

# CHAPTER I PRELIMINARY

## I.1 Research Background

Globalization is a worldwide movement toward economic, financial, trade, and communications integration. Entering the globalization era means entering a world without borders, where knowledge develops and spreads very quickly. The globalization era has now entered Industry 4.0 where technology has developed tremendously, to the point where people rely on technology on even doing their daily activities such as buying food & necessities, learning, working, and many more. Based on the latest report by We Are Social, in 2020 it was stated that there were 175.4 million internet users in Indonesia. Compared to the previous year, there was an increase of 17% or 25 million internet users in this country. Based on the total population of Indonesia, which amounts to 272.1 million people, it means that 64% of Indonesia's population has access to the internet. Percentage of internet users aged 16 to 64 who own each type of device, including mobile phones (96%), smartphones (94%), non-smartphone mobile phones (21%), laptops or desktop computers (66%), table (23%), game consoles (16%), to virtual reality devices (5.1%).

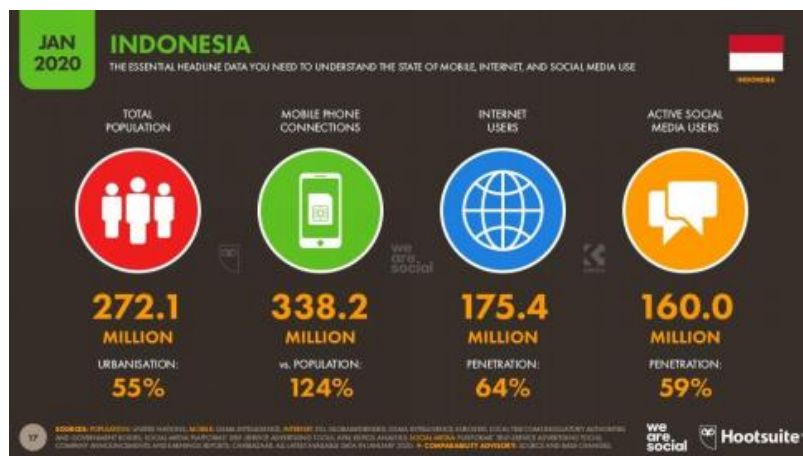


Figure 1 Indonesia internet use as of January 2020 (Source: We Are Social)

Responding to these conditions, Muslims must be able to answer the challenges they are facing so they can adapt and come up with alternative choices for the community. Most Muslims now have applications regarding their daily

Islamic activities, the application that they have on their phone also varies depending on what they need (reading Quran, prayer reminder, etc.). For example, the most used Islamic digital ecosystem application is MuslimPro as stated in their website “With over 170 million downloads worldwide, Muslim Pro is the most trusted and widely-used Muslim lifestyle app”. Even though MuslimPro is the most popular amongst other Muslim related application, it still has its fair share of controversy, such as the news going around that the app developer of MuslimPro from Singapore started selling the personal data of the users to the military, this news blew up on 16<sup>th</sup> of November 2020 and shocked the Muslim community especially the ones who uses the MuslimPro application (Lubis, Muhammad & Rosadi, Sinta & Priowirjanto, Enni. 2022). This causes huge trust issues to the MuslimPro application.

Apakah sebuah aplikasi digital ekosistem islam dibutuhkan untuk membantu mencakup aktifitas dan kebutuhan sehari-hari anda?

92 responses

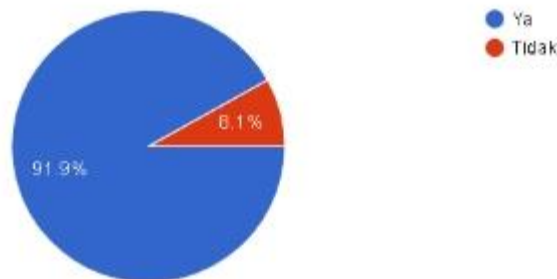


Figure 2 Data on Islamic digital ecosystem application needs.

Based on the data above, it can be concluded that most of the respondents will have demand that an Islamic digital ecosystem application should be developed, to which 91.9% of them agree, so that they would have an application that would fulfil both their daily and religious needs.

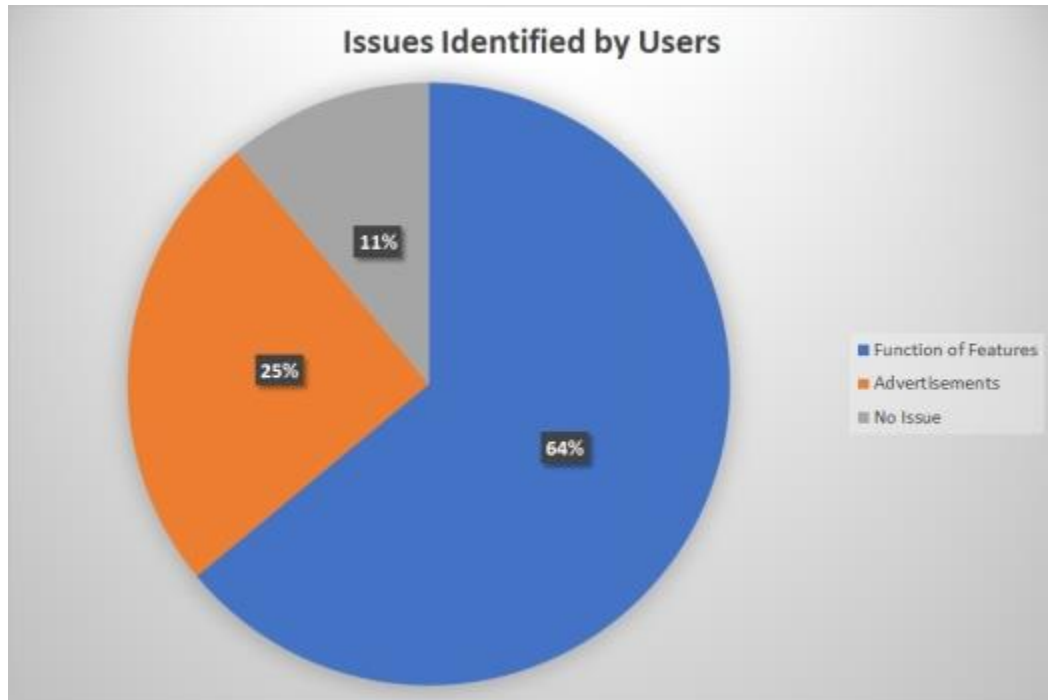


Figure 3 Data of issues experienced by users in existing applications.

The data above has identified the issues in the commonly used applications, according to past researches the problems with the existing Islamic applications is that there are too many source, and the users couldn't filter which is true and which is not, because with having too much different application, there is not really a way to authenticate the contents of the applications, for example there has been many Quran and Hadith application that has been investigated that was proven that it has misleading translations of the verses, and that case is only one of many that has been encountered (Hameed, A., Ahmed, H. A., & Bawany, N. Z., 2019)

the role of the Islamic-based digital ecosystem clearly is important, to make sure that the systems are centralized and could prevent issues mentioned on the previous paragraph, also so it could support various needs for Muslims, ranging from learning, social media, information sources, etc safely. After the analysis of the role of the Islamic-based digital ecosystem have been finished, it can be concluded that there is an actual need for an application with the concept of Islamic-based digital ecosystem, therefore an application needs to be developed. An application must have good interfaces and experience for it to attract the

targeted users. Therefore, the UI and UX for the application must be carefully planned and designed according to the needs of the targeted users.

In order to develop the UI and UX for the Islamic-based digital ecosystem application, it needs a method that involves users to further understand what the users want in terms of the UI/UX of the application. The UCD approach has been supported by various techniques, methods, tools, procedures and processes that help design a more user centered interactive system (Purnama, 2017). The method is also proven to increase the usability of web/ application and that the web they redesigned using the UCD method had an increase in usability compared to the previous design (Pratiwi et al., 2018).

Based on the explanation above, it is decided that the user centered design method is the right method for the design development of UI/UX for IHYA Digital Ecosystem Application. Since the UCD method involves users in the development it assures that the needs of the users will be fulfilled and it could increase the productivity of the development since this research only develops features and needs that only the users want, and there is less need to spend time on unnecessary features that the users will unlikely use.

## **I.2 Problem Statement**

Problems that are going to be identified in this research are as follows:

1. How to design the user interface and user experience for the IHYA Islamic Digital Ecosystem mobile application?
2. What method will be implemented in the design of user interface and user experience of IHYA Islamic Digital Ecosystem mobile application?
3. How to conduct the test and evaluation of the prototype and implementation result of the IHYA Islamic Digital Ecosystem mobile application?

## **I.3 Research Objectives**

Based on the problem statement above, the objectives of this research are as follows:

1. Design the user interface by analysing the user experience of the referenced application to develop user centered design.
2. Implement the method of user centered design (UCD).
3. Test the prototype and evaluate the implemented front-end design of the IHYA Islamic Digital Application with single ease question (SEQ) and system usability scale (SUS) method.

#### **I.4 Research Scopes**

According to the problem formulation defined above, the method used in this research must be suitable so that the research goals could be achieved and the features that will be implemented in the Islamic digital ecosystem application must fulfil the needs of the users. Based on the description of problem statement above, the scopes of this research are as follows:

1. Develop the design and workflow of the IHYA Digital Islamic Ecosystem using *User Centered Design* method.
2. Design features from existing applications with the addition of the missing features such as learning, video & e-commerce, also features based on the data gathered from response of the users from the questionnaire to further increase the variety of features that are necessary to further assist the user in their daily activities.
3. The research is conducted with participants ranging from <20 - >40 years of age from different backgrounds.

#### **I.5 Research Benefits**

This research could hopefully give benefits for the readers and the researchers that will do further research in the development of UI / UX design of an application. There are two kinds of benefits, there are theoretical and practical benefits.

1. The theoretical benefits

It will hopefully give further knowledge about the development of UI/UX design of an application using the user centered design method and will be used as a reference for similar research in the upcoming future.

## 2. The practical benefits

With IHYA Islamic Digital Ecosystem Application, it is expected that it will help ease the users in terms of their daily benefits, such as obtaining information related to Islam, study more about Islam, and conducting Islamic activities. In hopes that it will make the users more religiously productive.

### **I.6 Writing Systematics**

This research is described with systematic writing as follows:

#### **Chapter I Introduction**

This chapter describes the context of the problem, the background of the research, the formulation of the problem, the purpose of research, the limitations of research, the benefits of research, and the systematics of writing.

#### **Chapter II Literature Review**

This chapter contains literature relevant to the problems studied and also discussed the results of previous research.

#### **Chapter III Research Method**

Research methodology is a strategy and steps (*plan of attack*) that will be conducted in the research in order to answer the problem formulation that was prepared earlier. This chapter describes the research steps in detail including: formulating research problems, formulating hypotheses, developing research models, identifying and operationalizing research variables, compiling research questionnaires, designing data collection and processing, conducting instrument testing, designing data processing analysis.

#### **Chapter IV Analysis & Planning**

This chapter presented the results of the design, findings, analysis, and processing of data. In addition, this chapter also contains about validation or verification of the results of research so that the results have actually solved the problem.

#### **Chapter V Implementation and Testing**

This chapter presents the implementation result of the user interface and user experience of the IHYA Islamic Digital Ecosystem application based on the analysis and planning that has been concluded in the previous chapter. This chapter also includes the testing results of the user interface and user experience to see if the result meets the participants expectations.

## **Chapter VI Conclusion and Suggestion**

This chapter explained the conclusions of the research conducted as well as the answers to the research questions presented in the introduction. Research advice is presented in this chapter for future research.