A CASE STUDY ON DEFINING SIMPLICITY IN INTERACTION DESIGN: A REVIEW OF THE SCHEMATIC AND FUNCTIONAL EVALUATION OF THE SIMPLE MODE SMARTPHONE INTERFACE

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BY

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PLAGIARISM

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ABSTRACT

In the last decade, with the development of technology and the widespread of digital product designs, users have become the main element in the field of interaction design. Especially, academic studies and sectoral product designs conducted under the title of user-centered interaction design created the need to develop discussions on the concepts of simplicity and usability and to make definitions that explain these concepts. In the context of contributing to these discussions and creating definitions, this study aims to analyze the simplicity features of a product developed for simplicity and to measure whether the simplicity offered by this product is meaningful to users. In addition, within the scope of this study, it is aimed to reveal the effectiveness of the decisions taken for simplicity for the user by comparing it with the version of the presented product that does not claim simplicity. In order to answer the research questions, first a content analysis study and then structured interviews were conducted with 12 interviewees. SUS-TR and EWPL-TR tests were used for user reviews in the interviews. The findings show that there are design and functional differences between the simple product and the standard version of the product. Simple mode product's usability level is at marginal and acceptable levels. However, it could not be concluded that the decisions taken for simplification create usability for all users. Especially, it has highlighted that simplicity may be useful according to its relationship with user needs. In summary, there is a positive correlation between making user-centered and balanced design and functional decisions and creating meaningful simplicity.

Keywords: Interaction Design, User Experience, User Interface Design, Simplicity, Usability, Ease of Use, Target Audience, Needs Analysis, User, User Satisfaction, Visual Aesthetics

ÖZET

Son on yılda, teknolojinin gelişmesi ve dijital ürün tasarımlarının yaygınlaşması ile birlikte, kullanıcılar etkileşim tasarımı alanının ana unsuru haline gelmiştir. Özellikle, kullanıcı merkezli etkileşim tasarımı başlığı altında yapılan akademik çalışmalar ve sektörel ürün tasarımları basitlik ve kullanılabilirlik kavramları üzerine tartışmaların geliştirilmesi ve bu kavramları açıklayan tanımların yapılması ihtiyacını yaratmıştır. Bu tartışmalara katkıda bulunması ve tanımların oluşturulması bağlamında, bu çalışma, basitlik amacıyla geliştirilmiş bir ürünün basitlik niteliklerini analiz ederek ve bu ürünün sunduğu basitliğin kullanıcılar için anlamlı olup olmadığını ölçümlemeyi amaçlamaktadır. Ek olarak, bu çalışma kapsamında, sunulan ürünün basitlik iddiası taşımayan versiyonu ile karşılaştırılarak basitlik için alınan kararların kullanıcı açısından etkinliğinin ortaya çıkarılması amaçlanmaktadır. Araştırma sorularının cevaplanması için, önce içerik analizi çalışması ve daha sonra 12 görüşmeci ile yapılandırılmış görüşme gerçekleştirilmiştir. Görüşmelerde kullanıcı değerlendirmeleri için SUS-TR ve EWPL-TR testleri uygulanmıştır. Bulgular, basit ürün ile ürünün standart versiyonu arasında tasarım ve işlevsel farklılıklar olduğunu göstermektedir. Basit mod ürününün kullanılabilirlik düzeyi marjinal ve kabul edilebilir düzeylerdedir. Ancak sadeleştirmeye yönelik alınan kararların tüm kullanıcılar için kullanılabilirlik yarattığı sonucuna varılamamıştır. Özellikle kullanıcı ihtiyaçları ile olan ilişkisine göre sadeliğin faydalı olabileceği vurgulanmıştır. Özetle, kullanıcı merkezli ve dengeli tasarım ve işlevsel kararlar vermek ile anlamlı sadelik yaratmak arasında pozitif bir ilişki vardır.

Anahtar kelimeler: Etkileşim Tasarımı, Kullanıcı Deneyimi, Kullanıcı Arayüz Tasarımı, Basitlik, Kullanılabilirlik, Kullanım Kolaylığı, Hedef Kitle, İhtiyaç Analizi, Kullanıcı, Kullanıcı Memnuniyeti, Görsel Estetiği

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1. INTRODUCTION

Communication environments, which have become digital with the development of technology over time, have been instrumental in the emergence of a new interdisciplinary field. To summarize briefly up to this point we have reached today, the important element in the history of communication is the message. Many communication models explain in what way or how the message is delivered. Traditional mass media can be shown as the clearest example of this. The message is transmitted unilaterally and it is aimed to inform the masses in this way. In such a situation, it could be said that a response to the message could be received only if the masses took action.

However, with the digital transformation, the media itself, the source of the message and the receiver, have changed shape. When this one-way communication has become two-sided, the individual is defined as the "user" and has now played an important role in this communication. As the products shaped according to the movement or response of the individual increase, it has been measured that every material presented to the user is not impressive or usable at the same. Thereupon, studies are carried out to understand the user, to define the user's action, that is, the interaction. A new phenomenon was needed to gather all the elements that could analyze and research the user. Today, interaction design, which is still under investigation, is the general name for this new field. It includes well-established fields such as information technologies, graphic design, behavioral psychology and visual communication design.

Interaction design deals with people in communication. It analyzes how people behave and what they behave towards. Its main purpose is to design in response to

human thinking and needs, to provide products and services. With the fact that the boundaries of the digital world have not yet been fully discovered and this formation is still fresh, interaction design can be described as an area open to development and research. At the same time, with every new technological development and method introduced, it is likely that new areas to be applied and evolved will be discovered.

Due to these explanations, that is, for the studies to be carried out or products to be developed and new areas to be discovered within the scope of the interaction design, this phenomenon, which is located between the digital and the real world, needs to be shaped and framed with some basic concepts. In this direction, when we look at the other fields in the field, such as behavioral psychology and visual communication design, it is seen that two elements, human and object, are at the center of the field of interaction design. "Is interaction design object-based or human-based?" is the first question that we encounter in this comparison. In addition to this question, another point related to the conduct of the study is usability, which is a shaping element in interaction design. The main purpose of these arguments put forward is to create a skeleton of the basic characteristics that shape or direct an item to be produced in this field and to see the basic design or functional elements that affect the user in this production.

For this purpose, within the scope of this thesis, in order to make the definition of simplicity in interaction design, a sample product, which was developed with the claim of simplicity and whose opposite is available, and both versions are currently in use, was handled with more than one method and examined as a case study from many different angles. The simple mode, presented today as an alternative to the default interface of smartphones, is the product under review in this study.

In this context, "The simple mode smartphone home screen interface design does not create a meaningful simplicity in terms of design and functionality for users compared to the standard mode home screen interface design." hypothesis will be tested. The research questions directed in the research in order to get the necessary answers for testing this hypothesis are as follows:

- Are there any design differences between the simple mode and the standard mode home screen interface?
- Are functions in simple mode more limited than in the standard mode home screen interface?
- Is there a meaningful difference between the design and functional decisions taken in simple mode and standard mode products?
- Is the simple mode easy for users to use?
- Does simple mode make it easier for a certain age group to use?

The main purpose of these research questions to contain comparative elements is to first check whether the product under consideration has a valid and meaningful difference between the standard product. The second purpose is to reveal whether the mentioned element of simplicity is reflected in this product mostly in terms of design or function. The final purpose of the research questions is to measure the feelings and thoughts of the users on simplicity after the users experience this product, which is thought to be developed by considering every aspect in detail.

This thesis study consists of four parts. In order to shape the content of the study, in the first part, the areas to which the product concerned can be explained were examined first, and then the definitions of the concept of simplicity that were sought and the other concepts related to it were examined in a theoretical framework. At the end of the first part, the literature study, while summarizing the findings of this

research, other research studies using the same theory and methodology framework are discussed. In the second part, the simple mode product and the standard product, which are in the field of interaction design, user experience design and user interface design in a broad framework, are examined by content analysis method in the light of the information obtained in the first part. A view of the functional and design elements of the simple and standard mode home screen interface, which was examined within the scope of the study, was made with this section. Afterwards, a separate study was conducted in the third section in order to have an overview by the user, one of the main elements of interaction design. In this section, structured interviews were held with the interviewees. In these interviews, first "Smartphone Simple Mode" was made available to the participants, then their opinions were sought with structured questions. In order to obtain statistical data from these interviews, SUS-TR and EWPL-TR tests were included in the interviews. In the fourth and last part of this thesis, the data obtained from the literature review, content analysis and structure interviews, respectively, were summarized within themselves, and then the relationships between them were examined. In the light of the results obtained here, first inferences about the simplicity of the simple mode product are made, then some definitions regarding the concept of simplicity of interaction design, from specific to general, are presented and a conceptual framework is drawn.

2. LITERATURE REVIEW

In the literature review section of this thesis, which deals with a product developed as a simple mode smartphone interface design, it is aimed to draw two separate frameworks, theoretical and methodological. The primary reason for this is to define in detail the area or areas to which the product under consideration belongs. Another reason is to be able to accurately determine the main factors effective in revealing this product to be examined. These two reasons play a guiding role in the establishment of the theoretical framework. In order to create a methodological framework, the methods to be used in this thesis study and other concepts that these methods can be related to will be put into the center.

2.1. Product - Theoretical Framework

The simple mode interface is available in a smartphone. It allows the execution of different transactions through the actions to be taken by the user. From here, it can be concluded that interaction design field, which primarily deals with the user and interaction, should be included in the theoretical framework. However, according to Hagen and Golombisky (2017), no matter what date a product is designed for or for the media, the criteria and rules that are effective in its creation belong to the design. In other words, according to this evaluation, it can be concluded that even though a product is designed for a smart device, it is shaped according to the fundamentals and rules of visual communication design.

However, design should be considered not as a single field, but as a holistic approach since it touches on many different areas such as economy, technology, teamwork, product concept, target audience and so on. And the end product can only

offer a meaningful experience to its users, with the areas involved in this whole, working together in an integrative way and having a successful process together (Best, 2010, pp. 8–9).

Actually, Hagen and Golombisky (2017) emphasizes that the first stage of the design process is research, regardless of which area or media a product will serve. It is essential to seek answers to some basic questions in this research process. Among these questions, it is highlighted what the purpose or objectives of a design is and to whom this design will serve and how it will reach this target audience.

Due to these explanations, in this section of the literature review, the evaluations about the design and design criteria of the product in the relevant fields are included in order to make a qualified examination later.

2.1.1. Design of the product

The simple mode home screen interface design has been shaped under the influence of many different disciplines due to the nature of the product, its media and target audience. For this reason, the definitions made for the design of the product vary according to the approaches. To explain this through a workspace, graphic design basically deals with texts and images, reinterpreting concepts and design ideas to convey them in the form of a suitable message to the recipient. However, with the adaptation process it has gone through due to the development of technology, it has spread to new areas and has been divided into many different parts. For this reason, graphic designers continue to develop design ideas in many different fields, both digital and print. However, as on their basis, they continue to develop design ideas by using the elements of visual communication design in design. Sometimes, this fragmentation and the differences in the work done prevent the graphic design field to be defined as a

whole and to gather all works under the same title (Ambrose & Harris, 2009, pp. 9–22). In addition, there are more than one field under the title of design. For a designer or developer, it will be more helpful to have a basic knowledge of the requirements of each area rather than being an expert in one area (Lacey, 2018, p.2). From these definitions, it can also be deduced that more than one area may be determinative for the features of the product, especially regarding the design of a product. Regarding the nature of the product discussed in this thesis, it is important to examine these intertwined areas such as visual communication design, user experience design, interaction design and user interface design. Because, although each product is shaped within unique design processes due to both perspective and needs, it allows the determination of decision-making and prominent factors.

2.1.1.1. Visual communication design

Although design tools and media have changed with the development of technology from past to present, the grammar of visual communication, that is, the basic rules of good design, are still the same. Visual communication tries to convey a message to its audience by using text and images with the help of its basic elements and principles. Design is inclusive, so design is made by taking into account everything from the environmental conditions to the media's possibilities and the physiological characteristics of the audience. At this point, it is important to define well the audience the design will appeal to. A visual communication design should communicate with the audience in their own language (Hagen & Golombisky, 2017, pp. 1–3).

On the other hand, in the book written by Hembree (2006, p. 14), visual communication design is defined as a communication field that tries to convey qualified information to the receiver through the message it creates by combining text, visual and

spoken language. In terms of graphic design, it is mentioned that visual communication design has many characteristics such as informative, guiding, persuasive when applied according to its rules. It is pointed out that the most basic criteria for visual communication design is that the message designed using text and visuals can speak the visual language of its audience. At this point, it is emphasized that the designer makes a message translation by using visual communication elements. It is mentioned that a clean and qualified design is the aim of the visual communication design field, as all communication areas aim.

In the same way, according to Best (2010, p. 48), visual communication makes storytelling by using elements such as words, images, colors, and text, and evaluating the opportunities offered by the customer and identifying the situations they indicate. The visual language used in storytelling must be carefully chosen so that the message can be conveyed accurately and clearly. Because in this way, it is aimed to develop a solution to the problem mentioned on the customer side, as the visual message produced attracts the attention and support of the audience.

In addition, elements of visual communication such as text, color, visuals are used in interface design to convey a message, guide the user and create a visual identity (Knight, 2019, p. 11). The appearance of a product has an impact on the user as a first impression. For this reason, the design elements used cause a perception in the user about simplicity or complexity as they evoke a connotation (Knight, 2019, pp. 103-104).

However, the indicator of successful visual communication is the answer received from the target audience. Therefore, in order to get a qualified response to the message planned to be delivered, it is aimed to make a strong visual design that will

evoke emotions or take action in the target audience (Dabner, Stewart, & Vickress, 2017, p. 35).

At this point, it is concluded that visual communication design has an impact on making the right decisions about determining the design elements with a purpose in order to communicate basically, regardless of the technical or design decisions required by the nature of any product.

2.1.1.2. User experience design

User experience design is generally thought to be related to the appearance of an application or product. However, user experience design addresses all aspects of the interaction of a developed product or service with the user. The user experience tries to turn the product it handles into a product that the user will not have difficulty or complexity in use and will want to use again. The basic criteria for achieving these goals is to provide a well-planned experience through creating a value for the user. The success of the usage conditions that the user encounters during the experience depends on how qualified the usability is considered. However, in order to create qualified value for the user, it is very important to determine the user needs and to design the experience to meet these needs (Lacey, 2018, pp. 2–4).

According to Lacey (2018, p. 6), determining the usage context has an effect on the appearance of a mobile application and meeting user needs. Because, through context, a framework is drawn for all the attributes of a mobile application, from who will use it, when, where, and for what purpose. In this way, the decisions taken by adhering to this context contribute to the formation of the motivation required for the repeated use of an application by first responding to the needs of the user and then providing permanent value for the user.

On the other hand, according to Knight (2019, pp. 1–4), user experience design is not only concerned with the interaction of products developed for digital with the user. It is a field that deals with every product that interacts with human beings. Therefore, since experience is not only related to developing a product, it also includes all kinds of disciplines that can enable the improvement and enrichment of the experience. The impact distribution of these areas varies according to the capability or scope of a product. Designing experience is about improving the usage conditions and creating user satisfaction while enabling people to complete their goals and objectives through a product. Since each individual has an experience on their own, it is not enough just to design the experience. Therefore, the experience should be designed by taking the user into the center. It should be aimed to meet the expectations and needs of the users.

However, although responding to the user's needs and expectations is important for the user experience that a product will create, everything that can meet the user's needs should not be included in the product scope. Because, bombarding the user by offering every function they can use, instead of providing ease of use or usability, on the contrary, it may cause a state of inactivity. Therefore, after conducting a research, a filter should be applied before all the data obtained are included in the design. The product should be designed for the user's needs but with functions that complement each other (Still & Crane, 2017, pp. 149-158). Moreover, although all the functions that can be added are added to a product, it is only the user's feelings about this product that will determine the success of the experience (Soegaard, 2018, p. 5).

In summary, user experience design focuses on the following questions while developing a new product or making improvements on the product. Who will be the user of this product, what will the user use this product for, how will the user use the

product, are there any pain points or what are these points when using this product? The question of whether users can achieve their desired goal using this product is the main reason for usability studies conducted to measure the user experience and the quality of the experience (Travis & Hodgson, 2019, pp. 18-20).

In summary, user experience design is concerned that design decisions should be made taking into account the user profile of the product. Every product has a target audience it wants to reach. For this reason, it is strongly emphasized that the decisions taken should be implemented by checking their suitability for the user. At this point, the usability value is highlighted in terms of a sustainable user experience.

2.1.1.3. Interaction design

When interaction design and user experience design are compared, it can be seen that they serve many common purposes. However, user experience design tries to design the best experience for the user, by focusing more on the user and applying research and measurement methods. Interaction design is entirely concerned with the interaction of the product and the user. Therefore, there are some concepts that have an impact on interaction design. Firstly, for a digital product, words or terms used to communicate with the user and visual materials, icons and colors are of great importance in terms of interaction. Subsequently, the physical objects with which the user interacts to experience the product, i.e. extensions of the tool, are additionally taken into account. Even the processing time of visual or audio materials that are active while the user experiences this product has an impact on the interaction. In addition, the user's likely behaviors, feelings and feedback also play a role in how the interaction is designed (Soegaard, 2018, pp. 52-55). Moreover, interaction design enables the development of more qualified interaction designs that will meet user expectations with

the help of other disciplines by examining the behavior of different user profiles to technological change (Knight, 2019, p.11).

In interaction design, besides the techniques and methods used, human nature also has an effect. The human brain has a feature of making sense of and relating everything it sees. Simple patterns can be used in the design to guide the user without giving written information, to create a hierarchy in the user's brain and to classify the content. In this way, self-explanatory and effective designs that do not require prior learning can be created. At this point, homogeneous pattern designs should be avoided. Including common patterns in the design helps to improve the user's experience (Knight, 2019, pp. 79-82). In summary, it can be said that factors such as user perception, human nature, physical and psychological factors are effective in the interaction of a product with the user.

2.1.1.4. User interface design

According to Hagen and Golombisky (2017, pp. 233-234), interface design serves to create the desired interaction between the user and the tool, which is also aimed by interaction design. An interface design is best described as simple, well thought-out, and unobtrusive. It is emphasized that the interface design of a web page communicates with the user from the colors used to the size of the elements it contains.

Design elements such as text, color and layout used in the design of a product have an effect on the impression of the product on the user. Design decisions can only be correct if they are suitable for the target user audience. Because the product is designed for users to use. Therefore, it is important to make design decisions based on user feedback and research results (Still & Crane, 2017, p.161).

In the design of a product, the design decisions taken are about shaping the product as a whole. Regardless of the environment in which the product is designed, creating a composition in a meaningful way of elements such as shape, color, text and visual helps to create a visual connotation, but composition is also a method used to deal with complexity (Dabner, Stewart, & Vickress, 2017, p. 65). In addition, regardless of whether the designed product is digital or printed, including a column or grid system within the design likewise shapes the content and provides flexibility in drawing a guiding way for the target audience to consume the content (Dabner, Stewart, & Vickress, 2017, pp. 84-89).

On the other hand, color is a powerful communication and message delivery tool. Colors have an effect on human psychology. Color carries information, although it varies according to culture or the perception of the user audience. For this reason, a marking can be made about the content with the help of colors in the design and used in categorizing the contents. In particular, this feature can provide basic useful use in routing complex content (Dabner, Stewart, & Vickress, 2017, p. 199).

Improving a design should not just mean making visual changes. Making the user experience better should be the key. When developing the product, using diagrams or workflows helps to gain insight into the hierarchical view of the design. In this way, breaks or deficiencies in the operation of the product can be detected by looking at the big picture (Dabner, Stewart, & Vickress, 2017, pp. 339-342).

Using icons is an effective way to communicate with the user in interface design. Icons become a user-friendly tool when they are designed strongly with the meaning they aim to carry. Icons are powerful tools to convey an idea or meaning. Icons designed in accordance with the target audience have the feature of directing in the

interface they are used. At the same time, they provide the ability to remember and learn more easily thanks to the clue they provide to the user. Users can thus direct themselves to complete their tasks within the interface. Icons make a good interaction design because they make the work flow faster (Maioli, 2018, pp. 135-140).

In addition, in the design of a digital product, it is very important to classify the content in a way that the user can easily remember it. The assessment of this situation is usually done on the rule of seven items plus two or minus two. The user's short-term memory will only recall data of this criterion. For this reason, it is important that long content or options are determined according to needs and presented in small groups so that the user can easily remember them (Yablonski, 2020, pp. 35-41).

2.1.1.5. Design process

In the study conducted by Lawson (2005, p. 3), "design" is defined as both a noun and a verb indicating the final product or the design process itself. On the other hand, it is especially emphasized that this design process, which is carried out to reach the final product, is reinterpreted by designers in different fields according to the need, by adding different priorities and new steps. When these design processes carried out in different fields were compared with each other, it was determined that the basic features and requirements of a design process could be the following. First of all, although the design process is carried out with different steps and techniques in different areas, it addresses a problem and aims to reveal the real solution in line with its goals. On the other hand, this process is in a loop, the solution offered is tested and evaluated until it is optimized. This is an endless loop.

However, besides the logical and systematic features of the design process maps, design has a creative and unpredictable structure. Especially the backgrounds

and styles of designers play a role in shaping the final product (Lawson, 2005). In addition, in this study conducted by Lawson (2005, p. 13), it is emphasized that designers should analyze well the nature and needs of the user mass, regardless of the design field, even if not at the level of a social scientist. According to another definition made to point out the differences between art and design, design is not open to personal interpretation like art, it should have defined goals with measurable results (Hembree, 2006, p. 12).

In the book written by Stone (2010, p. 9), the Design Process is defined as a management with a certain number of systematic and cyclical stages that specifically help a designer to produce professional work. Although there are schemes in which these stages are sometimes named differently, it is emphasized that they also have the same content and operation. In addition, it is mentioned that the design process outlines the interaction between the designer and the client from concept to completion. Factors that directly affect this design process are defined as communication, scope of work, timing, budget and delivery medium. It is pointed out that information sharing and effective communication between the customer and the designer, the scope or size of the work, the time constraint or the real time needed for the job, the adequacy or insufficiency of the budget determined for the work, and the means by which the work will be carried out directly affect the design. On the other hand, in the study conducted by Hembree (2006, p. 10), it is also mentioned that a designer is responsible for the environment in which the design will be applied and the message will be conveyed.

In addition, according to Hembree (2006, p.41), the design process is an application method developed to solve a design problem, regardless of how ordinary or extraordinary the design process is. With the design process, it is ensured that the message can be formed in accordance with the qualifications of the target audience as

a result of the good processing of the method and concept. Therefore, the visual communication design problem itself forms the basis and method of the design process.

In summary, if these definitions about the design process should be evaluated within the scope of the simple mod product, the product may be affected by conditions such as budget and time in the design process. The product is shaped according to the decisions taken by the design team in which it is developed. In fact, the design process of a product is an endless cycle. It is in continuous improvement. Conducting user research and performing usability assessments are among the methods that can be used to improve a product, and they are guiding.

2.1.2. Design Questions

According to Hembree (2006, pp. 42-47), it is very important to conduct research on the customer's demand, subject and target audience before starting the process of developing a design. The research made contributes to finding qualified answers about the problem specified by the customer, the solution they request and the audience they want to offer this solution. These answers provide guidance on how to produce an adequate design solution for the defined problem according to the specified audience. First of all, it is decisive for the purpose of the work to be clearly defined within the scope of this research in order to establish an effective communication. Because these objectives are combined with the qualities of the target audience and have an impact on the design decisions taken. The text, color, layout and visual language used are first determined according to the purposes and then customized for the target audience. Information such as their demographic characteristics, their business and culture, and their interests are taken into account while developing a solution to the defined problem. For this reason, before starting the design of a final

product, especially in an unfamiliar area, a large number of questions should be asked about the customer's request, the specified problem, the audience to reach, and useful answers should be found using various methods such as meetings and interviews.

The main purpose of designing a product or service is to provide the most appropriate solution to a determined problem. First of all, the user or target audience is analyzed in detail, then the solution that the product aims to offer is shaped in line with this information. Although these details show the process of a design, the product itself may contain a development hierarchy within itself. In order to continue developing a product, it must first be able to complete a step without any problems. If a product cannot offer a qualified value to the user, making design and creative improvements in its appearance does not make a meaningful contribution to the product. Because this product cannot fulfill its main function primarily at the basic level. Therefore, a non-working product having an attractive appearance in terms of design will not provide the necessary motivation for the user to use this product over and over again. For this reason, the development of a design should be carried out step by step, starting with making the basic functions working. In summary, a product or service is first designed to function smoothly with a simple look. It is then worked on to ensure that it can do this successfully every time. In the next stage, improvements are made on how much usability its functions provide while performing this function. Later, with which tools this product can be organized, it may be the subject of development. However, after all these hierarchical steps are completed, action should be taken for add-ons or creative actions (Magazine, 2012, pp. 33-41).

2.1.2.1. Objective: "Simplicity"

The simplicity of a design is often defined by its uncomplicated use. However, complexity is also used when there are many elements that are interconnected, apart from the difficult to understand. For this reason, simplicity and complexity should not be thought of as white and black. A design may be easy to use while containing quite a few functions (Knight, 2019, p. 70). On the other hand, according to the consumption characteristics in the research conducted by Maeda (2020), people tend to adopt innovations that make life easier when used. However, on the contrary, it is especially emphasized that every technological development leads to the emergence of a more complex system. Therefore, simplicity is an essential element that the industry must conflict and provide solutions to exist in the future.

Simplicity can be achieved by limiting the features. However, in order for a product to be demanded for use, it must have qualified and functional functions. Therefore, it is important for usability to adjust the balance of functions offered by the product. Because while a product has quite a lot of functions, it should be well-designed and thought out in detail in order to be simple and easy to use. Otherwise, usability will be negatively affected as the experience quality and motivation of the user will decrease in complexity. Therefore, it is important to take into account the user profile and the user's experience level in the design process of the product. An expert user will not have the same level of experience as a novice user in a complex interface (Still & Crane, 2017, pp. 49-51).

Especially, eliminating functionality in design is the easiest way to achieve simplicity. Moreover, products with small size, elegant appearance and reflecting the feeling of fragility earn the respect of the user even when they fulfill their basic

function. In addition, this view is also supportive in drawing the image of simplicity. The best example for this is the Swiss army knife. The opposite example can be shown as smartphone designs that have blurred lines between simple design and functionality (Maeda, 2020, pp. 1-7). For instance, the interface design of Apple products can be shown as an example of a good user-centered design and simplification. It should be underlined that the simplification in these products is not made only in one direction. The design and functions of the elements are shaped according to the needs of the user. Placing only the items that the user really needs in an interface helps to leave the control to the user, as it reduces the possibility of the user getting lost in the interface. On the other hand, designing and simplifying the ergonomics of items such as the keyboard that the user frequently uses improves the user experience and satisfaction as it reduces the possibility of the user to make mistakes (Still & Crane, 2017, p. 15).

To summarize, in order to define the design of a product as simple, it should be free of complex content, compatible with user expectations and provide feedback according to the action completed by the user. It should also be understandable in terms of language and compatible with the target audience. These features also allow a product to be experienced intuitively by the user on its own. Simple products aim to minimize the occurrence of errors and involuntary actions, provide the user with a comfortable and flexible usage area, and require minimum physical effort (Maioli, 2018, pp. 156-157).

However, according to the definition made by Travis and Hodgson (2019, pp. 86-87), making a developed product easy to use is not something that can be achieved only by modifying the functions of the product. In order for something to be simplified, the complex must be stripped out. Therefore, if a product is to be simplified, its basic functions should be determined. After that, these basic functions should be reviewed in

the user environment and the product should be developed within the framework of these functions.

On the other hand, simplification is also important to alleviate the cognitive load placed on the user. However, balance must be maintained here. Because the product may become inoperable for the user due to oversimplification. The situation that the minimalist icon designs used cannot evoke their true meaning in the mind of the user may be given as an example. The measure of minimization or simplification should be well adjusted. Otherwise, it can create complexity within the interface (Yablonski, 2020, pp. 31-32). In another word, reducing options in an interface design can reduce complexity as it draws a framework and guidance for the user, helping the user to make decisions more easily, thereby improving simplicity. However, removing or hiding the functions that different user profiles may need just to provide this minimalism can have a negative impact on usability as it will complicate the user experience. Therefore, these decisions should be taken in a balanced and planned manner according to the user profile. On the other hand, the principle of form follows function is of great importance. In particular, if a design element is used, it has a link to the content and a guidance role (Knight, 2019, pp. 71-75). In addition, the statement by Soegaard (2020) emphasizes two methods of simplifying complex content. One is to categorize complex elements, the other is to hide complexity by dividing it into stages. However, while it is mentioned that there may be more than one approach to making something easy for the user, it is especially emphasized that every decision taken is planned in a way that respects the user and the user's time. These decisions are not always just about simplicity. Other related concepts, such as complexity and usability, where simplicity interacts, also need to be considered for balance.

2.1.2.1.1. Opponent: “Complexity”

The complex causes the inability to see as a whole. It creates an appearance that has an uncertain beginning and end. Therefore, it may cause a feeling of pessimism or loss in the user. The user may feel they have to learn more to deal with this. Because complexity is actually a view of intertwined items. A section cannot be easily cut out of a complex whole (Still & Crane, 2017, pp. 35-36). Actually, gestalt theories have a directive effect on the brain. Therefore, Gestalt theories can be included in the design to eliminate complexity and disconnection and reflect a specific design order to the user (Knight, 2019, p. 113).

However, complexity does not arise just because some decisions are made wrong in visual design. Placing all the functions in the interface as a stack, using the functions do not have a flow, presenting all kinds of functions in front of the user... These cause a complexity as they will confuse even the user has a target in his mind. Presenting everything is not always a good idea. Functions should be made available to the user in a roadmap according to the user's needs and the goals they want to achieve (Yablonski, 2020, p. 24). In fact, this situation is also related to the cognitive load you demand from the user. Because the use of a product consists of two stages for the user. First to learn how the product works, then to complete the intended function. The layout of the product, the function and design of the interface elements that the user will interact with, the process of the function to be performed... These directly affect the user's thoughts about how simple the use of the product is, as these affect the learning stage and experience of the user in the first step. Especially for this reason, it is important to develop a product design where the user will need less cognitive load while using it (Yablonski, 2020, p. 25).

2.1.2.1.2. Usability

Usability is related to the experience and feel of the users. Usability is seen as the most important factor that has an impact on user experience design. However, usability is not just a visual assessment. It has both design and functional criteria regarding how easy an experience is to use and how easily it can be learned (Knight, 2019, p. 6).

According to the definitions made in the study conducted by Maioli (2018, p. 187), products that offer usability need a structure that informs the user. It should inform or direct the user about the transaction process of the action taken. If the content and functions it contains are in a way that the user experiences in the real world, this awareness will provide ease of use to the user during use. Usability requires similar levels of experience for both expert and novice users. The visual materials in the product have a minimal and aesthetic form that conveys information and is uncomplicated. In addition, there are designs that do not need any explanation or prior teaching. These are called walk-up and use. The user can understand and start to use intuitively without any guidance (Magazine, 2012, p. 85).

Actually, usability also concerns the efficiency of a design and the sustainability of its function. Therefore, these functions are controlled with different evaluation methods at different stages of the design (Knight, 2019, p. 11). In addition, usability researches struggle with the potential negative effects on the product or the user's behavior. Some of the foremost of these are bias and credulity. Because bias causes the real need of the product or the user to be ignored just because of the belief, credulity can cause all design decisions to be made due to the evaluations made by the user. For this reason, it is important that decisions are taken not only in line with a belief, but

after the validity and accuracy qualities of usability researches are fulfilled (Travis & Hodgson, 2019, pp. 2-9). To explain, according to Knight (2019, p. 145), usability assessment of a product can be done by creating a hypothesis and then testing it. Although the hypothesis is falsified as a result of the evaluation made here, it can make a greater contribution to the development of the product.

2.1.2.1.3. Related concepts: "Visibility and Readability"

Visibility is provided when the controls and directions presented to the user through an interface are in sight and in an understandable position. The user shouldn't need any further information or thinking in order to interact with the product. This may cause disconnection during use or cause the user not to know how to proceed. The lack of visual elements that may be needed in the design may cause difficulties in learning, and it may also increase the amount of work done (Knight, 2019, p. 116).

On the other hand, readability is about how meaningful and understandable a text is. Since some of the words used in the text belong to a certain area decreases the awareness, the readability of the texts especially by the age group or educational background decreases. On the other hand, the narrative language used in the text has an effect on readability (Magazine, 2012, p. 85). In fact, readability and legibility are generally used as similar to each other. However, while readability is used to describe that the letters in a font are more easily distinguished from the other due to the form of the font, legibility is used to mean that it is more easily selectable due to the layout used or the unity created in a design (Ambrose & Harris, 2009, p. 185).

2.1.2.2. Audience: "Target Audience"

In order to establish an effective communication through visual communication design, the created message must have appropriate qualifications for both its sender and

receiver. Therefore, while the designer creates a visual message to meet the needs of a customer, he organizes the message according to the visual and contextual perception of the target audience of the message (Hembree, 2006, p. 14). Regarding this, in the study conducted by Ambrose and Harris (2009, p. 76), it is mentioned that a design problem can have more than one solution and that the designer or the design team must make the design decision that will serve the design best. From the font used to the preferred color scale, every element has an impact on the design. For this reason, he emphasizes that the design will not reflect the same impression on every audience or user, especially since each element used in the design has a different meaning or has a different meaning on the user or audience side.

A product developed is used by individuals. However, developing a product that can appeal to every individual is both a costly and challenging process. On the other hand, there are no two people with exactly the same characteristics. For this reason, designers or design teams aim to customize the features of a product for a group of users with almost the same characteristics. Since it would not make sense to develop a product by guessing, especially for an unfamiliar area, it is often necessary to use a few of the specific research methods and make a determination to identify this target group of users. Because for a target user group, not only quantitative data but also qualitative data are needed. It is possible to determine the demands or needs of this target group from a product when various information such as age, gender distribution, educational status, interests and income status are gathered together. This information obtained is effective in clarifying the design decisions taken during the development of the product and determining a strategy. In addition, these data can be used to determine different road maps for the future of the product (Lacey, 2018, pp. 29-39).

If a design or layout that users use constantly and familiar with its visual language and layout is changed to redesign, users may not be satisfied with the new design. This is due to the users' inclination and habituation to the first design. This has a negative impact on usability, especially on renewed interfaces or redesigned products (Magazine, 2012, p. 76).

Actually, dividing user features into small groups is an important action in terms of manageability so that user characteristics can be analyzed in a qualified manner before the product development phase. Demographic characteristics such as age, gender, educational background, and income are the basic criteria in user research. However, in the development of a product, more detailed information is needed on user behavior and attitude. Especially for a product to be put into use in digital, how often the user uses these technological environments, the place of this technology in the user's life and the user's dependence are important. Likewise, the level of competence the user has in technology is also decisive in the development of a product (Garrett, 2011, pp. 42-44).

2.1.2.2.1. User

It is important to understand the user, to respond to the needs of the user and to ensure user satisfaction. At this point, the designer or design team should be at a level to empathize with the users. Most projects and works do not have the budget or time to get together with real users. Therefore, it is necessary to have sufficient qualitative and quantitative information to understand the feelings and demands of the real user by conducting user research. There are a wide variety of methods used for user research. These methods can be used to identify the user at the start of the project or to refer to user evaluation after a product is completed. In addition, it is possible to obtain different

user insights that were not noticed before, for use in the development phase of the product (Knight, 2019, pp. 83-87).

When users use a product, they want to have control in order to reach their goals and meet their expectations, and to take action. Often, they ignore information and usage requirements and develop their own solution through the experience process. Likewise, this is the case when they encounter a difficulty during the experience. If they cannot cope with the challenge, it has the potential to give up and abandon the product for no more use. Therefore, giving control is not about providing endless functions to make the user feel more in control. The important thing is to give the user options to make his own preferences and to draw a way that will prevent him from getting lost during the experience (Still & Crane, 2017, pp. 55-56).

While designing a product, planning such as first designing and then adapting the users to this design causes a big problem. The product should have a design language suitable for the user audience, so that it does not require special effort and learning beforehand while being used by the targeted audience (Still & Crane, 2017, p.63).

At this point, it is necessary to mention about the competence of the user, depending on the experience he / she has. According to the definition made in the study carried out by Carpenter and Qualls (2015, p.134), competence levels definitions indicate how and at what level a job or task can be carried out by a person. In this regard, one of the accepted qualification levels definitions belongs to The National Institutes of Health. According to the definition, the competence of people on a job consists of five levels: fundamental awareness, novice, intermediate, advanced, and expert. Each level has its own definition. For the level of fundamental awareness, one

needs an understanding of basic concepts and processes. The novice level represents limited experience, and the person needs assistance during performance to be able to exercise competence. However, an intermediate level person, unlike a novice, is at the point where he can perform basic applications independently. The person may only need expert support from time to time. An advanced person performs a competence completely without any assistance. In fact, if there is a problem with competence in the environment, he is the person to get help. A person at the expert qualification level can guide, troubleshoot, or answer questions in other areas closely linked to this competency.

In the definition made by Yablonski (2020, pp. 65-74), it is especially emphasized that when users interpret a product in terms of usability, it is not only evaluated in terms of functionality. Visual aesthetics is of particular importance for the user to create the impression that a product is usable. In fact, it has been stated that in product designs where users are visually satisfied, they tend to ignore usability problems.

2.1.2.2.2. User Needs and Needs Analysis

The basic user experience requirement of the users is to allow the user to use an interface without requiring much effort. When designing the user experience, there are many elements that have an impact on the experience. Everything from the medium where the product will be presented to the functional and design elements used in the product can be included in these items. The types and number of fonts used have an effect on readability and visual aesthetics. So, at some point, it shapes the user's experience. The visual language used in the design of the product helps to guide the user perception. For this reason, in a corporate product, if the corporate identity does

not match the content of the product, you cannot use it, you need to change it. If the user does not perceive them as an active button, the specified flat button designs cause complexity and difficulty of use. Therefore, after the user takes action, feedback should be made to the user through visual design. In addition, one of the things that improves the user experience in an interface design, regardless of the user audience profile, is that it is "big enough". Texts large enough to be read, buttons that the user can touch more easily if they have fat fingers… The buttons used should be large enough and close to their own content so that they can be guided by the senses (Grant, 2018, pp. 21-33).

If the icons used do not reflect the feature of the function they actually have to the user, it will negatively affect the user experience as it will increase the task completion time. Therefore, it should be in a form similar to what the user experiences in the real world, from icon designs to functioning. This way, the user does not have to learn or make an effort over and over again. On the other hand, it is necessary to avoid trying to give a new meaning to an icon design that already exists with its meaning. Because every time the user tries to use the product, it causes an increase in complexity as it will recall it again (Grant, 2018, pp. 101-115).

Actually, while the default font used should be designed in a size that does not require separate effort, assistive technologies also help for this purpose. Both browsers and phones used today offer services under the heading of accessibility. All of these features should be done in order not to force the user to learn something new. Apart from the basic functions, everything requested from the user increases the complexity. The user should be limited enough not to do anything wrong while fulfilling his intended use, but the user should be comfortable and have control as much as he can feel. The features that a product offers both in terms of design and functionality should be consistent in order for the user to have the same level of experience in every subject.

The user is spending time experiencing the product, and his time is valuable, you should respect that. Therefore, hiding everything to minimize it or just using icons without tags will do nothing more than pause the user experience. Even colors without text can cause different meanings to be conveyed for each different user profile. Also, since every user has used similar products before this product, their experience and learning should not be ignored. This product is not the construction of something new from scratch, but a product that has been interpreted in a different way from existing products. Therefore, changing everything, forcing the user to learn something new will make it difficult for the designed user experience to meet user needs (Grant, 2018, pp. 239-249).

2.1.2.2.3. Persona

Persona is the creation of character from the characteristics of the target audience that exists or discovered as a result of research. It is a method used to determine the demands or needs that may be obtained by the target audience more clearly. The qualitative and quantitative characteristics of the target audience are combined with various variations to create a persona like a real person. This person may have a name, age, profession as well as elaborate goals. The main reason for the creation of this character is that the evaluation of the product to be designed and the measurement of its feel is done by a person representing the target audience. In this way, what can be added, what should be removed, what may create confusion or what may create difficulty in use, these are tried to be measured. Design and functionality are tailored to the needs and demands of this person. However, as well as using a single persona, it can also be used more than once. This depends entirely on the scope and size of the work. Individual personas are created by using all the features acquired in the research for the target audience. With the evaluations of these personas, it is aimed to

improve the product in a way that appeals to the entire target audience. Over time, these characters can be updated and new additions can be added (Lacey, 2018, pp. 40-42).

According to Knight (2019, pp. 90-93), persona creation is a method that allows a user to evaluate the product without having to interview real users. Persona can tell what a user profile expects from the design or use of a product. It can provide information on how a user will behave while using the product. In addition, with this method, it can be determined why the user will use this product or what goals the user will use this product to achieve. In this way, it is possible to use the insights that have not been thought before in the development of the product. Additionally, a user profile can be created using user characteristics derived from research results, such as in persona creation. This method is mostly used to develop a product for different user groups and to plan the future strategies of the product (Still & Crane, 2017, pp. 101-102).

2.2. Product - Methodological Framework

Within the scope of this thesis, content analysis and in-depth interview methods were chosen as the methods to carry out the research. However, this thesis study deals with the definition of simplicity. In this context, studies that are carried out in the field of interaction design and that are similar in content stand out. In the study conducted by Choi and Lee (2012), similar to the topic discussed in this thesis, the effects of the simplicity of smartphone interface design on the user were investigated. Before the research, the theoretical simplicity definitions were investigated and the concepts effective in creating simplicity were determined. In the light of this information, a questionnaire was created for users to evaluate interface designs based on their experiences. However, the resources used on the basis of the research are based on the

studies on web usability, which are in more widespread use and have been studied, since smartphones have just been put into use. The data obtained as a result of the survey show that the simplified interface design has a positive effect on the user's satisfaction and there is a positive interaction between them. However, unlike the research questions sought within the scope of this thesis study, there is no evaluation or finding regarding the age range of the users in this research study. In addition, this research study was carried out by focusing on the sense of simplicity created by the Apple interface design in the user. However, it has not been investigated and defined that the Apple smartphone interface design is created with what elements or how they differ in design. The purpose of this thesis is to analyze the content analysis and the evaluations of the users comparatively and to investigate the quality of the design decisions taken in the simple mode product, which are different from the standard product.

In the research on applications developed for language learning (Büyükbeşe, 2019), 8 mobile applications randomly determined by in-depth interview method were analyzed comparatively. Interviews were completed with 11 participants who were English language teachers. In this study, the data collection part was composed of 4 stages. In these sections, detailed information about the participants and mobile applications was obtained. In addition, a question set was created based on literature research and previous studies for the evaluation of mobile applications and presented to the evaluation of the participants. Finally, the opinions of the participants that would contribute to the design of the applications were taken. Unlike this study, in-depth interviews conducted in this thesis study included usability tests available in the literature. In order to create a user profile for the participants, structured questions related to the user profile were created. In addition, in both studies, it is aimed to

evaluate the product in terms of design and usability through in-depth interviews. However, in the research study, the design features of the applications were neither defined nor an inquiry was made on these qualities. Since this thesis study aims to contribute to the definition of simplicity in interaction design, the design and functional features of the product in question and its differences from the standard product are revealed by using the content analysis method. In this way, design decisions that have an impact on simplicity are identified. Each material of the product under consideration was defined by developing the structural coding method before the study was conducted and listed for documentation purposes. Through this coding method, it is aimed to provide integrity within the thesis study.

2.2.1. Research methodologies

In this thesis, it is planned to use the content analysis method to examine the simple mode product in terms of design and functionality. On the other hand, it is aimed to get user feelings and evaluations by including usability tests in in-depth interviews.

First of all, to mention the content analysis method, it is sometimes used when trying to evaluate a product in terms of its content. Content is the communication itself with the user through the elements it contains and the form, design and arrangement of these elements. When developing a new product, it is carried out to check the success or deficiencies of the existing product. In this way, for example, if there is a lack of a product in terms of meeting the user needs or being user-friendly, this method provides an in-depth analysis of the quality of the content. Accordingly, the new product to be developed can be reorganized by removing the deficiencies (Still & Crane, 2017, p. 139-141).

In order to carry out a functional content analysis, it is necessary to mention the frequently used workflows. Site or application maps are a method used to visually show a product's workflow, its components. It is preferred to describe the user interface in detail, or to create a framework for the operation of the product. As user behavior is examined or usability studies are completed, improvements are made on this map. The labels and contents on the map provide information about the organizational chart, ease of use and navigation (Maioli, 2018, p. 276).

Finally, regarding the in-depth interview, an in-depth interview with the user is a method used to obtain a detailed subjective opinion of the user regarding a specified or assumed problem. Unlike quantitative methods, the user has the opportunity to express himself more comfortably. Generally, an interview is carried out within the framework of a subject with determined questions. In addition, when using this method, the researcher may also have the opportunity to present a design or a prototype of the developed product to the user for review, before conducting an in-depth interview with the user (Holston, 2011). In addition, in these interviews, the method of asking structured questions to the interviewers can be used for studies such as testing a hypothesis. At the same time, standard information about the interviewers can be obtained by this way (Arksey & Knight, 1999, p. 7).

2.2.2. Evaluation methodologies

Usability tests have been developed by researchers to measure how much the developed product can be used by users, how much it can respond to user needs, and user satisfaction, through user feedback. Many qualitative and quantitative methods have been tried over time. These methods help gather user feedback as a data set. The data collected are used both to identify product defects and to improve products (Still

& Crane, 2017, p. 29). In addition, in the study conducted by Still and Crane (2017, pp. 33-34), it is strongly emphasized that besides evaluating, usability test outputs and user feedback should be included in the design process in order to actually improve a product.

On the other hand, usability tests allow a product to be evaluated on the basis of its properties. This is not enough to improve a product according to user expectations. Because each user may have different expectations or goals while using a product. For this reason, besides usability tests, methods that can reach the opinions of the users and gather information about the user experience should be included (Still & Crane, 2017, pp. 37-39).

When conducting user research or usability research, one method alone should not be used. Data should be collected using at least three different methods and then the research results should be evaluated comparatively (Still & Crane, 2017, p. 60). Actually, in the study conducted by Maioli (2018, p. 288), it is especially emphasized that both qualitative and quantitative research methods provide different benefits from each other, therefore, it is necessary to use both qualitative methods that present small data and quantitative methods that provide big data in order to make a qualified study.

In addition, although the methods that provide statistical results help to find answers to some questions about the product, the research must be supported and balanced with methods that enable the user to express his / her own opinion. Because the methods used to obtain statistical data do not allow to obtain more insight about the user from the questions asked. In this way, clues about the motivations, needs or expectations of the user can be reached (Still & Crane, 2017, pp. 80-81).

2.2.2.1. System usability scale

The system usability scale (SUS) is an assessment in which user feedback is used to learn about the usability of a product by designers or developers. Evaluation is done by users scoring the judgments on a scale and then evaluating them. Usability is a difficult concept to evaluate numerically. Therefore, there may be different methods used. However, SUS is one of the most frequently used in terms of awareness and applicability (Maioli, 2018, pp. 293-295).

To explain the structure of the system usability scale, it is implemented by evaluating ten sentences in total with five positive and five negative meanings on a five-point Likert scale. The results of this evaluation made by the user are calculated with a method specific to the system usability scale, and the SUS Score of the evaluated system is reached. For this calculation, 1 is subtracted from the scale scores of items 1,3,5,7 and 9, which contain positive judgments. The scale score of the 2, 4, 6, 8, and 10 items containing negative judgments is subtracted from 5. The resulting number is multiplied by 2.5. With this calculation method, SUS score between 0 and 100 is obtained (Brooke, 1994, p. 194).

After the system usability scale was put into use, many studies have been carried out on it. In the study conducted by Bangor, Kortum, and Miller (2008), it was studied to determine the adjective equivalents of the SUS score obtained with the system usability scale. According to the results of this study, it was determined that the adjectives worst imaginable, awful, poor, ok, good, excellent, best imaginable, respectively, could correspond to certain score ranges. Figure 1 shows the acceptability, grade and adjective rating equivalents of the system usability scale score between 0-100, according to the findings obtained from the research. Regarding the equivalents of

these scores, it is emphasized that products with evaluations of 50 and below will cause problems in use, and those with points in the 70's and 80's should be taken into account as more developable (Bangor, Kortum, & Miller, 2008, pp. 592-593).

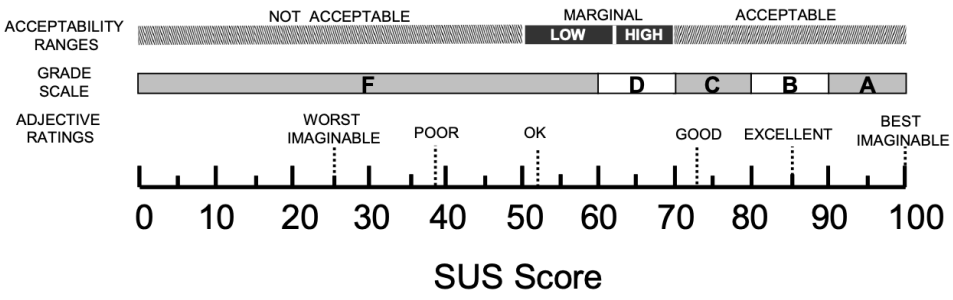


Figure 1. Grade rankings of SUS scores from "An Empirical Evaluation of the System Usability Scale," by Bangor, A., Kortum, P. T., and Miller, J. T., 2008, International Journal of Human-Computer Interaction, 24(6), 574-594. Reprinted with permission.

Besides this, in the study conducted by Brooke (2013, p. 35) regarding the use of the system usability scale in different areas, it is underlined that the replacement of the word "system" in system usability scale judgments with different concepts such as "web page" and "application" does not change the SUS results. In addition, it is pointed out that there are versions in different languages for this usability test, the original version of which is in English, and that they do not cause a significant change in the results. Depending on this explanation, studies that are suitable for the methods applied in this thesis study and their participants were also scanned in the literature review. In the research study conducted by Demirkol (2018), it was worked on translating the system usability scale into Turkish. As a result of determining the validity of the data obtained at the end of the study, this study was presented to the use of researchers as a Turkish version under the name of SUS-TR.

2.2.2.2. Emotion word prompt list

In this thesis, Emotion word request list has been used as a method in order to include user emotions as well as user evaluations. Related to this, in the study conducted by Petrie and Harrison (2009), it is emphasized that the user experience is not only taking user evaluation to measure a product, but also what the user feels while experiencing the product. It is mentioned that there are different word lists in various languages developed by researchers to measure user reactions for this purpose. It is stated that through this research study, it is aimed to create a short list of words that can summarize the feelings of the users. The existing long word lists have been tried to be made more concise by presenting them to the evaluation of the user with the card sorting technique. At the end of this study, a usability test consisting of 16 words was created in which the positive and negative emotions felt by the users while experiencing the product could be measured. Since the study was conducted in England, the contents are in English. However, because of the research part of this thesis will be carried out with users in Turkey, another word list that has validity in the literature were also scanned. With the translation study carried out by Demirkol and Şeneler (2018), the Turkish version of the emotion request word list (EWPL-TR) was reached. This sentiment prompt word list was then applied to university students. The data obtained at the end of the study show that the test reliability is high. However, in order to facilitate the analysis of the items, it is mentioned that 16 words have been reduced to 15 words. Later, this method was used in the evaluation of the determined web pages by the users.

3. RESEARCH

3.1. Research Scope and Importance

In this thesis, a product that has been worked on by designers and developers in order to present an alternative interface design to users is considered and examined in detail. This product, besides having an indicative and informative two-dimensional view in terms of design, offers the user the opportunity to interact with the functions it contains and its responses when considered functionally. Due to these qualities it has, the main reason for this product, which serves in the field of interaction design, to be included in the study is the name given to the product and the service the product aims to offer. This product, which has the name of "Simple mode" and different interface design and operation in a smart phone, brings up a few questions. Because the word "Simple" in its name is an adjective that defines this product and, together with this title, announces the target it plans to serve.

Since this thesis study aims to contribute to the determination and drawing of the framework of the interaction design area, which is still evolving, this study deals with the simple mode interface design product. To summarize, the decisions taken at the design stage and the reinterpreted materials have led to a definition of simplicity through this product. In this research section of the thesis, this definition of simplicity, made through the design of the product, was examined from more than one angle with the methods used in the research design, and the research questions were sought.

Due to the nature of the product, the simple mode found in most smartphones varies according to the brand that produces the product, the version in which it is available and the device model. In this thesis, the product offered for use in a smartphone model produced by a brand of simple mode interface design is discussed.

In order to examine the simple definition made, the product itself was documented within the scope of content analysis. In this research study, interviews were conducted in order to reach both qualitative and quantitative data together and to question the validity of the design decisions made. The structured interview method was used in order to create the statistical data of the user opinions received in these interviews. Accepted usability tests (SUS-TR and EWPL-TR) are presented to the evaluation of the users in interviews, along with the demographic questions that reflect the user profile.

With this thesis study, the elements of simplicity created by a final product, which has been put into use and qualify as simple as its name, the design decisions taken to create this simplicity and the effectiveness of these decisions for the user are reached. For this reason, when it is aimed to make a conceptual description of the field of interaction design, these data and the results obtained provide guidance for the next design decisions and simplicity definitions to be made.

3.2. Research Aims

To define, the general purpose of this thesis study is to contribute to the determination of the fundamentals of the interaction design field by making both product and user-based reviews and evaluations of a product shaped for a specific purpose. In this direction, if it is necessary to determine the sub-goals that will be from part to whole, the first step is to determine the properties of a design and its theoretical connections with interaction design. The second step is the creation of the functional and design scheme of the simple mod product discussed in the light of the information and connections obtained. The next step is to search and determine the equivalents of the design decisions made in this simple product within the standard product. The other

stage is the determination of the effect of the decisions made in the simple mode product on the user with usability tests evaluations. The last step is to reveal whether the decisions taken on the basis of this product have a significant contribution to the field of interaction design through the data obtained at the end of the research study.

3.3. Research Limitations

If it is necessary to define the limitations of this thesis study, the simple mode interface design product examined within the scope of the study, due to its nature, varies according to the brand that produces the product, the version it is put into use and the device model. Therefore, since this research study examines the operability of a simple mode interface design product introduced in a smartphone model produced by a brand, this causes the study to be conducted as a case study. However, since this study includes a single product sample, the data and results obtained do not reflect the characteristics of all smartphone simple mode home screen interface designs.

Besides, interaction design does not only include the interface design. It includes many different disciplines and application areas. In addition, since this product is developed by a group of design and software teams within a brand, and the product is shaped according to the needs identified by these teams, it shows that this definition of simplicity is a definition made only within the scope of this brand. For this reason, it is also possible that other elements that are not mentioned or encountered in this thesis study, but that will contribute to the concept “simplicity”, will be discovered in smartphone simple mode home screen interface designs of other brands.

In addition, it was planned to include the survey method before starting the research study. However, as a result of the pilot study, it has been observed that this method is not usable and sufficient due to the nature of the product and usability tests.

The survey study has been canceled, since both taking user opinions and testing the product in a limited time will cause a significant deviation in the research results. Usability tests were directed to a certain number of users instead of large user groups. By comparing the usability test evaluations of the users participating in the interviews, the simplicity that the product aims to offer to the user profiles was examined. Finally, since this thesis study was conducted in Turkey, Turkish versions of the usability tests are presented to Turkish users who participate in the interviews. These versions are quoted from the studies in the literature, but since the users live in the Turkish culture, their answers may be limited within the framework of this learning.

3.4. Research Methods

3.4.1. Case study

In the scope of the research, a product developed for simplicity is discussed in order to examine the definition of simplicity in interaction design. Although this product belongs to a brand, the definition of simplicity made within the scope of the product is made by simplifying and redesigning another product belonging to the same brand. For this reason, the design decisions taken for this product are shaped according to the perspective of a brand's software developer and design team. In addition, the simplification process made in this simple product, either by design or function, makes the product dependent on the existing product itself. All these facts lead to obtaining an evaluation on the effectiveness of the product put forward by the brand through the definition of simplicity to be made for the product to be examined within the scope of this thesis and whether this simplicity is meaningful.

3.4.2. Content analysis

The product discussed within the scope of this thesis is simple mode home screen interface design on the Mate 10 Lite smartphone device of the Huawei brand. In order for the work to be carried out in a healthy way, the smart device was returned to the factory settings, and then the documentation was made. There are 14 built-in sections with 2 home screen designs in simple mode. A review order was determined due to the examination of 2 home screen designs in the research. In this context, first the first home screen design and then the second home screen design were analyzed one by one. However, during the research process, the Settings section was included in the content analysis as an additional review section, as it was noticed that the Settings section contained significant differences between the two modes. The review order is made in each home screen design first from left to right and then from top to bottom. Figures 1, 2 and 3 show these sections and the layout.

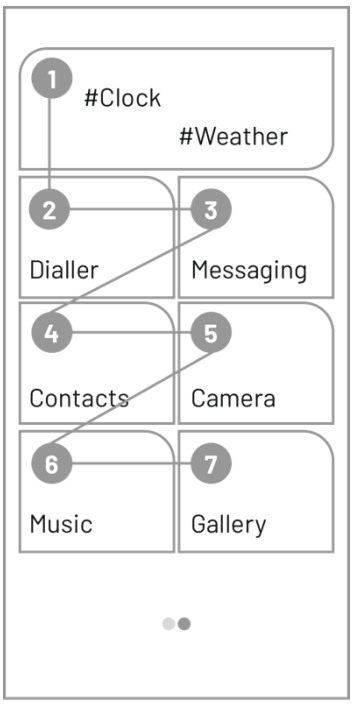


Figure 2. Simple Mode – Home Screen 1

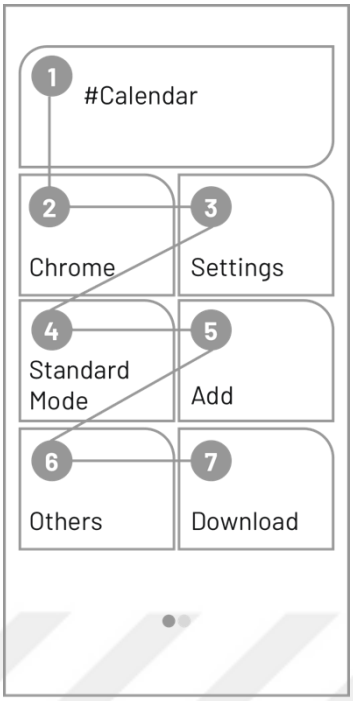


Figure 3. Simple Mode - Home Screen 2

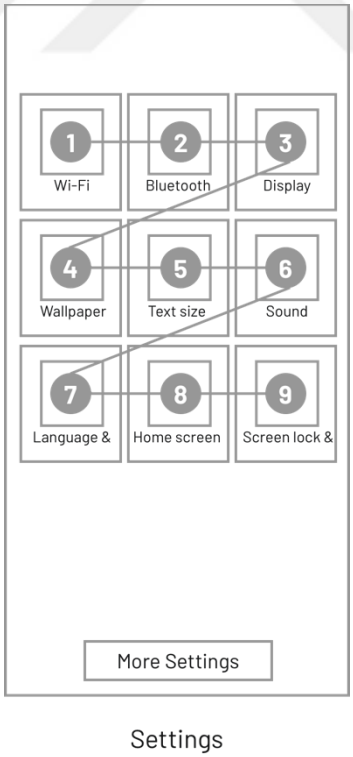


Figure 4. Simple Mode – Settings

In addition, a content coding system has been created to facilitate comparison and observation. In Table 1, these sections are listed with their codes.

Table 1

Analysis Layout and Coding for Content Analysis

Home Screen 1	**Sections**	
	1-1 #Clock & #Weather	
	1-2 Dialler	
	1-3 Messaging	
	1-4 Contacts	
	1-5 Camera	
	1-6 Music	
	1-7 Gallery	
Home Screen 2	**Sections**	
	2-1 #Calendar	
	2-2 Chrome	
	2-3 Settings	
	2-4 Standard Mode	
	2-5 Add	
	2-6 Others	
	2-7 Download	
Home Screen 2	**2-3 Settings**	**Subheadings**
		2-3_1 Wi-Fi
		2-3_2 Bluetooth
		2-3_3 Display
		2-3_4 Wallpaper
		2-3_5 Text Size
		2-3_6 Sound
		2-3_7 Language & Input
		2-3_8 Home Screen Style
		2-3_9 Screen Lock & Privacy

In order to make the analysis, firstly the simple mode has been solved in terms of design and functionality. In order to find the equivalent of the design decisions made for the simple mode in the standard product, the same operations were then carried out for the standard mode. Since design criteria such as color and size are specified especially in terms of usability (Dabner, Stewart, & Vickress, 2017, p.65), the color codes used in the simple and standard mode content analysis study, the variety of color codes, have any frequency or specific distribution whether it has been investigated. In addition, due to the emphasis on the effect of icon design and design style on simplicity (Grant, 2018), the design styles of icons used for the same sections in both simple mode and standard mode have been categorized and analyzed.

To mention the characteristics of the study carried out, content analysis was carried out in two separate sections. However, in order to make a detailed analysis of these two sections, first of all, all the contents, those in the simple mode, and the equivalents of the contents in the simple mode in the standard mode were comparatively documented (see Appendix D). This documentation has been made both visually and functionally in connection with the purposes of the content analysis method. Afterwards, the content analysis study was carried out in two stages, first visual content analysis and then functional content analysis. The general coding and definitions made in the study are explained in Table 2.

Table 2

General Coding and Definitions in Content Analysis

Terms	**Explanation**
Section	It is an area in the home screen designs that references a function or group of functions.
Label	It is a word or phrase that is being used to describe or summarize the attribute of an area.

“Full Size”	The page that takes up the full screen of the phone.
#	Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
Heading	The main title that summarizes the content of a section and describes the functions on the page.
Subheading	A title that summarizes sub-functions under the main heading on a page and directs the flow.
Entrance Page	The first page encountered when redirecting to a section
Linked Page	Other page or section linked to the entrance page content and functions.

In the visual content analysis title, the sections in the simple mode home screen designs are discussed in terms of design. Characteristics of the items used, such as color, size and style, are defined. The uses of the same items in the standard mode product are analyzed comparatively. Different from the general explanations of content analysis, the meanings of coding and classifications made in visual analysis are defined in Table 3.

Table 3

Coding and Definitions Used in Visual Content Analysis

Terms	**Explanation**
#	Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
“#”	It is used to indicate that there is no content that can be analyzed.
“#Null”	It is used for sections with no labels specified.
“#Visual”	It specifies the sections that are defined not by icon design but by visual elements such as logo.
“#Transparent”	Identifies transparent items that do not have a color code.
“●“	Contents available in simple mode but not included in standard mode are marked with a red circle.
*	It counts once because the same content has been used.

In addition to these definitions, the definitions in Table 4 were used to categorize the icon designs.

Table 4

Categorization of Icon Styles

Terms	Explanation
Flat	Defines icons that contain no design elements other than the icon design.
Shaded	Defines icons that are simple but have stylistic additions such as shadows.
Stylized	Defines elements that are stylized by color and other similar design elements, whose icon design differs from the simple and minimal form.

In the functional content analysis title, simple mode and standard mode products are analyzed comparatively by creating workflow diagrams. In addition to the general explanations of content analysis, the meanings of the markings and explanations used on the diagrams for functional analysis are defined in Table 5.

Table 5

Coding and Definitions Used in Functional Content Analysis

Terms	Explanation
“More”	Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
“ ● “	Contents available in standard mode but not included in simple mode are marked with a red circle.
"Status"	The comparison result is explained in this section.
"Simple mode and Standard mode are the same"	In the sections where this statement used, no functional difference, removal or elimination, is encountered.
	Pages with the same title and content within a section were shown in the workflow but counted once.

3.4.3. Structured interview

In this section, details of the structured interview study, which is one of the methods to be used within the scope of the research, are given. However, beforehand, it is necessary to mention the results of the pilot study. In order to question the research questions discussed within the scope of this thesis study from the point of the user, it is planned to conduct a survey study first. The survey was created from the mentioned usability tests and demographic questions such as gender, age, education background to identify the participants. Later, 4 different users were enabled to try the product first and then participate in this survey. However, the nature of the questionnaire did not match the quality of the product. The application of the survey method was abandoned due to the limited time and the user's inability to examine the product in depth. For this reason, the interview method was preferred in accordance with the nature of the product discussed within the scope of the thesis study and its target audience.

Considering the comments made by the users during the interviews conducted in the pilot study, it was decided that it would be useful to add a question about the phone operating system used by the user to the user related questions. The testing period has been extended in interviews for users to test the product and make in-depth examinations. In addition, based on the definitions made in the study conducted by Arksey & Knight (1999, p. 7), it was preferred that the questions be structured in order to make a comparison between the answers given to the questions in the interviews.

To mention the details of the in-depth interview method carried out during the research phase, structured interviews were conducted with a total of 12 interviewees. Structured questions consist of 5 user profile related demographic questions and 2 usability tests, System Usability Scale and Emotion Word Prompt List. Demographic

questions are multiple choice questions planned in the light of the information obtained in the literature review to define the user in terms of age, gender, educational background (Lacey, 2018, pp. 29-39) and user experience (Carpenter & Qualls, 2015). The operating system question was added based on the participant comments in the pilot study.

While choosing the interviewees, it was especially aimed to create maximum variation sampling. In this context, the participation of the interviewers was planned to ensure that the answers to the age and gender questions had a balanced distribution. Apart from this, no targeting has been made in connection with other questions in order to ensure diversity of user profiles.

Usability tests were included among structured questions without any change in content or answers. Only, in the light of the information obtained in the literature review for the system usability scale, which is one of the usability tests (Brooke, 2013, p. 35), the word "system" in the test was changed to "product" in connection with the simple mode product. These changes are shown in Table 6. In addition, Turkish versions of usability tests, SUS-TR (Demirkol, 2018) and EWPL-TR (Demirkol & Şeneler, 2018), were used in the research, since the research was conducted in Turkey and Turkey's native language is Turkish (See Appendix A).

Table 6

The original SUS and the modified statements

Original SUS Statements	**Modified SUS Statements**
1. I think that I would like to use this system frequently.	1. I think that I would like to use this product frequently.
2. I found the system unnecessarily complex.	2. I found the product unnecessarily complex.

3. I thought the system was easy to use.	3. I thought the product was easy to use.
4. I think that I would need the support of a technical person to be able to use this system.	4. I think that I would need the support of a technical person to be able to use this product.
5. I found the various functions in this system were well integrated.	5. I found the various functions in this product were well integrated.
6. I thought there was too much inconsistency in this system.	6. I thought there was too much inconsistency in this product.
7. I would imagine that most people would learn to use this system very quickly.	7. I would imagine that most people would learn to use this product very quickly.
8. I found the system very cumbersome/awkward to use.	8. I found the product very cumbersome/awkward to use.
9. I felt very confident using the system.	9. I felt very confident using the product.
10. I needed to learn a lot of things before I could get going with this system.	10. I needed to learn a lot of things before I could get going with this product.

Note. See Table A1 for System Usability Scale Statements in Turkish and Table A3 for Modified SUS-TR Statements for Simple Mode Interface Design Product.

Apart from the questions and the interviewees, if it is necessary to define the framework of the interviews, the nature, content and stages of the interview were explained to the interviewer with an introduction letter before the interview started. (See Appendix B for the introduction, questions and answers.) The interviews started with the experience of the product and the planned questions were asked afterwards. Each interview took 15-20 minutes in total.

3.5. Findings

The findings obtained in the research carried out within the scope of the thesis study are explained under the headings according to the preferred research methods.

3.5.1. Content analysis

In the simple mode, which was examined by the content analysis method, a total of 23 sections, 14 in the 2 main screen designs and 9 in the settings, were examined

comparatively. In comparison with the sections in Simple mode and Standard mode, no similar equivalents were found for 4 out of 23 sections. These sections are 2-4 Standard Mode, 2-5 Add, 2-6 Others, and 2-7 Download, respectively.

When examined comparatively, it is seen that there are design or functional differences in each section. However, in order to analyze how the simplicity is created, these differences are put forward by counting. It is explained in detail in the relevant analysis sections.

3.5.1.1. Visual content analysis

Visual content analysis was carried out under the headings of color code usage, icon and icon design, and button and icon sizes, respectively. First of all, to talk about the use of color codes, 17 different color codes were used for a total of 23 sections in the Simple mode product. In the standard mode, the use of color codes was examined out of 19, since there is no equivalent of 4 sections. It was determined that the backgrounds of the two sections were transparent. For 17 sections, 10 different color codes were used in total.

Table 7

Analyzing of Color Codes

	Simple Mode			**Standard Mode**	
	Color Code	**Sections**		**Color Code**	**Sections**
1	#2F72CB	(1-1)	1	#00B7B7	(1-2)
2	#5DBC3C	(1-2)	2	#0075C5	(1-3)
3	#26BBC1	(1-3)	3	#ECA048	(1-4)
4	#D2864C	(1-4)	4	#D1D1D3	(1-5)
5	#B867E8	(1-5), (2-2)	5	#EFEFF0	(1-6)
6	#A6BF1C	(1-6), (2-3)	6	#E8E8E8	(1-7)
7	#3D9BE0	(1-7)	7	#C24450	(2-1)

8	#F3583C	(2-4)	8	#777B81	(2-3)
9	#4B5FA6	(2-5)	9	#5585DA	(2-3_1, 2-3_7, 2-3_9)
10	#BC6A45	(2-6), (2-7)	10	#4ECB77	(2-3_2, 2-3_3*, 2-3_4*, 2-3_5*, 2-3_6, 2-3_8*)
11	#6474C2	2-3_1	-	#Transparent	(1-1), (2-2)
12	#5696DA	(2-3_2), (2-3_4)			
13	#4ECB77	(2-3_3)			
14	#BC60D1	(2-3_5)			
15	#48BBD8	(2-3_6), (2-3_9)			
16	#AEAEAE	(2-3_7)			
17	#F17932	(2-3_8)			

***** Same Content

Regarding the icon and icon design analysis, when the sections are compared as simple mode and standard mode, it is seen that the icon or icon style used for the section has been changed.

To explain in detail, sections 1-1, 1-2, 1-3, 1-4, 1-6, 2-1, 2-3, 2-3_1, 2-3_6 are represented by the same icon in both modes. However, it is determined that the icon designs have been changed in the simple mode home screen design of some sections represented by the same icon. These sections are 1-2, 1-3, 1-4, 1-6, 2-1 and 2-3. The shaded or stylized icon designs of these sections in the standard mode product have been changed to flat in the simple mode product design. In addition, although sections 1-5, 1-7, 2-2 and 2-3_2 have the same label, their icons differ in the same two modes. At the same time, 2-3_3, 2-3_4, 2-3_5, 2-3_7 and 2-3_8 sections in the Settings section in simple mode do not have their own icon, since they are under a heading in standard mode.

Table 8

Icon and Icon Styles

	Simple Mode		Standard Mode	
Sections	**Icon**	**Icon Style**	**Icon**	**Icon Style**
1-1 #Clock & #Weather	#Text & Cloudy	Flat & Flat	#Text & Cloudy	Flat & Flat
1-2 Dialler	Handset	Flat	Handset	**Shaded**
1-3 Messaging	Talking Balloon	Flat	Talking Balloon	**Shaded**
1-4 Contacts	Person	Flat	Person	**Shaded**
1-5 Camera	Camera	Flat	**Lens**	**Stylized**
1-6 Music	Note	Flat	Note	**Stylized**
1-7 Gallery	Picture	Flat	**Photographs**	**Stylized**
2-1 #Calendar	Calendar Page	Flat	Calendar Page	Flat
2-2 Chrome	Network	Flat	**#Visual**	Flat
2-3 Settings	Gear	Flat	Gear	**Stylized**
2-4 Standard Mode	Home	Shaded	#	#
2-5 Add	Plus	Flat	#	#
2-6 Others	#Visual	Stylized	#	#
2-7 Download	#Visual	Stylized	#	#
2-3_1 Wi-Fi	Wireless	Flat	Wireless	Flat
2-3_2 Bluetooth	Bluetooth	Flat	**Devices & Connection**	Flat
2-3_3 Display	Phone Screen	Flat	**Phone Screen***	Flat
2-3_4 Wallpaper	Picture	Flat	**Phone Screen***	Flat
2-3_5 Text Size	Two letters A in different sizes	Flat	**Phone Screen***	Flat
2-3_6 Sound	Speaker	Flat	Speaker	Flat
2-3_7 Language & Input	Keyboard	Flat	**Phone Screen & Letter "i"**	Flat
2-3_8 Home Screen Style	Home	Flat	**Phone Screen***	Flat
2-3_9 Screen Lock & Privacy	Lock	Flat	**Shield**	Flat

***** Same content

Finally, when the button and icon sizes used in simple mode and standard mode are compared, a significant difference emerges. In the simple mode, 3 different sizes

for the button and 4 different sizes for the icon were used in total within the scope of the sections discussed. In standard mode, the size usage is 5 different sizes for the button and 10 different sizes for the icon. In both modes, some sizes are used more than once. In simple mode, a button and icon size is used at most 12 times. In standard mode, a button size is used up to 9 times and an icon size is used up to 7 times. There are also significant differences between the volume of the sizes used in simple mode and standard mode. These are shown in Figure 5.

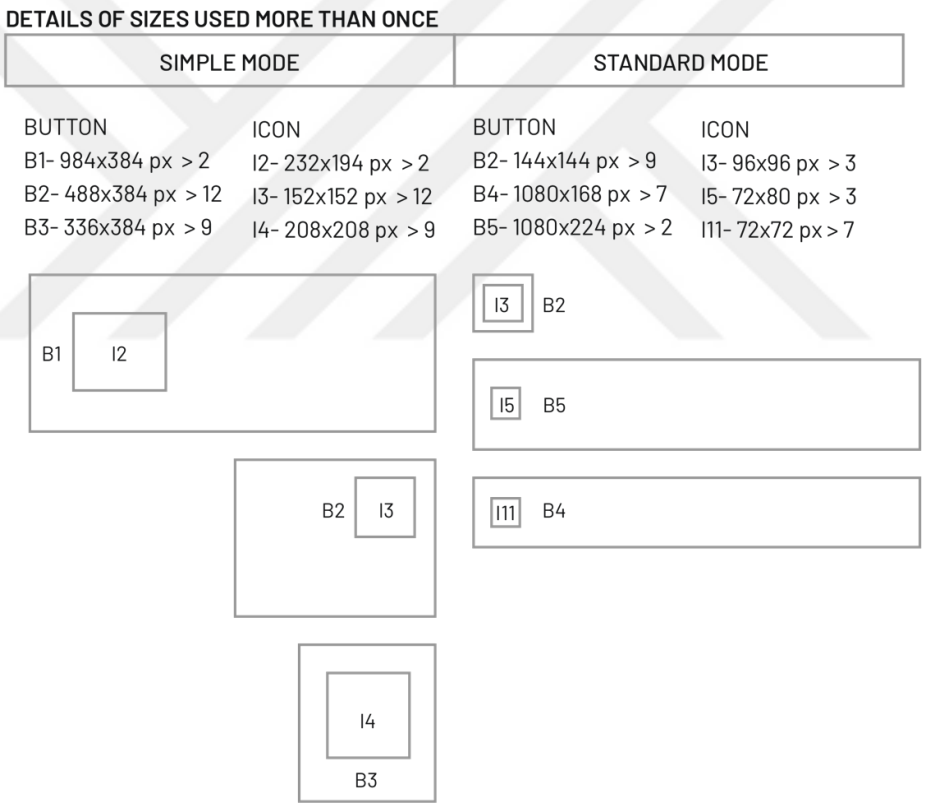


Figure 5. Size Differences in Simple Mode and Standard Mode

3.5.1.2. Functional content analysis

Within the scope of functional content analysis, the labels, entrance page, linked pages, headings and subheadings of the sections examined in the simple mode in both

modes were listed in detail and comparatively, and then analyzed. As a result of this analysis, it was determined that the page contents were removed and filtered in some sections, and the contents of some sections were highlighted.

To explain, sections 1-1, 1-5, 1-6, 1-7, 2-1 and 2-2 have the same workflow in both modes, no changes have been made. In addition, the 2-4, 2-5, 2-6 and 2-7 sections in the simple mode are not available in the standard mode.

In sections 1-2, 1-3 and 1-4, some subtitles in standard mode are not included in simple mode.

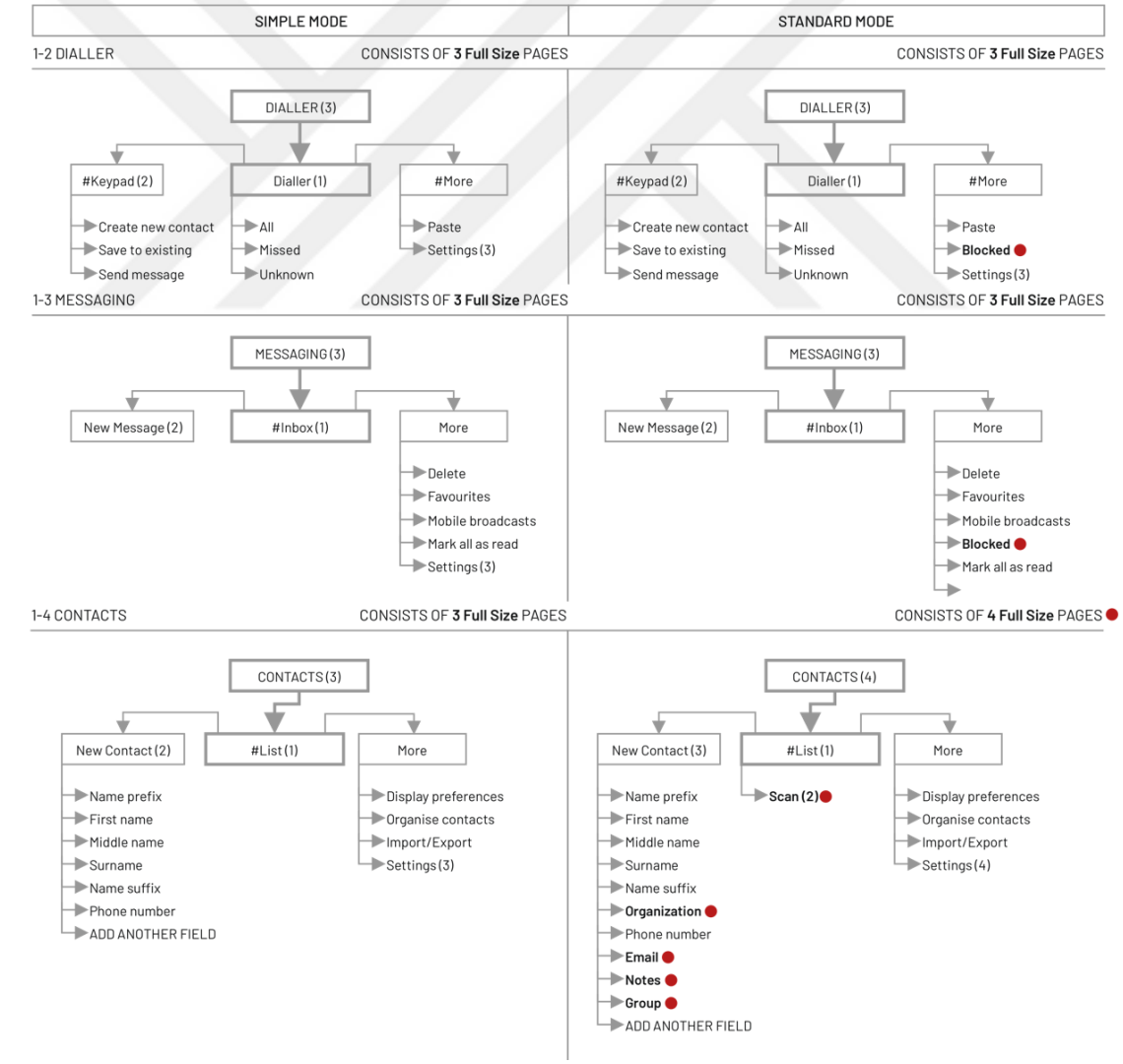


Figure 6. Elimination in Simple Mode

On the other hand, while sections 2-3_1, 2-3_2, 2-3_4, 2-3_5, 2-3_6, 2-3_7, 2-3_8 and 2-3_9 are under different headings in the Settings section in standard mode, they have been removed from the subtitle format in simple mode, used as a title.

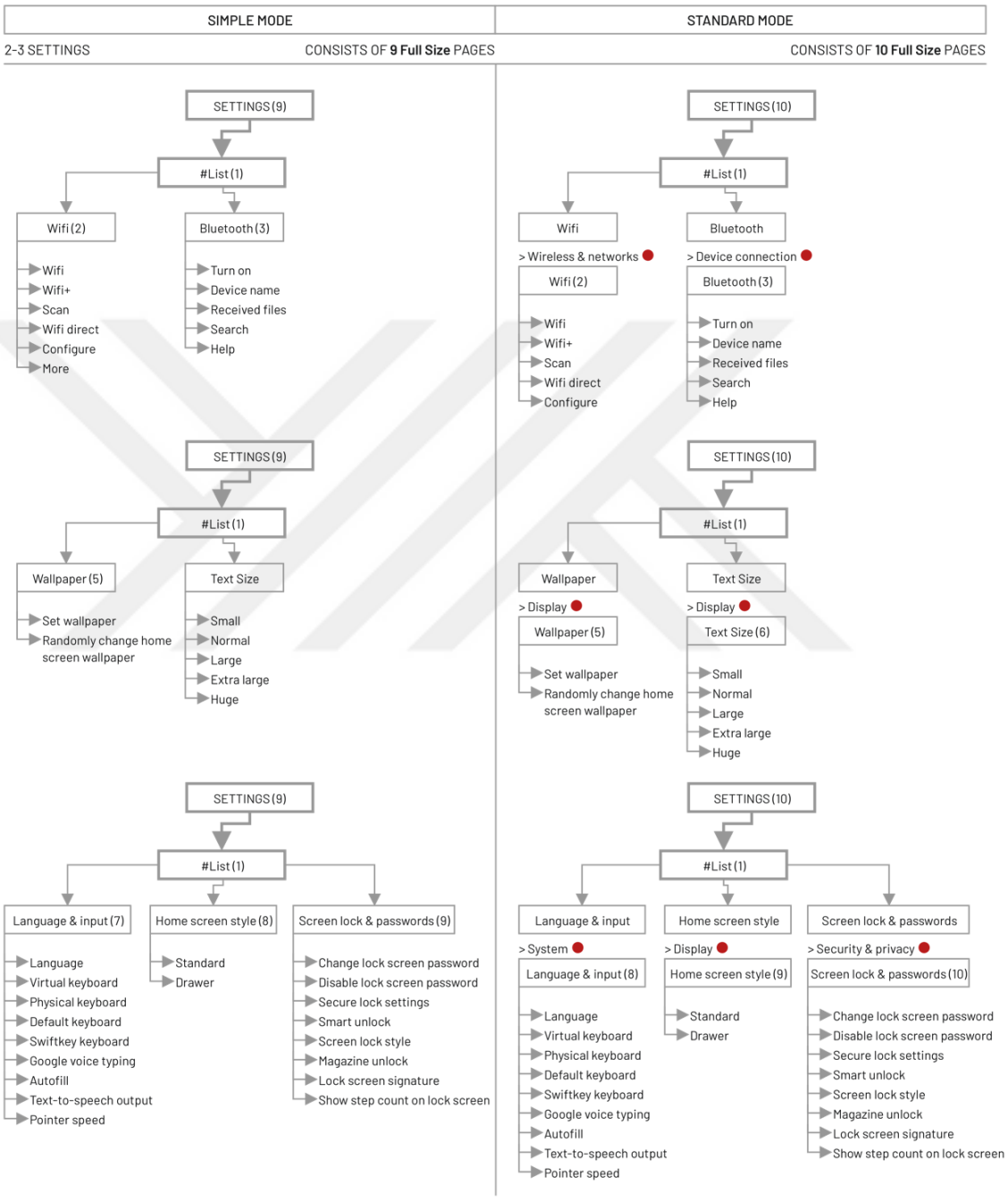


Figure 7. Highlighted Sections in Simple Mode

The “More Settings” section in the Settings section in simple mode has exactly the same content as the Settings section in standard mode.

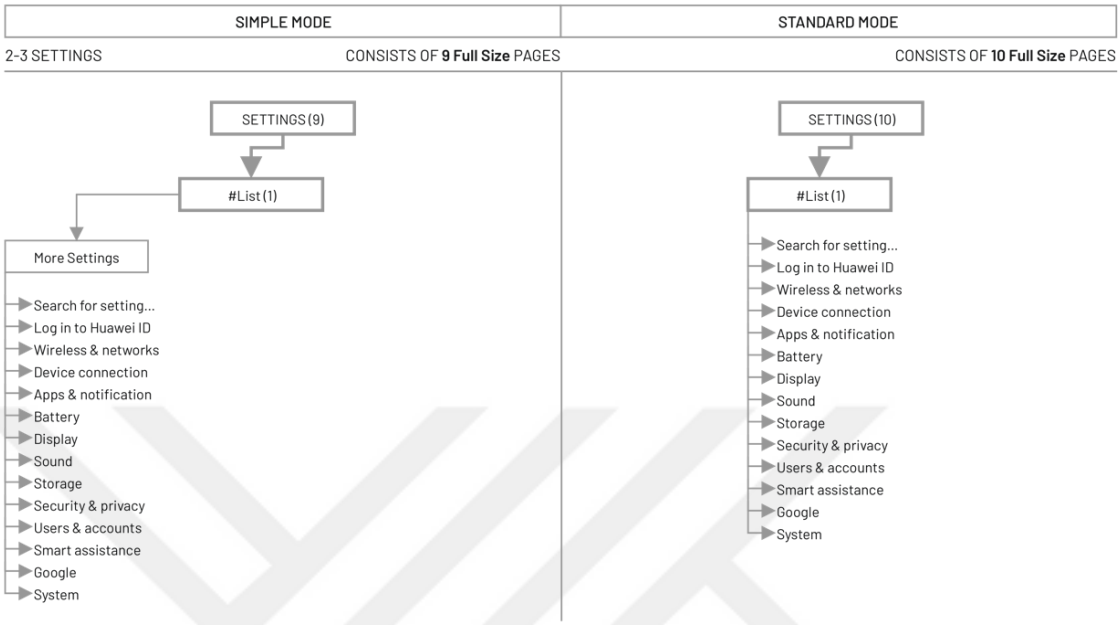


Figure 8. Filtering the Settings section in Simple Mode

3.5.2. Structured interview

Within the scope of the structured interview method, the usability evaluation of the Simple mode product was made by interviewing 12 users. The qualifications of the interviewees can be defined as follows. Three of the interviewees are between the ages of 18-24, three of them 25-34, two of them 45-54, three of them 55-64 and one of them 65 and above. In addition, the gender distribution of the interviewees is 4 men and 8 women. According to education level distribution, one is secondary school, five are high school, four are universities, two are master degree graduates. Additionally, seven of the interviewees are Android users and five are iOS users. While eight of the interviewees define themselves as intermediate users, four define themselves as advanced. The same questions were asked to 12 interviewees, and they were asked to

evaluate the usability of the simple mode product. However, due to the close user experience levels, a comparative evaluation was not made.

According to the results obtained from the interviews, all the interviewees evaluated the usability of the product for the system usability scale above the "unacceptable" level. In total, 5 interviewees found the product at a marginal level in terms of usability, while the other 5 interviewees found it excellent and the best imaginable. To mention the qualifications of the interviewees who found the product marginally usable, there are three women and two men, two of them aged 18-24, two of them 25-34 and one of them aged 65 and above. According to educational backgrounds are one is master, two are university and other two of them are high school graduates. Among the interviewees who rated the usability of the product as excellent and above, three were women and two were men. Related with age distribution, one is 25-34, two are 45-54, and other two are 55-64. As the education background, one is secondary school, one is high school, two are university and one is master degree graduate.

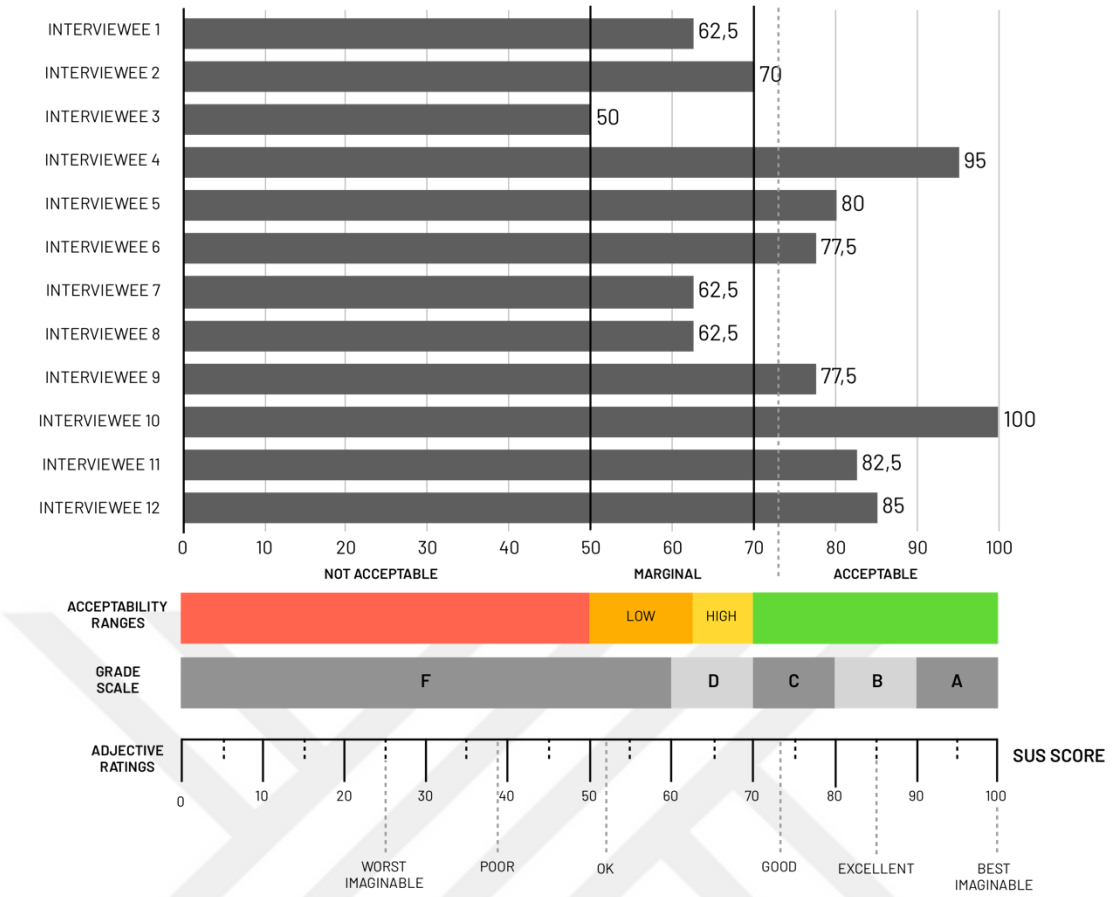


Figure 9. System Usability Scale – SUS Score

On the other hand, if we look at the emotion word prompt list evaluations of the interviewees, there are 3 interviewers who evaluated the words with positive connotations below 2.5 out of 5 in total, while there are 2 interviewers who evaluated the words with negative connotations above 2.5 out of 5. Two of these interviewees are female and one is male, and two of them are between the ages of 18-24 and one of them is between the ages of 25-34. One is university and the other two are high school graduates. Unlike the interviewees who had negative feelings while using the product, there were 9 interviewers who evaluated the words with positive connotations above 2.5 out of 5 in total, while there were 10 interviewers who evaluated the words with negative connotations below 2.5 out of 5. Three of these interviewees are men, six are women, and one is 18-24, two are 25-34, two are 45-54, three are 55-64, and one is 65

and above. According to the education level, one is secondary school, three are high school, three are university, and two are master degree graduates.

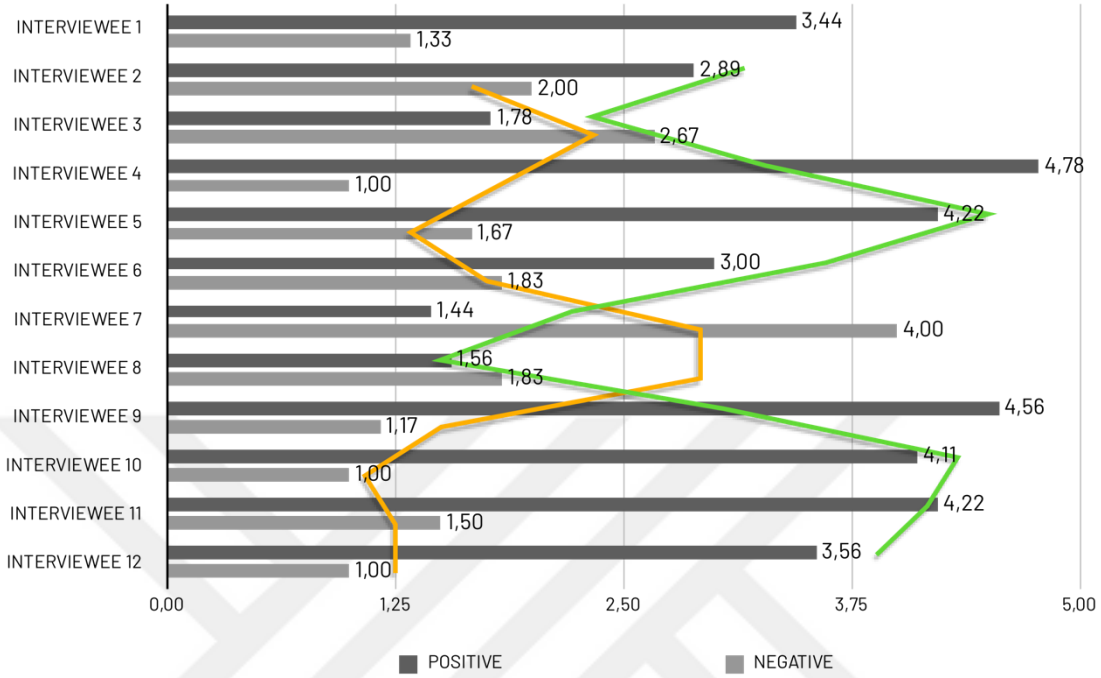


Figure 10. Emotion Word Prompt List – Results

Finally, considering the system usability scale and emotion prompt word list evaluations of the interviewees associated with the android and iOS operating systems, it was determined that iOS users reported close to low usability in terms of the usability of the simple mode product in both evaluations. Figures 11 and 12 show the response distribution of interviewer profiles according to usability tests (See Appendix E for a detailed view of the responses of the interviewees).



Figure 11 System Usability Scale – User Profile Distribution



Figure 12. Emotion Word Prompt List – User Profile Distribution

4. CONCLUSION

Along with the examinations in the literature, it has been put forward that there is more than one area effect in any product designed. Interface design products are also among these products. The simple mode product under consideration is affected in many design areas due to its structure. In addition, many different fields, which are the subject of social sciences, have an impact on this product. The research for the product before it is developed, the conditions during the development phase, and the improvements made after development create an endless cycle. The simple mode product therefore constitutes a meaningful example. With the effect of the area where it is produced and the design team, it responds to the needs of the area within the framework of the requirements defined by the team.

It has been revealed by research studies that this product, which is defined as simple, has a different appearance from the standard mode product in terms of design and functionality, together with the design decisions taken by the design team. It is observed that mainly design decisions are taken. The number of color codes used was increased, and icons with broad meanings were preferred instead of narrow-meaning icons, such as a camera instead of a lens. Button and icon designs have been enlarged to take into account usability as well as accessibility, such as fat finger and vision impairment (Grant, 2018, pp. 21-33). At the same time, icon designs have been simplified by turning them into flat designs. In connection with this, a customization has been made in the simple mode. The sections that users will generally need are highlighted and placed, rather than accessing all the features. On the other hand, the sections that may be called as extra details were either collected under other headings or completely removed.

With all these determinations, the needs of simplicity made in simple mode can be defined as follows; conducting the needs analysis study, simplifying the design, creating a clean look, using colors as a reference, deciding to sift or filter, reduce clutter, and take into account usage conditions.

If it is necessary to relate to the user's opinions, the simple mode product becomes usable by responding to the user's needs. Older users found the product more usable, but not all younger users found the product's usability low. Therefore, depending on the user's expectations, the usability level of the simple mode product is not the "unacceptable" level, but varies according to the user and the user's needs.

- **Suggestions for Future Research**

To mention the contributions of this study to the field and the future studies, interaction design is not only a sectoral field. Therefore, although this study is taken into consideration in shaping the future products to be developed on simplicity, on the other hand, this study draws attention to the connections of the interaction design discipline on which academic studies are carried out, both in terms of the versatile research method followed and the subject it deals with, with other fields. The following can be recommended for researchers aiming to identify the basic needs of the field. When this thesis study is completed, only some results and inferences specific to the product dealt with in the study have been reached. In the future studies, using the same operation and research design, another brand's smartphone simple mode home screen interface can be examined. However, especially if it is aimed to make an evaluation in terms of the user as in this thesis study, it is recommended to include not only quantitative but also qualitative methods in the study based on the results obtained in the pilot study. In addition, a comparative study can be conducted between the two

products under the heading of the simplicity definitions reflected in the product design in interaction with the obtained results. On the other hand, interface designs are increasingly needed in different areas and therefore new products continue to be developed. As is the basis of this study, the methods used in this research and the information obtained can be used to measure the products developed in the newly discovered areas.

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APPENDIX A. Usability Tests

Table A1. System Usability Scale

System Usability Scale (SUS)	1= Strongly disagree	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this system frequently.					
2. I found the system unnecessarily complex.					
3. I thought the system was easy to use.					
4. I think that I would need the support of a technical person to be able to use this system.					
5. I found the various functions in this system were well integrated.					
6. I thought there was too much inconsistency in this system.					
7. I would imagine that most people would learn to use this system very quickly.					
8. I found the system very cumbersome/awkward to use.					
9. I felt very confident using the system.					
10. I needed to learn a lot of things before I could get going with this system.					

Note. Reprinted from "A TURKISH TRANSLATION OF THE SYSTEM USABILITY SCALE: THE SUS-TR" by Demirkol, D., 2018, *Usak University Journal of Social Sciences, 11*(September-2018), p. 252-253

Table A2. Turkish Translation of The System Usability Scale (SUS-TR)

Sistem Kullanılabilirlik Ölçeği	**1=Hiç Katılmıyorum**	**2**	**3**	**4**	**5=Tamamen Katılıyorum**
1. Bu sistemi sıklıkla kullanmak isteyeceğimi düşünüyorum.					
2. Bu sistemi gereksiz bir şekilde karmaşık buldum.					
3. Bu sistemin kullanımının kolay olduğunu düşündüm.					
4. Bu sistemi kullanabilmek için daha teknik bir kişinin desteğine					

ihtiyaç duyacağımı düşünüyorum.					
5. Bu sistemdeki çeşitli fonksiyonları iyi entegre edilmiş buldum.					
6. Bu sistemde çok fazla tutarsızlık olduğunu düşündüm.					
7. Birçok insanın bu sistemi kullanmayı çok çabuk öğreneceğini sanıyorum.					
8. Bu sistemin kullanımını çok elverişsiz buldum.					
9. Bu sistemi kullanırken kendimden çok emin hissettim.					
10. Bu sistemde bir şeyler yapabilmek için öncelikle bir çok şey öğrenmem gerekti.					

Note. Reprinted from "A TURKISH TRANSLATION OF THE SYSTEM USABILITY SCALE: THE SUS-TR" by Demirkol, D., 2018, *Usak University Journal of Social Sciences, 11*(September-2018), p. 252-253

Table A3. Modified SUS-TR Statements in Turkish for Simple Mode Interface Design Product

Original SUS-TR Statements	**Modified SUS-TR Statements**
1. Bu sistemi sıklıkla kullanmak isteyeceğimi düşünüyorum.	Bu ürünü sıklıkla kullanmak isteyeceğimi düşünüyorum.
2. Bu sistemi gereksiz bir şekilde karmaşık buldum.	Bu ürünü gereksiz bir şekilde karmaşık buldum.
3. Bu sistemin kullanımının kolay olduğunu düşündüm.	Bu ürünün kullanımının kolay olduğunu düşündüm.
4. Bu sistemi kullanabilmek için daha teknik bir kişinin desteğine ihtiyaç duyacağımı düşünüyorum.	Bu ürünü kullanabilmek için daha teknik bir kişinin desteğine ihtiyaç duyacağımı düşünüyorum.
5. Bu sistemdeki çeşitli fonksiyonları iyi entegre edilmiş buldum.	Bu ürünün çeşitli fonksiyonları iyi entegre edilmiş buldum.
6. Bu sistemde çok fazla tutarsızlık olduğunu düşündüm.	Bu üründe çok fazla tutarsızlık olduğunu düşündüm.
7. Birçok insanın bu sistemi kullanmayı çok çabuk öğreneceğini sanıyorum.	Birçok insanın bu ürünü kullanmayı çok çabuk öğreneceğini sanıyorum.
8. Bu sistemin kullanımını çok elverişsiz buldum.	Bu ürünün kullanımını çok elverişsiz buldum.
9. Bu sistemi kullanırken kendimden çok emin hissettim.	Bu ürünü kullanırken kendimden çok emin hissettim.
10. Bu sistemde bir şeyler yapabilmek için öncelikle bir çok şey öğrenmem gerekti.	Bu üründe bir şeyler yapabilmek için öncelikle bir çok şey öğrenmem gerekti.

Table A4. Emotion Words Prompt List

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused					
Annoyed					
Bored					
Confident					
Confused					
Creative					
Curious					
Disappointed					
Frustrated					
Happy					
Interested					
Hopeful					
Pleased					
Relieved					
Surprised					
Unsure					

Table A5. Turkish Translation of The Emotion Words Prompt List (EWPL-TR)

Kelime Listesi	**1= Hiç**	**2**	**3**	**4**	**5= Çok**
Memnun					
Sinirlenmiş					
Sıkılmış					
Kendinden Emin					
Kafası Karışmış					
Yaratıcı					
Meraklı					

Hayal Kırıklığına Uğramış					
Usanmış					
Mutlu					
İlgili					
Umutlu					
Hoşnut					
Rahatlamış					
Güvensiz					

APPENDIX B. Structured Interview Questions

SIMPLE MODE SMARTPHONE INTERFACE DESIGN USABILITY ASSESSMENT

- **INTRODUCTION**

Dear participant,
The purpose of this interview is to provide usability assessment of the simple mode interface design in a smartphone. Simple mode is offered as an alternative to the standard interface design of the same phone. It is suggested that it is simplified in design and function compared to the standard interface.

Usability assessment consists of three stages. First, the product will be given to you to try. For 10 minutes, you can try to perform the tasks you intended to do while using your phone at a normal time, such as calling a contact, texting or taking a photo, and review all sections, including settings, in detail. You are completely free to do whatever you want to do. You will then be asked multiple choice questions about your user profile and previous experiences. Finally, in order to determine the usability of this product, you will be directed to two different usability tests, in which you can evaluate both your experience and the feelings you feel while using the product.
Your answers to the questions will not be considered true or false. The data obtained as a result of the interview will be used to measure the experience the product offers to the user and the feelings it creates in the user.

Structured Interview Questions

- **QUESTIONS RELATED WITH USER PROFILE**

1) **What is your gender?**
   - Female
   - Male

2) **What is your age?**
   - 18-24
   - 25-34
   - 35-44
   - 45-54
   - 55-64
   - 65 and above

3) **Which of the following is the education unit you last graduated from?**
   - Primary School
   - Secondary School
   - High School
   - University
   - Master
   - Doctorate

4) **Which of the following is the last phone operating system you used?**
   - Android
   - iOS

5) **Which of the following defines your experience level as a user?**

○ **Fundamental Awareness** (Basic Knowledge)	The user has knowledge about the basic concepts and processes related to the product.
○ **Novice** (Limited Experience)	The user needs assistance during the experience to use the product.
○ **Intermediate** (Pratical Application)	The user can perform basic operations independently, but may need expert support from time to time.

○ **Advanced** (Applied Theory)	The user fully fulfills the product experience without any assistance. He/She is the person who can be asked for help if there is a problem with product experience in the environment.
○ **Expert** (Recognized Authority)	The user can guide, troubleshoot problems or answer questions in other areas related to this product.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.					
2. I found the product unnecessarily complex.					
3. I thought the product was easy to use.					
4. I think that I would need the support of a technical person to be able to use this product.					
5. I found the various functions in this product were well integrated.					
6. I thought there was too much inconsistency in this product.					
7. I would imagine that most people would learn to use this product very quickly.					
8. I found the product very cumbersome/awkward to use.					
9. I felt very confident using the product.					
10. I needed to learn a lot of things before I could get going with this product.					

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused					
Annoyed					
Bored					
Confident					
Confused					
Creative					
Curious					
Disappointed					
Frustrated					
Happy					
Interested					

Hopeful					
Pleased					
Relieved					
Unsure					

APPENDIX C. Interview Transcripts

Structured Interview Questions

Interviewee No: 1

- **QUESTIONS RELATED WITH USER PROFILE**

1) **What is your gender?**
Female.

2) **What is your age?**
65 and above.

3) **Which of the following is the education unit you last graduated from?**
Master.

4) **Which of the following is the last phone operating system you used?**
iOS.

5) **Which of the following defines your experience level as a user?**

Intermediate (Practical Application)	The user can perform basic operations independently, but may need expert support from time to time.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.			X		
2. I found the product unnecessarily complex.				X	
3. I thought the product was easy to use.			X		
4. I think that I would need the support of a technical person to be able to use this product.	X				
5. I found the various functions in this product were well integrated.			X		
6. I thought there was too much inconsistency in this product.		X			
7. I would imagine that most people would learn to use this product very quickly.				X	
8. I found the product very cumbersome/awkward to use.		X			
9. I felt very confident using the product.			X		
10. I needed to learn a lot of things before I could get going with this product.		X			

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused			X		

Annoyed	X				
Bored		X			
Confident			X		
Confused	X				
Creative				X	
Curious			X		
Disappointed	X				
Frustrated	X				
Happy			X		
Interested				X	
Hopeful				X	
Pleased				X	
Relieved			X		
Unsure		X			

Structured Interview Questions

Interviewee No: 2

- **QUESTIONS RELATED WITH USER PROFILE**

1) **What is your gender?**
Male.

2) **What is your age?**
25-34.

3) **Which of the following is the education unit you last graduated from?**
University.

4) **Which of the following is the last phone operating system you used?**
iOS.

5) **Which of the following defines your experience level as a user?**

Advanced (Applied Theory)	The user fully fulfills the product experience without any assistance. He/She is the person who can be asked for help if there is a problem with product experience in the environment.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.	X				
2. I found the product unnecessarily complex.				X	
3. I thought the product was easy to use.					X
4. I think that I would need the support of a technical person to be able to use this product.	X				
5. I found the various functions in this product were well integrated.				X	
6. I thought there was too much inconsistency in this product.				X	
7. I would imagine that most people would learn to use this product very quickly.					X
8. I found the product very cumbersome/awkward to use.	X				
9. I felt very confident using the product.					X
10. I needed to learn a lot of things before I could get going with this product.		X			

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused			X		
Annoyed	X				

Bored			X		
Confident					X
Confused	X				
Creative			X		
Curious	X				
Disappointed			X		
Frustrated			X		
Happy		X			
Interested			X		
Hopeful			X		
Pleased		X			
Relieved				X	
Unsure	X				

Structured Interview Questions

Interviewee No: 3

- **QUESTIONS RELATED WITH USER PROFILE**

1) **What is your gender?**
Male.

2) **What is your age?**
25-34.

3) **Which of the following is the education unit you last graduated from?**
University.

4) **Which of the following is the last phone operating system you used?**
Android.

5) **Which of the following defines your experience level as a user?**

Intermediate (Practical Application)	The user can perform basic operations independently, but may need expert support from time to time.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.	X				
2. I found the product unnecessarily complex.			X		
3. I thought the product was easy to use.			X		
4. I think that I would need the support of a technical person to be able to use this product.	X				
5. I found the various functions in this product were well integrated.		X			
6. I thought there was too much inconsistency in this product.			X		
7. I would imagine that most people would learn to use this product very quickly.			X		
8. I found the product very cumbersome/awkward to use.		X			
9. I felt very confident using the product.	X				
10. I needed to learn a lot of things before I could get going with this product.	X				

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused		X			
Annoyed		X			
Bored		X			

Confident		X			
Confused			X		
Creative			X		
Curious			X		
Disappointed			X		
Frustrated				X	
Happy	X				
Interested		X			
Hopeful	X				
Pleased	X				
Relieved	X				
Unsure		X			

Structured Interview Questions

Interviewee No: 4

- **QUESTIONS RELATED WITH USER PROFILE**

1) **What is your gender?**
Female.

2) **What is your age?**
45-54.

3) **Which of the following is the education unit you last graduated from?**
Secondary School.

4) **Which of the following is the last phone operating system you used?**
Android.

5) **Which of the following defines your experience level as a user?**

Intermediate (Practical Application)	The user can perform basic operations independently, but may need expert support from time to time.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.					X
2. I found the product unnecessarily complex.		X			
3. I thought the product was easy to use.				X	
4. I think that I would need the support of a technical person to be able to use this product.	X				
5. I found the various functions in this product were well integrated.					X
6. I thought there was too much inconsistency in this product.	X				
7. I would imagine that most people would learn to use this product very quickly.					X
8. I found the product very cumbersome/awkward to use.	X				
9. I felt very confident using the product.					X
10. I needed to learn a lot of things before I could get going with this product.	X				

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused					X
Annoyed	X				
Bored	X				

Confident					X
Confused	X				
Creative				X	
Curious				X	
Disappointed	X				
Frustrated	X				
Happy					X
Interested					X
Hopeful					X
Pleased					X
Relieved					X
Unsure	X				

Structured Interview Questions

Interviewee No: 5

- **QUESTIONS RELATED WITH USER PROFILE**

1) **What is your gender?**
Male.

2) **What is your age?**
55-64.

3) **Which of the following is the education unit you last graduated from?**
University.

4) **Which of the following is the last phone operating system you used?**
Android.

5) **Which of the following defines your experience level as a user?**

Intermediate (Practical Application)	The user can perform basic operations independently, but may need expert support from time to time.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.			X		
2. I found the product unnecessarily complex.	X				
3. I thought the product was easy to use.					X
4. I think that I would need the support of a technical person to be able to use this product.	X				
5. I found the various functions in this product were well integrated.				X	
6. I thought there was too much inconsistency in this product.		X			
7. I would imagine that most people would learn to use this product very quickly.					X
8. I found the product very cumbersome/awkward to use.		X			
9. I felt very confident using the product.				X	
10. I needed to learn a lot of things before I could get going with this product.			X		

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused				X	
Annoyed		X			
Bored		X			

Confident				X	
Confused		X			
Creative				X	
Curious				X	
Disappointed		X			
Frustrated	X				
Happy				X	
Interested				X	
Hopeful				X	
Pleased					X
Relieved					X
Unsure	X				

Structured Interview Questions

Interviewee No: 6

- **QUESTIONS RELATED WITH USER PROFILE**

6) **What is your gender?**
Female.

7) **What is your age?**
18-24.

8) **Which of the following is the education unit you last graduated from?**
High School.

9) **Which of the following is the last phone operating system you used?**
iOS.

10) **Which of the following defines your experience level as a user?**

Advanced (Applied Theory)	The user fully fulfills the product experience without any assistance. He/She is the person who can be asked for help if there is a problem with product experience in the environment.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.			X		
2. I found the product unnecessarily complex.	X				
3. I thought the product was easy to use.				X	
4. I think that I would need the support of a technical person to be able to use this product.	X				
5. I found the various functions in this product were well integrated.				X	
6. I thought there was too much inconsistency in this product.	X				
7. I would imagine that most people would learn to use this product very quickly.					X
8. I found the product very cumbersome/awkward to use.	X				
9. I felt very confident using the product.	X				
10. I needed to learn a lot of things before I could get going with this product.		X			

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused			X		
Annoyed		X			

Bored		X			
Confident				X	
Confused		X			
Creative	X				
Curious	X				
Disappointed	X				
Frustrated	X				
Happy			X		
Interested			X		
Hopeful			X		
Pleased				X	
Relieved					X
Unsure			X		

Structured Interview Questions

Interviewee No: 7

- **QUESTIONS RELATED WITH USER PROFILE**

1) **What is your gender?**
Female.

2) **What is your age?**
18-24.

3) **Which of the following is the education unit you last graduated from?**
High School.

4) **Which of the following is the last phone operating system you used?**
iOS.

5) **Which of the following defines your experience level as a user?**

Advanced (Applied Theory)	The user fully fulfills the product experience without any assistance. He/She is the person who can be asked for help if there is a problem with product experience in the environment.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.	X				
2. I found the product unnecessarily complex.					X
3. I thought the product was easy to use.					X
4. I think that I would need the support of a technical person to be able to use this product.	X				
5. I found the various functions in this product were well integrated.	X				
6. I thought there was too much inconsistency in this product.	X				
7. I would imagine that most people would learn to use this product very quickly.					X
8. I found the product very cumbersome/awkward to use.			X		
9. I felt very confident using the product.				X	
10. I needed to learn a lot of things before I could get going with this product.	X				

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused	X				
Annoyed				X	

Bored					X
Confident			X		
Confused	X				
Creative	X				
Curious	X				
Disappointed					X
Frustrated					X
Happy	X				
Interested	X				
Hopeful	X				
Pleased			X		
Relieved	X				
Unsure				X	

Structured Interview Questions

Interviewee No: 8

- **QUESTIONS RELATED WITH USER PROFILE**

1) **What is your gender?**
Female.

2) **What is your age?**
18-24.

3) **Which of the following is the education unit you last graduated from?**
High School.

4) **Which of the following is the last phone operating system you used?**
iOS.

5) **Which of the following defines your experience level as a user?**

Intermediate (Practical Application)	The user can perform basic operations independently, but may need expert support from time to time.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.	X				
2. I found the product unnecessarily complex.					X
3. I thought the product was easy to use.					X
4. I think that I would need the support of a technical person to be able to use this product.	X				
5. I found the various functions in this product were well integrated.	X				
6. I thought there was too much inconsistency in this product.			X		
7. I would imagine that most people would learn to use this product very quickly.					X
8. I found the product very cumbersome/awkward to use.	X				
9. I felt very confident using the product.				X	
10. I needed to learn a lot of things before I could get going with this product.	X				

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused		X			
Annoyed	X				
Bored		X			

Confident				X	
Confused	X				
Creative	X				
Curious	X				
Disappointed			X		
Frustrated	X				
Happy		X			
Interested	X				
Hopeful	X				
Pleased	X				
Relieved	X				
Unsure			X		

Structured Interview Questions

Interviewee No: 9

- **QUESTIONS RELATED WITH USER PROFILE**

1) **What is your gender?**
Female.

2) **What is your age?**
55-64.

3) **Which of the following is the education unit you last graduated from?**
High School.

4) **Which of the following is the last phone operating system you used?**
Android.

5) **Which of the following defines your experience level as a user?**

Intermediate (Practical Application)	The user can perform basic operations independently, but may need expert support from time to time.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.					X
2. I found the product unnecessarily complex.					X
3. I thought the product was easy to use.					X
4. I think that I would need the support of a technical person to be able to use this product.		X			
5. I found the various functions in this product were well integrated.					X
6. I thought there was too much inconsistency in this product.	X				
7. I would imagine that most people would learn to use this product very quickly.				X	
8. I found the product very cumbersome/awkward to use.	X				
9. I felt very confident using the product.					X
10. I needed to learn a lot of things before I could get going with this product.				X	

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused				X	
Annoyed	X				
Bored		X			

Confident					X
Confused	X				
Creative					X
Curious				X	
Disappointed	X				
Frustrated	X				
Happy					X
Interested				X	
Hopeful					X
Pleased					X
Relieved				X	
Unsure	X				

Structured Interview Questions

Interviewee No: 10

- **QUESTIONS RELATED WITH USER PROFILE**

1) **What is your gender?**
Female.

2) **What is your age?**
25-34.

3) **Which of the following is the education unit you last graduated from?**
Master.

4) **Which of the following is the last phone operating system you used?**
Android.

5) **Which of the following defines your experience level as a user?**

Advanced (Applied Theory)	The user fully fulfills the product experience without any assistance. He/She is the person who can be asked for help if there is a problem with product experience in the environment.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.					X
2. I found the product unnecessarily complex.	X				
3. I thought the product was easy to use.					X
4. I think that I would need the support of a technical person to be able to use this product.	X				
5. I found the various functions in this product were well integrated.					X
6. I thought there was too much inconsistency in this product.	X				
7. I would imagine that most people would learn to use this product very quickly.					X
8. I found the product very cumbersome/awkward to use.	X				
9. I felt very confident using the product.					X
10. I needed to learn a lot of things before I could get going with this product.	X				

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused					X
Annoyed	X				

Bored	X				
Confident					X
Confused	X				
Creative		X			
Curious		X			
Disappointed	X				
Frustrated	X				
Happy					X
Interested			X		
Hopeful					X
Pleased					X
Relieved					X
Unsure	X				

Structured Interview Questions

Interviewee No: 11

- **QUESTIONS RELATED WITH USER PROFILE**

1) **What is your gender?**
Female.

2) **What is your age?**
45-54.

3) **Which of the following is the education unit you last graduated from?**
High School.

4) **Which of the following is the last phone operating system you used?**
Android.

5) **Which of the following defines your experience level as a user?**

Intermediate (Practical Application)	The user can perform basic operations independently, but may need expert support from time to time.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.				X	
2. I found the product unnecessarily complex.		X			
3. I thought the product was easy to use.					X
4. I think that I would need the support of a technical person to be able to use this product.			X		
5. I found the various functions in this product were well integrated.					X
6. I thought there was too much inconsistency in this product.	X				
7. I would imagine that most people would learn to use this product very quickly.					X
8. I found the product very cumbersome/awkward to use.	X				
9. I felt very confident using the product.				X	
10. I needed to learn a lot of things before I could get going with this product.			X		

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused					X
Annoyed		X			
Bored	X				

Confident					X
Confused		X			
Creative			X		
Curious	X				
Disappointed	X				
Frustrated		X			
Happy					X
Interested					X
Hopeful					X
Pleased				X	
Relieved					X
Unsure	X				

Structured Interview Questions

- **QUESTIONS RELATED WITH USER PROFILE**

Interviewee No: 12

6) **What is your gender?**
Male.

7) **What is your age?**
55-64.

8) **Which of the following is the education unit you last graduated from?**
University.

9) **Which of the following is the last phone operating system you used?**
Android.

10) **Which of the following defines your experience level as a user?**

Intermediate (Pratical Application)	The user can perform basic operations independently, but may need expert support from time to time.

- **SYSTEM USABILITY SCALE (SUS-TR)**

System Usability Scale	**1= Strongly disagree**	**2**	**3**	**4**	**5= Strongly agree**
1. I think that I would like to use this product frequently.			X		
2. I found the product unnecessarily complex.	X				
3. I thought the product was easy to use.					X
4. I think that I would need the support of a technical person to be able to use this product.	X				
5. I found the various functions in this product were well integrated.	X				
6. I thought there was too much inconsistency in this product.	X				
7. I would imagine that most people would learn to use this product very quickly.					X
8. I found the product very cumbersome/awkward to use.	X				
9. I felt very confident using the product.					X
10. I needed to learn a lot of things before I could get going with this product.	X				

- **EMOTION WORDS PROMPT LIST (EWPL-TR)**

Word List	**1 = Never**	**2**	**3**	**4**	**5 = Very much**
Amused				X	
Annoyed	X				
Bored	X				

Confident					X
Confused	X				
Creative					X
Curious	X				
Disappointed	X				
Frustrated	X				
Happy					X
Interested					X
Hopeful	X				
Pleased			X		
Relieved			X		
Unsure	X				

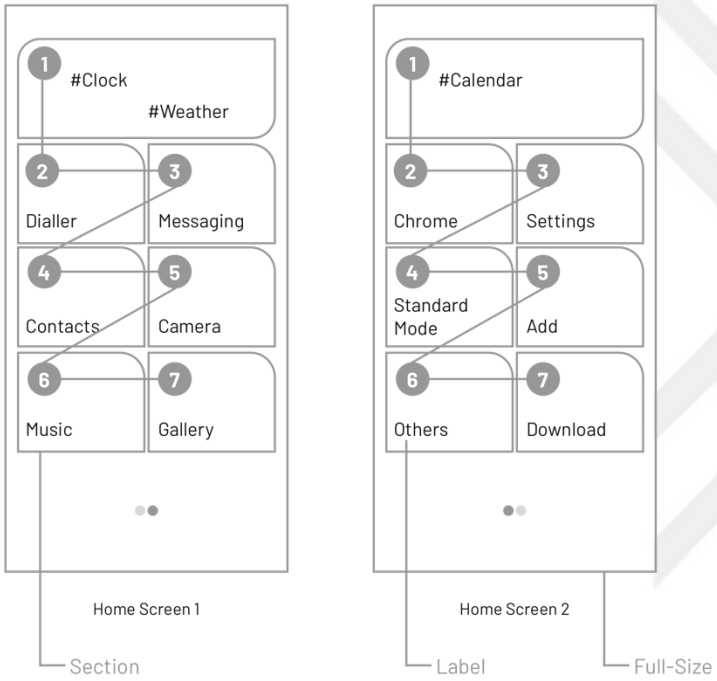
CONTENT ANALYSIS

MEDIA: Smart Phone
BRAND: Huawei
MODEL: Mate 10 Lite

Analyzed Product: Simple Mode (Settings > System > Simple Mode)
Compared Product: Standard Mode

Analysis Layout of The Home Screen Designs > from top to bottom, from left to right.

SIMPLE MODE
Home Screen Designs
PLACEMENT



EXPLANATION

- **Section:** It is an area in the home screen designs that references a function or group of functions.
- **Label:** It is a word or phrase that is being used to describe or summarize the attribute of an area.
- **"Full Size" :** The page that takes up the full screen of the phone.
- **# :** Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.

The simple mode home screen design is compared with the standard mode home screen design.

The simple mode product consists of **two full-size page** home screen designs **with 7 sections** on each page.

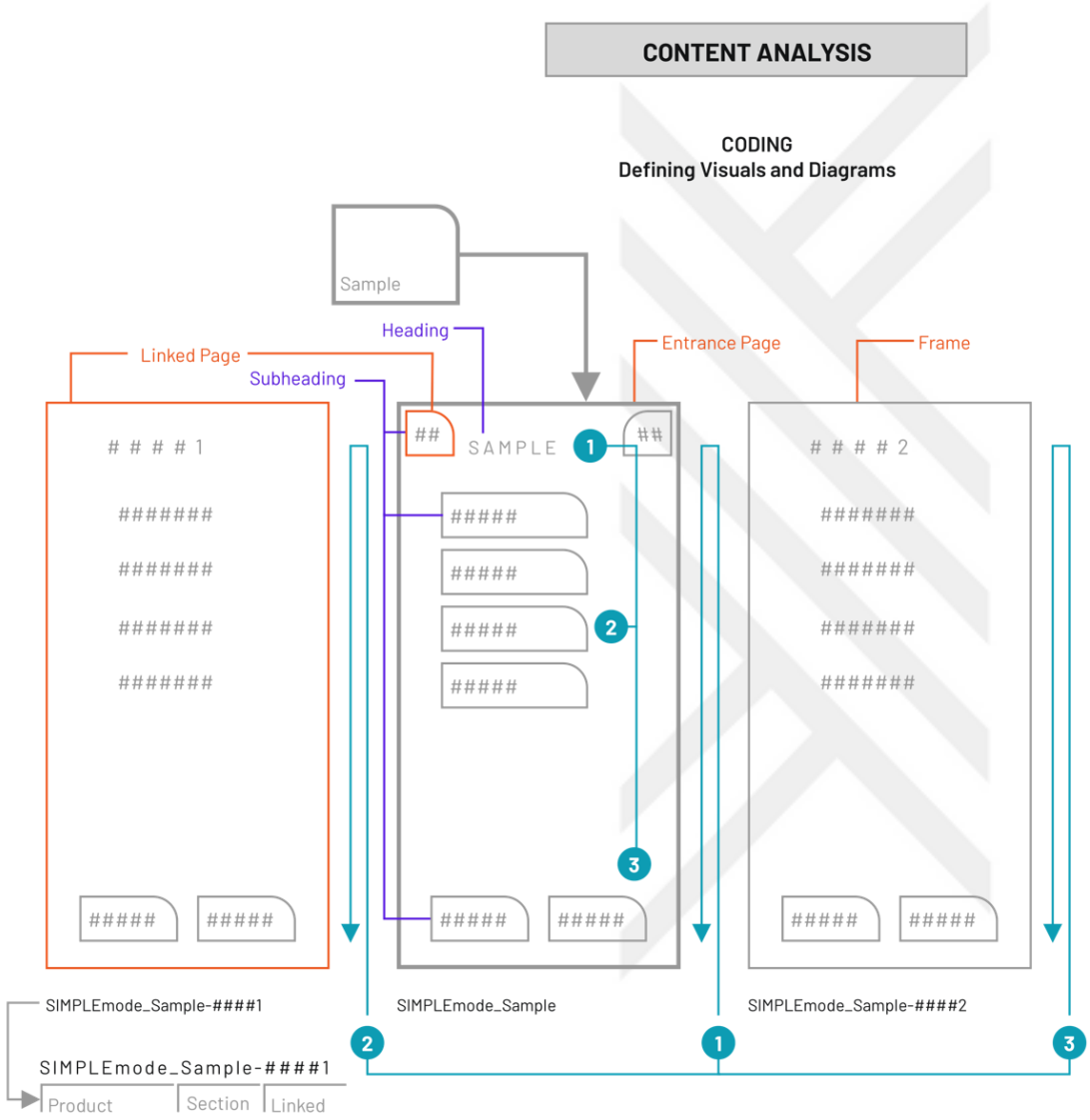
Content analysis is carried out under two different headings, visual and functional.

In the heading of visual content analysis, the sections included in the simple mode home screen designs are discussed in terms of design. The properties of the items used such as color, size and style are defined. The uses of the same items in the standard mode product are analyzed comparatively. The meanings of the determinations and categorization made on the tables are defined in the visual content analysis-coding section.

In the heading of functional content analysis, simple and standard mode products are analyzed comparatively by creating workflow diagrams. The meanings of the determinations made on the schemes are defined in the functional content analysis-coding section.

CONTENT ANALYSIS

CODING
Defining Visuals and Diagrams



EXPLANATION

- **Heading:** The main title that summarizes the content of a section and describes the functions on the page.
- **Subheading:** A title that summarizes sub-functions under the main heading on a page and directs the flow.
- **Entrance Page:** The first page encountered when redirecting to a section
- **Linked Page:** Other page or section linked to the entrance page content and functions.

Description on the Simple mode entrance screen: *"Enjoy a minimalistic and clean home screen that has a simple layout and large icons."*

- Simple mode is a simplified home screen interface design.
- The labels used in the home screen designs were taken into account in the analysis.
- The headings and subheadings within the sections are listed.
- In each section, the entrance page is highlightened.
- The pages to which the home page is linked are ordered from left to right in the flow.
- Items on a page are listed from top to bottom after the heading.

CODING OF FRAMES

Simple Mode	Standard Mode
#F6D80C	#D587F3
"SIMPLEmode"	"STDmode"

CONTENT ANALYSIS

LISTING
Comparison of Home Screen Visuals

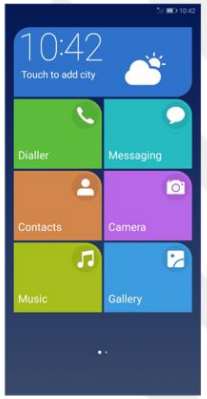
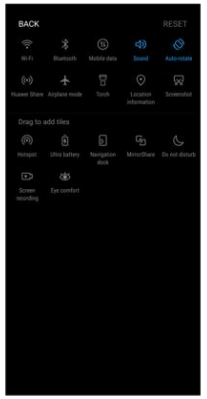
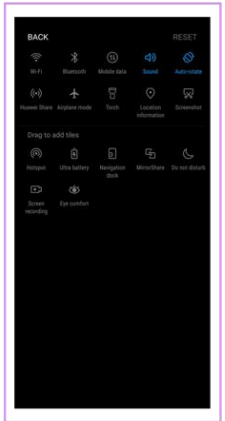
HUAWEI MATE 10 LITE

Simple Mode Screen Size
1080*2160 px

SIMPLE MODE>

STANDART MODE>

Standart Mode Screen Size
1080*2160 px

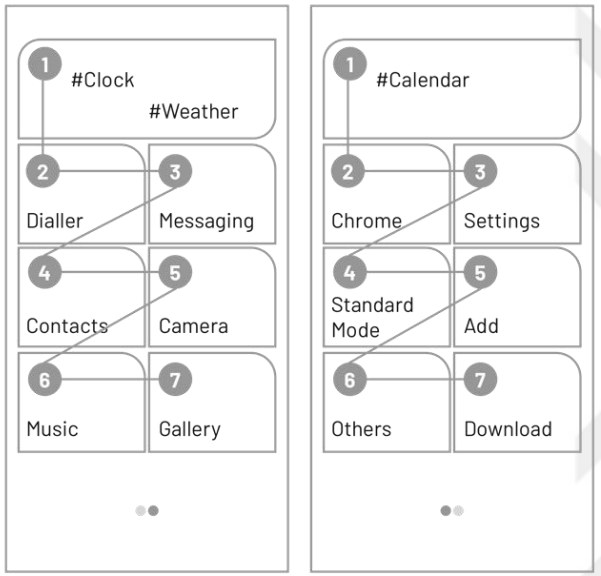
SIMPLEmode_LockScreen	SIMPLEmode_HomeScreen1	SIMPLEmode_HomeScreen2	SIMPLEmode_DropDown	SIMPLEmode_DropDown-Detail
				
STDmode_LockScreen	STDmode_HomeScreen1	STDmode_HomeScreen2	STDmode_DropDown	STDmode_DropDown-Detail
				

CONTENT ANALYSIS

CONTENTS

Standard Mode Equivalents of The Sections in Simple Mode

SIMPLE MODE



Home Screen 1 Home Screen 2

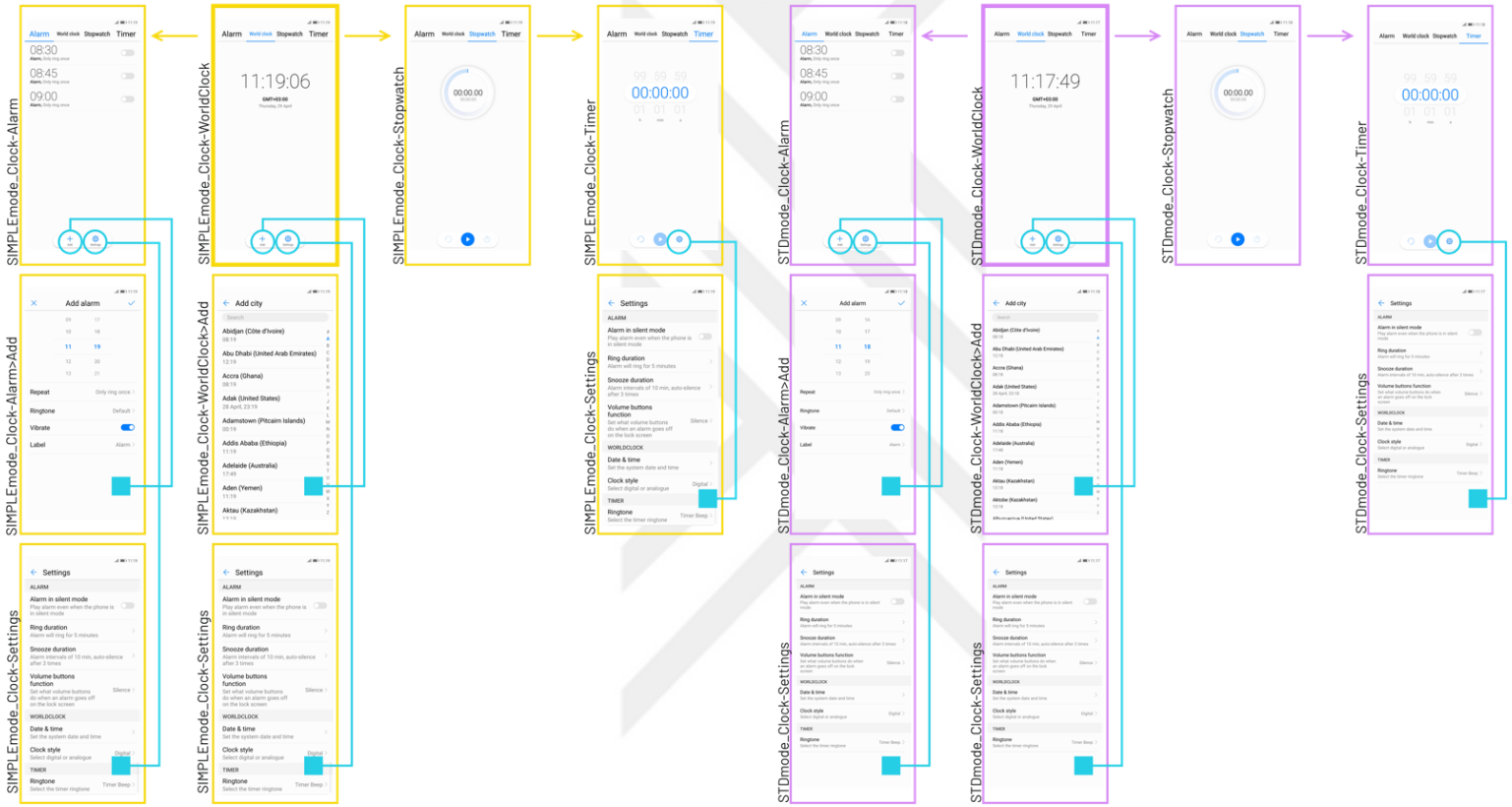
STANDARD MODE



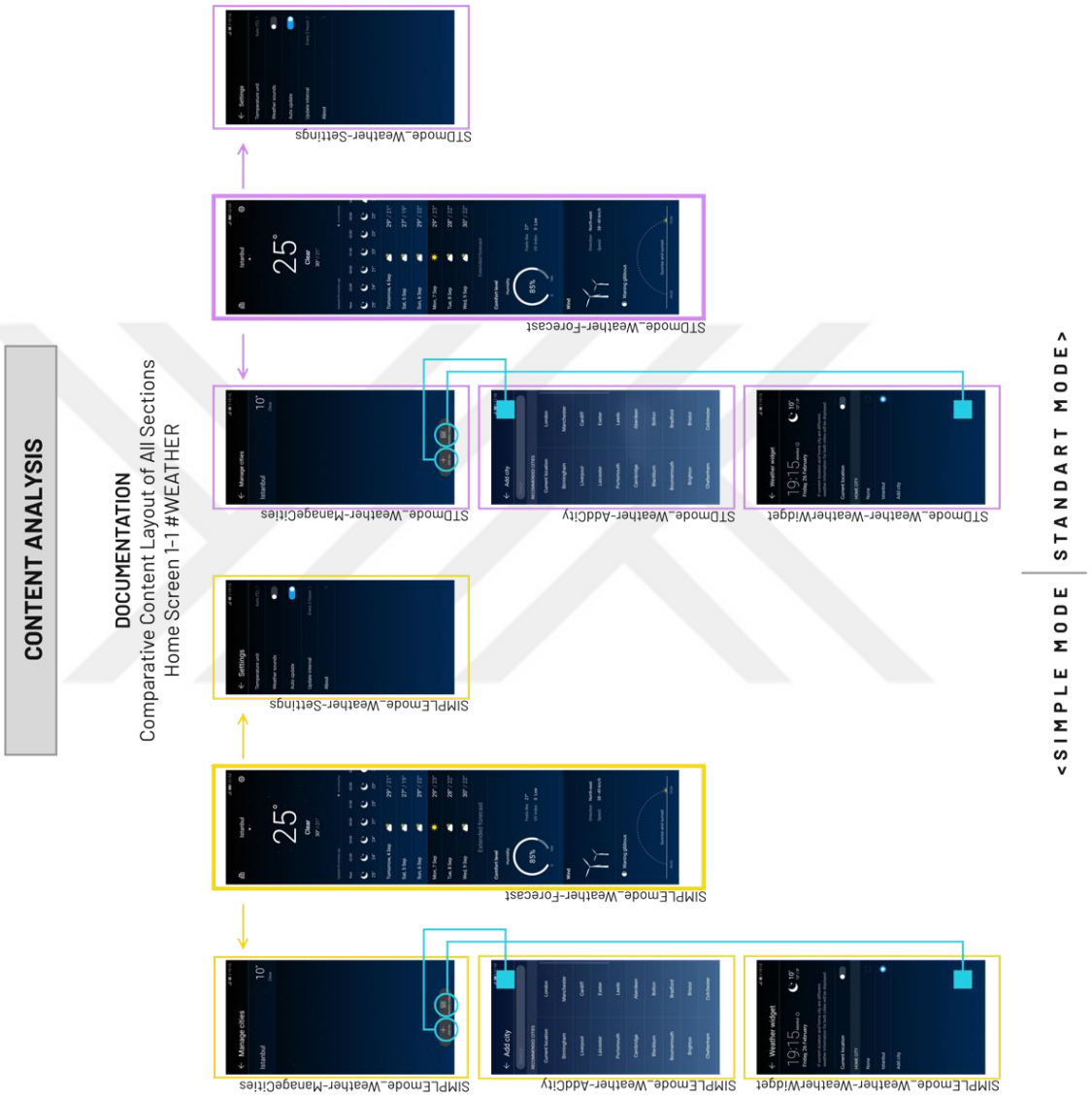
STDmode_HomeScreen1 STDmode_HomeScreen2

CONTENT ANALYSIS

DOCUMENTATION
Comparative Content Layout of All Sections
Home Screen 1-1 #CLOCK



<SIMPLE MODE | STANDART MODE>


CONTENT ANALYSIS
DOCUMENTATION
Comparative Content Layout of All Sections
Home Screen 1-1 #WEATHER
<SIMPLE MODE | STANDART MODE>
STDmode_Weather-Settings
STDmode_Weather-Forecast
STDmode_Weather-ManageCities
STDmode_Weather-AddCity
STDmode_Weather-WeatherWidget
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SIMPLEmode_Weather-Forecast
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SIMPLEmode_Weather-WeatherWidget

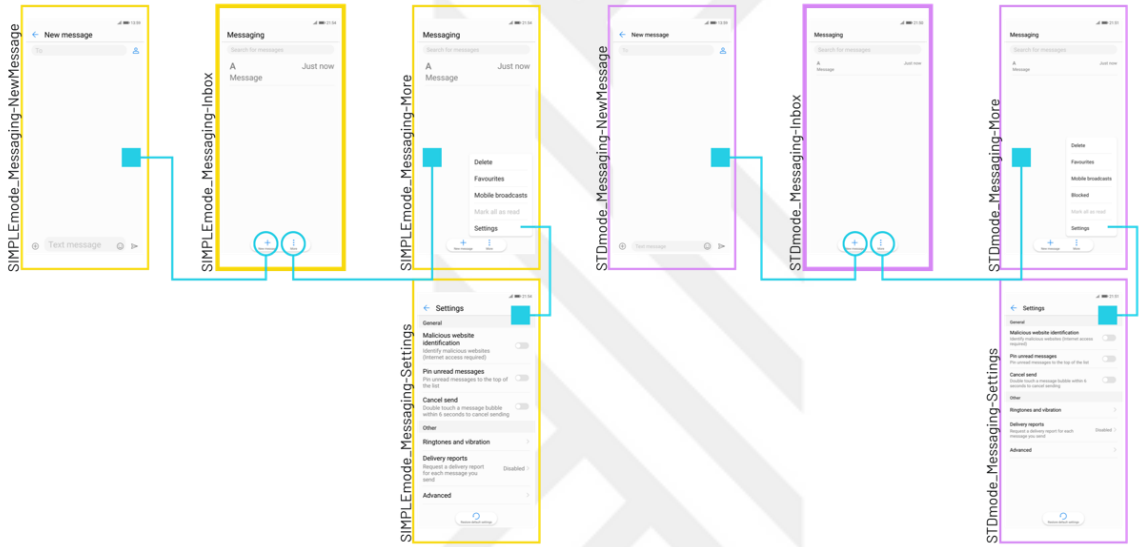
CONTENT ANALYSIS

DOCUMENTATION
Comparative Content Layout of All Sections
Home Screen 1-2 DIALLER



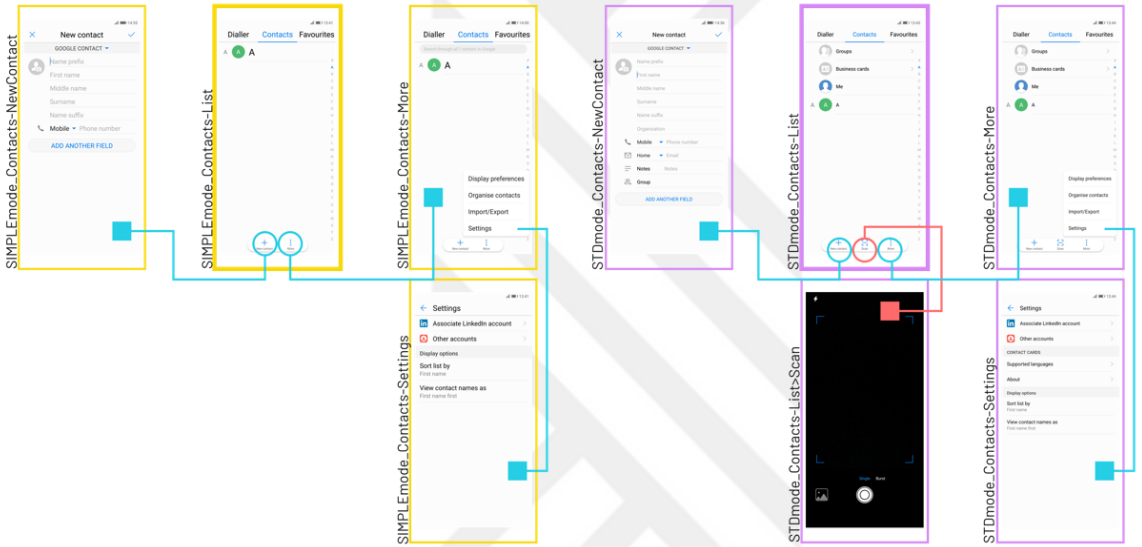
CONTENT ANALYSIS

DOCUMENTATION
Comparative Content Layout of All Sections
Home Screen 1-3 MESSAGING



CONTENT ANALYSIS

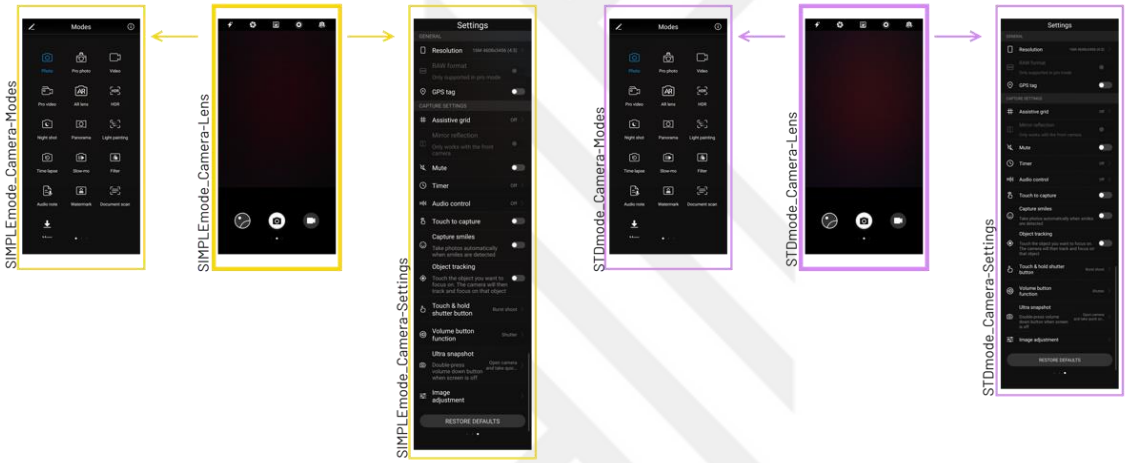
DOCUMENTATION
Comparative Content Layout of All Sections
Home Screen 1-4 CONTACTS

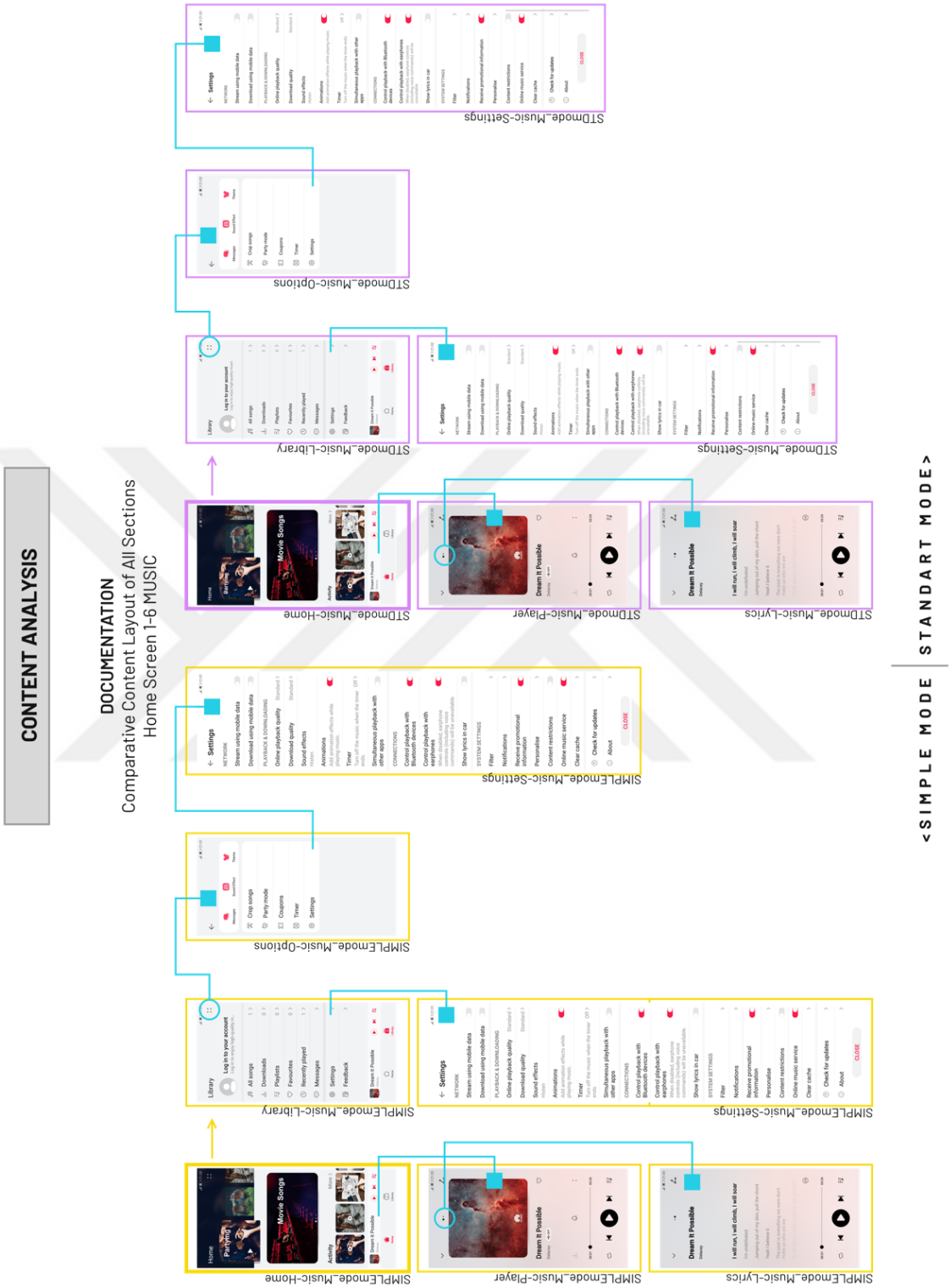


<SIMPLE MODE | STANDART MODE>

CONTENT ANALYSIS

DOCUMENTATION
Comparative Content Layout of All Sections
Home Screen 1-5 CAMERA



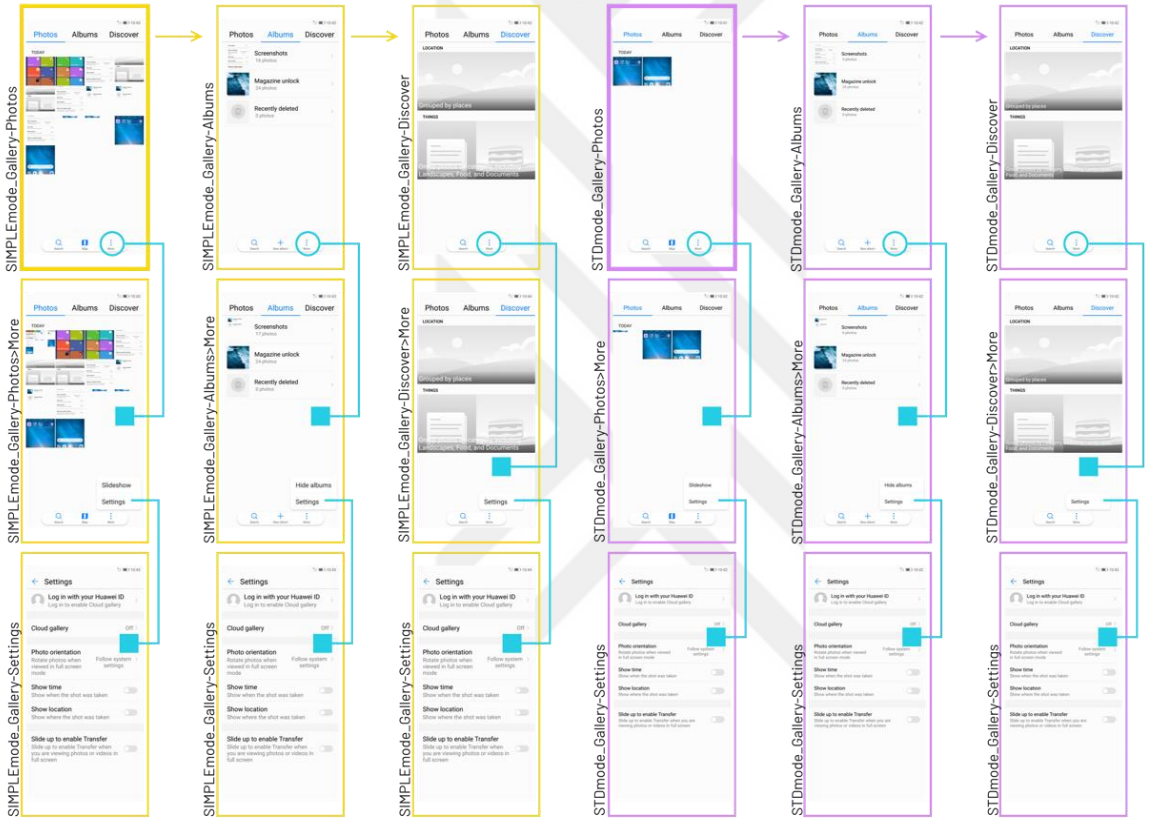

CONTENT ANALYSIS
DOCUMENTATION
Comparative Content Layout of All Sections
Home Screen 1-6 MUSIC
<SIMPLE MODE | STANDART MODE>
STDmode_Music-Home
STDmode_Music-Player
STDmode_Music-Lyrics
STDmode_Music-Library
STDmode_Music-Settings
STDmode_Music-Options
STDmode_Music-Settings
SIMPLEmode_Music-Home
SIMPLEmode_Music-Player
SIMPLEmode_Music-Lyrics
SIMPLEmode_Music-Library
SIMPLEmode_Music-Settings
SIMPLEmode_Music-Options
SIMPLEmode_Music-Settings

CONTENT ANALYSIS

DOCUMENTATION

Comparative Content Layout of All Sections

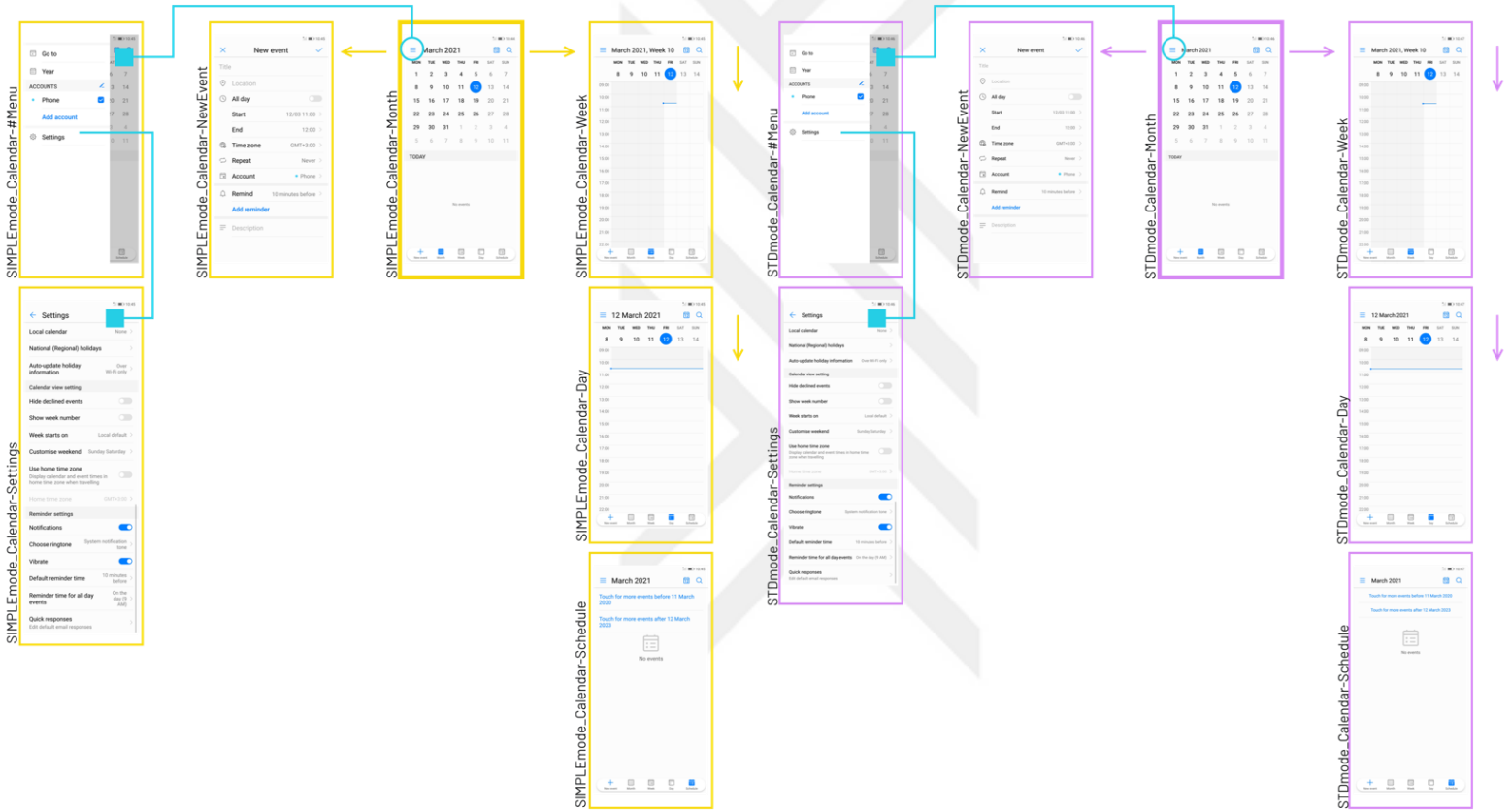
Home Screen 1-7 GALLERY



<SIMPLE MODE | STANDART MODE>

CONTENT ANALYSIS

DOCUMENTATION
Comparative Content Layout of All Sections
Home Screen 2-1 #CALENDAR



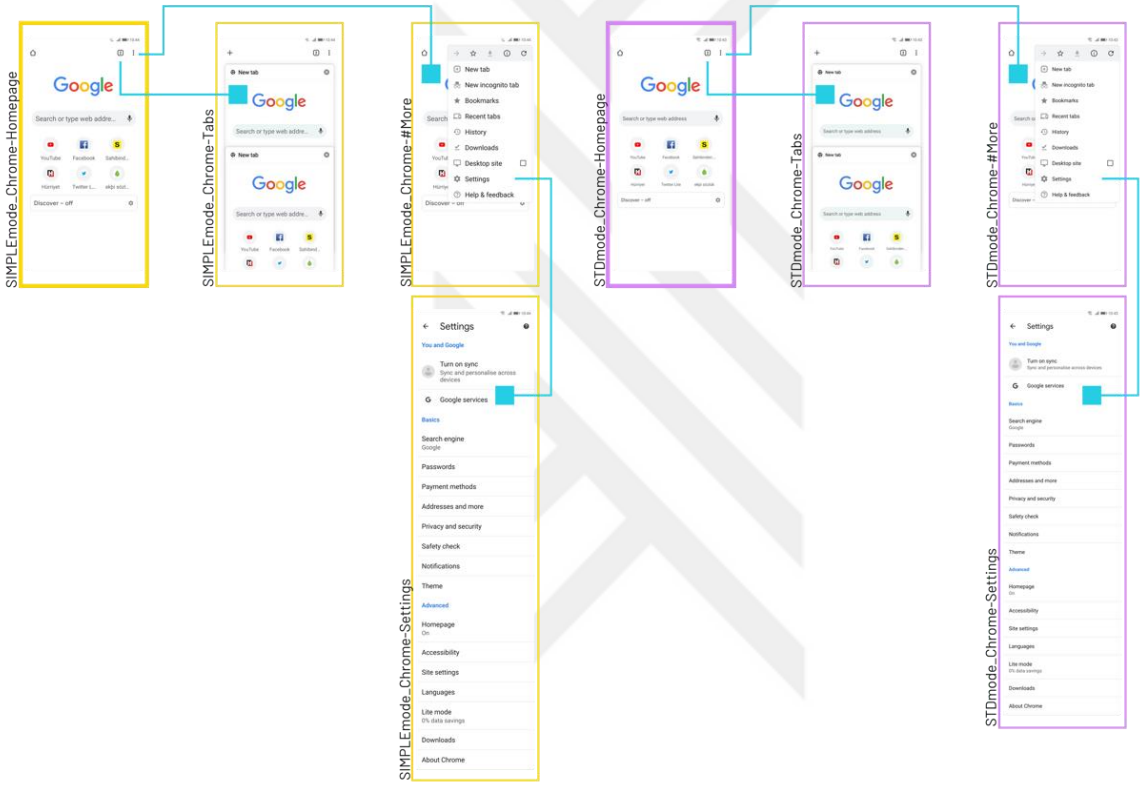
<SIMPLE MODE | STANDART MODE>

CONTENT ANALYSIS

DOCUMENTATION

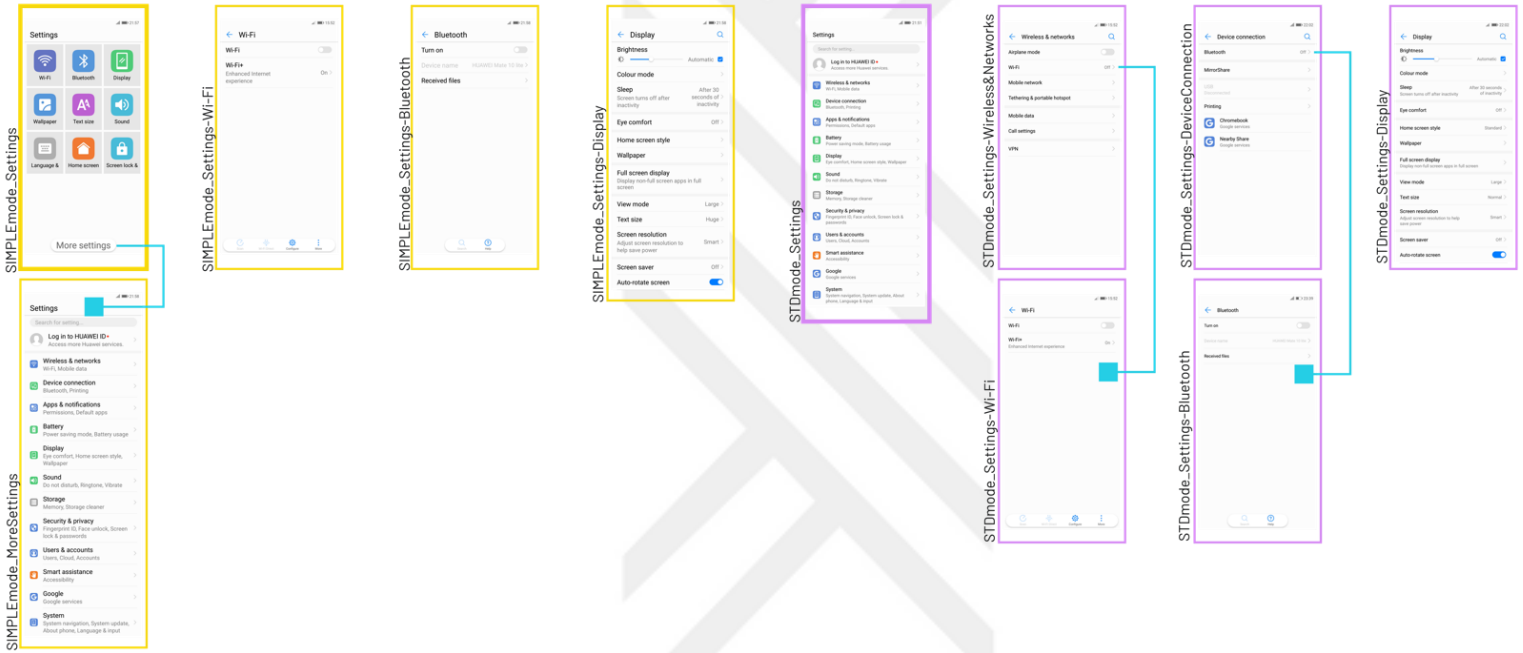
Comparative Content Layout of All Sections

Home Screen 2-2 CHROME



CONTENT ANALYSIS

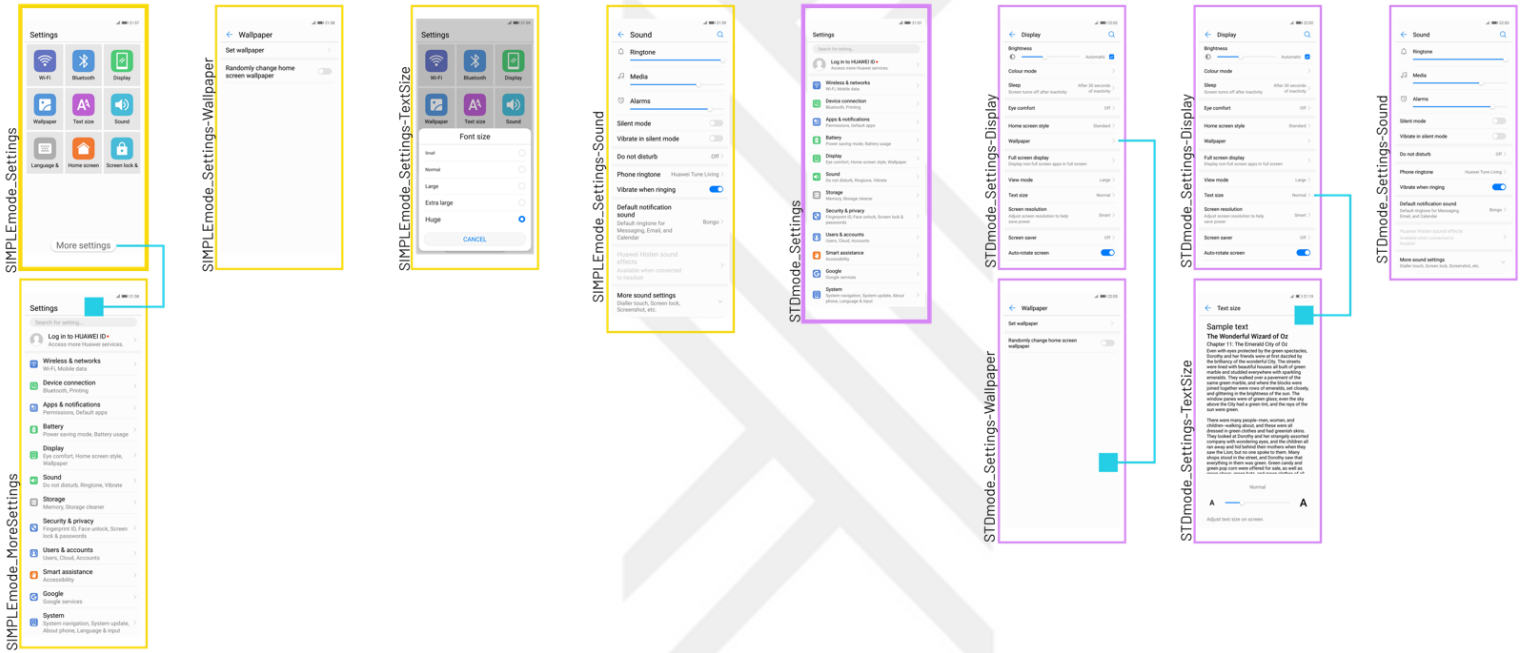
DOCUMENTATION
Comparative Content Layout of All Sections
Home Screen 2-3 SETTINGS



CONTENT ANALYSIS

DOCUMENTATION

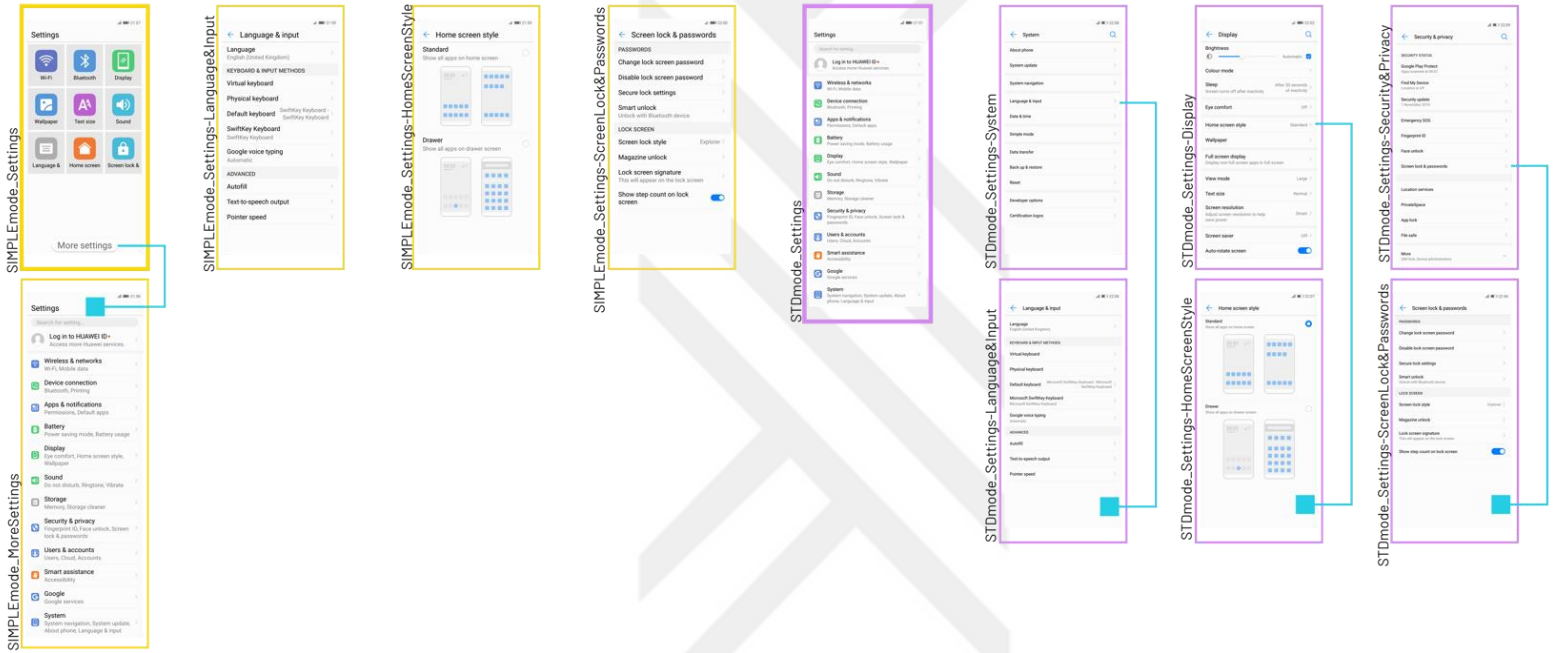
Comparative Content Layout of All Sections
Home Screen 2-3 SETTINGS



<SIMPLE MODE | STANDART MODE>

CONTENT ANALYSIS

DOCUMENTATION
Comparative Content Layout of All Sections
Home Screen 2-3 SETTINGS



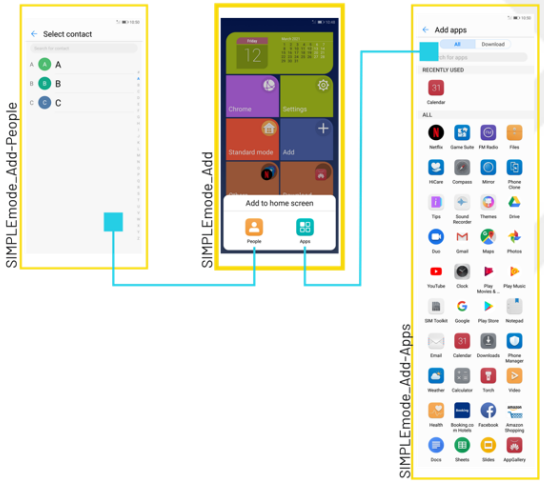
<SIMPLE MODE | STANDART MODE>

CONTENT ANALYSIS

DOCUMENTATION
Comparative Content Layout of All Sections
Home Screen 2-4 STANDARD MODE



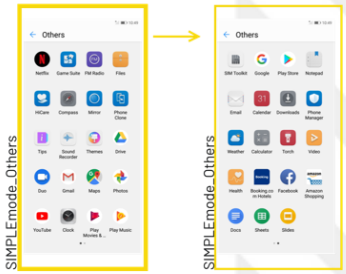
Home Screen 2-5 ADD



<SIMPLE MODE | STANDART MODE>

CONTENT ANALYSIS

DOCUMENTATION
Comparative Content Layout of All Sections
Home Screen 2-6 OTHERS



Home Screen 2-7 DOWNLOAD



A - VISUAL CONTENT ANALYSIS: DESIGN

CODING
Defining Contents and Diagrams

SECTIONS OF VISUAL CONTENT ANALYSIS

1. DOCUMENTATION
2. COMPARISON
3. ANALYZING (Color, Style & Size)

CODING OF VISUAL MATERIALS

1- HOME SCREEN 1 → Home Screen 1
- **1-** 1-1 #CLOCK & #WEATHER
- **2-** 1-2 DIALLER
- **3-** 1-3 MESSAGING
- **4-** 1-4 CONTACTS
- **5-** 1-5 CAMERA
- **6-** 1-6 MUSIC
- **7-** 1-7 GALLERY

2- HOME SCREEN 2 → Home Screen 2
- **8-** 2-1 #CALENDAR
- **9-** 2-2 CHROME
- **10-** 2-3 SETTINGS
- **11-** 2-4 STANDARD MODE
- **12-** 2-5 ADD
- **13-** 2-6 OTHERS
- **14-** 2-7 DOWNLOAD

2- HOME SCREEN 2 → Settings

2-3 SETTINGS
- **15-** 2-3_1 WI-FI
- **16-** 2-3_2 BLUETOOTH
- **17-** 2-3_3 DISPLAY
- **18-** 2-3_4 WALLPAPER
- **19-** 2-3_5 TEXT SIZE
- **20-** 2-3_6 SOUND
- **21-** 2-3_7 LANGUAGE & INPUT
- **22-** 2-3_8 HOME SCREEN STYLE
- **23-** 2-3_9 SCREEN LOCK & PRIVACY

EXPLANATION

- **# :** Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
- **"#"** : It is used to indicate that there is no content that can be analyzed.
- **"#Transparent"** : Identifies transparent items that do not have a color code.
- "●" : Contents available in simple mode but not included in standard mode are marked with a red circle.

VISUAL CONTENT ANALYSIS

"Home Screen 1", "Home Screen 2" and "Settings" section are examined in the visual content analysis study. All content discussed has been documented. The coding made in the analysis has been defined.

Sections are analyzed in terms of color, icon, style and size within the scope of visual content analysis.

Three different labels are used to categorize icon designs in terms of style.

- **Flat:** defines icons that contain no design elements other than the icon design.
- **Shaded:** defines icons that are simple but have stylistic additions such as shadows.
- **Stylized:** defines elements that are stylized by color and other similar design elements, whose icon design differs from the simple and minimal form.

DEFINITION OF THE DIAGRAM

SIMPLE MODE	STANDARD MODE

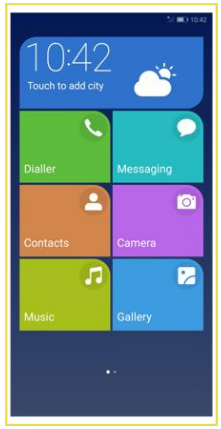
#- #000000 > # (#_#) — Detail | Quantity | Section used

1- #969798 > 3 (1-1, 2-4, 2-3_4) — Example

A - VISUAL CONTENT ANALYSIS: DESIGN

DOCUMENTATION
CONTENTS

HOME SCREEN 1



SIMPLEmode_HomeScreen1



STDmode_HomeScreen1

HOME SCREEN 2



SIMPLEmode_HomeScreen2



STDmode_HomeScreen2

SETTINGS



SIMPLEmode_Settings

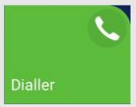
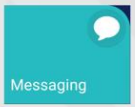
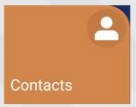
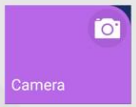
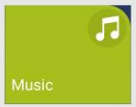
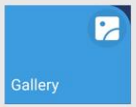


STDmode_Settings

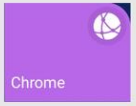
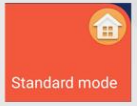
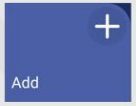
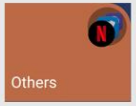
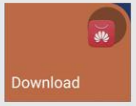
A - VISUAL CONTENT ANALYSIS: DESIGN

DOCUMENTATION
List of Visual Materials

HOME SCREEN 1

SECTION	1-1 #CLOCK & #WEATHER	1-2 DIALLER	1-3 MESSAGING	1-4 CONTACTS	1-5 CAMERA	1-6 MUSIC	1-7 GALLERY
SIMPLEmode >							
STDmode >							

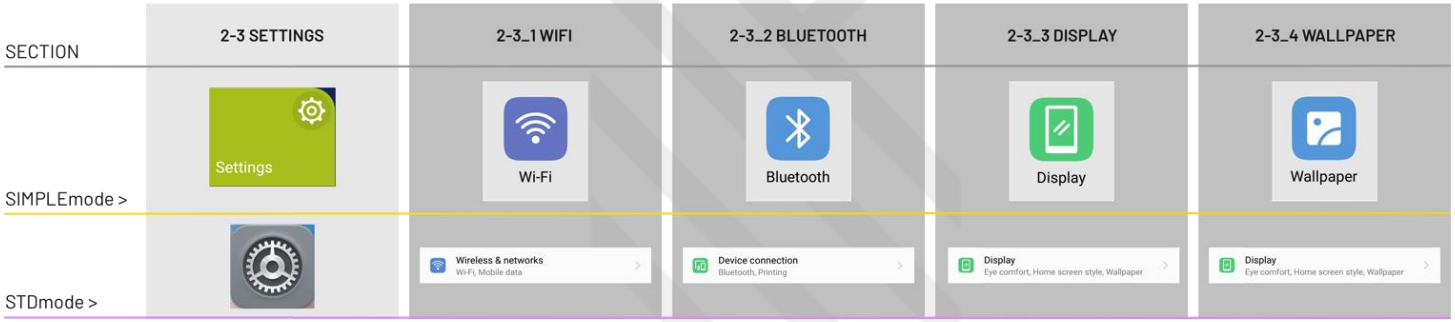
HOME SCREEN 2

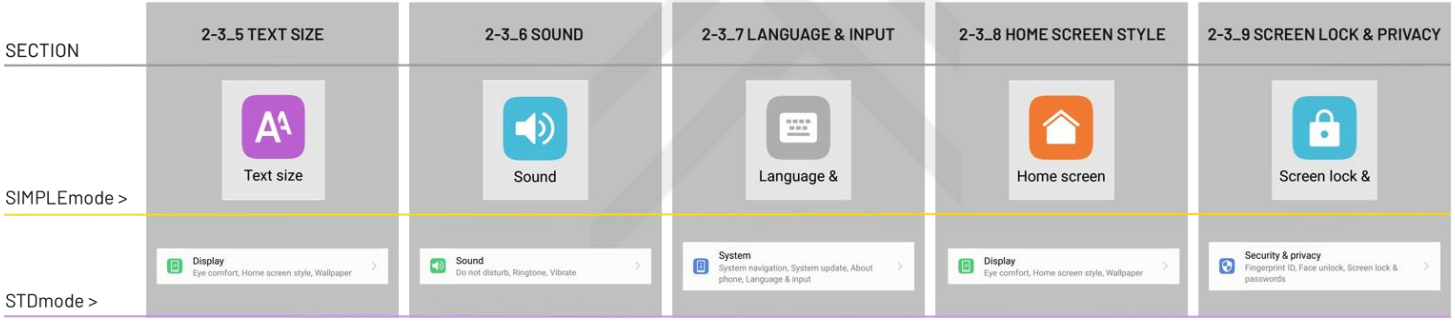
SECTION	2-1 #CALENDAR	2-2 CHROME	2-3 SETTINGS	2-4 STANDARD MODE	2-5 ADD	2-6 OTHERS	2-7 DOWNLOAD
SIMPLEmode >							
STDmode >							

A - VISUAL CONTENT ANALYSIS: DESIGN

DOCUMENTATION
List of Visual Materials

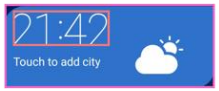
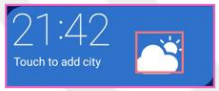
SETTINGS

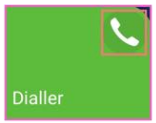
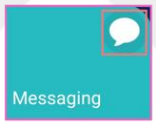




A - VISUAL CONTENT ANALYSIS: DESIGN

COMPARISON

SIMPLE MODE	STANDARD MODE	SIMPLE MODE	STANDARD MODE
1-1 #CLOCK		1-1 #WEATHER	
Label : #Null **Button Size :** 984*384px **Icon Size :** 464*152px **Icon :** #Text	**Label :** #Null **Button Size :** 880*224px **Icon Size :** 384*136px **Icon :** #Text	**Label :** #Null **Button Size :** 984*384px **Icon Size :** 232*194px **Icon :** Cloudy	**Label :** #Null **Button Size :** 880*224px **Icon Size :** 112*96px **Icon :** Cloudy
VISUAL	VISUAL	VISUAL	VISUAL
 COLOR CODE #2F72CB **Icon Style :** Flat	 COLOR CODE #Transparent **Icon Style :** Flat	 COLOR CODE #2F72CB **Icon Style :** Flat	 COLOR CODE #Transparent **Icon Style :** Flat

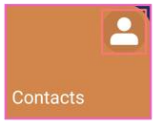
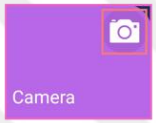
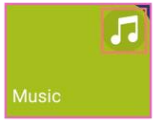
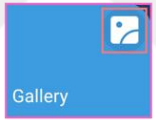
SIMPLE MODE	STANDARD MODE	SIMPLE MODE	STANDARD MODE
1-2 DIALLER		1-3 MESSAGING	
Label : "Dialler" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** Handset	**Label :** "Dialler" **Button Size :** 144*144px **Icon Size :** 96*96px **Icon :** Handset	**Label :** "Messaging" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** Talking Balloon	**Label :** "Messaging" **Button Size :** 144*144px **Icon Size :** 96*96px **Icon :** Talking Balloon
VISUAL	VISUAL	VISUAL	VISUAL
 COLOR CODE #5DBC3C **Icon Style :** Flat	 COLOR CODE #00B7B7 **Icon Style :** Shaded	 COLOR CODE #26BBC1 **Icon Style :** Flat	 COLOR CODE #0075C5 **Icon Style :** Shaded

CODING
: Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
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"#Transparent" : Identifies transparent items that do not have a color code.
"●" : Contents available in simple mode but not included in standard mode are marked with a red circle.

STATUS: Icon usages in Simple Mode and Standard Mode are similar, but their designs differ in style, size and color.

A - VISUAL CONTENT ANALYSIS: DESIGN

COMPARISON

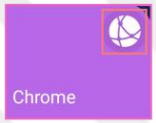
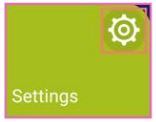
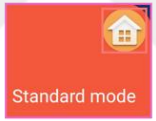
SIMPLE MODE	STANDARD MODE	SIMPLE MODE	STANDARD MODE
1-4 CONTACTS		1-5 CAMERA	
Label : "Contacts" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** Person VISUAL  COLOR CODE #D2864C **Icon Style :** Flat	**Label :** "Contacts" **Button Size :** 144*144px **Icon Size :** 88*80px **Icon :** Person VISUAL  COLOR CODE #ECA048 **Icon Style :** Shaded	**Label :** "Camera" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** Camera VISUAL  COLOR CODE #B867E8 **Icon Style :** Flat	**Label :** "Camera" **Button Size :** 144*144px **Icon Size :** 96*96px **Icon :** Lens VISUAL  COLOR CODE #D1D1D3 **Icon Style :** Stylized
SIMPLE MODE	STANDARD MODE	SIMPLE MODE	STANDARD MODE
1-6 MUSIC		1-7 GALLERY	
Label : "Music" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** Note VISUAL  COLOR CODE #A6BF1C **Icon Style :** Flat	**Label :** "Music" **Button Size :** 144*144px **Icon Size :** 72*80px **Icon :** Note VISUAL  COLOR CODE #EFEFF0 **Icon Style :** Stylized	**Label :** "Gallery" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** Picture VISUAL  COLOR CODE #3D9BE0 **Icon Style :** Flat	**Label :** "Gallery" **Button Size :** 144*144px **Icon Size :** 104*104px **Icon :** Photographs VISUAL  COLOR CODE #E8E8E8 **Icon Style :** Stylized

CODING
: Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
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"#Null" : It is used for sections with no labels specified.
"#Transparent" : Identifies transparent items that do not have a color code.
"●" : Contents available in simple mode but not included in standard mode are marked with a red circle.

STATUS: Icon usages in Simple Mode and Standard Mode are similar, but their designs differ in style, size and color.

A - VISUAL CONTENT ANALYSIS: DESIGN

COMPARISON

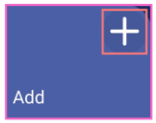
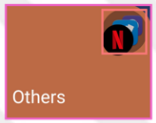
SIMPLE MODE	STANDARD MODE	SIMPLE MODE	STANDARD MODE
2-1 #CALENDAR		2-2 CHROME	
Label : #Null **Button Size :** 984*384px **Icon Size :** 232*194px **Icon :** Calendar Page VISUAL  COLOR CODE #A6BF1C **Icon Style :** Flat	**Label :** "Calendar" **Button Size :** 144*144px **Icon Size :** 96*112px **Icon :** Calendar Page VISUAL  COLOR CODE #C24450 **Icon Style :** Flat	**Label :** "Chrome" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** Network VISUAL  COLOR CODE #B867E8 **Icon Style :** Flat	**Label :** "Chrome" **Button Size :** 144*144px **Icon Size :** 144*144px **Icon :** #Visual VISUAL  COLOR CODE #Transparent **Icon Style :** Flat
SIMPLE MODE	STANDARD MODE	SIMPLE MODE	STANDARD MODE
2-3 SETTINGS		2-4 STANDARD MODE ●	
Label : "Settings" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** Gear VISUAL  COLOR CODE #A6BF1C **Icon Style :** Flat	**Label :** "Settings" **Button Size :** 144*144px **Icon Size :** 112*112px **Icon :** Gear VISUAL  COLOR CODE #777B81 **Icon Style :** Stylized	**Label :** "Standard Mode" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** Home VISUAL  COLOR CODE #F3583C **Icon Style :** Shaded	**Label :** **Button Size :** **Icon Size :** **Icon :** VISUAL COLOR CODE # **Icon Style :**

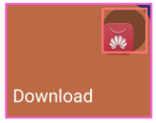
CODING
: Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"#" : It is used to indicate that there is no content that can be analyzed.
"#Null" : It is used for sections with no labels specified.
"#Transparent" : Identifies transparent items that do not have a color code.
"●" : Contents available in simple mode but not included in standard mode are marked with a red circle.

STATUS: Icon usages in Simple Mode and Standard Mode are similar, but their designs differ in style, size and color.
"Standard Mode" section is not available in standard mode.

A - VISUAL CONTENT ANALYSIS: DESIGN

COMPARISON

SIMPLE MODE	STANDARD MODE	SIMPLE MODE	STANDARD MODE
2-5 ADD ●		2-6 OTHERS ●	
Label : "Add" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** Plus VISUAL  COLOR CODE #4B5FA6 **Icon Style :** Flat	**Label :** **Button Size :** **Icon Size :** **Icon :** VISUAL COLOR CODE # **Icon Style :**	**Label :** "Others" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** #Visual VISUAL  COLOR CODE #BC6A45 **Icon Style :** Stylized	**Label :** **Button Size :** **Icon Size :** **Icon :** VISUAL COLOR CODE # **Icon Style :**

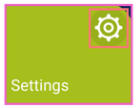
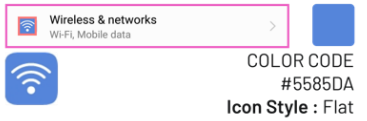
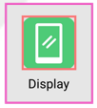
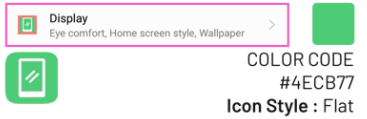
SIMPLE MODE	STANDARD MODE
2-7 DOWNLOAD ●	
Label : "Download" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** #Visual VISUAL  COLOR CODE #BC6A45 **Icon Style :** Stylized	**Label :** **Button Size :** **Icon Size :** **Icon :** VISUAL COLOR CODE # **Icon Style :**

CODING
: Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"#" : It is used to indicate that there is no content that can be analyzed.
"#Null" : It is used for sections with no labels specified.
"#Transparent" : Identifies transparent items that do not have a color code.
"●" : Contents available in simple mode but not included in standard mode are marked with a red circle.

STATUS: "Add", "Others" and "Download" sections are not available in standard mode.

A - VISUAL CONTENT ANALYSIS: DESIGN

COMPARISON

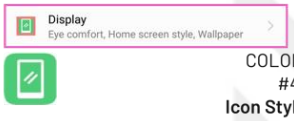
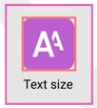
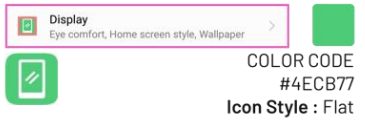
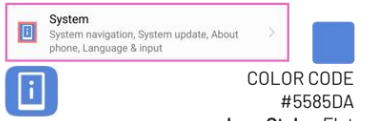
SIMPLE MODE	STANDARD MODE	SIMPLE MODE	STANDARD MODE
2-3 SETTINGS		2-3_1 Wi-Fi	
Label : "Settings" **Button Size :** 488*384px **Icon Size :** 152*152px **Icon :** Gear VISUAL  COLOR CODE #A6BF1C	**Label :** "Settings" **Button Size :** 144*144px **Icon Size :** 112*112px **Icon :** Gear VISUAL  COLOR CODE #777B81	**Label :** "Wi-Fi" **Button Size :** 336*384px **Icon Size :** 208*208px **Icon :** Wireless VISUAL  COLOR CODE #6474C2 **Icon Style :** Flat	**Label :** "Wireless & networks" **Button Size :** 1080*168px **Icon Size :** 72*72px **Icon :** Wireless VISUAL  COLOR CODE #5585DA **Icon Style :** Flat
SIMPLE MODE	STANDARD MODE	SIMPLE MODE	STANDARD MODE
2-3_2 Bluetooth		2-3_3 Display	
Label : "Bluetooth" **Button Size :** 336*384px **Icon Size :** 208*208px **Icon :** Bluetooth VISUAL  COLOR CODE #5696DA **Icon Style :** Flat	**Label :** "Device connection" **Button Size :** 1080*168px **Icon Size :** 72*72px **Icon :** Devices & Connection VISUAL  COLOR CODE #4ECB77 **Icon Style :** Flat	**Label :** "Display" **Button Size :** 336*384px **Icon Size :** 208*208px **Icon :** Phone Screen VISUAL  COLOR CODE #4ECB77 **Icon Style :** Flat	**Label :** "Display" **Button Size :** 1080*168px **Icon Size :** 72*72px **Icon :** Phone Screen VISUAL  COLOR CODE #4ECB77 **Icon Style :** Flat

CODING
: Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"#" : It is used to indicate that there is no content that can be analyzed.
"#Null" : It is used for sections with no labels specified.
"#Transparent" : Identifies transparent items that do not have a color code.
"🔴" : Contents available in simple mode but not included in standard mode are marked with a red circle.

STATUS: Icon usages in Simple Mode and Standard Mode are similar, but their designs differ in style, size and color. In "Bluetooth" section, Simple Mode and Standard Mode are completely different from each other in terms of icon, style, size and color.

A - VISUAL CONTENT ANALYSIS: DESIGN

COMPARISON

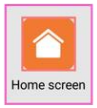
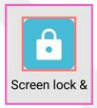
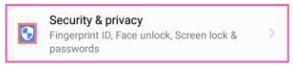
SIMPLE MODE	STANDARD MODE	SIMPLE MODE	STANDARD MODE
2-3_4 WALLPAPER		2-3_5 TEXT SIZE	
Label : "Settings" **Button Size :** 336*384px **Icon Size :** 208*208px **Icon :** Picture VISUAL  COLOR CODE #5696DA **Icon Style :** Flat	**Label :** "Display" **Sub-Heading :** "Wallpaper" ● **Button Size :** 1080*168px **Icon Size :** 72*72px **Icon :** Phone Screen VISUAL  COLOR CODE #4ECB77 **Icon Style :** Flat	**Label :** "Text size" **Button Size :** 336*384px **Icon Size :** 208*208px **Icon :** Two letters A in different sizes VISUAL  COLOR CODE #BC60D1 **Icon Style :** Flat	**Label :** "Display" **Sub-Heading :** "Text size" ● **Button Size :** 1080*168px **Icon Size :** 72*72px **Icon :** Phone Screen VISUAL  COLOR CODE #4ECB77 **Icon Style :** Flat
SIMPLE MODE	STANDARD MODE	SIMPLE MODE	STANDARD MODE
2-3_6 SOUND		2-3_7 LANGUAGE & INPUT	
Label : "Sound" **Button Size :** 336*384px **Icon Size :** 208*208px **Icon :** Speaker VISUAL  COLOR CODE #48BBD8 **Icon Style :** Flat	**Label :** "Sound" **Button Size :** 1080*168px **Icon Size :** 72*72px **Icon :** Speaker VISUAL  COLOR CODE #4ECB77 **Icon Style :** Flat	**Label :** "Language & input" **Button Size :** 336*384px **Icon Size :** 208*208px **Icon :** Keyboard VISUAL  COLOR CODE #AEAEAE **Icon Style :** Flat	**Label :** "System" **Sub-Heading :** "Language & input" ● **Button Size :** 1080*224px **Icon Size :** 72*80px **Icon :** Phone Screen & Letter "i" VISUAL  COLOR CODE #5585DA **Icon Style :** Flat

CODING
: Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"#" : It is used to indicate that there is no content that can be analyzed.
"#Null" : It is used for sections with no labels specified.
"#Transparent" : Identifies transparent items that do not have a color code.
"●" : Contents available in simple mode but not included in standard mode are marked with a red circle.

STATUS: Simple Mode and Standard Mode are completely different from each other in terms of icon, style, size and color. Unlike simple mode, some sections in standard mode are formed as subheading.

A - VISUAL CONTENT ANALYSIS: DESIGN

COMPARISON

SIMPLE MODE	STANDARD MODE	SIMPLE MODE	STANDARD MODE
2-3_8 HOME SCREEN STYLE		2-3_9 SCREEN LOCK & PRIVACY	
Label : "Home screen" **Button Size :** 336*384px **Icon Size :** 208*208px **Icon :** Home VISUAL   COLOR CODE #F17932 **Icon Style :** Flat	**Label :** "Display" **Sub-Heading :** ""Home screen style" ● **Button Size :** 1080*168px **Icon Size :** 72*72px **Icon :** Phone Screen VISUAL    COLOR CODE #4ECB77 **Icon Style :** Flat	**Label :** "Screen lock & passwords" **Button Size :** 336*384px **Icon Size :** 208*208px **Icon :** Lock VISUAL   COLOR CODE #48BBD8 **Icon Style :** Flat	**Label :** "Security & privacy" **Sub-Heading :** "Screen lock & passwords" ● **Button Size :** 1080*224px **Icon Size :** 72*80px **Icon :** Shield VISUAL    COLOR CODE #5585DA **Icon Style :** Flat

CODING
: Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"#" : It is used to indicate that there is no content that can be analyzed.
"#Null" : It is used for sections with no labels specified.
"#Transparent" : Identifies transparent items that do not have a color code.
"●" : Contents available in simple mode but not included in standard mode are marked with a red circle.

STATUS: Simple Mode and Standard Mode are completely different from each other in terms of icon, style, size and color. Unlike simple mode, some sections in standard mode are formed as subheading.

A - VISUAL CONTENT ANALYSIS: DESIGN

ANALYZING
Details of Visual Materials

LIST OF COLOR CODES

SIMPLE MODE			STANDARD MODE		
1- #2F72CB	>1	(1-1)	**1- #Transparent**	**>2**	**(1-1, 2-2)**
2- #5DBC3C	>1	(1-2)	**2-** #00B7B7	>1	(1-2)
3- #26BBC1	>1	(1-3)	**3-** #0075C5	>1	(1-3)
4- #D2864C	>1	(1-4)	**4-** #ECA048	>1	(1-4)
5- #B867E8	>2	(1-5, 2-2)	**5-** #D1D1D3	>1	(1-5)
6- #A6BF1C	>3	(1-6, 2-1, 2-3)	**6-** #EFEFF0	>1	(1-6)
7- #3D9BE0	>1	(1-7)	**7-** #E8E8E8	>1	(1-7)
8- #F3583C	>1	(2-4)	**8-** #C24450	>1	(2-1)
9- #4B5FA6	>1	(2-5)	**9-** #777B81	>1	(2-3)
10- #BC6A45	>2	(2-6, 2-7)	**10- #**	**>4**	**(2-4, 2-5, 2-6, 2-7)**
11- #6474C2	>1	(2-3_1)	**11-** #5585DA	>3	(2-3_1, 2-3_7, 2-3_9)
12- #5696DA	>2	(2-3_2, 2-3_4)	**12-** #4ECB77	>3	(2-3_2, 2-3_3*, 2-3_4*, 2-3_5*, 2-3_6, 2-3_8*)
13- #4ECB77	>1	(2-3_3)			
14- #BC60D1	>1	(2-3_5)			
15- #48BBD8	>2	(2-3_6, 2-3_9)			
16- #AEAEAE	>1	(2-3_7)			
17- #F17932	>1	(2-3_8)			

SIMPLE MODE		STANDARD MODE	
Number of Sections Analyzed	23	Number of Sections Analyzed	23
No Content (#)	0	No Content (#)	4
Visual Materials with #Transparent	0	Visual Materials with #Transparent	2
TOTAL NUMBER OF VISUALS ANALYZED FOR COLOR	**23**	**TOTAL NUMBER OF VISUALS ANALYZED FOR COLOR**	**17**
Number of Color Codes Used	17	Number of Color Codes Used	10
Number of Color Codes Used More Than Once	5	Number of Color Codes Used More Than Once	2

23 Visual Materials and 17 Color Codes **X** 17 Visual Materials and 10 Color Codes

EXPLANATION

- **"#"** : It is used to indicate that there is no content that can be analyzed.
- **"#Transparent"** : Identifies transparent items that do not have a color code.
- ***** : It counts once because the same content has been used.

DETAILS OF COLOR CODES USED MORE THAN ONCE

SIMPLE MODE	STANDARD MODE
5- #B867E8 >2 (1-5, 2-2)	**11- #5585DA >3 (2-3_1, 2-3_7, 2-3_9)**
1- Home Screen 1-5 CAMERA	**1-** Home Screen 2-3_1 WI-FI
2- Home Screen 2-2 CHROME	**2-** Home Screen 2-3_7 LANGUAGE & INPUT
	3- Home Screen 2-3_9 SCREEN LOCK & PRIVACY
6- #A6BF1C >3 (1-6, 2-1, 2-3)	**12- #4ECB77 >3 (2-3_2, 2-3_3*, 2-3_4*, 2-3_5*, 2-3_6, 2-3_8*)**
1- Home Screen 1-6 MUSIC	**1-** Home Screen 2-3_2 BLUETOOTH
2- Home Screen 2-2 #CALENDAR	**2-** Home Screen 2-3_3 DISPLAY, 3_4 WALLPAPER, 3_5 TEXT SIZE, 3_8 HOME SCREEN STYLE
3- Home Screen 2-3 SETTINGS	**3-** Home Screen 2-3_6 SOUND
10- #BC6A45 >2 (2-6, 2-7)	
1- Home Screen 2-6 OTHERS	
2- Home Screen 2-7 DOWNLOAD	
12- #5696DA >2 (2-3_2, 2-3_4)	
1- Home Screen 2-3_2 BLUETOOTH	
2- Home Screen 2-3_2 WALLPAPER	
15- #48BBD8 >2 (2-3_6, 2-3_9)	
1- Home Screen 2-3_6 SOUND	
2- Home Screen 2-3_9 SCREEN LOCK & PRIVACY	

A - VISUAL CONTENT ANALYSIS: DESIGN

ANALYZING
Details of Visual Materials

LIST OF ICONS & ICON STYLES

	SIMPLE MODE		STANDARD MODE	
1- HOME SCREEN 1				
1- 1-1 #CLOCK & #WEATHER	#Text & Cloudy	Flat & Flat	#Text & Cloudy	Flat & Flat
2- 1-2 DIALLER	Handset	Flat	Handset	**Shaded**
3- 1-3 MESSAGING	Talking Balloon	Flat	Talking Balloon	**Shaded**
4- 1-4 CONTACTS	Person	Flat	Person	**Shaded**
5- 1-5 CAMERA	Camera	Flat	**Lens**	**Stylized**
6- 1-6 MUSIC	Note	Flat	Note	**Stylized**
7- 1-7 GALLERY	Picture	Flat	**Photographs**	**Stylized**
2- HOME SCREEN 2				
8- 2-1 #CALENDAR	Calendar Page	Flat	Calendar Page	Flat
9- 2-2 CHROME	Network	Flat	**#Visual**	Flat
10- 2-3 SETTINGS	Gear	Flat	Gear	**Stylized**
11- 2-4 STANDARD MODE	Home	Shaded	**#**	**#**
12- 2-5 ADD	Plus	Flat	**#**	**#**
13- 2-6 OTHERS	#Visual	Stylized	**#**	**#**
14- 2-7 DOWNLOAD	#Visual	Stylized	**#**	**#**
2- HOME SCREEN 2				
2-3 SETTINGS				
15- 2-3_1 WI-FI	Wireless	Flat	Wireless	Flat
16- 2-3_2 BLUETOOTH	Bluetooth	Flat	**Devices & Connection**	Flat
17- 2-3_3 DISPLAY	Phone Screen	Flat	**Phone Screen***	Flat
18- 2-3_4 WALLPAPER	Picture	Flat	**Phone Screen***	Flat
19- 2-3_5 TEXT SIZE	Two letters A in different sizes	Flat	**Phone Screen***	Flat
20- 2-3_6 SOUND	Speaker	Flat	Speaker	Flat
21- 2-3_7 LANGUAGE & INPUT	Keyboard	Flat	**Phone Screen & Letter "i"**	Flat
22- 2-3_8 HOME SCREEN STYLE	Home	Flat	**Phone Screen***	Flat
23- 2-3_9 SCREEN LOCK & PRIVACY	Lock	Flat	**Shield**	Flat

EXPLANATION

- **# :** Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
- **"#"** : It is used to indicate that there is no content that can be analyzed.
- **"#Visual"** : It specifies the sections that are defined not by icon design but by visual elements such as logo.
- *** :** It counts once because the same content has been used.

SIMPLE MODE

23 SECTION
(21 Icons + 1 Text + 2 Visual)

Icon Styles
Flat: 21
Shaded: 1
Stylized: 2

STANDARD MODE

23 SECTION
(15 Icons + 1 Text + 1 Visual + 4 No Content (#))

Icon Styles
Flat: 13
Shaded: 3
Stylized: 4

A - VISUAL CONTENT ANALYSIS: DESIGN

ANALYZING
Details of Visual Materials

LIST OF BUTTON & ICON SIZES

SIMPLE MODE	STANDARD MODE
BUTTON SIZE **1-** 984x384 px > 2 (1-1, 2-1) **2-** 488x384 px > 12 (1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7) **3-** 336x384 px > 9 (2-3_1, 2-3_2, 2-3_3, 2-3_4, 2-3_5, 2-3_6, 2-3_7, 2-3_8, 2-3_9)	**BUTTON SIZE** **1-** 880x224 px > 1 (1-1) **2-** 144x144 px > 9 (1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 2-1, 2-2, 2-3) **3- # > 4 (2-4, 2-5, 2-6, 2-7)** **4-** 1080x168 px > 7 (2-3_1, 2-3_2, 2-3_3*, 2-3_4*, 2-3_5*, 2-3_6, 2-3_8*) **5-** 1080x224 px > 2 (2-3_7, 2-3_9)
ICON SIZE **1-** 464x152 px > 1 (1-1-1) **2-** 232x194 px > 2 (1-1-2, 2-1) **3-** 152x152 px > 12 (1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7) **4-** 208x208 px > 9 (2-3_1, 2-3_2, 2-3_3, 2-3_4, 2-3_5, 2-3_6, 2-3_7, 2-3_8, 2-3_9)	**ICON SIZE** **1-** 384x136 px > 1 (1-1-1) **2-** 112x96 px > 1 (1-1-2) **3-** 96x96 px > 3 (1-2, 1-3, 1-5) **4-** 88x80 px > 1 (1-4) **5-** 72x80 px > 3 (1-6, 2-3_7, 2-3_9) **6-** 104x104 px > 1 (1-7) **7-** 96x112 px > 1 (2-1) **8-** 144x144 px > 1 (2-2) **9-** 112x112 px > 1 (2-3) **10- # > 4 (2-4, 2-5, 2-6, 2-7)** **11-** 72x72 px > 7 (2-3_1, 2-3_2, 2-3_3*, 2-3_4*, 2-3_5*, 2-3_6, 2-3_8*)

SIMPLE MODE		STANDARD MODE	
Number of Sections Analyzed	23	Number of Sections Analyzed	23
No Content (#)	0	No Content (#)	4
TOTAL NUMBER OF VISUALS ANALYZED FOR SIZE	**23**	**TOTAL NUMBER OF VISUALS ANALYZED FOR SIZE**	**19**
Number of Sizes Used		**Number of Sizes Used**	
BUTTON	3	BUTTON	4
ICON	4	ICON	10
Number of Size Used More Than Once		**Number of Size Used More Than Once**	
BUTTON	3	BUTTON	3
ICON	3	ICON	3

3 Button & 4 Icon Sizes **X** 4 Button & 10 Icon Sizes

EXPLANATION

- **"#"** : It is used to indicate that there is no content that can be analyzed.
- **"#Visual"** : It specifies the sections that are defined not by icon design but by visual elements such as logo.
- *** :** It counts once because the same content has been used.

DETAILS OF SIZES USED MORE THAN ONCE

SIMPLE MODE		STANDARD MODE	
BUTTON	ICON	BUTTON	ICON
B1- 984x384 px > 2	I2- 232x194 px > 2	B2- 144x144 px > 9	I3- 96x96 px > 3
B2- 488x384 px > 12	I3- 152x152 px > 12	B4- 1080x168 px > 7	I5- 72x80 px > 3
B3- 336x384 px > 9	I4- 208x208 px > 9	B5- 1080x224 px > 2	I11- 72x72 px > 7



B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

CODING
Defining Contents and Diagrams

CONTENT LIST *(Entrance & Linked Pages)*



Home Screen 1

1- CLOCK & WEATHER

A-CLOCK
1. Alarm
E 2. World Clock
3. Stop Watch
4. Timer

B-WEATHER
1. Manage Cities
E 2. Forecast
3. Settings

2-DIALLER
1. Keypad
E 2. Dialler
3. More

3-MESSAGING
1. New Message
E 2. Inbox
3. More

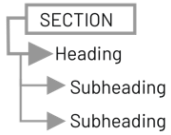
4-CONTACTS
1. New Contact
E 2. List
3. More

5-CAMERA
1. Modes
E 2. Lens
3. Settings

6-MUSIC
E 1. Home
2. Library
3. Options

7-GALLERY
E 1. Photos
2. Albums
3. Discover

ORDER OF CONTENTS



E : Entrance Page

EXPLANATION

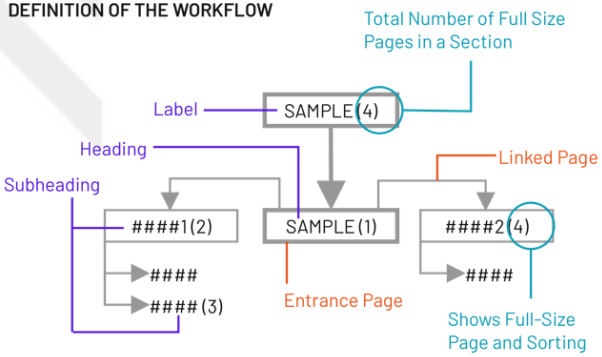
- **"Full Size" :** The page that takes up the full screen of the phone.
- **# :** Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
- **"More" :** Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
- **"●" :** Contents available in standard mode but not included in simple mode are marked with a red circle.

Pages with the same title and content within a section were shown in the workflow but counted once.

The comparison result is explained in the ***"Status"*** section.

In the sections where ***"Simple mode and Standard mode are the same"*** statement, no functional difference, removal or elimination, is encountered.

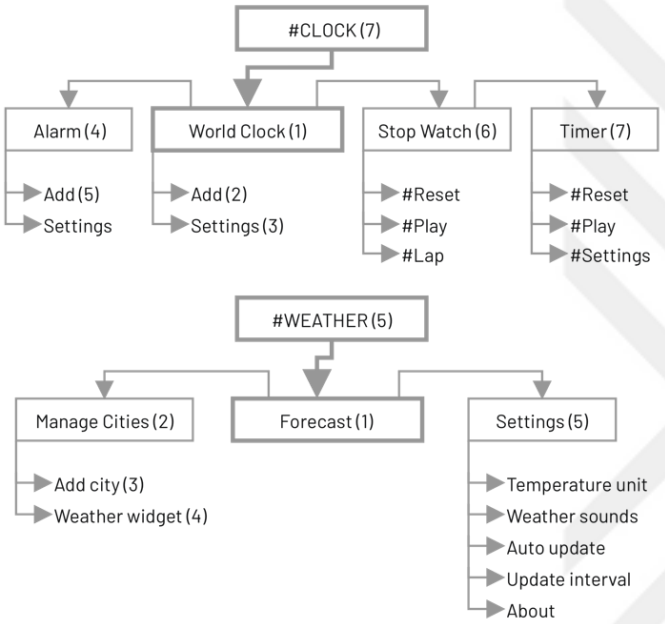
DEFINITION OF THE WORKFLOW

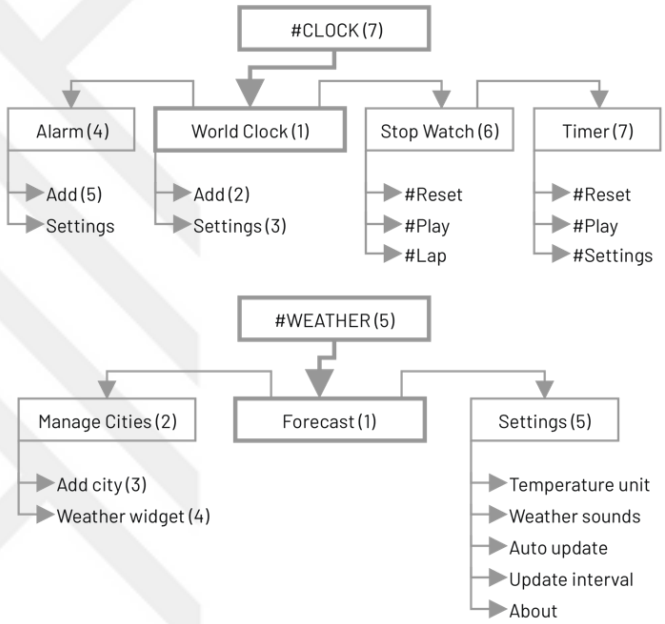


B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

COMPARISON

SIMPLE MODE	STANDARD MODE
1-1 #CLOCK & #WEATHER	CONSISTS OF **12 Full Size** PAGES
CONSISTS OF **12 Full Size** PAGES	

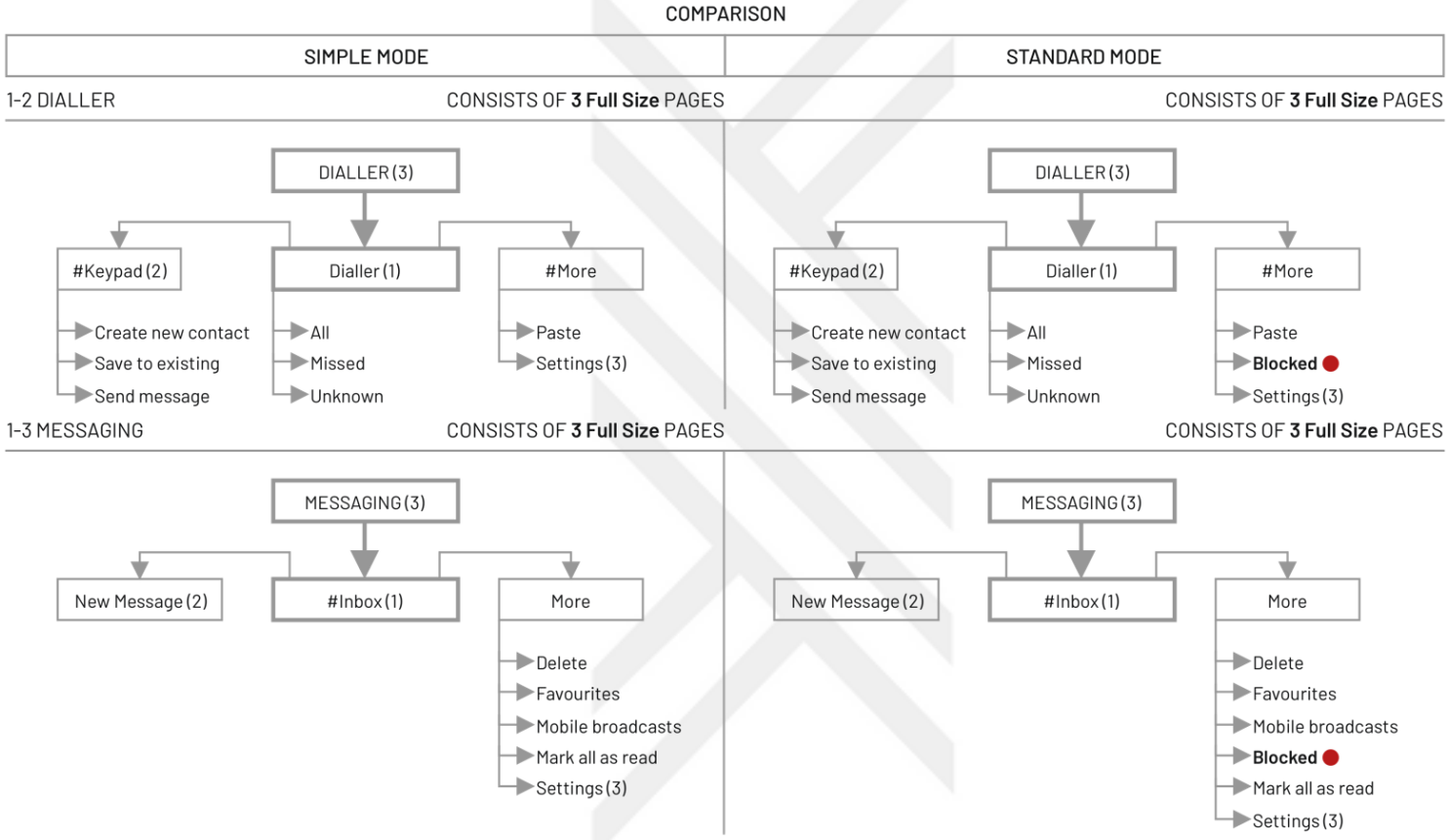




CODING
"Full Size" : The page that takes up the full screen of the phone.
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"●" : Contents available in standard mode but not included in simple mode are marked with a red circle.
Pages with the same title and content within a section were shown in the workflow but counted once.

STATUS: Simple mode and Standard mode are the same.

B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW



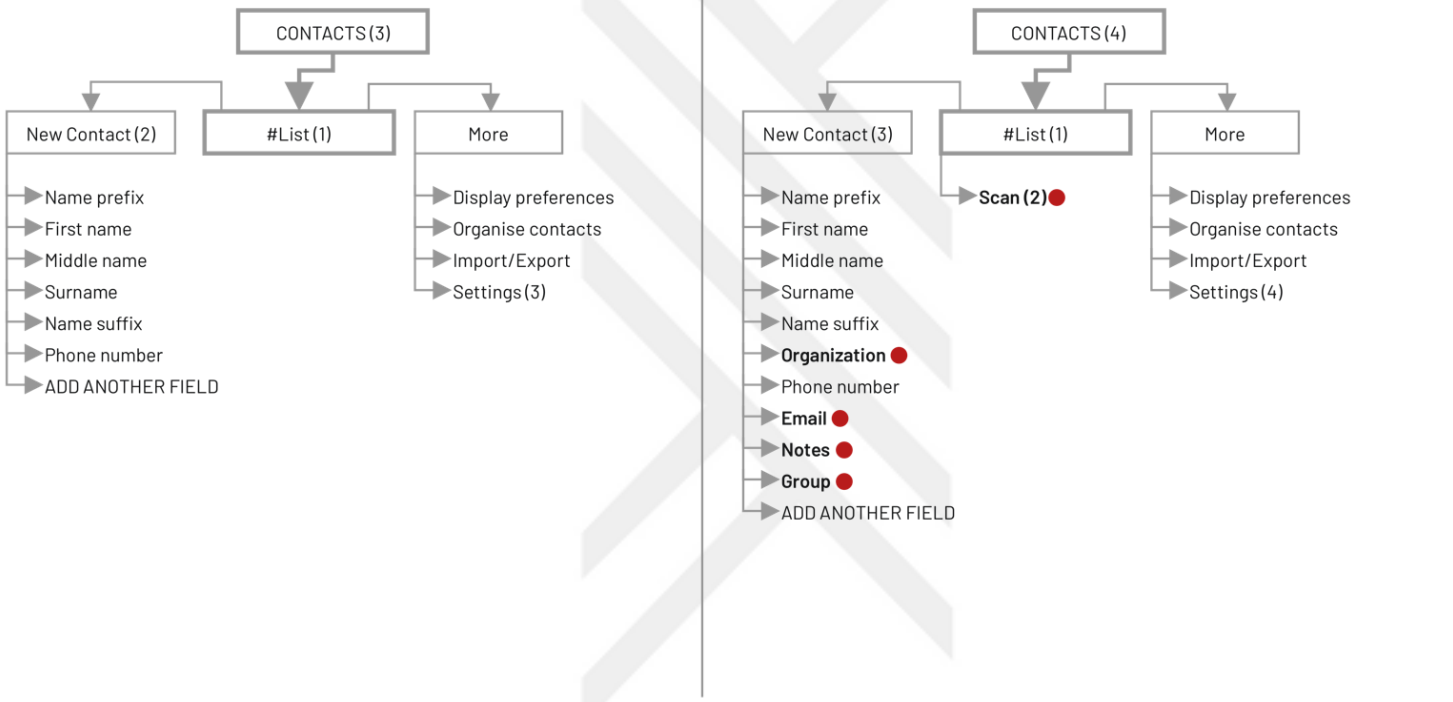
CODING
"Full Size" : The page that takes up the full screen of the phone.
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"●" : Contents available in standard mode but not included in simple mode are marked with a red circle.
Pages with the same title and content within a section were shown in the workflow but counted once.

STATUS: The "Blocked" function on the page called "more" in sections 2 and 3 has been eliminated in the simple mode design.

B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

COMPARISON

SIMPLE MODE	STANDARD MODE
1-4 CONTACTS	CONSISTS OF **3 Full Size** PAGES
CONSISTS OF **4 Full Size** PAGES ●	



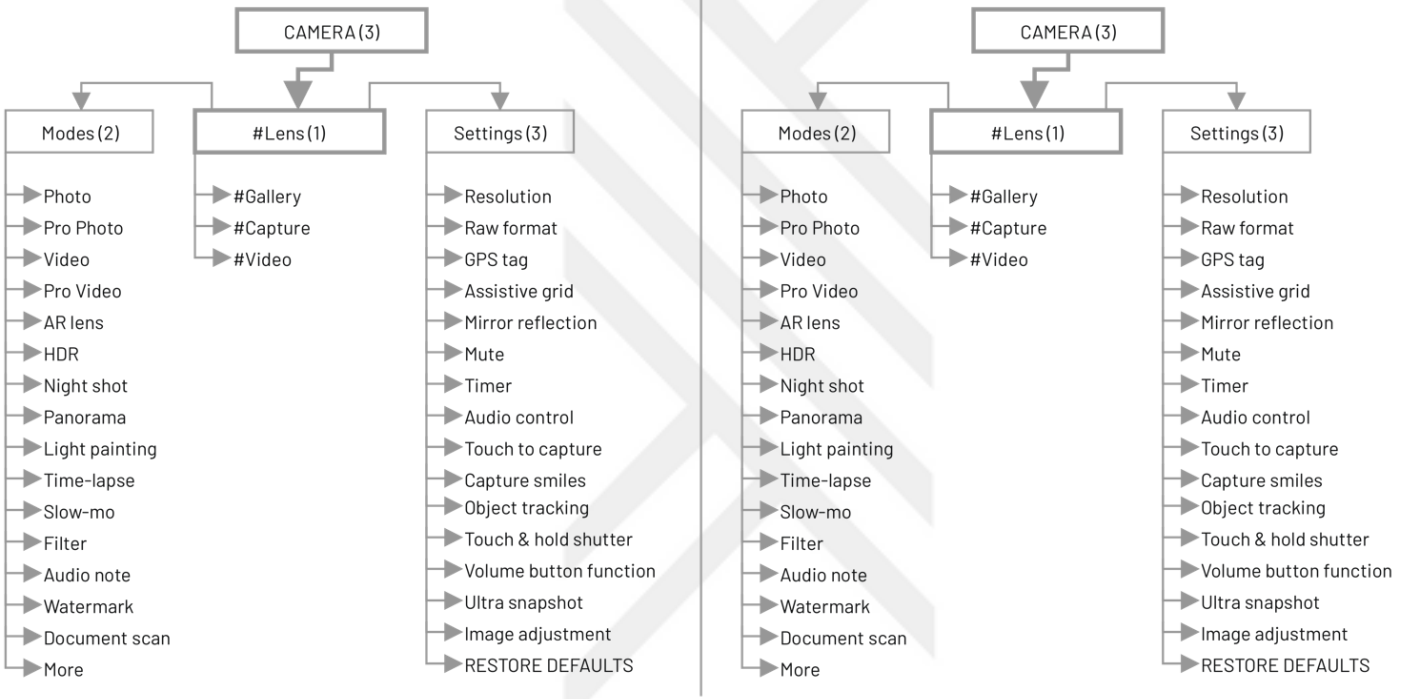
CODING
"Full Size" : The page that takes up the full screen of the phone.
 # : Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"More" : Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
"●" : Contents available in standard mode but not included in simple mode are marked with a red circle.
Pages with the same title and content within a section were shown in the workflow but counted once.

STATUS: In simple mode design, fields such as organization, email, notes, group are removed from the "New Contact" page. The "Scan" function on the list page has been eliminated.

B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

COMPARISON

SIMPLE MODE	STANDARD MODE
1-5 CAMERA CONSISTS OF **3 Full Size** PAGES	CONSISTS OF **3 Full Size** PAGES



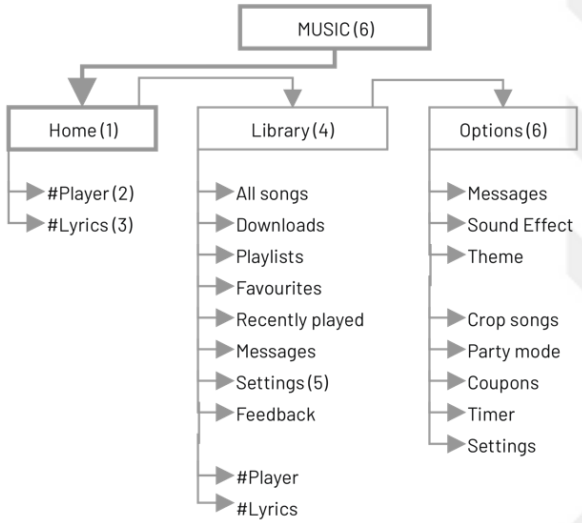
CODING
"Full Size" : The page that takes up the full screen of the phone.
 # : Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"More" : Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
"●" : Contents available in standard mode but not included in simple mode are marked with a red circle.
Pages with the same title and content within a section were shown in the workflow but counted once.

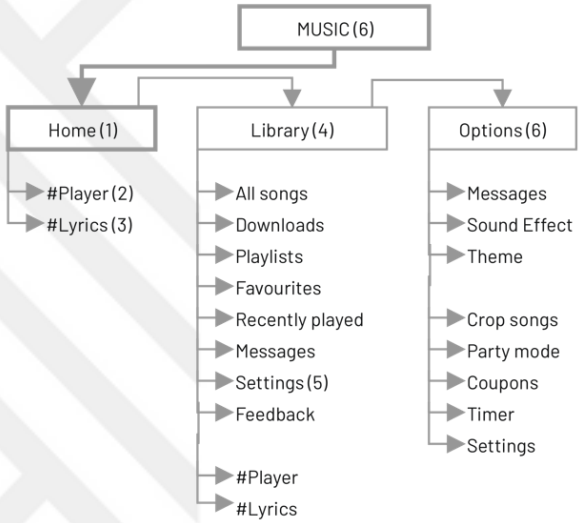
STATUS: Simple mode and Standard mode are the same.

B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

COMPARISON

SIMPLE MODE	STANDARD MODE
1-6 MUSIC CONSISTS OF **6 Full Size** PAGES	CONSISTS OF **6 Full Size** PAGES





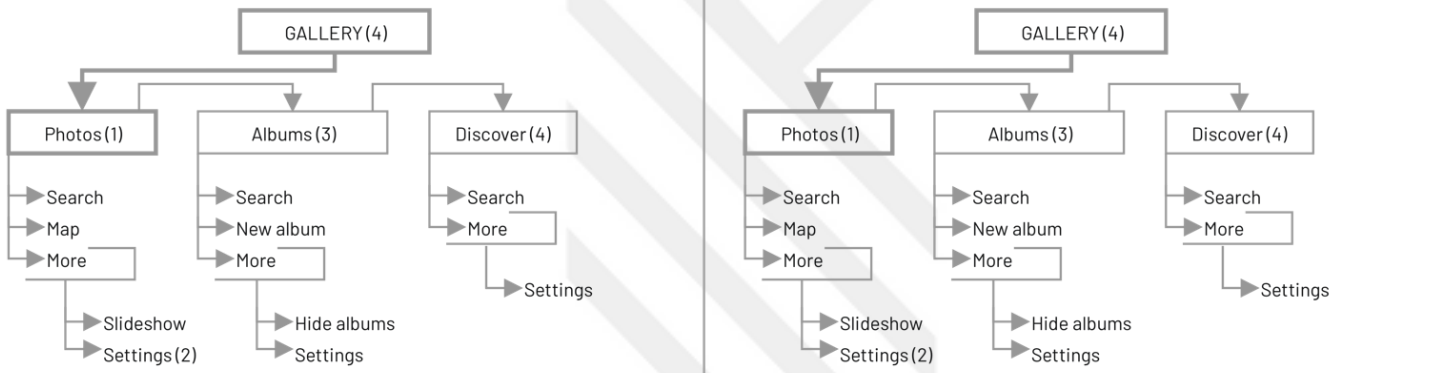
CODING
"Full Size" : The page that takes up the full screen of the phone.
 # : Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"More" : Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
"●" : Contents available in standard mode but not included in simple mode are marked with a red circle.
Pages with the same title and content within a section were shown in the workflow but counted once.

STATUS: Simple mode and Standard mode are the same.

B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

COMPARISON

SIMPLE MODE	STANDARD MODE
1-7 GALLERY CONSISTS OF **4 Full Size** PAGES	CONSISTS OF **4 Full Size** PAGES



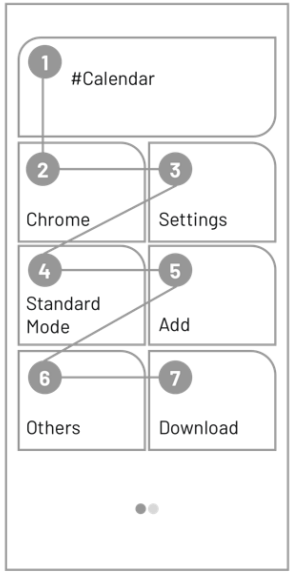
CODING
"Full Size" : The page that takes up the full screen of the phone.
 # : Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"More" : Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
"●" : Contents available in standard mode but not included in simple mode are marked with a red circle.
Pages with the same title and content within a section were shown in the workflow but counted once.

STATUS: Simple mode and Standard mode are the same.

B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

CODING
Defining Contents and Diagrams

CONTENT LIST *(Entrance & Linked Pages)*



Home Screen 2

1- CALENDAR
1. Menu
2. Search
3. New Event
E 4. Month
5. Week
6. Day
7. Schedule

2-CHROME
E 1. Homepage
2. Tabs
3. More

3-SETTINGS
E 1. List
2. More Settings

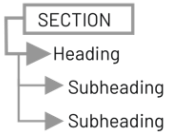
4-STANDARD MODE
E 1.Pop-up Notification

5-ADD
E 1. Add to home screen
2. People
3. Apps

6-OTHER
E 1. List

7-DOWNLOAD
E 1. List

ORDER OF CONTENTS



E : Entrance Page

EXPLANATION

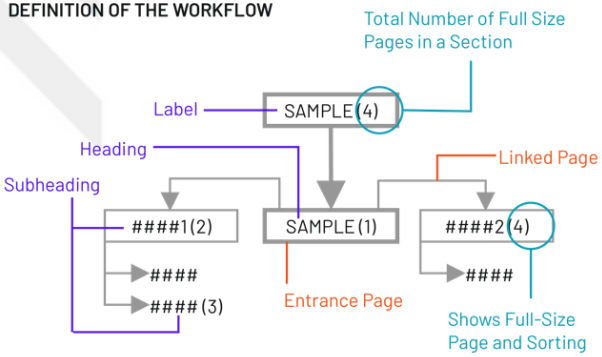
- **"Full Size" :** The page that takes up the full screen of the phone.
- **# :** Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
- **"More" :** Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
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Pages with the same title and content within a section were shown in the workflow but counted once.

The comparison result is explained in the ***"Status"*** section.

In the sections where ***"Simple mode and Standard mode are the same"*** statement, no functional difference, removal or elimination, is encountered.

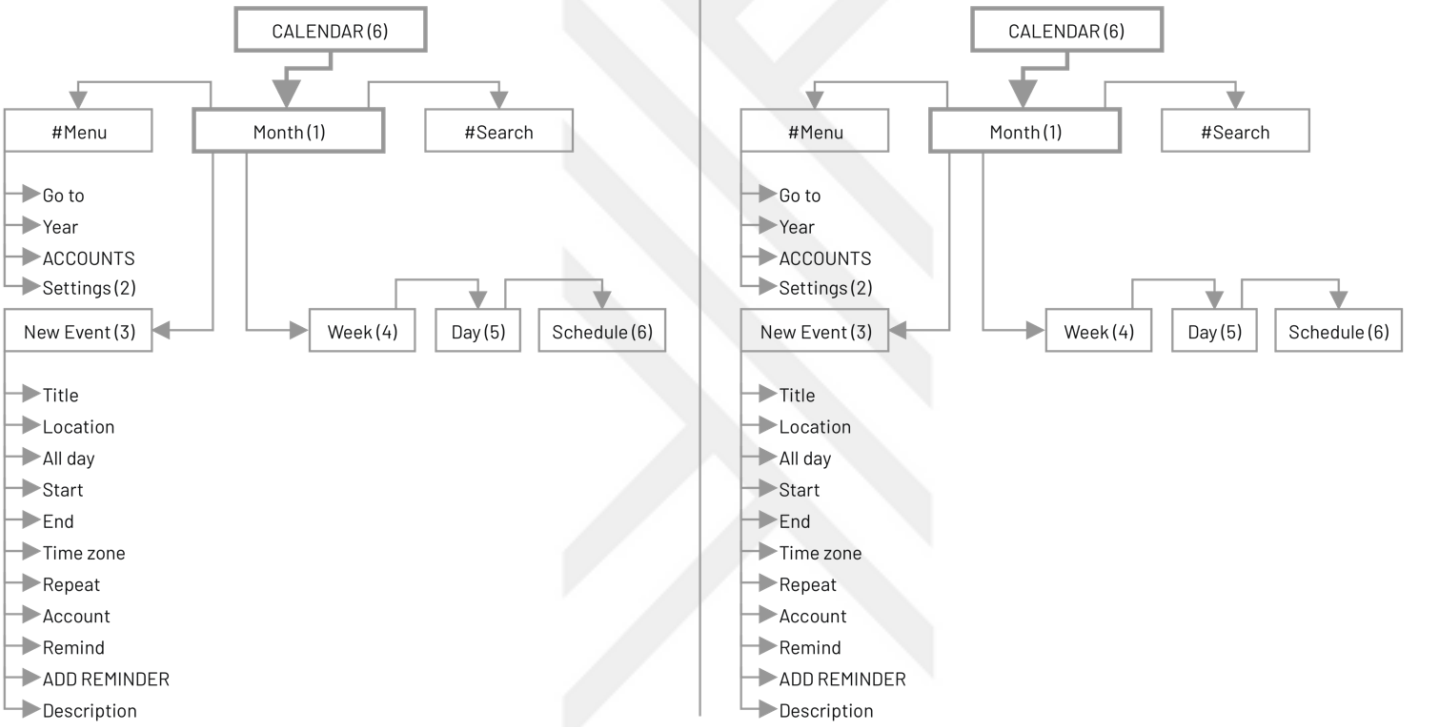
DEFINITION OF THE WORKFLOW



B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

COMPARISON

SIMPLE MODE	STANDARD MODE
2-1 CALENDAR CONSISTS OF **6 Full Size** PAGES	CONSISTS OF **6 Full Size** PAGES



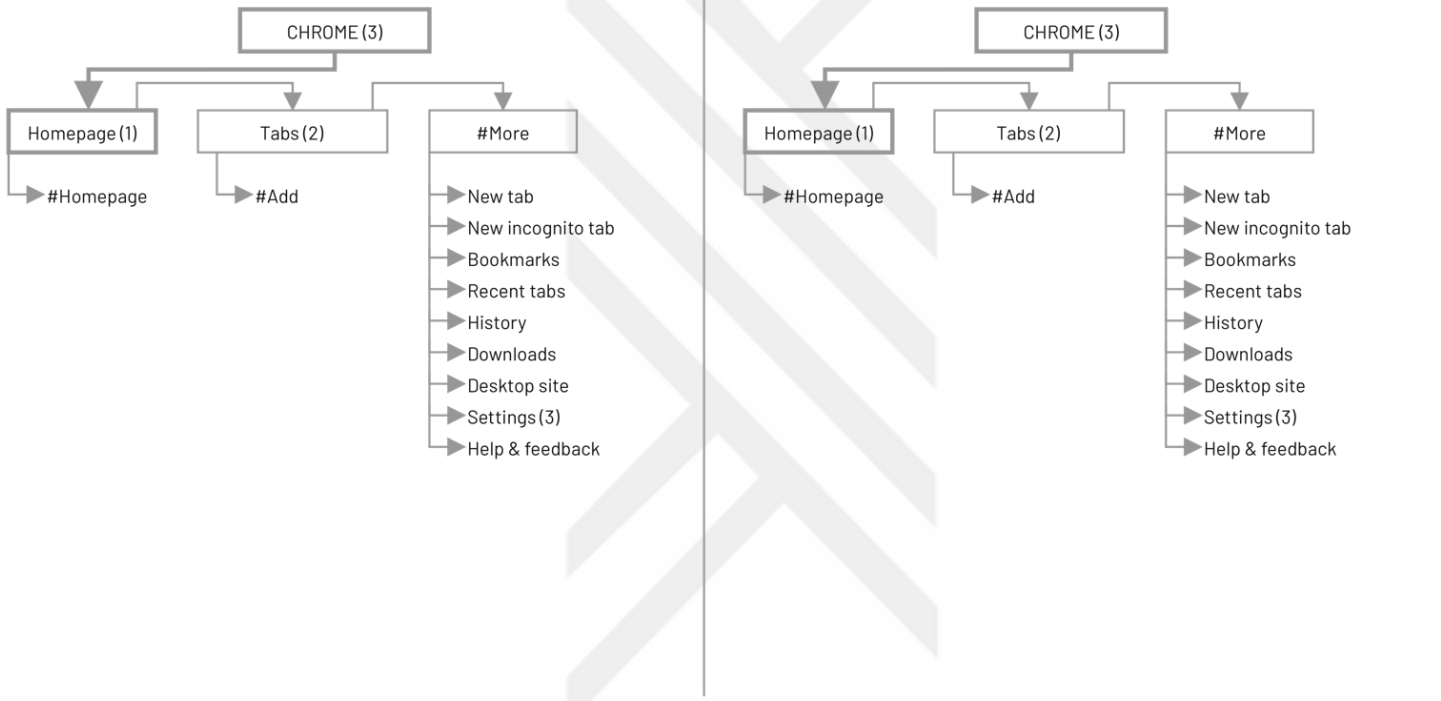
CODING
"Full Size" : The page that takes up the full screen of the phone.
 # : Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"More" : Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
"●" : Contents available in standard mode but not included in simple mode are marked with a red circle.
Pages with the same title and content within a section were shown in the workflow but counted once.

STATUS: Simple mode and Standard mode are the same.

B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

COMPARISON

SIMPLE MODE	STANDARD MODE
2-2 CHROME CONSISTS OF **3 Full Size** PAGES	CONSISTS OF **3 Full Size** PAGES



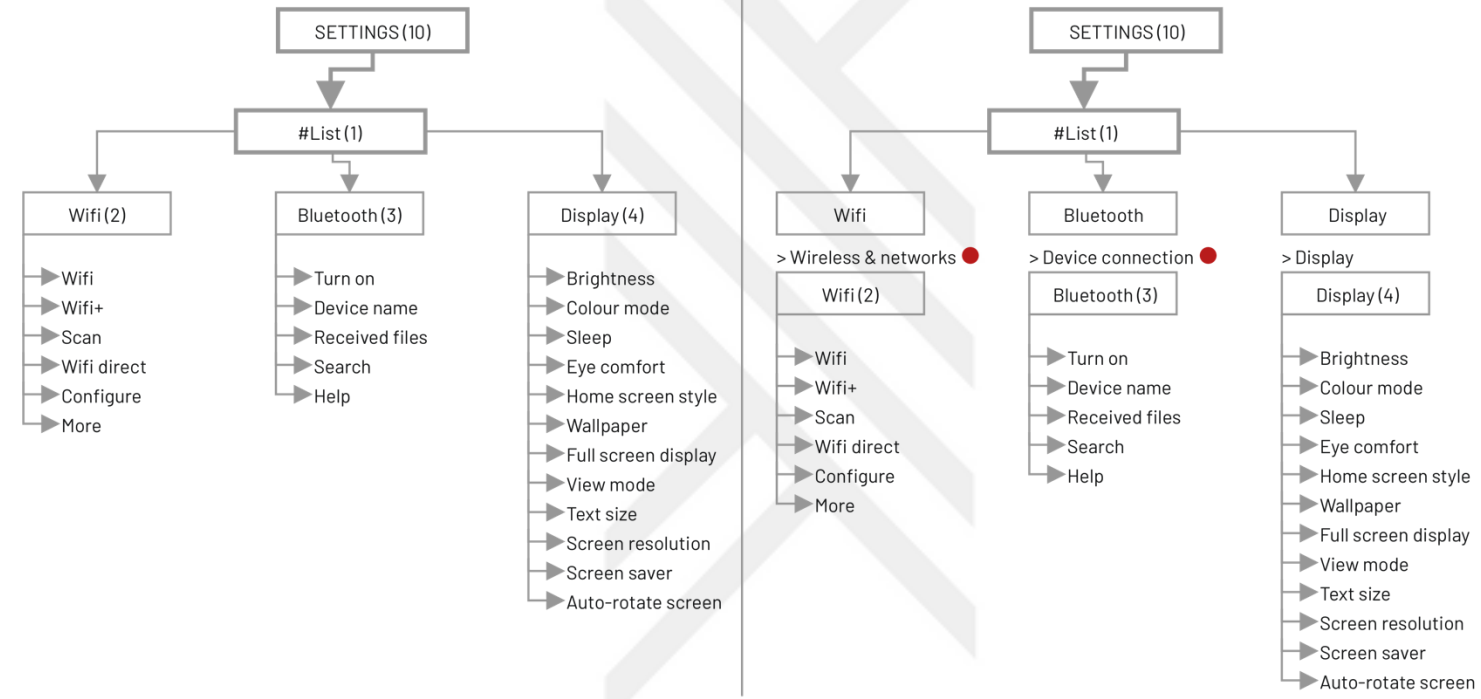
CODING
"Full Size" : The page that takes up the full screen of the phone.
 # : Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"More" : Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
"●" : Contents available in standard mode but not included in simple mode are marked with a red circle.
Pages with the same title and content within a section were shown in the workflow but counted once.

STATUS: Simple mode and Standard mode are the same.

B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

COMPARISON

SIMPLE MODE	STANDARD MODE
2-3 SETTINGS	CONSISTS OF **10 Full Size** PAGES
CONSISTS OF **10 Full Size** PAGES	

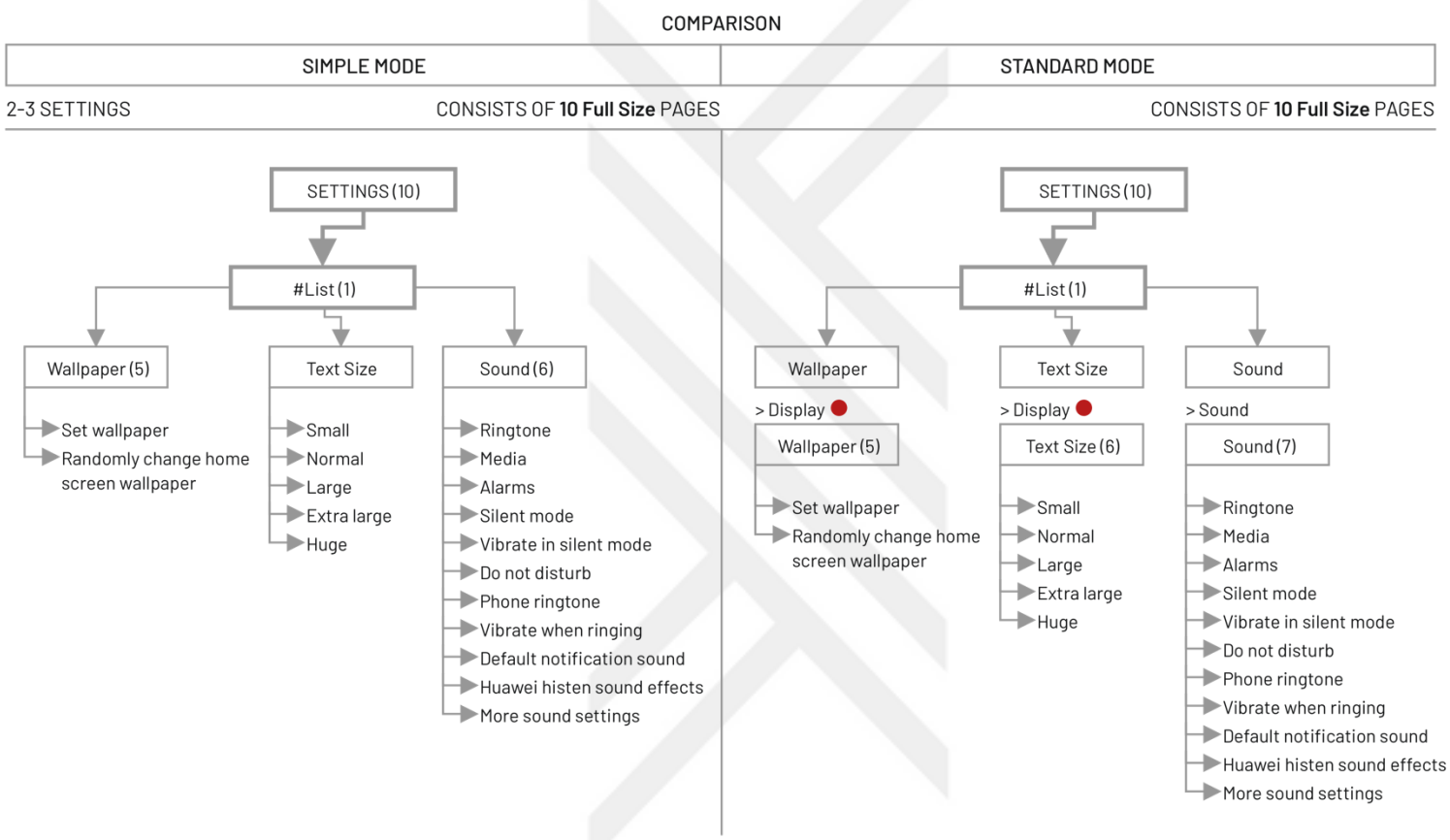


CODING
"Full Size" : The page that takes up the full screen of the phone.
: Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"More" : Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
"●" : Contents available in standard mode but not included in simple mode are marked with a red circle.
Pages with the same title and content within a section were shown in the workflow but counted once.

STATUS: Unlike the simple mode product, in the standard mode product, an extra heading redirection is made in order to reach the same subtitles in the settings section. In the simple mode product, the mentioned headings have been removed and the layout of the functions has been re-arranged.

B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

COMPARISON

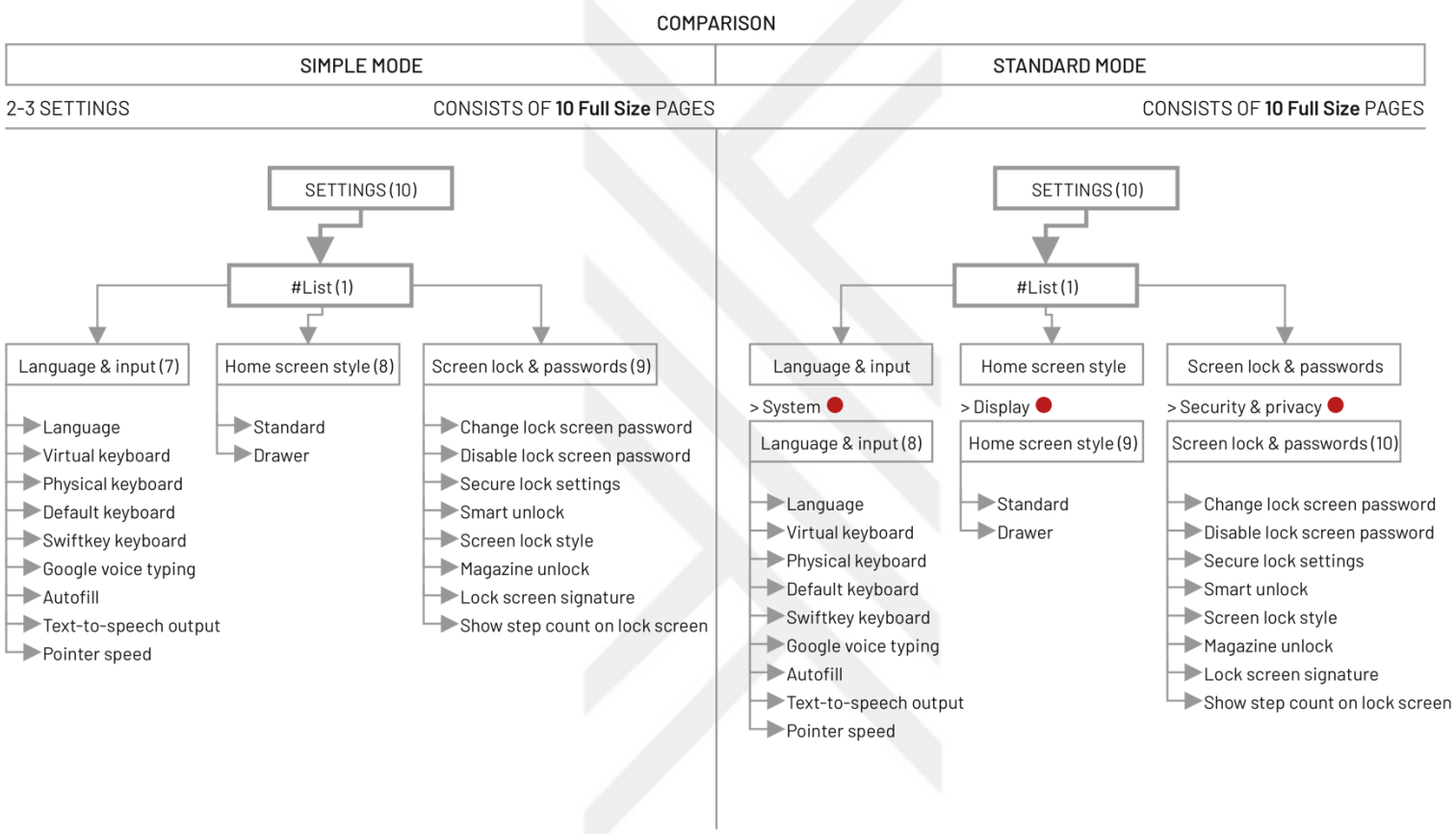


CODING
"Full Size" : The page that takes up the full screen of the phone.
 # : Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"More" : Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
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Pages with the same title and content within a section were shown in the workflow but counted once.

STATUS: Unlike the simple mode product, in the standard mode product, an extra heading redirection is made in order to reach the same subtitles in the settings section. In the simple mode product, the mentioned headings have been removed and the layout of the functions has been re-arranged.

B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

COMPARISON



CODING
"Full Size" : The page that takes up the full screen of the phone.
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"More" : Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
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STATUS: Unlike the simple mode product, in the standard mode product, an extra heading redirection is made in order to reach the same subtitles in the settings section. In the simple mode product, the mentioned headings have been removed and the layout of the functions has been re-arranged.

B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW

COMPARISON

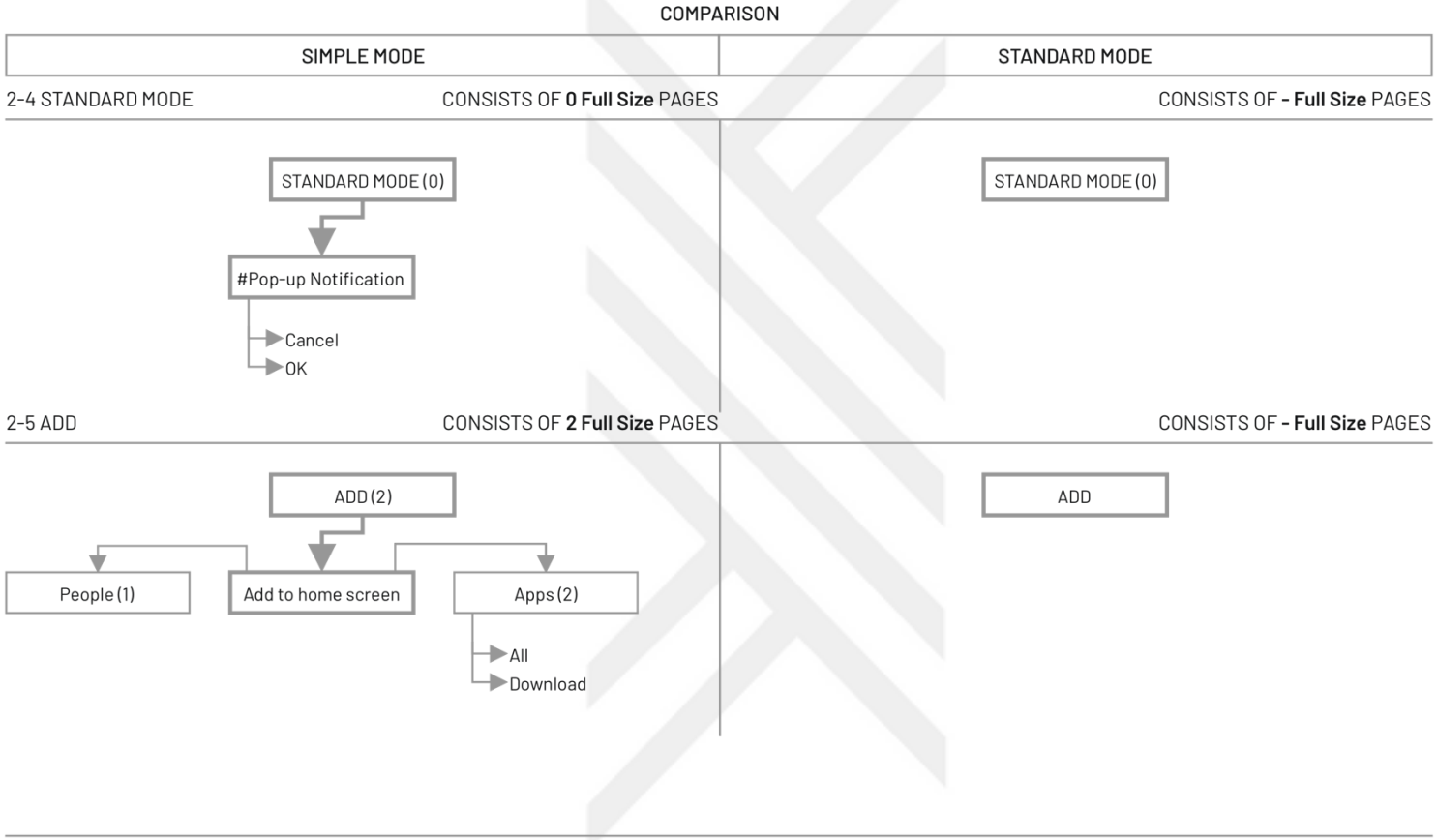
SIMPLE MODE	STANDARD MODE
2-3 SETTINGS CONSISTS OF **10 Full Size** PAGES	CONSISTS OF **10 Full Size** PAGES



CODING
"Full Size" : The page that takes up the full screen of the phone.
 # : Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"More" : Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
"●" : Contents available in standard mode but not included in simple mode are marked with a red circle.
Pages with the same title and content within a section were shown in the workflow but counted once.

STATUS: In the simple mode product, some functions in "Settings" section in the standard mode have been filtered, and a separate section has been created for these items.

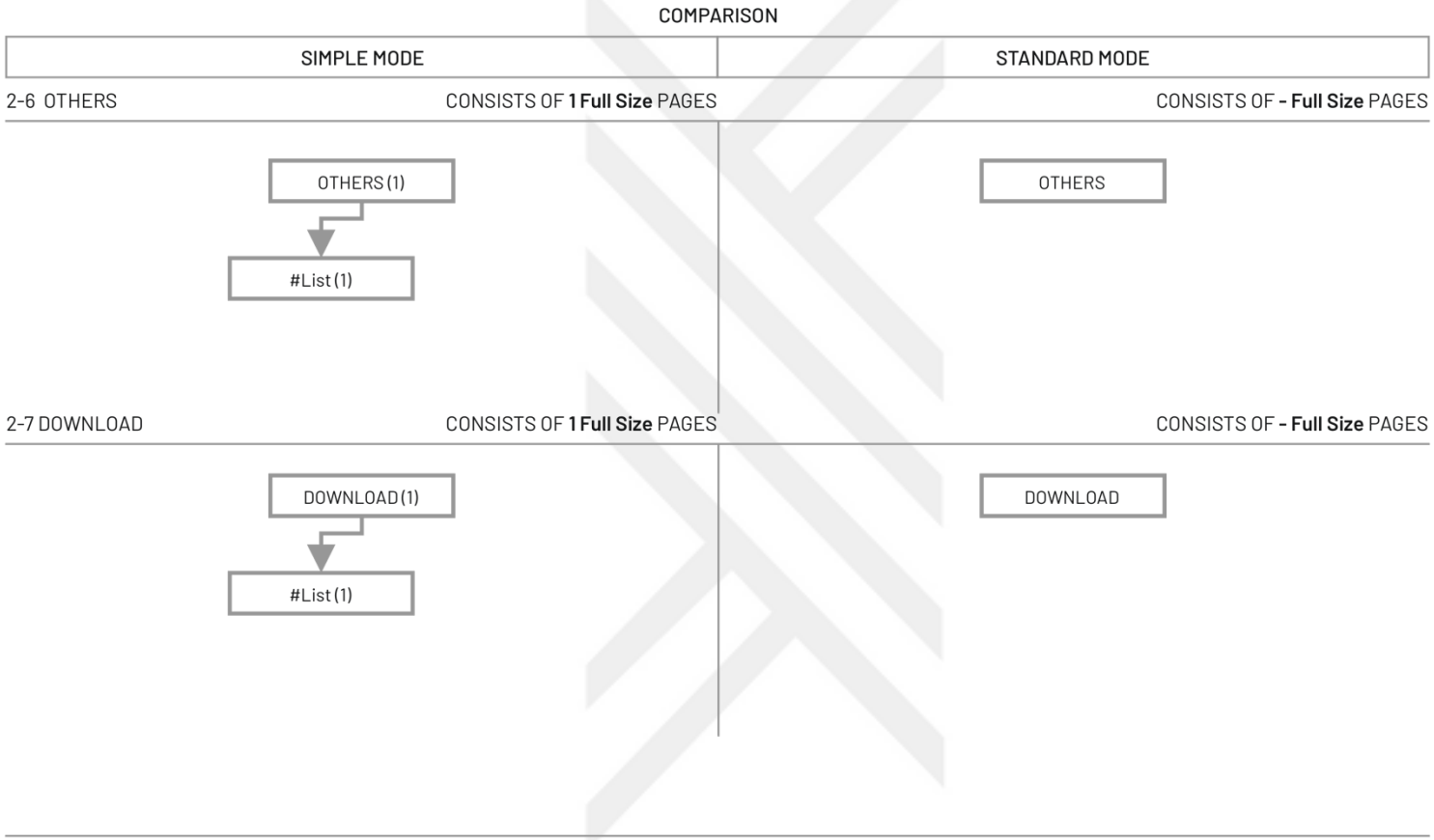
B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW



CODING
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"●" : Contents available in standard mode but not included in simple mode are marked with a red circle.
Pages with the same title and content within a section were shown in the workflow but counted once.

STATUS: "Standard Mode" and "Add" sections are not available in standard mode.

B - FUNCTIONAL CONTENT ANALYSIS: WORKFLOW



CODING
"Full Size" : The page that takes up the full screen of the phone.
 # : Some sections do not use content labels. For this reason, relabeling has been done considering the nature of the content.
"More" : Since the kebab menu is used with the "More" label in the product, the same label is defined for the kebab menu items that do not have a label.
"🔴" : Contents available in standard mode but not included in simple mode are marked with a red circle.
Pages with the same title and content within a section were shown in the workflow but counted once.

STATUS: "Others" and "Download" sections are not available in standard mode.

APPENDIX E. In-Depth Interviews

IN-DEPTH INTERVIEW

EXPLANATIONS
Usability Assessment
Structured Interview Questions

	RELATED WITH USER PROFILE
U1	What is your gender?
U2	What is your age?
U3	Which of the following is the education unit you last graduated from?
U4	Which of the following is the last phone operating system you used?
U5	Which of the following defines your experience level as a user?

	SYSTEM USABILITY SCALE
S1	I think that I would like to use this product frequently.
S2	I found the product unnecessarily complex.
S3	I thought the product was easy to use.
S4	I think that I would need the support of a technical person to be able to use this product.
S5	I found the various functions in this product were well integrated.
S6	I thought there was too much inconsistency in this product.
S7	I would imagine that most people would learn to use this product very quickly.
S8	I found the product very cumbersome/awkward to use.
S9	I felt very confident using the product.
S10	I needed to learn a lot of things before I could get going with this product.

	EMOTION WORD PROMPT LIST							
E1	Amused	+	E6	Creative	+	E11	Interested	+
E2	Annoyed	-	E7	Curious	+	E12	Hopeful	+
E3	Bored	-	E8	Disappointed	-	E13	Pleased	+
E4	Confident	+	E9	Frustrated	-	E14	Relieved	+
E5	Confused	-	E10	Happy	+	E15	Unsure	-

IN-DEPTH INTERVIEW

EXPLANATIONS
Transcription
Answers of Structured Interview Questions

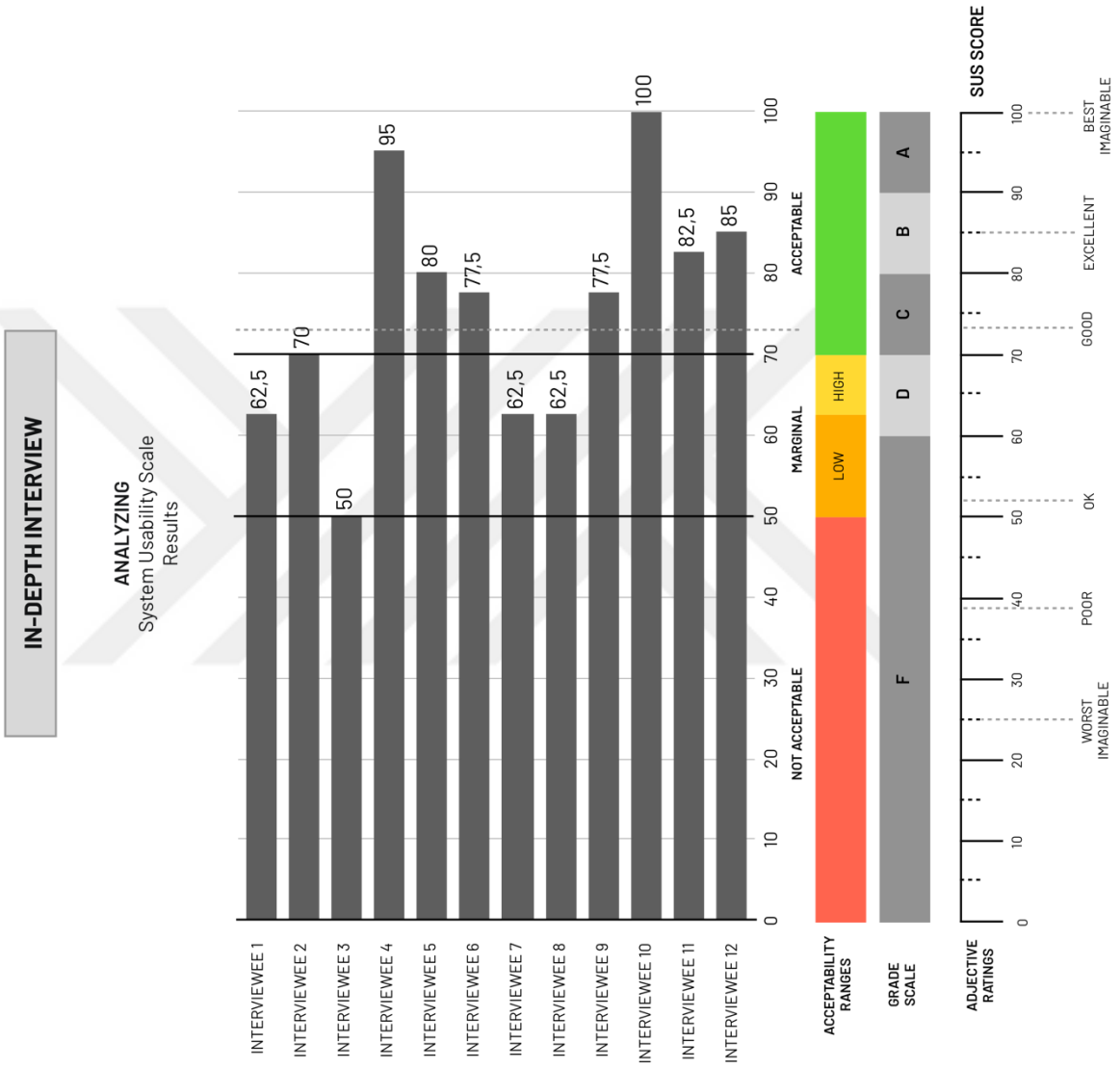
ANSWERS	QUESTIONS RELATED WITH USER PROFILE (U)					SYSTEM USABILITY SCALE (S)	EMOTION WORD PROMPT LIST (E)
CODES	U1	U2	U3	U4	U5	S	E
1	Female	18-24	Primary School	Android	Fundamental Awareness	Strongly Disagree	Never
2	Male	25-34	Secondary School	iOS	Novice	.	.
3		35-44	High School		Intermediate	.	.
4		45-54	University		Advanced	.	.
5		55-64	Master		Expert	Strongly Agree	Very Much
6		65 and above	Doctorate				

IN-DEPTH INTERVIEW

ANALYZING
System Usability Scale
Answers

ANSWERS	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	TOTAL	SUS SCORE
INTERVIEWEE 1	3	4	3	1	3	2	4	2	3	2	25	*62,5
INTERVIEWEE 2	1	4	5	1	4	4	5	1	5	2	28	*70
INTERVIEWEE 3	1	3	3	1	2	3	3	2	1	1	20	*50
INTERVIEWEE 4	5	2	4	1	5	1	5	1	5	1	38	95
INTERVIEWEE 5	3	1	5	1	4	2	5	2	4	3	32	80
INTERVIEWEE 6	3	1	4	1	4	1	5	1	1	2	31	77,5
INTERVIEWEE 7	1	5	5	1	1	1	5	3	4	1	25	*62,5
INTERVIEWEE 8	1	5	5	1	1	3	5	1	4	1	25	*62,5
INTERVIEWEE 9	5	5	5	2	5	1	4	1	5	4	31	77,5
INTERVIEWEE 10	5	1	5	1	5	1	5	1	5	1	40	100
INTERVIEWEE 11	4	2	5	3	5	1	5	1	4	3	33	82,5
INTERVIEWEE 12	3	1	5	1	1	1	5	1	5	1	34	85

***It means the SUS Score below the "Acceptable" level.**


IN-DEPTH INTERVIEW
ANALYZING
System Usability Scale
Results
INTERVIEWEE 1
INTERVIEWEE 2
INTERVIEWEE 3
INTERVIEWEE 4
INTERVIEWEE 5
INTERVIEWEE 6
INTERVIEWEE 7
INTERVIEWEE 8
INTERVIEWEE 9
INTERVIEWEE 10
INTERVIEWEE 11
INTERVIEWEE 12
62,5
70
50
95
80
77,5
62,5
62,5
77,5
100
82,5
85
0
10
20
30
40
50
60
70
80
90
100
NOT ACCEPTABLE
MARGINAL
ACCEPTABLE
ACCEPTABILITY RANGES
LOW
HIGH
GRADE SCALE
F
D
C
B
A
SUS SCORE
ADJECTIVE RATINGS
WORST IMAGINABLE
POOR
OK
GOOD
EXCELLENT
BEST IMAGINABLE


IN-DEPTH INTERVIEW
ANALYZING
System Usability Scale
SUS Score Distribution
0
50
70
100
INTERVIEWEE 3
Age: 25-34
Education: University
Opening System: Android
User Profile: Intermediate
INTERVIEWEE 1
Age: 65 and above
Education: Master
Opening System: iOS
User Profile: Intermediate
INTERVIEWEE 7
Age: 18-24
Education: High School
Opening System: iOS
User Profile: Advanced
INTERVIEWEE 8
Age: 18-24
Education: High School
Opening System: iOS
User Profile: Intermediate
INTERVIEWEE 5
Age: 55-64
Education: University
Opening System: Android
User Profile: Intermediate
INTERVIEWEE 9
Age: 55-64
Education: High School
Opening System: Android
User Profile: Intermediate
INTERVIEWEE 6
Age: 18-24
Education: High School
Opening System: iOS
User Profile: Advanced
INTERVIEWEE 2
Age: 25-34
Education: University
Opening System: iOS
User Profile: Advanced
INTERVIEWEE 11
Age: 45-54
Education: High School
Opening System: Android
User Profile: Intermediate
INTERVIEWEE 12
Age: 55-64
Education: University
Opening System: Android
User Profile: Intermediate
INTERVIEWEE 4
Age: 45-54
Education: Secondary School
Opening System: Android
User Profile: Intermediate
INTERVIEWEE 10
Age: 25-34
Education: Master
Opening System: Android
User Profile: Advanced

IN-DEPTH INTERVIEW

ANALYZING
Emotion Words Prompt List
Answers

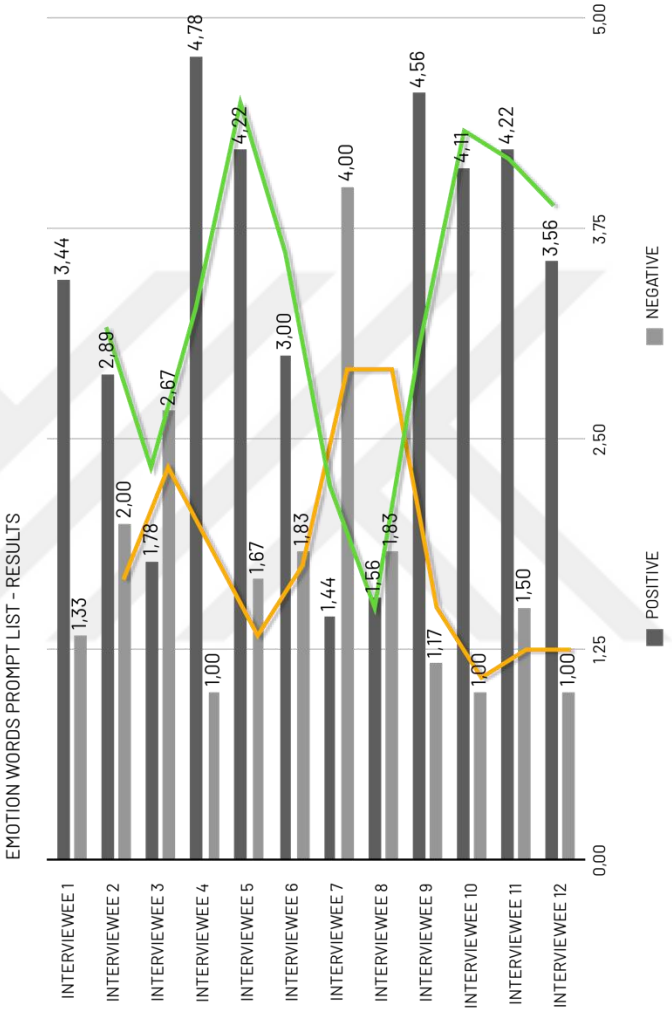
EMOTION WORDS PROMPT LIST - ANSWERS

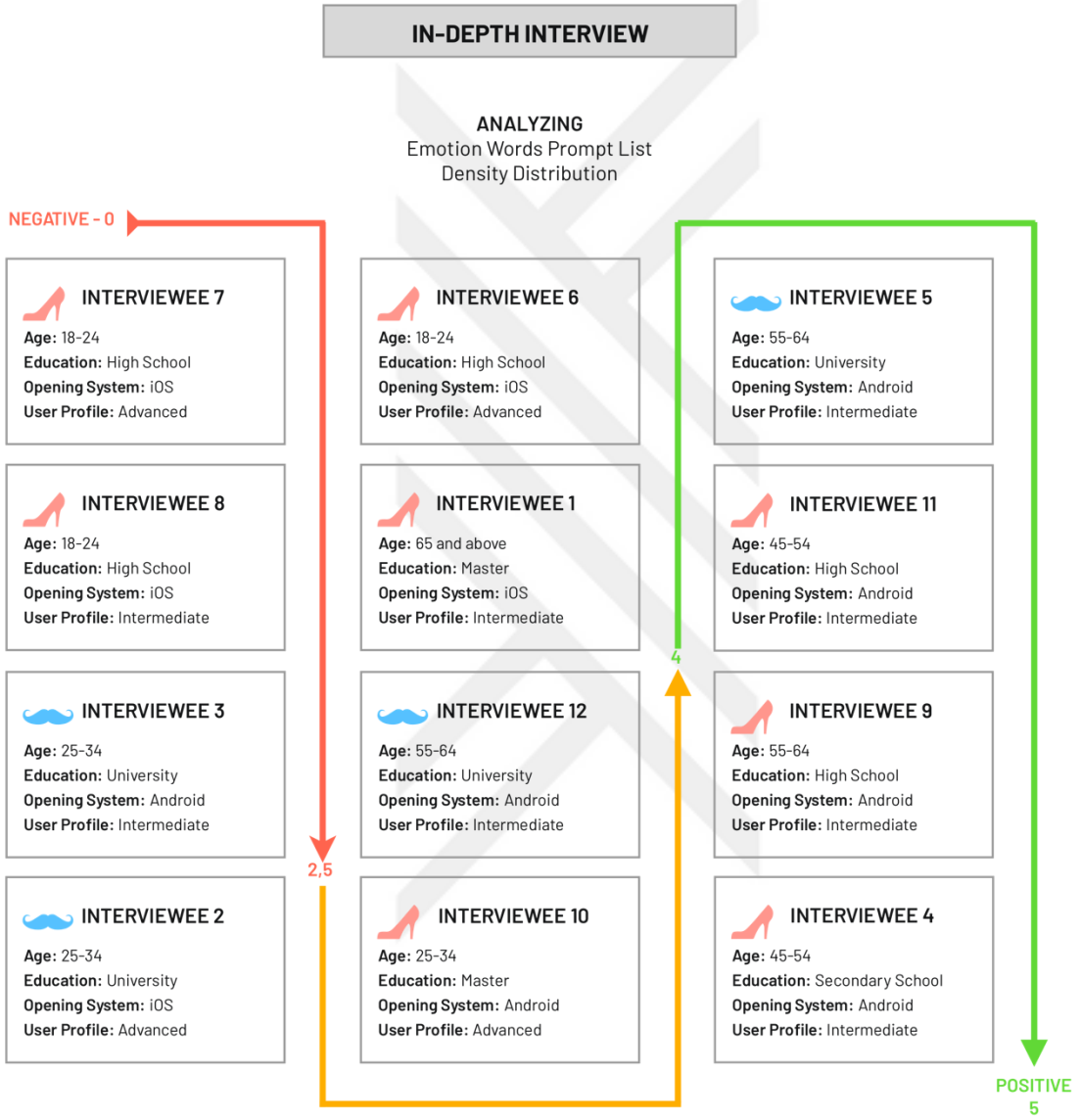
ANSWERS	+ E1	- E2	- E3	+ E4	- E5	+ E6	+ E7	- E8	- E9	+ E10	+ E11	+ E12	+ E13	+ E14	- E15	9 POSITIVE	6 NEGATIVE
INTERVIEWEE 1	3	1	2	3	1	4	3	1	1	3	4	4	4	3	2	3,44	1,33
INTERVIEWEE 2	3	1	3	5	1	3	1	3	3	2	3	3	2	4	1	2,89	2,00
INTERVIEWEE 3	2	2	2	2	3	3	3	3	4	1	2	1	1	1	2	*1,78	*2,67
INTERVIEWEE 4	5	1	1	5	1	4	4	1	1	5	5	5	5	5	1	4,78	1,00
INTERVIEWEE 5	4	2	2	4	2	4	4	2	1	4	4	4	5	5	1	4,22	1,67
INTERVIEWEE 6	3	2	2	4	2	1	1	1	1	3	3	3	4	5	3	3,00	1,83
INTERVIEWEE 7	1	4	5	3	1	1	1	5	5	1	1	1	3	1	4	*1,44	*4,00
INTERVIEWEE 8	2	1	2	4	1	1	1	3	1	2	1	1	1	1	3	*1,56	1,83
INTERVIEWEE 9	4	1	2	5	1	5	4	1	1	5	4	5	5	4	1	4,56	1,17
INTERVIEWEE 10	5	1	1	5	1	2	2	1	1	5	3	5	5	5	1	4,11	1,00
INTERVIEWEE 11	5	2	1	5	2	3	1	1	2	5	5	5	4	5	1	4,22	1,50
INTERVIEWEE 12	4	1	1	5	1	5	1	1	1	5	5	1	3	3	1	3,56	1,00

***It means that user evaluation is below 2.5 out of 5 for positive words and above for negatives.**

IN-DEPTH INTERVIEW

ANALYZING
Emotion Words Prompt List
Results




IN-DEPTH INTERVIEW
ANALYZING
Emotion Words Prompt List
Density Distribution
NEGATIVE - 0
INTERVIEWEE 7
Age: 18-24
Education: High School
Opening System: iOS
User Profile: Advanced
INTERVIEWEE 8
Age: 18-24
Education: High School
Opening System: iOS
User Profile: Intermediate
INTERVIEWEE 3
Age: 25-34
Education: University
Opening System: Android
User Profile: Intermediate
INTERVIEWEE 2
Age: 25-34
Education: University
Opening System: iOS
User Profile: Advanced
2,5
INTERVIEWEE 6
Age: 18-24
Education: High School
Opening System: iOS
User Profile: Advanced
INTERVIEWEE 1
Age: 65 and above
Education: Master
Opening System: iOS
User Profile: Intermediate
INTERVIEWEE 12
Age: 55-64
Education: University
Opening System: Android
User Profile: Intermediate
INTERVIEWEE 10
Age: 25-34
Education: Master
Opening System: Android
User Profile: Advanced
4
INTERVIEWEE 5
Age: 55-64
Education: University
Opening System: Android
User Profile: Intermediate
INTERVIEWEE 11
Age: 45-54
Education: High School
Opening System: Android
User Profile: Intermediate
INTERVIEWEE 9
Age: 55-64
Education: High School
Opening System: Android
User Profile: Intermediate
INTERVIEWEE 4
Age: 45-54
Education: Secondary School
Opening System: Android
User Profile: Intermediate
POSITIVE
5