

THE DESIGN OF “CATVISOR” SUNSCREEN USAGE REMINDER MOBILE APPLICATION FOR COLLEGE STUDENTS

Salsabila Aurielya Verdian¹, Diani Apsari² and Yelly Andriani Barlian³

^{1,2,3} Visual Communication Design, School of Creative Industries, Telkom University, Jl. Telekomunikasi No 1, Terusan Buah Batu – Bojongsong, Sukapura, Kec. Dayeuhkolot, Kabupaten Bandung, Jawa Barat, 40257
cacaurielya@student.telkomuniversity.ac.id¹, dianiapsari@telkomuniversity.ac.id²,
yellybarlian@telkomuniversity.ac.id³

Abstrak : Tabir surya adalah cara penting untuk melindungi kulit dari efek berbahaya sinar UV. Namun, banyak orang yang sering lupa menggunakan tabir surya atau tidak menggunakannya dengan benar sehingga berisiko terkena paparan sinar matahari, kerusakan kulit, dan kanker kulit. Indonesia juga terletak di garis khatulistiwa yang memungkinkan paparan sinar matahari dengan intensitas tinggi, sehingga sangat penting bagi masyarakat untuk menggunakan tabir surya dalam kehidupan sehari-hari. Paparan sinar matahari seumur hidup berhubungan positif dengan kerusakan kulit dan penuaan kulit, terutama pada orang yang masih muda, hal ini menunjukkan bahwa pengetahuan dan perilaku sebagian besar masyarakat telah menunjukkan tingkat penggunaan tabir surya yang rendah, termasuk pendidikan tentang pentingnya penggunaan tabir surya perlu dilakukan untuk meningkatkan kondisi hal ini. Solusi potensial untuk masalah ini adalah dengan menggunakan pengingat media untuk mendorong orang menggunakan tabir surya. Oleh karena itu, tugas akhir ini digunakan untuk meringkas proses perancangan dan media pendidikan interaktif dengan menggunakan kualitatif sebagai metode penelitian dan menggunakan angket, observasi, wawancara dan studi literatur sebagai Pengumpulan Data dan SWOT dan Matriks sebagai analisis data untuk mengingatkan orang akan pentingnya penggunaan tabir surya dalam kehidupan kita, dan akan menjelaskan dasar pembuatan aplikasi sebagai media yang dapat mengingatkan masyarakat untuk memakai tabir surya dan memberikan pengetahuan tentang indeks UV, sehingga masyarakat dapat lebih memahami penggunaan tabir surya dan tidak lupa menggunakan tabir surya setiap hari.

Kata kunci: *antarmuka pengguna pengingat tabir surya, aplikasi seluler, desain untuk layanan kesehatan, desain interaktif, pendidikan*

Abstract : Sunscreen is an important way to protect your skin from the harmful effects of UV rays. However, many people often forget to apply sunscreen or do not use it properly, putting them at risk of sunburn, skin damage and skin cancer. Indonesia is also located on the equator which allows exposure to high-intensity sunlight, so it is very important for people to use sunscreen in their daily lives. Lifetime sun exposure is positively associated with skin damage and skin aging, especially in younger people, these indicate that most people's knowledge and behavior have shown a low level of sunscreen use, including education about the importance of using sunscreen needs to be done to improve this condition. A potential solution to this problem is to use media reminders to encourage people to use sunscreen. Therefore, this paper is used to summarize the process of designing and interactive media education by using qualitative as

the research method and use questionnaire, observation, interview and literature study as the Data Collection and SWOT and Matrix as the data analysis to remind people the importance of using sunscreen in our lives, and will explain the basis for creating applications as the media that can remind people to wear sunscreen and providing knowledge about the UV index, so that people can better understand the use of sunscreen and did not forget to use sunscreen every day.

Keywords: *design for healthcare, edutainment, interactive design, mobile application, sunscreen reminder user interface*

BACKGROUND

Indonesia is a tropical country with year-round of sunlight, Indonesia is also located on the equator which allows exposure to high-intensity sunlight. Although sunlight is a beneficial energy source for human life, it is not always beneficial because excessive exposure to the ultraviolet rays contained in sunlight can have adverse effects on the skin.

As stated by Badan Meteorologi, Klimatologi, and Geofisika (BMKG) by monitoring the UV Index, health officials can warn the public of the risks of overexposure to the sun and offer advice on how to protect themselves from harmful UV rays. With the dangers of UV rays and the need to protect our skin, we must use sunscreen as a layer of protection against UV rays.

In our evolving and technology-dependent life, we rely on gadgets, especially smartphones. Today everyone has a smartphone. This gives us the opportunity to better use technology to make it work for us. And it plays an important role in our daily life and serves as a reminder to use sunscreen in different ways each time.

Media Reminders can be a powerful tool to promote sunscreen use and protect people from the harmful effects of UV rays. However, further research and innovation are needed to develop effective and culturally appropriate media strategies and to address privacy and user experience issues.

RESEARCH METHOD

The research method used to collect data for this study is qualitative method, namely by questionnaire, interview, observation, and literature review. Observations were made by observing students' behavior when using sunscreen. Interviews are conducted with the dermatologist, the graphic designer, and the target audience he will be researching. A questionnaire was distributed to a student in Bandung. Literary studies taken from many sources such as journals, books, articles related to this topic will be used as reference for this design. For the analytical approach of this study, matrix and SWOT analysis are used to analyze the opportunities of this design to gain capabilities and strengths while minimizing gaps and threats.

RATIONALE

Digital Illustration

According to Kusrianto, Adi in the book Introduction to Visual Communication Design (2007), Digital Illustration is a kind of illustration which explores the creative abilities of computer programs to create visual art in the form of illustrations and improve illustrations. Before studying this computer application program, we need to know the type of digital image to be processed. There are two kinds of images that can be produced by digital processes, namely vector images and bitmap images. Each has different characteristics and benefits. Images of this type will not change when enlarged or reduced. Vector images are the result of lines, curves, and points. Each element has a fill and stroke that can be edited according to creation. Bitmap images are images formed by a set of dots called pixels (picture elements).

User Interface (UI)

User Interfaces are the parts of computers and software that humans can see, hear, touch, speak to, and directly understand. A user interface can be said to be the technology and mechanism of interface display for interacting with the user. Based on

this statement, we can say that the user interface is the part of the computer and software that manages the appearance of the interface to the user and allows pleasant interaction between the user and the system (Wilbet O Galitz, 2007).

User Experience (UX)

User Experience is an individual's perceptions or experiences and reactions when using a product, system, or service. *User experience* measures users' satisfaction and comfort with products, systems, and services. *User experience* includes all aspects of user interaction with a company, its services, and products. (Mirnig et al., 2015).

Mobile User Interface

According to Churchville (2021), reported by techtarget.com, a mobile *user interface* is a type of *user interface* that focuses on designing interactive interfaces on smaller screens such as smartphones and tablets and enhancing special features such as touch controls.

Track Log System

The track log system from the UI itself is indeed designed to facilitate access to various UI programming flows, so that it can achieve its main goal of optimizing and identifying trends from existing infrastructure (Leighton, 2017). Tracker logs will play a role in providing information to users starting from temperature, location, and other ratios to facilitate user activities (Ravazzolo et al., 2014).

UV Index

The *UV* index is a measure of the *UV* value associated with human skin effects (*UV-induced erythema*) and is obtained by integrating spectral radiance weighted with the CIE (1987) reference action spectrum up to 400. Defined as effective irradiance. nm, normalized to 1.0 at 297 nm. The *UV Index* is recommended as a means of raising public awareness of the potential adverse health effects of *UV exposure* and alerting people to the need for protective measures. (Karel Vanicek et al., 2000)

DESIGN AND RESULTS

Message Concept

The existing sunscreen reminder applications cannot effectively help because they think that the letter of design is overcrowded for beginner users, the element of the design's application is overcrowded and didn't think that the design is easy to be understood. Therefore, the message concept of this design is to provide interactive media in the form of applications with interactive elements, good visuals, and edutainment features that can make them more comfortable to use. This concept was carried out by exploiting the strengths and improving the weaknesses of existing applications, as well as adding the author's own creative ideas, namely by using a tracker log system to assist users' journeys in tracking their use of sunscreen and can provide easy explanations for users to understand.

Creative Concept

The design is to provide interactive media in the form of applications with interactive elements such as tracker log system, good visuals, and edutainment features that can make them more comfortable to use. The purpose of this program, according to the analysis, because many college students have outdoor activities during the day, it is very important to use sunscreen every day to reduce the more serious impact for the future, an idea was created to create an application that provides important information about UV Index and Pop Quiz to provide education about UV Ray, UV Index in easy-to-understand language. Besides that, several applications that have emerged have even been used as ideas to develop these applications into new innovative applications based on some of the application's shortcomings. Among them are related to the design and colors that are still not friendly to new users. Through the appearance usage factor, the combination of feature placement and feature usage flow is still not optimal given due to the difficulty of access and simplification of applications that are not good, for example there are UV Index and UV Rays, or even UV Index and UV lens applications even with minimal deficiencies.

Communication Concept

Methods used for communication strategies that seek attention, interest, research, action, and sharing. This method will use supporting media that serve as promotion for the main media.

Visual Concept

Mood Board

The theme and concept of the design to be created is a fresh color, Kiwi Maru Font and structure layout and cat theme as the identity and design of the user interface.



Figure 1 Mood Board

Source: Personal Documentation

Main Media Concept

The selected main media is a mobile phone application that will later serve those who want to maintain and track their daily sunscreen use. It features an element of a tracker log system that allows users to identify goals from results achieved by tracking their daily sunscreen usage. The main elements of this mobile phone application include a tracker log system, reminders, and goal achievement.

Supporting Media

The supporting media that will be used to promote the main media is Print Media that contain Poster and Brochure, Digital Media in the form of Social Media, and Merchandise in the form of Sunscreen collaboration, UV Reminder Stickers, UV Umbrella, and Character Stickers.

Business Concept

The business aspect in the Character Collection feature where some of the characters can be used as stickers in the chat messenger application. So, when the user hasn't bought an existing in app purchase, then some of the characters in the free application are no more than 10 cat characters, and if you buy an in-app purchase that has monthly and one-time purchases then you can get a new character and can be used as stickers in available chat messengers such as WhatsApp Messenger, Telegram, etc.

Design Results

Logo



Figure 2 CatVisor Logo

Source: Personal Documentation

The CatVisor logo is a gray cat which makes it the mascot and the cat serves as an advisor for this application

Cover, Welcome & Sign-In, and Sign Up

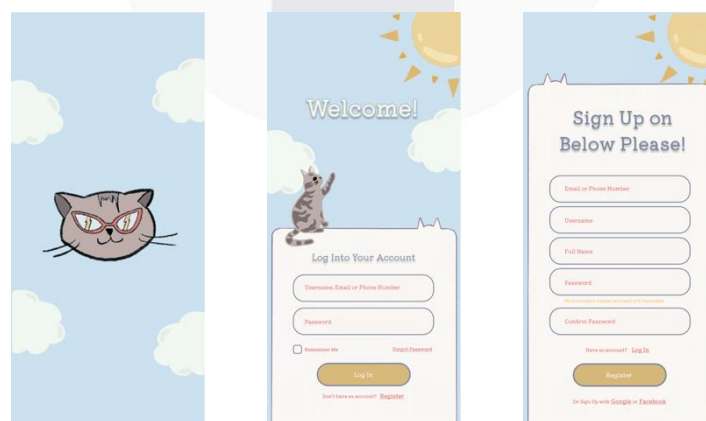


Figure 3 CatVisor Application

Source: Personal Documentation

The opening of the application begins with the appearance of the CatVisor logo with a sky-like background.

The Welcome & Sign-In page has a cat in the layout to enter the account as if it's reaching for the sun and the words 'Welcome'.

The Sign-Up page has a clean design because there are many things that must be registered, such as Email, Password and Username.

Personalization, Home Page, and Menu & Categories

Personalization has a simple design so that users have plenty of space to personalize their skin type and the type of SPF used.

The home page has a scroll up and down design aimed at minimizing another page so that the application is not complicated for the user, has a window that depicts the user as if he were at home to avoid existing UV rays, with the tracker log system system, the percentage available in the window will increase as it is frequently logged.

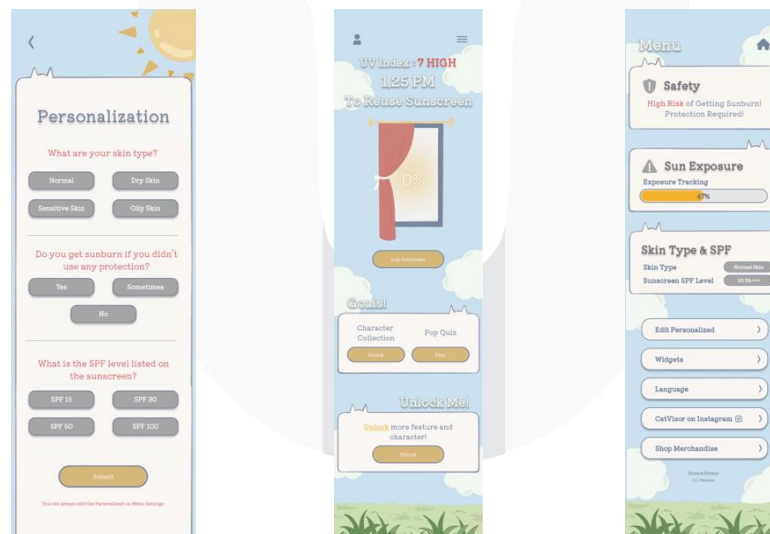


Figure 4 CatVisor Application

Source: Personal Documentation

On the Menu page there are 3 optional warnings for Safety, Sun Exposure, and Skin Type & SPF which can be customized at the Personalized page but can be edited again later. With the use of orange in the Sun Exposure bar, depicting the color of bright sunlight.

Get Character



Figure 5 CatVisor Application

Source: Personal Documentation

By frequently logging sunscreen in the CatVisor application, you will get prizes for existing cat characters more often, but if you don't buy the application, you will only be provided with 10 original cats that are CatVisor's signature, namely the gray tabby cat.

Pop Quiz

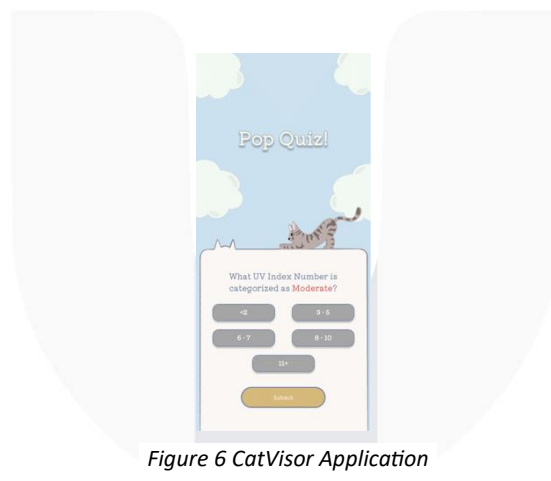


Figure 6 CatVisor Application

Source: Personal Documentation

On the Pop quiz page there are several questions related to UV Rays, UV Index and Sunscreen, so that users can understand more about this concern and encourage more to wear sunscreen every day. It has a tabby gray cat design that is stretching its body in its layout.

Notification and In App Purchase Offer

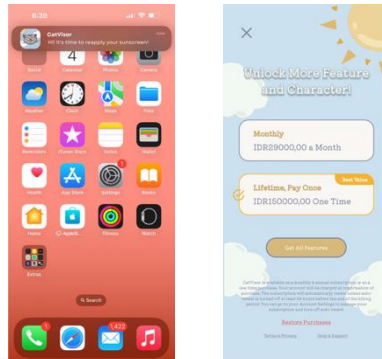


Figure 7 CatVisor Application

Source: Personal Documentation

In App Purchase with monthly offers 29,000 Rupiah per Month and One Time Purchase that more worth that the user only has to pay 150,000 Rupiah and can own without have to pay again for more subscription offer, by purchasing the user can have access to have many characters with various types of cat breeds such as British Shorthair, Munchkin, Scottish Fold, etc.

Supporting Media

Poster

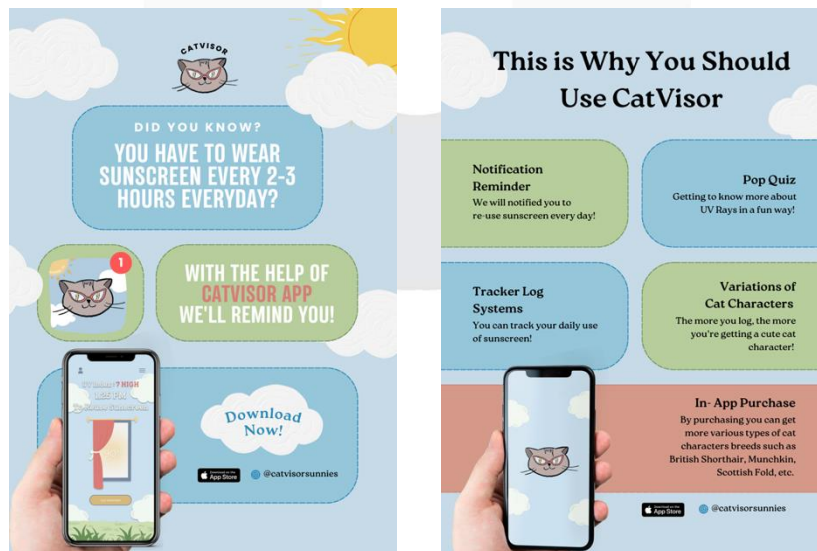


Figure 8 CatVisor Poster

Source: Personal Documentation

Brochure



Figure 9 CatVisor Brochure

Source: Personal Documentation

Social Media

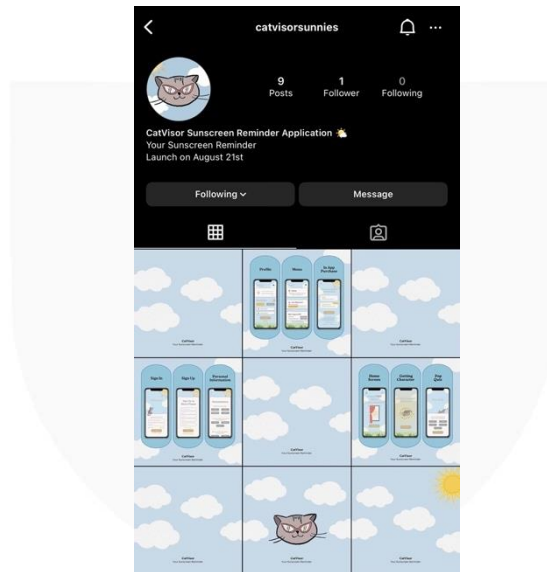


Figure 10 CatVisor Social Media

Source: Personal Documentation

Merchandise



Figure 11 CatVisor Merchandise

Source: Personal Documentation

CONCLUSION

In conclusion, the college students in Bandung engage in numerous outdoor activities during the morning and noon hours, thereby increasing their vulnerability to future adverse effects of sun exposure. Despite this, the consistent use of sunscreen every 2-3 hours remains uncommon among many individuals. Consequently, there exists a need for a third-party application capable of reminding users to apply sunscreen daily. However, the available applications often fail to meet user preferences due to inadequate design. As a result, it can be deduced that the current sunscreen reminder applications are ineffective due to their overwhelming design, particularly for novice users, and their failure to convey information in an easily understandable manner. This underscores the urgency for an alternative solution, which involves the development of a new application with user-friendly features.

The key message of this proposed design is to offer an interactive application incorporating elements of edutainment, captivating visuals, and interactive features to enhance user comfort and engagement. This design approach capitalizes on the strengths of existing applications while addressing their shortcomings and introducing innovative ideas. One such innovation is the incorporation of a tracker log system to assist users in monitoring their sunscreen usage, complete with user-friendly explanations. Through an analysis of the strengths and weaknesses of current applications and based on questionnaire feedback, this design aims to align with user preferences. The envisioned "CatVisor" application caters to user demands by presenting an appealing design and engaging features that make the sunscreen application process enjoyable. By introducing "CatVisor," it is hoped that users seeking to track their daily sunscreen use will find a comfortable, easily comprehensible, and enjoyable solution.

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