not be able to receive correct feedback and uncover the problems of the design (Kate Moran, 2017).

- Accessibility issue

Accessibility is the method that allows people with different medical backgrounds and disabilities to engage the product without too much struggle. It is essentially a practice that when done correctly all users can be able to distinguish what they are viewing and operate the product smoothly.

Accessibility issues will be showcased in visuals that will represent the hierarchical value of its issue, starting at the top with the most critical being at the top and less critical ones as it progresses downwards (ADA Site Compliance).

These are the issues that would obstruct people with disabilities the most

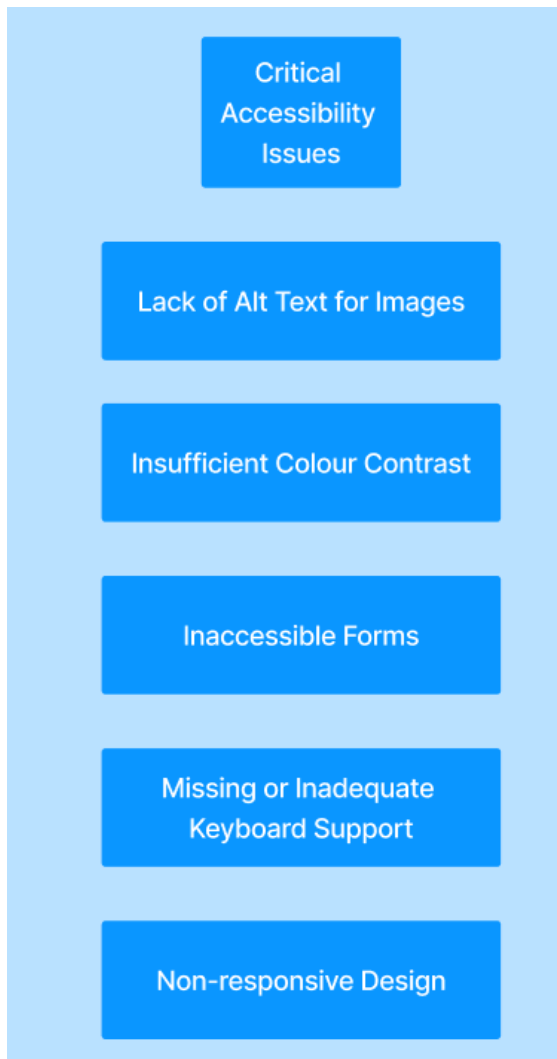


figure 1: Critical Accessibility Issues (ADA Site Compliance)

These issues are not as critical to fix as the last ones, but still an obstacle to usability.

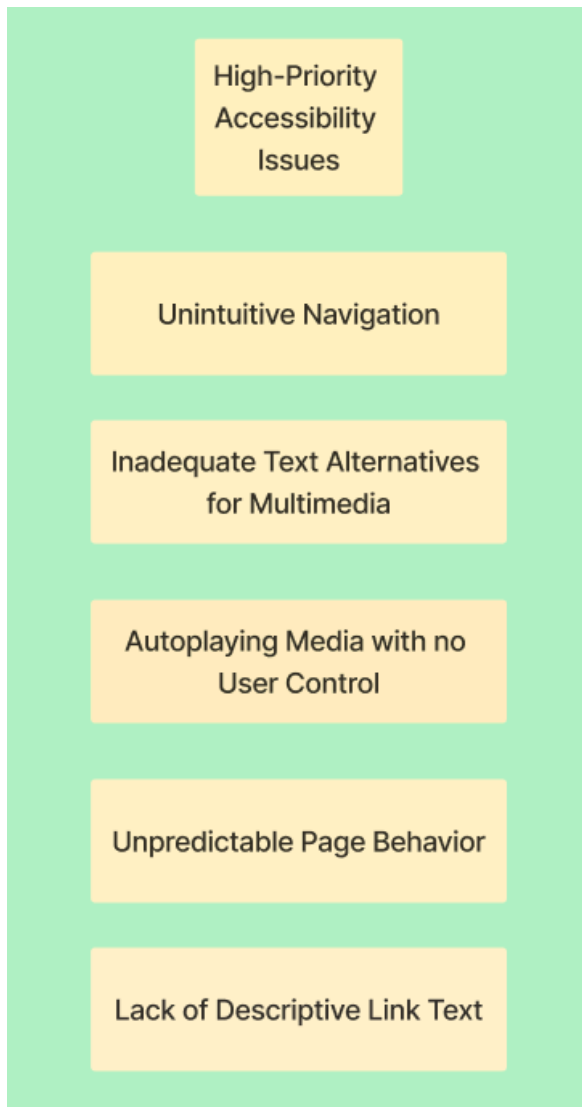


figure 2 : High-Priority Accessibility Issues (ADA Site Compliance)

These issues do not cause an immediate negative impact but still need to be addressed.

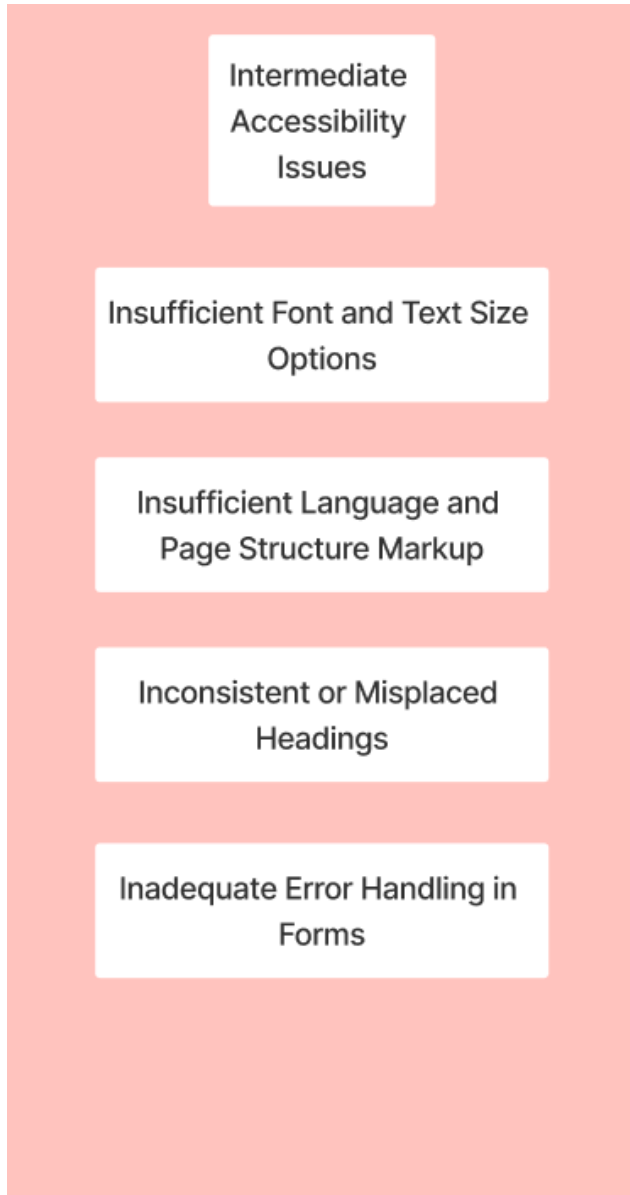


figure 3 : Intermediate Accessibility Issues (ADA Site Compliance)

These issues are the least common ones, however important to fix in order to proclaim good usability.

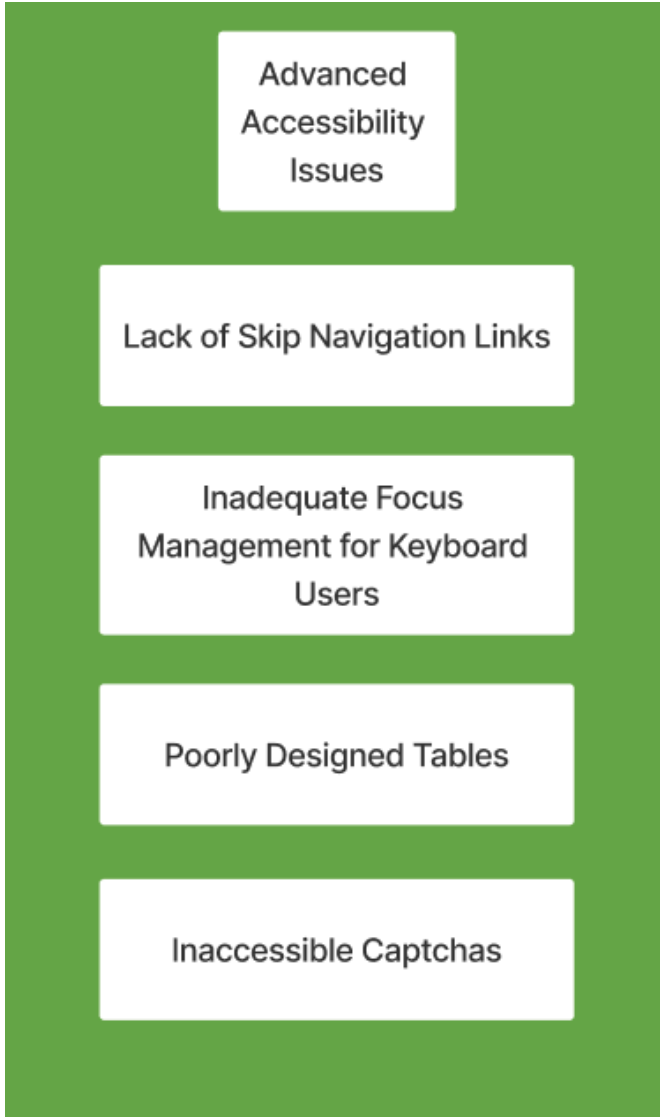


figure 4: Advanced Accessibility Issues (ADA Site Compliance)

2.3 Effect of colours on emotions

2.3.1 Cultural effects on interpretations

Table 1: Cultural Comparison table based of Color psychology in UX by Kritika Mall

	Western	Far Eastern	Middle Eastern	Indian
Red	Love, Danger, Action	Prosperity, Good Fortune, Vitality	Danger, Caution, Evil	Beauty, Wealth, Power
Black	Intimidating, Death, Mourning	Health, Prosperity, Stability	Mystery, Mourning, Rebirth	Evil, Darkness, Negativity
Blue	Depression, Trust, Calm	Healing, Relaxation, Feminine	Heaven, Spirituality	Sports, Strength
Green	Luck, Jealousy, Greed	Fertility, Hope, Life	Strength, Hope	Harvest, Hope, Virtue
Yellow	Happiness, Joy Caution	Sacred, Royal, Masculinity	Happiness, Prosperity	Sacred, Auspicious

Table 2: Comparison table based on colorpsychology.org

	Symbolism	Effect	Associated with
Red	Energy, war, danger, strength, love	Enhances metabolism, raises blood pressure	Attention, signifying danger
Green	Growth, harmony, freshness, fertility	Enhances metabolism, produces calmness	Tranquility, calmness, sincerity
Blue	Unique, empathetic, personal, sympathetic	Lowers heart rate, slows metabolism	Peaceful, flexible, imaginative
Brown	Stability, wisdom	Seriousness, maturity, support	Dependability, resilience
Orange	Energy, happiness, determination, success	Attraction, creativity, positivity	Joy, sunshine, tropics
Yellow	Honor, loyalty, energy, happiness, encouragement	Produces a warm effect, cheerfulness, stimulates mental activity	Happiness, intellect, energy
Pink	gentleness, love, youth, hope	Calming, non-threatening	Vulnerability, innocence, femininity
Purple	Power, nobility, luxury, ambition	Conveys wealth and extravagance	Wisdom, dignity, creativity, mystery
White	Safety, cleanness, purity	declutter the mind, sparks creativity	Light, innocence, perfection
Black	Strength, authority, grief	mysterious, elegance, depressing	Formality, death, evil, power, elegant

3 Research Design

The method that will be used for this research will be qualitative in the form of interviews. The interviews will be efficient in this research due to the fact that the answers will be provided by expert opinion on the subject matter.

3.1 Interview

- Semi-structured interview

In this research a semi-structured interview would suffice and result into adequate insights as it allows the participants to have more freedom in formulating responses and keep the interview in a conversational level to allow exchange of ideas and information

- Interview questions
 1. Can you tell me about your experience as a UX designer and your background in working with colour in design?
 2. How important do you think colour choices are in creating a positive user experience?
 3. How do you approach selecting colour schemes for different types of projects or user demographics?
 4. How do you balance the aesthetic appeal of colour choices with usability and accessibility concerns, particularly for users with visual impairments?
 5. How do you conduct user research or usability testing related to colour choices, and how does this feedback inform your design decisions?

Background

1. Can you tell me about your experience as a UX designer?
2. Do you use color psychology in design?
3. What has been the most important source of learning about design, and colours in specific?

Effect of colors on the target audience?

1. How important do you think colour choices are?
2. What about creating a positive user experience?

3. How do you conduct user research or usability testing related to color choices?
4. How does this feedback inform your design decisions?

What affects your design decisions?

1. How do you approach selecting color schemes for different types of projects?
2. What about different user demographics?

- Subject of study

The subject of study is how UX designers view the impact of colour psychology in their lives as professionals. This can give important insights as to what goes through a person's mind when designing with colour psychology in mind and its effects on the users.

- Recruiting of participants

The recruiting was carried out by email invitations. Carefully picked candidates with adequate experience in UX design.

4 Results

- Objective

The goal of the results is to gather all the raw data from the interviews into organized patterns that provide the reader with sufficient knowledge about the topic. The results will also provide a more insightful point of view that compliments the theoretical background.

4.1 Interview

In this part I will demonstrate the organized version of the interview data that I have gathered.

4.1.1 Interview perspectives

Question 1: Can you tell me about your experience as a ux designer and your background in working with colour in design?

Participant 1: I studied a very general design degree as a bachelor. And in that, I am a student of communication and a masters in contemporary design. And I've been working as a visual designer that includes ux design with a strong emphasis in technology, but I have been doing all over like all over the graphic design, ux design, ui design, visual communication, advertisement, animation, production.

Participant 2: My background is basically from graphic design and advertising and marketing, but basically, basically I've done visual. So that's where I started my career, maybe 25 years ago. I thought that I'm going to be a print designer in advertising, but I've never worked in print. I've always worked online on web projects and stuff.

Participant 3: I have about 24 years of experience as a designer and of course I've been not only a UX designer but a visual designer and I've done some motion design and UI design of course. And being foremost a visual designer then of course color is a really important aspect in my work and something I really like to explore with.

Question 2: How important do you think colour choices are in creating a positive user experience?

Participant 1: It is one of the basic building blocks of good design, it can either break it or make a design like I usually, if you think about the design process, I usually start from colourless bare wire frames. And then you sort of start building upon that. And when you start adding color is when

things start coming to life in terms of more abstract communication. When I was talking before like that, you have, of course, depending on the platform, whatever, but like a very basic communication setup would be like the green is “agreed”, the red is “declined”, the yellow is a warning. What we should be doing as communication experts in general, saying stuff without having to write the words like how often i run into issues, design issues that the proposed solutions is like writing more text, giving more extent. That's not always the case. Communication can be done for example with icons, drawings, illustrations, and all of this is accompanied by colour.

Participant 2: I've been working for the daily brand for many years, 4 years now on at this moment. And we have a kind of set colour scheme to which we should obey. At my current work, we have some of the brand color stuff which we used to identify our brand. And then we have several colors indicating different kinds of occasions in the UI for example, warning and information on different colors for that kind of situation.

Participant 3: I think it's really important because it kind of sets the tone when you open up an app, it kind of sets the tone from the start, like what kind of an app it is. Try different combinations in order to achieve the best results using color.

Question 3: How do you approach selecting color schemes for different types of project or user demographics?

Participant 1: I think there are a few layers. There's the technical layers and the creative layers that you are sometimes limited by whether it's a design system or a platform, or like specified conventions, like all very often when you're working some, there's like, it's in industries that have very specific conventions. And that's what it is. And that's what they want. Like in, for example, cyber security. There's a lot of like, what is it like? TLP is how private this document is in terms of who can see it? And it can be either white, green, yellow, or red. But they're in a black box, but this specific black, the specific green, the specific yellow, and the specific red. And that's the convention. So there's like limits like that. But like whenever I think about that I also like you need to work within those limitations and the brands have different colour schemes and stuff, but like always always telling stories through color. I think that's like one thing that I do. And also if you go one step back from that, like in the very more basic aspects like that, things have. If you create a color palette or a color scheme, you need to take into account whether you're trying to achieve that. You are able to build things with the proper contrast that they have.

Participant 2: We have a set of colours that is tested for accessibility, that we have certain colour contrast for colours. We have, for example, our button colors and stuff like that. They look like they come from the brand, we can touch them, but we have been assured that they are accessible and

they have enough contrast for accessibility stuff. There is a set standard for colors, and we have to pass them with the VCAG 2. And that's about it.

Participant 3: Well, by kind of, trying to understand who the project is for. So, let's say if I work for something, some project in Indonesia, then I try to study that. What does a colour mean there? And then I go and see like, what do the colours mean? But like if it's like a group of people, like different profiles, then like, for example, if it's like up for, let's say, business people, then it's more new. If it's for youth, then it can be really whatever. If it's for kids, then like kind of happy and bright colors.

Question 4: How do you balance the appeal of color choices with usability for users that have visual impairments?

Participant 1: There are specified rules for that. There's the measuring of the contrast. There's an endless amount of tools like also all illustrator after effects photoshop they have tools to specifically measure accessibility on color. You can see different types of color perception, like different capital types of daltonism, or high contrast or contrast like, how Does it look? So you can test your own design, in that sense, like if you are making a bottom that looks a certain way, but it just disappears. If you have, like some sort of daltonism, that's probably not the right combination. And or you can address it in a way that even if it disappears, you could still see it. So that's when you find a lot of buttons with borders, shadows or like high contrasting words. So you could still see it in the worst case scenario.

Participant 2: I'm kind of working currently like renewing some of UX designs in a company. And we kind of can't try to minimize colors like going, maybe more to black and white, but really going to shadow colours like to ensure accessibility and to assure that the UI is kind of clean from distracting colours. We don't really have any similar purpose. We should use colors when it has some kind of purpose, not just for fun. And it means a kind of strict typography and good readability and legibility.

Participant 3: Usability is always number one. And the good thing nowadays, like when you have design systems, at least like where I worked, have always the triple A accessibility. So it's that, that usually helps that it doesn't kind of matter in a way, but of course, good contrast needs to exist for all users. Accessibility is also available for testing with online tools, so this makes the testing become more accurate and assure that usability works for everyone.

Question 5: How do you conduct user research or usability testing related to color choices, and how does this feedback inform your design decisions?

Participant 1: So I'm gonna start with the end like feedback is always what designers work on. I think when you build stuff, you see it, you read it, you understand it. That doesn't guarantee anything, doesn't matter how much of an expert you are, or how much capable you think of how much knowledgeable you think you are in a specific topic, you always do user testing, I tried to do as much testing as possible with everything I do, even if it's just like sending someone a screenshot and saying "just look at this". Tell me there's anything weird not necessarily like drawing a user acceptance test like completing a task or like proper testing, like making a whole system test is the most important thing. And you should always as a designer kind of understand that. Even if you think that what they're saying is incorrect, like let's say someone says like, I just don't like this colour. They are not saying that doesn't mean that you should change the colour. You should understand why this colour is like this, or why is this component like this? Or why is this like shade or whatever it can be? Why is this picking the attention of this person? You need to sort of go one step further and like to gather the feedback and understand where it comes from. And once you understand what it comes from, you can make design decisions to either address it or not, or like how to address it. So in those terms, I think feedback is the most important thing and how to test it.

Participant 2: I can say that we do use testing like when we are creating new layouts or our new product comes, we have prototypes, which we test with the users. We have 2 kinds of tests, like larger and deeper user tests with just a few people. And then we have, like a usability hub, and where you can test with the audience all around the world and test our stuff. If we get some user feedback, which is like 100 %, like everyone is, or opinion on some of our stuff, we really take a good look at, are we going to change it? but when it goes to like 50, 50, usually with designers, they think we are wiser than the users.

Participant 3: I try not to focus on the visual bit in user research. And even though that would be my kind of main goal, then I wouldn't focus on it because people will anyway have an opinion on different colours. I would say not to actually ask them about it because it's an opinion that everyone has. And many people like to kind of bring it forward or bring forward if they don't like it. But again, that's kind of the approach I've taken because I did some branding exercises for a company and like a large company and where colour is everything. So, I had to kind of find creative ways to get the feedback without them kind of just thinking about the choice of colour, but how the colour works in different applications or different aspects of their usage of the brand tools.

4.1.2 Thematic Analysis of interviews

The thematic analysis allows the identification of patterns or themes within a dataset. Thematic analysis is suitable for the interpretation of the textual data I have collected from the interviews.

Table 3: Similarities among answers

<p>Can you tell me about your experience as a ux designer and your background in working with colour in design?</p>	<ol style="list-style-type: none"> 1. Long careers in their respective field 2. Degrees in graphic design 3. Long experience in UX/UI design 4. Worked in other areas such as web development, motion design, advertising
<p>How important do you think colour choices are in creating a positive user experience?</p>	<ol style="list-style-type: none"> 1. Colors serve great importance 2. User is faced with colors from the jump 3. Colours serve as a communication tool 4. Colours indicating different ways of usage 5. Different combinations to achieve best result
<p>How do you approach selecting colour schemes for different types of project or user demographics?</p>	<ol style="list-style-type: none"> 1. Deciding colors based on the users 2. Based on the industry and culture 3. Different layers of decision-making 4. Based on the target audience 5. Colour palettes received from customers to create brand identity, which are also accessible
<p>How do you balance the appeal of color choices with usability for users that have visual impairments?</p>	<ol style="list-style-type: none"> 1. Specific rules to address accessibility 2. High importance in usability 3. Existing tools that help in choosing the right colors 4. Choosing the correct colors to create the right contrast between text and background 5. Most of the time designers will receive a colour scheme from a brand with the colors being already tested for usability(AAA).
<p>How do you conduct user research or usability testing related to color choices, and how does this feedback inform your design decisions?</p>	<ol style="list-style-type: none"> 1. Different tests exists that include a few people and a larger group 2. Feedback is important, however depends on the responses 3. Colour choices may be different from user to user 4. Choosing colors based on the functionality of the product rather the individual opinion choice

Table 4: Deductive thematic analysis

Comparing existing literature with the interview's answers

Research questions	Corresponding source	Corresponding answers
How important do you think colour choices are in creating a positive user experience?	Neurofied.com The effects of colors on behavior by Clara Vetter 2019	<p>"It is one of the basic building blocks of good design"</p> <p>"I think it's really important because it kind of sets the tone when you open up an app"</p>
How do you approach selecting colour schemes for different types of project or user demographics?	tubikstudio.com Color matters 6 tips on choosing UI colors by Alina Arhipova	<p>"We have a set of colors that is tested for accessibility, that we have certain color contrast for colors"</p> <p>"You are able to build things with the proper contrast that they have"</p> <p>"trying to understand who the project is for. So, let's say if I work for something, some project in Indonesia, then I try to study that. What does a colour mean there?"</p>
How do you balance the appeal of colour choices with usability for users that have visual impairments?	UX Collective Some proposed color heuristics by Alex O'Neal 2019	<p>"There's an endless amount of tools like also all illustrator after effects photoshop they have tools to specifically measure accessibility on colour"</p> <p>"shadow colours like to ensure accessibility and to assure that the UI is kind of clean from distracting colors"</p> <p>"Usability is always number one. And the good thing nowadays, like when you have design systems, at least like where I worked, have always the triple A accessibility"</p>
How do you conduct user research or usability testing	usertesting.com How color impacts conversion rates and UX by UserTesting 2019	<p>"We have 2 kinds of tests, like larger and deeper user tests with just a few people. And</p>

<p>related to colour choices, and how does this feedback inform your design decisions?</p>		<p>then we have, like a usability hub, and where you can test with the audience all around the world and test our stuff”</p> <p>“I had to kind of find creative ways to get the feedback without them thinking about the choice of colour, but how the colour works in different applications or different aspects of their usage of the brand tools”</p> <p>“You should understand why this colour is like this, Why is this picking the attention of this person? You need to sort of go one step further and like to gather the feedback and understand where it comes from.”</p>
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5 Discussion

The data I received from the interviews give a clear idea of how professionals approach colour psychology and UX. The participants are well-established professionals in their field which make the answers have magnitude and enrich the research.

The answers provide details of how a professional UX designer is able to process colour psychology and operate within the rules of UX. They are a combination of personal experience and tested knowledge that has been obtained through their work. Some of the answers were expected to follow a similar pattern due to the fact that there are specific regulations a designer must follow. Nevertheless, this didn't stop the participants to also speak their mind and talk about how the processes are being done in reality.

The results of the interviews also displayed the differences of each participant in their answers. As I mentioned before it is natural that the responses would have many similarities to the rules and regulations a designer has to focus on, however everyone added something new that was unexpected even though they all had the same questions. This makes sense as they all come from different backgrounds, working in the same field can offer plenty of things in common but the individual's experience is also related to how they first started and how they continued their journey.

As I found out through one of the interviews, user experience was not as prevalent in the past as it is now. A couple of factors that connected everyone were the graphic design, communications and web development. Each individual started their careers with different degrees and jobs, but as the time progressed they started picking up the rise of UX design. This is important to understand how the differences in opinions are created. Even though it is not necessary to have complete approval from all designers when it comes to topics and methods of work, having a background that is different from everyone else creates a diversified opinion which makes the content richer in value.

On the other hand, similarities can be seen from people who have studies on the same topic but doing something different, for instance a communications degree working in UX. Having a diverse collection of well-thought opinions provides a better understanding on how professionals are able to evolve in their current field.

Lastly, the data were accumulated to be represented as a thematic analysis method, in order to clarify and illustrate analytic claims. This way the data is able to provide a clear view on what was said by the participants and make their points of views understood for the readers. (Terry, Hayfield, Clarke & Braun, 2017, 33)

6 Conclusion

User experience is a quite diverse and intricate field. With the addition of colour psychology as one of the most prevalent methods of design it allows the creation of beautiful products that can impact humans positively.

There are many aspects of user experience that are being used today that were mentioned in the theoretical background. Some of those have a strong emphasis on colour psychology, such as branding and aesthetics. As previously mentioned, the aspects that are viewed by people directly, colour plays a significant role in the success of that aspect. Let's look at branding for example, even though marketing and strategies are important to the story of the product, colour is what makes it come alive and grabs the viewer's attention.

Usability is another factor that every UX designer can't omit. With usability the product or service is able to function correctly for all users and make it easy for everybody to use. Colour and usability go hand in hand as mentioned in the interview results, colours have a significant role to provide the correct contrast for people with visual impairments. This is also mentioned in the accessibility part where users need to have proper contrasts between text font and background.

The interview data shines a lot of light in methods and techniques used when it comes to usability and colour psychology. Explained by seasoned professionals, the importance of colour is clear, "It is one of the basic building blocks of good design" said one of the participants. With the aid of the UX professionals the research questions had a lot of depth and insight. Each participant responded according to their own experiences within the realm of user experience design.

Colour psychology in UX design is a technological field that impacts people's lives and provides products and services which are used by the people. The more research is conducted the better everyone will benefit with the advancements of this technology.

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