CHAPTER III

DESIGN METHODOLOGY

3.1 Subjects of Design

The following specifies the subjects of the mobile application design for improving financial literacy among undergraduates through personal financial planning.

1) Demographics
   a. Gender : Male and Female
   b. Age : 18-25

   The average Generation Z, born between 1997 and 2012, is currently in residing in college and university (Arum et al., 2023), which shows that most of them have the status of an undergraduate student. (Hulukati & Djibran, 2018) also state that undergraduate students are in the age group of 18-25 years. This age period is the moment when a person begins to consider expenses and income, as well as various other financial decisions. This is supported by Amelia & Sugiharto (2020) who states that undergraduate students are at an age where they are still in the transition from dependence on their guardians to financial independence. Therefore, undergraduate students are chosen as the target audience because of their need to learn a lot of new things about financial literacy to avoid making wrong financial decisions in the future.

   c. Education : highschool graduate
   d. SEC : A-B

   People in the socioeconomic status A and B have sufficient financial resources to manage their personal expenses and income efficiently. On the other hand, people with socioeconomic status C and below are considered less effective because they do not have

enough income to fulfill their daily needs, much less consider a long-term personal financial plan.

2) Geographics

Jakarta and Tangerang

Jakarta is the most urban city in Indonesia. Being a metropolitan city, Jakarta is chosen based on its high minimum wage, resulting in more middle-high socioeconomic status. Based on the research from Databoks (2022), most undergraduates reside in Banten. Tangerang, as a city in Banten, is chosen because it has the highest number of active universities in Banten.

3) Psychographics

a. People who barely keep track of their expenses

b. People who do not understand about personal finance

c. People who experience hedonism

d. People who are trying to learn the basics of money management

e. People who experience money loss due to poor money management

f. People who have an interest in gamified learning apps

3.2 Design Methodology and Procedure

The design method used in the mobile application design for improving financial literacy among undergraduates through personal financial planning is the design thinking approach by Tim Brown. In his book, Tim Brown (2009) stated that the five main processes of design thinking are empathize, define, ideate, prototype, and test. In order to make an effective information media, the writer aims to understand the feelings of the users and relate to them beforehand. Afterwards, the writer will also make a user-friendly design highly collaborating with the users in the form of prototyping. Through these procedures, the final design can be relatable and easily received by the users.

The writer will be using a qualitative approach as the main method of research. Basrowi and Suwandi (2009) in Ultavia et al. (2023) stated that qualitative research is done when researchers can identify subjects and experience what the

subjects feel in their daily lives. Furthermore, according to Kirk and Miller in Moeloeng (2017:6) the qualitative research method in social sciences is a method that fundamentally relies on observing humans within their surroundings, accompanied by direct interactions with their environment. It is concluded that the qualitative research method is used to relate to the research subjects' daily activities. (Andini & Ahmad, 2021) stated that qualitative research is a research method that is used to understand reality through inductive thinking. The purpose of using qualitative research is to receive responses in the form of thought processes, long answers, and highly detailed subjects' feelings. The data-gathering process of the research approach includes in-depth interviews, existing studies, and reference studies. The following points will describe the process of design thinking by Tim Brown that will be applied in this design.

3.2.1 Empathize

In "Empathize", the writer will be making observations regarding the phenomenon that is happening, holding in-depth interviews to understand the situation of Gen Z and their below-average rates of financial literacy, and holding a focus group discussion with the target audiences to know better about their financial habits. Observation will first be used as a basis for study in preparation for the expert interview and the focused group discussion. Afterwards, in-depth interviews will be held to further deepen the knowledge about personal finance and its relation to the low rate of financial literacy in Gen Z. Finally, the focus group discussion will be held to understand more about the financial habits and preferences of the undergraduates. Throughout this process, the writer can relate and empathize to the users of the design and make designs that are relevant and catered towards resolving the problem. Existing study, as a method of research is used to help find the design problem, and reference study will be used as a reference for design styles, especially ones that highly interest Gen Z.

3.2.2 Define

In the step "Define", the writer collects and analyzes data that have been gathered from the "Empathize" step. The writer will be making user personas and user journeys to further formulate the main problem in Gen Z's lack of personal financial planning education, which results in their low financial literacy. This process helps the writer to have a clear problem and solution to resolve the pressing issue through a better design process.

3.2.3 Ideate

In "Ideate", the writer will create mind maps to help brainstorm design ideas, generate keywords and big ideas for the application's interactivity, and establish moodboards and a stylescape to convey the general idea of what the design looks like, and finally summarize it with a key visual. With this process, the writer will be able to further enhance and create prototypes for the application and test the functionality of the design.

3.2.4 Prototype

The process "Prototype" will require the user to develop the ideas found in the previous step into a real design. Firstly, the writer will start by making sketches and low-fidelity designs for the prototype to establish a baseline for the design, which will help in visualizing the design for the application. This low-fidelity prototype will be constantly improved until its high-fidelity version is ready for testing. This process is the phase where the writer will be finalizing the design, which will be sent out for testing in the test phase afterwards.

3.2.5 Test

After "prototype", the writer will test the prototype designed with the subjects of the design (users). The testing will be divided into two phases: 1. Alpha test, and 2. Beta test. The writer will be doing an alpha test with random users first to gain proper insight before getting it tested with the targeted users. Then, after receiving feedback from alpha testing, the writer will iterate on the design to proceed to beta testing, which will be held with the

targeted users of the design. The purpose of this step is to finalize and receive meaningful feedback regarding the application's design, interactivity, and many other things which will be helpful in further developing the design to be more effective.

3.3 Design Techniques and Procedures

The techniques for gathering data in the design conducting in-depth interviews, a focused group discussion, existing studies, and reference studies to further understand the importance of personal financial planning education for improving financial literacy among undergraduates. Personal Financial Planning is the ability to plan ahead in order to reach a certain financial goal while considering realistic economic assumptions like income, expenses, inflation, and investment (Ningrum, 2021). A good personal financial plan not only helps undergraduates balance between their expenses and savings but also aids in avoiding debt and getting trapped in loans (Marini et al., 2024:206). The objective of this research will be to understand and relate to the subjects of the research, get further insight regarding personal financial planning in improving Gen Z's financial literacy, and obtain expert opinions on how to approach personal finance education to Gen Z who have never learned about personal finance.

3.3.1 In-depth Interview

The writer will be holding an in-depth interview with two targets: a financial expert and students who have already received formal education in personal finance. The interview will be held in a semi-structured way, where the writer will have already prepared a set of questions beforehand, but is still open for new questions when the need arises. This way, the writer can get more meaningful insights and more in-depth feelings on the topic of personal financial planning for improving Gen Z's financial literacy. The expert interview will be held with a financial expert, with several years of experience as the head of finance and budgeting in an insurance company, Ms. Vania Harsono, S.E., while the interview with students who have gotten formal education in personal finance will be held with Leon and Hansel, who have

both passed their personal finance class is their bachelor's program. With these in-depth interviews, the writer will be able to obtain data regarding the steps of learning personal finance, the effectiveness of the subject taught, and the effects it has on the student's daily life. The questions used in these in-depth interviews according to the interview prerequisites by Sugiyono (2004) will be described in the following points.

1. **In-depth Interview with a Financial Expert**

    The interview with a financial expert will be held with Ms. Vania Harsono, S.E. The objective of this in-depth interview is to obtain data that is related to the ways to teach personal finance, the challenges of educating personal finance, and student behaviors in learning personal finance. By doing interviews, the writer obtains better insights from experts regarding the topic of personal finance. The interview will be done in Bahasa Indonesia as it is the most familiar language in Indonesia. The questions posed to with Ms. Vania Harsono, S.E. based on the steps of interview defined by Neuman (2002) in Fadhallah (2021) are the following:

    a. *Menurut kakak, apa yang menyebabkan orang enggan mempelajari topik finansial, khususnya personal finance?*

    b. *Secara garis besar, apa saja yang terlibat dari personal finance?*

    c. *Apakah kakak sendiri pernah mengalami hedonisme dan overspending atau kegagalan finansial dari segi kurangnya pengelolaan uang pribadi? Bagaimana cara agar kakak dapat mulai mengelola keuangan pribadi kakak?*

    d. *Apa saja tantangan yang kakak hadapi dalam pengelolaan uang pribadi kakak?*

    e. *Jika kakak harus memberikan ajaran terkait personal finance untuk orang yang belum paham sama sekali pentingnya pengelolaan uang pribadi, bagaimana cara kakak untuk memulainya?*

f. *Jika dirangkum dalam 3 tahapan, apa saja step-by-step personal financial management yang mudah dimengerti bagi orang yang belum familiar dengan mengelola keuangannya?*

g. *Menurut kakak, apa saja faktor seseorang dapat gagal dalam sticking to the budget atau limit pengeluarannya?*

h. *Apakah Kakak menggunakan media alternatif (aplikasi, game, simulasi, atau media sosial) dalam pengelolaan uang? Jika ya, bagaimana pandangan kakak jika aplikasi tersebut tidak hanya menjadi aplikasi pengelola uang bagi yang sudah paham, tetapi juga menjadi aplikasi pembelajaran untuk basic personal finance bagi orang yang belum paham?*

2. In-depth interview with Finance Major students

Along with the interview of a personal finance lecturer, the writer will also hold in-depth interviews with two undergraduate students majoring in finance, Hansel Imanuel and Leon Tanjung. In the school of finance, both of them learned personal finance as one of the courses required for them to obtain a bachelor's degree in finance. The purpose of interviewing two undergraduate students is to understand the effects of personal finance in their lives and see their point of view as the ideal result for the users of the design. They are undergraduate students who have learned personal financial planning and applied it in their lives, just like how the users of the design are aimed to be. This interview is also held to find out the importance of personal finance according to them and to know its effects on their daily lives. The interview questions in Bahasa Indonesia will be displayed below:

a. *Ceritakan sedikit tentang proses pembelajaran personal finance yang anda alami.*

b. *Bagaimana pendapat Anda tentang pembelajaran Personal Finance?*

c. *Menurut Anda, seberapa efektif pembelajaran Personal Finance yang anda alami dalam kehidupan sehari-hari anda? Tolong jelaskan.*

Mobile Application Design…, Riyan Chintama, Universitas Multimedia Nusantara

d. *Seberapa beda diri Anda dalam menentukan desisi finansial sebelum dan sesudah mendapat pembelajaran personal finance?*

e. *Sebelum mengambil kelas personal finance, apa yang Anda harapkan dalam mata kuliah tersebut?*

f. *Setelah mengambil kelas tersebut, apa yang anda alami dan apakah sesuai dengan harapan anda sebelum mengambil kelas tersebut?*

g. *Menurut Anda, apakah media lain (aplikasi, video interaktif, game, dll.) akan menjadikan penyampaian pembelajaran personal finance lebih menarik? Jika ya, kira-kira media apa yang paling cocok untuk Anda?*

h. *Apakah Anda memiliki saran untuk perancangan media interaktif mengenai pembelajaran personal finance?*

3.3.2 Focus Group Discussion

The writer will be holding a focus group discussion with target audiences based on the demographics, geographics, and psychographics stated above. The participants of the FGD are Gadia, an undergraduate student majoring in Computer Science, Justin (Jugun), an undergraduate majoring in Mathematics, along with Felissa, Fio, and Clarisa, who are undergraduates majoring in Design. The target audiences will be asked questions and discuss their opinions with the writer regarding the topic of personal finance, starting from their familiarity with the topic, interest in the topic, and finally, about the mobile application design for improving financial literacy among undergraduates through personal finance. The questions asked in the focus group discussion in Bahasa Indonesia will be as follows:

a. *Kira-kira kalau boleh tahu, sumber income kalian dari mana ya? Apa bisa dijelaskan sedikit?*

b. *Apakah kalian familiar dengan* personal finance *atau pengaturan keuangan sendiri? Jika iya, apakah kalian mempraktekkan nya dalam kehidupan sehari-hari?*

c. *Menurut kalian, financial success dalam diri kalian masing-masing tuh kayak gimana sih?* (follow up) *Pernahkah kalian melakukan planning dan menghitung kira-kira seperti apa keuangan masa depan kalian?*

d. *Apakah kalian mempraktekkan budgeting dan saving, jika iya, apa saja kesulitan yang dialami dalam melakukan hal tersebut?*

e. *Apakah kalian merasa informasi mengenai personal finance dan cara mengatur keuangan pribadi dibutuhkan bagi mahasiswa?*

f. *Pernahkah kalian menggunakan aplikasi yang berhubungan dengan pengelolaan uang pribadi (money manager, investment app, dll.) apa kesan kalian dalam menggunakan aplikasi tersebut?*

g. *Menurut kalian, apakah dengan adanya fitur gamifikasi (sistem poin, level, mission, dan leaderboard) dalam aplikasi pembelajaran personal finance, kira-kira apakah kalian akan lebih tertarik untuk mempelajarinya? Bisa tolong dijelaskan?*

3.3.3 Existing Study

To get the general idea and approaches that previous mobile applications have achieved in educating personal finance, the writer studies existing media related to the topic of personal finance in improving financial literacy. The writer will be reviewing three existing mobile applications, namely Money+, Money Lover, and Budgets Simplified - StayWise. These three different applications relate to personal financial planning with different strengths, weaknesses, opportunities, and threats that will be analyzed in the following chapter.

3.3.4 Reference Study

As a reference for the mobile application design, the writer will be doing a reference study on two mobile apps. The applications analyzed are OVO and Duolingo. These mobile applications will be analyzed with a SWOT table in the following chapter to identify each of their traits. With a reference study, the writer will gain more insight into the mobile application design regarding the UI elements and general theme for the design process