

Determining Strategies for The Perfect Shade Mobile Application Using SWOT Analysis and Six Thinking Hats

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Abstract

Product testing is vital when buying a cosmetic product to ensure it fits or looks good on someone's skin tone. In 2020, the world was hit by the Covid-19, a deadly and contagious virus because it spreads when a person inhales an aerosol or droplets containing the virus. Usually, cosmetic products are being tested by buyers through mall testers. Mall testers have disease-causing bacteria that can lead to a skin infection. This study aims to assess a mobile application design that uses augmented reality and artificial intelligence to be a virtual consultant and skin analyzer. This study uses a survey questionnaire based on six thinking hats to gather data and SWOT analysis to analyze the data. Based on the collected data, the researchers conclude that a virtual try-on is effective in trying a cosmetic product and will be patronized by makeup enthusiasts and artists. For women in their late adolescence or early adulthood, The Perfect Shade has a lot of appeals. According to the findings, the group should market the product by micromarketing to beauty gurus online. Investing in a robust AI algorithm will increase the product's security against security concerns.

Keywords

Cosmetic Products, Artificial Intelligence, Augmented Reality, Mobile Application, Skincare

1. Introduction

Makeup testers are used in physical stores to see what product would complement their skin tone and look. Richard Khaw, the deputy of director of the School of Chemical & Life Sciences at Nanyang Polytechnic, said that makeup testers that are high in moisturizers, liquid foundations, and vitamin-infused face masks could contain lots of disease-causing bacteria, such as *Staphylococcus aureus* that leads to skin infections and the acne-causing *Propionibacterium*. These bacteria that can be found on the testers come from the shoppers themselves (Khim, 2021)

Knowing there are sanitary dilemmas in the old way of testing makeups, consumers greatly acknowledge the solution. A consumer study showed 63% of consumers would no longer use the traditional form of testing makeups. Not only do the consumers benefit from the application from being safe from being in contact with germs and diseases, but they will have the liberty of trying out a variety of products and colors, with the same confidence of either buying or not buying the product (Perfect365, 2018).

A mobile application that will utilize Augmented Reality product visualization will be the solution to minimize the usage of makeup testers and lessen contracting a disease from these testers, as seen on Figure 1. AR allows the users to interact with the makeups virtually and immediately see the results in just a few seconds. Artificial Intelligence will also suggest which shade of the product is the best for the user's skin tone. This will help the users make decisions and reduce their time thinking about what's the right shade.

Also, the developers added a skin analyzer feature wherein the mobile application will be suggesting a makeup or a product that is perfect for the skin tone of the buyer by using Artificial Intelligence. In this innovative way of choosing, buying, and trying makeup, makeup enthusiasts don't have to worry about those contractible diseases, and makeup brands don't need to spend money every month for their makeup artists in their boutiques.

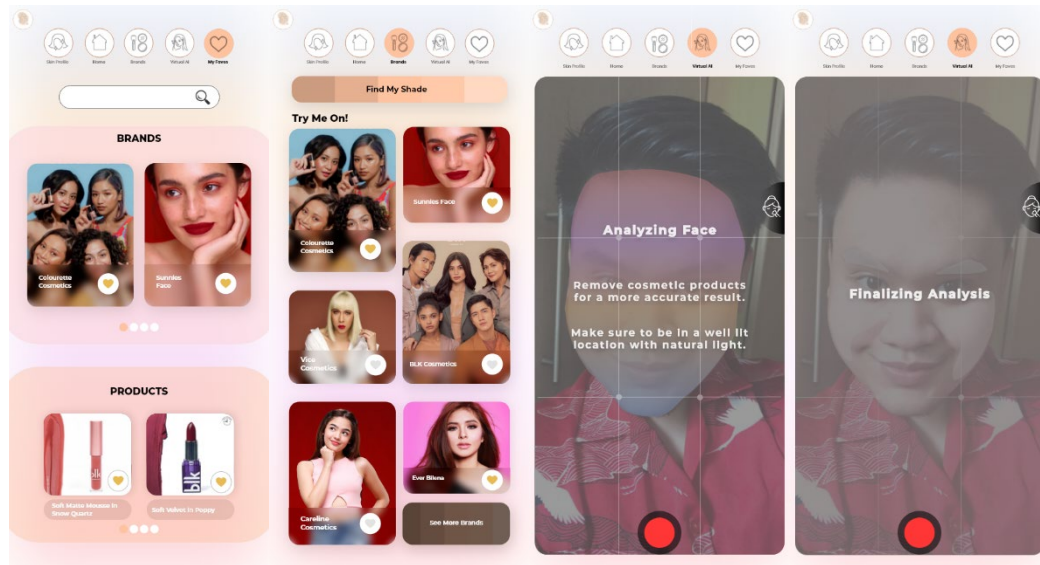


Figure 1 The Perfect Shade User Interface

1.1 Objectives

The case study aims to evaluate the design of The Perfect Shade mobile application and come up with strategies that can further improve the product.

2. Literature Review

The Contribution of SWOT Analysis in the Competitiveness of Business Enterprises in Rwanda. (Habimana et al., 2018)

SWOT analysis is used to evaluate the strengths, weaknesses, opportunities, and threats of a product, service, or business. Factors such as uncontrollable economic conditions significantly affect businesses, especially those who are in third-world countries. A SWOT analysis shows how a company's strengths compare to its competitors' weaknesses and provide strategies to capitalize on market opportunities. Utilizing SWOT Analysis in making The Perfect Shades against all other augmented reality applications determines the application's strengths and vulnerabilities.

Ideal Analysis for Decision Making in Critical Situations through Six Thinking Hats Method. (Aithal & Suresh, 2017)

Six Thinking Hats by Edward De Bono is a relatively new technique that highlights various thinking patterns connected with effectively analyzing a particular situation. According to Kumar et al., every hat has a different use that generates many answers to any case depending on neutral quantitative judgments, humanistic reasonings, creative, pessimistic, optimistic, or management thinking. This strategy encourages lateral thinking and allows for new results during problem-solving sessions. They also added that Six Thinking Hats could be helpful in 3 forms. First, these hats could be beneficial in a session participated by different people with diverse viewpoints that reflect different hats, resulting in a mature choice that considers all options from all perspectives. Second, it might reflect an individual manager who believes all six sets of options before making a viable conclusion. It might also indicate that each of the six hats represents six different methods, representing a particular personality type. Hence, people are more likely to make specific choices. The use of Six Thinking Hats helped the researchers develop survey questionnaires for The Perfect Shade. Applying all of the six hats in the questionnaire allowed the researchers to know the customers' preferences and gather the information that will be helpful for the future marketing of the mobile application.

Design of a SWOT Analysis Model and its Evaluation in Diverse Digital Business Ecosystem Contexts (Namugenyi, 2019)

At the beginning of every business, establishment, and organization, SWOT is usually done at the planning stage. It helps define and examine both internal and external parts. SWOT is defined as Strengths, Weaknesses, Opportunities, and Threats, which analyzes the internal and external factors that affect the business. There is a lot to consider in the

digital age, such as sharing business data with a slow internet connection, which should be a part of the SWOT analysis. Without considering such would result in bad customer service and performance. This would be helpful to our project because such an application may have underlying problems that only SWOT can analyze effectively.

Factors & Elemental Analysis of Six Thinking Hats Technique Using A.B.C.D Framework (Aithal et al., 2016)

De Bono's Six Thinking Hats Technique is defined by six colored hats that correspond to different ways of thinking. This technique helps a person view from different perspectives. This approach helps thinking lateral thinking options and new results while solving issues to determine the optimal answer. The hats are categorized as White Neutral hat is about the factual data, statistics, and factual information. This is the basics and foundation for thinking. Red Intuitive hat will use emotions or humanity as its motivation. Yellow Optimistic Hat is about the positive plans that will help improve the business. This investigates solving problems once an objective is achieved. The Black Pessimistic Hat helps understand the opposing sides. Because of its negative perspective, this helps create solutions or at least mitigate losses beforehand. The Green Creative Hat is about not following the norms. It can help the business do unique ways and create new opportunities.

Furthermore, lastly, the Blue Managerial Hat, whose principal responsibility is to lead and supervise toward achieving the objective effectively. This plots out all the alternative answers. Such a technique is essential in order to determine all possible perspectives towards our project. This benefits significantly from the initial launch of the application.

How Is Artificial Intelligence Impacting the Beauty Industry on Making Data-Driven Decisions? (Viera, 2020)

Beauty businesses have been incorporating digital transformation into their business models to provide customers with the most significant possible experience. This digital transformation aims to alter internal processes, increase efficiency, and add value throughout the value chain. Beauty businesses are impacted by the evolution of technology, software, and hardware and must keep current on all developments to be competitive in the market.

Cosmetics Industry: An Analysis of Marketing and Mass Communication Strategies. (Spironelli, 2019)

Cosmetic products control social perception and social attractiveness since they enhance someone's appearance by their very nature. Consumers think that an attractive person has more or better chances in life, whether in social elements. Cosmetic companies no longer have control over the information published about their products, but they recognize that beauty influencers play an essential role in guiding customers to the best option. The way a cosmetic company communicates with customers affects its long-term performance. Beauty gurus play a vital role in marketing the application as users create a human connection with them. The need for knowledge, news, and experience to navigate and select the finest among hundreds of identical goods led to creating beauty gurus.

Are Consumers Concerned About Privacy? An Online Survey Emphasizing the General Data Protection Regulation. (Prestus & Sørnum, 2018)

The General Data Protection Regulation (GDPR) is a European regulation that protects consumers' fundamental rights concerning the acquisition, use, and storage of personal information. The findings suggest that the respondents had a favorable view of GDPR, but they were skeptical about its enforcement. They expressed a desire to influence how personal data is collected, used, and stored. Still, they were uncertain about the extent to which companies meet the requirements for carrying out these activities. Prestus and Sørnum (2018) stated that–

1. Most consumers are aware of GDPR and individuals' rights in this regard, but they are skeptical of how organizations will handle the new regulations.
2. There are differences in how a customer perceives the processing and analysis of personal data, depending on the type and private nature of the data; and
3. Consumers are comparatively concerned with privacy.

These uncertainties may prevent the users from using the application. Knowing these, the application should abide by existing data privacy laws being implemented to ensure customers care about their privacy and that it is safe to use the application.

3. Methods

As the modernization of the beauty industry emerges, the research specifically aims to study the following questions: How should The Perfect Shade service application product be designed to fit the client's preference? What strategies should the service product use to ensure marketability based on SWOT/TOWS Analysis? The group made use of the input process output process to organize their thoughts as seen on Table 1.

Table 1. Input Process Output Table

| INPUT | PROCESS | OUTPUT |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Respondent Profile • Preferred System Features • Six Thinking Hats Strategy | <ul style="list-style-type: none"> • Survey Questionnaires • Mobile Application Prototype • Statistical Treatment • SWOT/TOWS Analysis | <ul style="list-style-type: none"> • Research-based strategy plan improving the application's marketability using SWOT/TOWS analysis. |

4. Data Collection

The researchers used the six thinking hats strategy approach as seen in Table 2 in creating the survey questionnaire. The questionnaire was disseminated using google forms. The researchers presented a participant consent form at the start of the survey that includes the purpose of the study, why it is conducted, and things that should be done during the research span. Confidentiality of the data gathering is also indicated and information regarding their willingness to answer the survey. The sample size for this study is a total of 68 respondents.

According to new research, Edward de Bono's Six Thinking Hats uses collaborative thinking to make good group choices. Each hat will let the designer apply thoughts more broadly to a circumstance, allowing them to accomplish the objectives without unwanted repercussions. (Bhasin, 2020). The questions correspond to the six thinking hats to encapsulate the process of design thinking and collect data regarding potential users' thoughts.

Table 2. Six Thinking Hats Questionnaire Table

| Six Thinking Hats | Questions | Answered by |
|---------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Blue Managerial Hat | The utilization of filters gives me a clear view of how the product will look on me | Likert Scale (1 - 5) |
| | How much do you think a personalized makeup suggestion should be? | <ul style="list-style-type: none"> • 100 - 199 • 200 - 299 • 300 - 399 • 400 - 499 • Above 500 |
| | I think it's better to try makeup virtually than to use mall testers before buying the cosmetic product. | Likert Scale (1 - 5) |
| White Neutral Hat | Gender | <ul style="list-style-type: none"> • Male • Female • LGBTQ+ |
| | Age | |
| | Which makeup brands do you want to see on a virtual try-on mobile application? | <ul style="list-style-type: none"> • Colourette Cosmetics • Cloud Cosmetics • Happy Skin • Sunnies Face • Filipinta Beauty • Ever Bilena • Careline • Vice Cosmetics • Ellana Cosmetics |

| | | |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <ul style="list-style-type: none"> • Others: |
| Red Intuitive Hat | By looking at the logos below, which logo is more interesting for you? | <ul style="list-style-type: none"> • Logo A • Logo B |
| | The accuracy of the applied filters in my face makes the app trustworthy. | Likert Scale (1 - 5) |
| | I trust the use of Artificial Intelligence in determining the fitting cosmetic shade for me rather than a real person. | Likert Scale (1 - 5) |
| Yellow Optimistic Hat | I would consider purchasing a virtual cosmetic consultant to help me in choosing a product that would fit my shade. | Likert Scale (1 - 5) |
| | What benefits do you think are presented in using the application? | <ul style="list-style-type: none"> • It protects the buyer from contracting a disease from a tester • It saves up time when buying a makeup • It is easy for me to think of the perfect shade for my skin tone • It is easy to choose what brands to try • Others |
| | I think that the perfect shade is an effective platform for other brands to market their products and reach a wider audience? | Likert Scale (1-5) |
| Black Pessimistic Hat | What security issues concern you in using The Perfect Shade? | <ul style="list-style-type: none"> • Facial recognition • Personal information and photos taken • Allowing the mobile application in modifying the settings or getting information on the phone to use it • Others |
| | Are you going to patronize the virtual makeup try-on despite this technology replacing the makeup artists, endorsers, etc.? | <ul style="list-style-type: none"> • I will continue to use the product • I will not be using this product and will be supporting makeup artists and such. • I will support both the mobile application and the makeup artists |
| | I see myself still using the application 5 years from now? | Likert Scale (1-5) |
| Green Creative Hat | What feature of the product do you like to use the most? | <ul style="list-style-type: none"> • I want to know what the brands in the mobile application are selling cosmetic products to try the different shades and |

| | | |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | filters of a certain product on my face virtually <ul style="list-style-type: none"> I want to use the cosmetic product recommendation based on my skin tone |
| | I think it would be fun if I could share a photo of me with the virtual try-on/recommendation to my social media accounts. | Likert Scale (1-5) |
| | Do you agree that cosmetic products are enough to be tried virtually in The Perfect Shade, or would it be better to add a virtual try-on for hair colors as another feature? | Likert Scale (1-5) |

5. Results and Discussion

The Probability Distribution Table was applied to analyze the data percentage from 68 respondents. The statistics were acquired via an online survey form with respondents who use cosmetic items. The researchers employed the SWOT Analysis technique in examining the findings. Based on the results, related outcomes that have common thinking were grouped into a single thought. The researchers brainstormed, which summarized into twelve actual results that are divided each SWOT category equally as seen on Table 3. The researchers applied the TOWS matrix as seen on Table 4, which showed the different strategies to maximize the strengths and opportunities while minimizing the weaknesses and threats.

Table 3. SWOT Analysis Table

| Strengths | Weaknesses |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> The Perfect Shade can help cosmetic brands, especially local brands, easily advertise their products without spending too much since most users think this is a good platform for reaching a wider audience. The Perfect Shade helps in preventing the spread of the Covid-19 Virus through the use of Augmented Reality. The Perfect Shade can help users choose a product that fits their skin tone by using the virtual try-on | <ul style="list-style-type: none"> It is still hard to trust Artificial Intelligence when using the right shade and cosmetic product for the user's skin tone. The Perfect Shade's use of AI needs to access the device's gallery to perform its function, which can be a privacy issue. An average of the users is not entirely convinced if they will still use the application for more than five years. |
| Opportunities | Threats |
| <ul style="list-style-type: none"> Most known competitors that utilize Augmented Reality in virtual try-on only offer their products in the app Providing accurate filters when using the mobile application will make it trustworthy The younger generation is more knowledgeable about technology. They may benefit the most; hence there is a possibility of having users for more generations. The idea of being able to share the edited photos on any social media platform helps the mobile application attract more users and give the cosmetic brands free marketing. | <ul style="list-style-type: none"> Results say both traditional and virtual try-on will be acknowledged. There would be a possibility that virtual try-on may be contested by the traditional way's accuracy. The majority of the potential users are concerned with security, specifically on the user's personal information and photos. The older age group requires assistance on the utilization and navigation of the application. |

The researchers determined the positive and negative forces within the mobile application based on the survey questionnaires using SWOT Analysis. As shown in the Strength, the mobile application is a good platform for the local brands to advertise their cosmetic products. The app can also help prevent the spread of Covid-19, and users can freely choose a product that fits their skin tone. The Perfect Shade weaknesses based on the survey show that people are still doubting the capability of Augmented Reality in providing accurate results and the other security issues. Most of the competitors only offer their cosmetic products for the opportunities, unlike The Perfect Shade, which offers many local brands to choose from. Also, having accurate filters will make the mobile app trustworthy. Younger generations may also benefit the most from this mobile application. Threats were also determined, such as virtual try-on will still be contested by the traditional makeup testing and that older people might need some time to understand the application.

Table 4. TOWS Analysis Table

| | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Opportunities</p> <ul style="list-style-type: none"> • Most known competitors that utilize Augmented Reality in virtual try-on only offer their products in the application • Providing accurate filters when using the mobile application will make it trustworthy • The younger generation is more knowledgeable about technology. They may benefit the most; hence there is a possibility of having users for more generations. | <p>Threats</p> <ul style="list-style-type: none"> • Results say both traditional and virtual try-on will be acknowledged. There would be a possibility that virtual try-on may be contested by the traditional way's accuracy. • The majority of the potential users are concerned with security, specifically on the user's personal information and photos. • The older age group requires assistance on the utilization and navigation of the application. |
| <p>Strengths</p> <ul style="list-style-type: none"> • The Perfect Shade can help cosmetic brands, especially local brands, easily advertise their products without spending too much since most users think this is a good platform for the brands to reach a wider audience. • The Perfect Shade helps in preventing the spread of the Covid-19 Virus through the use of Augmented Reality. • The Perfect Shade can help users choose a product that fits their skin tone by using the virtual try-on | <p>Strengths/Opportunities</p> <ul style="list-style-type: none"> • Offering different cosmetic brands in the mobile application places the company ahead of its competitors, who only offer their brands. • Being able to focus on giving an accurate application of filters in users' faces will give an advantage to people patronizing virtual try-on instead of mall testers that can spread diseases. • Since the younger generations (Gen Z/Millennials) are known to love makeup and are also tech-savvy, The Perfect Shade is able to cater to their needs about choosing makeup. | <p>Strengths/Threats</p> <ul style="list-style-type: none"> • Market the application as the future of cosmetic makeup and the new normal of trying them out— research on technology performance on giving accurate output. • Enhance the security features of the application and make sure that it adheres to the data privacy act ensuring the user's safety. • The Perfect Shade UI can have a toggle between simple and advanced mode modes, especially for older age groups. AI automation would be the focus of simple mode. |

| Weaknesses | Weaknesses/Opportunities | Weaknesses/Threats |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ● It is a challenge to trust Artificial Intelligence when using it to suggest the right shade and cosmetic product for the user's skin tone. ● The Perfect Shade's use of AI needs to access the device's gallery to perform its function, which can be a privacy issue. ● An average of the users is not entirely convinced if they will still use the application for more than five years. | <ul style="list-style-type: none"> ● Investing in a trustworthy and accurate AI algorithm that is rooted in human research/observation. ● Consider a good algorithm that will access the device's gallery without storing the photos in the application's database but still can produce accurate filters. ● Constantly apply future makeup trends to the mobile application in order for it to be updated and still cater to the needs of users every year. | <ul style="list-style-type: none"> ● Such features should be required to run at specific devices that can run the application effectively and without bugs and errors. ● The application will ask for permission to access all or only chosen files of the device. ● Provide a more flexible interface that is easy to understand by all age groups. |

Strategies were identified to maximize both the strengths and opportunities. It is good to offer different cosmetic brands on the mobile application as it gives The Perfect Shade an advantage over its competitors. Also, the application should focus on providing accurate filters to make the people patronize the product. Lastly, the application will cater to the needs of the younger generations. To maximize the strengths and minimize the threats, some strategies were identified. First, promote the app as the future of cosmetic makeup and the new normal for experimenting with it. More research on how thriving technology performs in terms of delivering accurate results is needed. Second, enhance the application's security features and ensure that it complies with the data privacy laws, ensuring the user's safety. Lastly, a toggle between simple and advanced modes may be found in the Perfect Shade UI. Strategies to minimize weakness and take advantage of the opportunities are the following: the mobile application should have an excellent accurate AI algorithm that will provide the best results, consider having an algorithm that won't store the device's photos in the application's database and, apply future makeup trends to be updated and still cater to the users' needs from time to time. Three strategies were determined to minimize the weaknesses and the threats. First, such features should be required to execute efficiently on specified devices. Second, the application should notify the user if they will allow the application to have permission on the chosen files of the device. Lastly, the application should provide an easy-to-learn interface that will suit all generations.

5.1 Survey Results

The survey was conducted to 68 respondents in which 51.5% or 35 participants are female while 22.1% or 15 participants are male, and 26.5% or 18 participants are part of the LGBTQ+.

The question that asked the participants for their Age, 83.8% or 57 participants are within 18 to 24 years old, 10.3% or 7 participants are 25 to 34 years old, and 5.9% or 4 participants are under 18 years old.

Forty-nine (49) of the participants are concern about personal information and photos taken by the mobile application, while 45 chose facial recognition, and 21 of the participants chose to allow the mobile application to modify the settings or to get information to use it.

Forty-three (43) of the participants like to try the different shades and filters of a particular product on their face virtually, 42 wants to use the cosmetic product recommendation based on their skin tone, and 30 of the participants wants to know what cosmetic products are being sold by the brands n the mobile application.

Forty-six (46) of the participants think that it protects the buyer from contracting a disease from a tester, 43 of them chose that it is easy for them to of thinking the perfect shade for their skin tone, 36 of the participants believe that it saves up time when buying makeup, while 30 of the participants it is easy to choose what brands to try, and 1 participant thinks that it is easier for shy girls or boys to try on and purchase makeup.

38.2% or 26 of the participants think that it should be around 200-299 pesos, 29.4% or 20 chose 300-399 pesos, 19.1% or 13 participants believe that it should be at 100-199 pesos, 7.4% or 5 participants answered 400-499 pesos, and 5.9% or 4 participants responded that it should be above 500 pesos.

For the question "By looking at the logos below, which logo is more interesting for you?" asks which logo is best suited for the purpose of the application. Thirty-six participants chose the first logo, and 32 participants chose the second logo.

41 participants chose Colourette Cosmetics, 40 of them also chose Sunnies Face, 37 chose Careline, while 35 participants chose Vice Cosmetics, 34 participants also chose Ever Bilena, 27 chose Happy Skin, 22 included Filipinta Beauty, 20 of the participants chose Cloud Cosmetics, 18 of them chose Ellana Cosmetics, 2 participants added Viy Line, 1 participant included BLK Cosmetics, and another 1 participant answered Shawii.

The question "The utilization of filters gives me a clear view of how the product will look on me," 29 agreed overall, 19 strongly agreed, 15 answered neutral while four disagreed, and one strongly disagreed.

The question "The accuracy of the applied filters in my face makes the product trustworthy" 24 of the participants are totally agreed and agreed. While 15 answered neutral, three disagreed, and one strongly disagreed.

The question "I trust the use of Artificial Intelligence in determining the fitting cosmetic shade for me rather than a real person," 27 answered neutral, 26 of them agreed, while eight strongly agreed, 4 of them disagreed, and one strongly disagreed.

The question "I would consider purchasing a virtual cosmetic consultant to help me in choosing a product that would fit my shade.", 26 are agreed, while 21 strongly agreed. 17 of the participants answered neutral, and 2 answered disagreed and strongly disagreed.

The question "I think it's better to try makeup virtually than to use mall testers before buying the cosmetic product.", 26 of the participants agreed, while 23 strongly agreed. 16 of them answered neutral, 2 disagreed, and 1 strongly disagreed.

The question "I think that The Perfect Shade is an effective platform for other brands to market their products and reach a wider audience." 33 of the participants strongly agreed, while 20 are agreed. 11 of them answered neutral, 3 of them disagreed, and 1 strongly disagreed.

The question "I think it would be fun if I could share a photo of me with the virtual try-on/recommendation to my social media accounts.", 28 are agreed, 23 of the participants strongly agreed, 13 of them were neutral, 2 answered disagreed, and another 2 strongly disagreed.

The question "Are you going to patronize the virtual makeup try-on despite this kind of technology replacing the makeup artists, endorsers, etc.?", 63.6% or 42 of the participants said that they would support both the mobile application and the makeup artists, endorsers, etc. 21.2% or 14 of them answered that they will continue to use the product, and 15.2% or 10 participants responded that they will not be using this product and will be supporting makeup artists and such.

The question "I see myself still using the application 5 years from now.", 28 agreed, while 24 participants were neutral. 9 of them strongly agreed, while 4 disagreed and 3 strongly disagreed.

The question "Do you agree that cosmetic products are enough to be tried virtually in The Perfect Shade, or would it be better to add a virtual try-on for hair colors as another feature?", 33 of the participants agreed, while 22 strongly agreed. Nine of them are neutral, two strongly disagreed, and one disagreed.

Overall, the surveys shows an inclination to have a simple, affordable application that would feel premium and gives a must-have vibe, especially to those who want help in choosing products and loves to experiment. It is suitable for both beginners and experts alike. The survey describes a well-balanced application that will prioritize features, such

as AI and accurate try-on, and good valued suggestions for makeup. An application that gives important suggestions and is reliable in trying various products. In terms of marketing, the application is in line with the current generation being molded with technology. Also, in having various brands occurring left and right, the application enables fair advertisement where they are shown equally and by their suitability to unique skin types and color.

6. Conclusion

The researchers were able to collect data that encapsulates the preference of the users and reveal areas of improvement by using the six thinking hats strategy. The six thinking hats strategy effectively dig deep into the user's thoughts and develop a marketable version of the service product. The design effectively revealed what the service product should retain, improve, and how it should market. The Perfect Shade has high marketability for women in the late adolescents or young adulthood stage. The group is found to be conscious both in their appearance and the application's potential benefits in their daily life.

The researchers discovered that the marketing, use of innovative technology, and safety are the strategies that should be further improved and developed to ensure the marketability of the application. Based on the research, the group should market the product by appealing to beauty guru's online through micro marketing. Beauty gurus are vital to making human connections and utilizing their influence on those who watch them. The effect of these micro populations would impact the potential buyers, assuring them that the product is worth the use because beauty gurus have a positive review on them. The study showed that the use of innovative technology delivers convenience to its customers. It enables them to do things at a click of a button. As technology continues to evolve, the possibilities our mobile phones bring become limitless. To improve the product's safety against security issues, investing in a good AI algorithm that won't collect any data from the device after the user permits the application is better. Also, the mobile application should provide a pop-up message that will notify the users that it will need permission to get the photo that the users want to edit.

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