**Online Activity No. 8 and 9: Applying the User-Centred System Design Process – TEAM MaCeVi**

**Chapter I. Introduction**

**Background of the study**

Digital innovations are transforming the financial world at a rapid pace. Mobile banking has emerged as a significant component in the effort to make financial services more accessible, efficient, and user-friendly. "MasSafe" is a mobile transaction banking app created to meet the increasing demand for seamless digital banking experiences. This study will investigate MasSafe's design and user experience, with a focus on its integration with popular digital wallets such as GCash and PayMaya to improve transaction efficiency and user convenience.

Mobile banking adoption in the Philippines has grown significantly, owing mostly to increased smartphone and internet penetration. According to the Bangko Sentral ng Pilipinas (BSP), 41% of Filipino adults owned a mobile phone in 2020, with 32% having internet connection. This digital transition provides a unique chance to improve financial inclusion in a country where a sizable section of the population remains unbanked.

GCash and PayMaya are two of the most widely used digital wallets in the Philippines, providing a variety of financial services such as money transfers, bill payments, and online shopping. By including these wallets into MasSafe, the software hopes to offer customers a more comprehensive and unified banking experience. This integration will allow users to seamlessly transfer funds between their bank accounts and digital wallets, pay bills, and perform other operations without having to move between several apps.

**Statement of the problem**

Despite the fast acceptance of mobile banking in the Philippines, consumers frequently encounter obstacles due to the fragmented nature of financial services. Specifically, switching between several applications for banking transactions and digital wallet services such as GCash and PayMaya creates a burdensome user experience. This fragmentation can result in inefficiencies, user annoyance, and security problems, especially among those who are less tech-savvy.

The primary issues addressed by this study are:

1. **Fragmented User Experience:**

* Users must hop between various applications (conventional banking apps and digital wallets) to handle their finances, resulting in a disconnected and inefficient experience.

1. **Complexity and usability:**

* Existing mobile banking and digital wallet apps can have complex interfaces that are difficult to use, particularly for new or less technologically savvy users.

1. **Security Concerns:**

* When using several platforms, users are concerned about the security of their financial information, as each has its own set of security standards and precautions.

1. **Financial Inclusion:**

* A large proportion of the Filipino population remains unbanked or underbanked. There is a need for a mobile banking solution that is user-friendly and convenient for this demography.

**Assumption of the study**

To address the issues outlined in the statement of the problem, the study assumes the following conditions and requirements. These assumptions validate the design features proposed for the MasSafe app and ensure that they sufficiently address the identified problems:

**1. Integrated Financial Services:**

**- Assumption:** Users prefer a unified platform that consolidates traditional banking and digital wallet services.

**- Feature:** MasSafe will integrate functionalities of traditional banking apps and digital wallets like GCash and PayMaya, allowing users to manage all financial transactions within a single application. This integration aims to streamline the user experience and eliminate the need to switch between multiple apps.

**2. Simplified User Interface:**

**- Assumption:** Users, especially those less tech-savvy, need a simplified and intuitive interface to navigate banking services effectively.

**- Feature:** The app will incorporate user-centered design principles, focusing on simplicity and ease of use. Key design elements will include a clean, modern interface with straightforward navigation paths, large buttons, and easy-to-understand icons and instructions**.**

**3. Enhanced Security Protocols:**

**- Assumption:** Users are concerned about the security of their financial information and need assurance that their data is protected.

**- Feature:** MasSafe will implement robust security measures such as multi-factor authentication, biometric logins (fingerprint or facial recognition), and end-to-end encryption. Regular security audits and updates will ensure compliance with industry standards and enhance user trust.

**4. Financial Inclusion:**

**- Assumption:** There is a significant demand for accessible mobile banking solutions among the unbanked and underbanked populations in the Philippines.

**- Feature:** MasSafe will offer features designed to enhance financial inclusion, such as low-bandwidth optimization for users with limited internet access, easy onboarding processes, and educational resources within the app to assist users in understanding and utilizing banking services.

**5. Technological Integration and Reliability:**

**- Assumption:** The necessary technological infrastructure, including APIs for integrating GCash and PayMaya, is reliable and available.

**- Feature:** The app will use stable and well-documented APIs to ensure seamless integration with digital wallets. This will facilitate real-time transactions and updates, providing a smooth and reliable user experience.

**6. Regulatory Compliance:**

**- Assumption:** The regulatory environment in the Philippines supports the integration of digital wallets with traditional banking services.

**- Feature:** MasSafe will adhere to local financial regulations and data protection laws. Continuous collaboration with regulatory bodies will ensure that all features and updates comply with legal requirements, protecting user data and maintaining trust.

**7. User Education and Support:**

**- Assumption:** Users may require additional support and education to fully utilize mobile banking services.

**- Feature:** The app will include a comprehensive help section, tutorials, and customer support to assist users in navigating the app and understanding its features. This will be particularly beneficial for those less familiar with digital banking.

**Significance of the study**

Through the provision of a centralized, approachable, and secure platform, the MasSafe mobile transaction banking app seeks to completely transform the way consumers engage with financial services. In order of greatest to least benefit, the following are the study's beneficiaries:

1. **Users in General**

* The public, which includes users of digital wallets such as GCash and PayMaya as well as traditional financial services, is the main beneficiary. The unified platform of the app makes it unnecessary to navigate between different apps, resulting in a smooth and effective user experience. Because of its simple navigation, even non-techies can use it thanks to its intuitive design. By guaranteeing the protection of their financial information, enhanced security measures encourage users to feel confident and trust digital banking services.

1. **Populations Underbanked and Unbanked**

* A considerable segment of the Filipino populace continues to be either underbanked or unbanked. MasSafe is made to meet their needs by providing a user-friendly and convenient mobile banking solution. The application has functionalities including optimized low-bandwidth operations, streamlined onboarding procedures, and educational materials to assist users in comprehending and utilizing financial services. MasSafe provides financial inclusion, enabling these groups to take part in the digital economy.

1. **Financial Institutions and Banks**

* MasSafe's greater adoption of digital banking services will benefit banks and other financial organizations. The app's improved user experience and integration with digital wallets have the potential to draw in new users while retaining current ones. Banks may improve their competitive edge in the digital banking sector, strengthen their customer connections, and save operating costs connected with physical branches by offering a dependable and secure platform.

1. **Providers of Digital Wallets (GCash and PayMaya)**

* The integration of digital wallet services with traditional banking services is expected to yield benefits for providers such as GCash and PayMaya. By increasing user engagement and transaction volumes, the smooth integration within MasSafe may broaden their audience and improve their value offer. Working with MasSafe may also open up new business avenues and alliances.

**Chapter II. Research Design**

The team applied the Empathize, Define, Ideate, Prototype, and Test phases of the Design Thinking process model. Using Tim Brown's "Change by Design" as a source, this model highlights a user-centered approach to problem-solving. We performed surveys and interviews throughout the Empathize stage to learn about the demands and difficulties consumers are having with the banking apps they currently use. To formulate a precise problem statement that addressed the fragmented user experience, usability problems, and security concerns, we synthesized the data gathered during the Define step. The team generated ideas for an integrated, user-friendly, and secure banking app throughout the Ideate step of the process. Low-fidelity mockups of the app were made at the Prototype stage, and they were iteratively improved in response to user feedback. Ultimately, we tested usability with prospective users throughout the Test phase to get their input and make any required adjustments. MasSafe's final design was made to be extremely near to the requirements and expectations of its users thanks to this iterative procedure.

1. **Task Analysis**

Screens screenshot of a mobile application

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1. **Requirements Gathering**

The team used questionnaires and interviews to gather information to make sure the MasSafe mobile transaction banking software fits the user needs and solves the issues that were found. A wide range of participants, including those who were unfamiliar with digital banking services, those who currently used traditional banking apps, and those who used digital wallets, were interviewed in-depth. These semi-structured interviews gave flexibility to investigate topics, such as users' experiences with current apps, difficulties they have encountered, features they would want to see, and security concerns. The interviews yielded insightful information about frequent problems, including juggling several apps, worries about data security, and the want for a more comprehensive financial solution. Participants also mentioned wanting an interface that was easier to use and more straightforward.

Quantitative information on user preferences and behaviors was gathered through the distribution of surveys and questionnaires to a wider audience. These tools were created to gather data regarding the kind and frequency of transactions carried out, users' satisfaction levels with the financial apps they now use, and the features they think should be included in a single banking app. The answers provide a more comprehensive understanding of the wants and expectations of users while also assisting in validating the results of the interviews. The team created a user-centered UI/UX design for MasSafe by integrating quantitative data from surveys and qualitative insights from interviews to create a comprehensive grasp of user requirements.

1. **Storyboarding and Prototyping**

Screens screenshot of a mobile application

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1. **Evaluation of prototype**

A black and white logo

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Description automatically generated A logo with a red blue and white striped background

Description automatically generated

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| --- | --- | --- | --- | --- | --- |
| **Area of Evaluation** | **5** | **4** | **3** | **2** | **1** |
| 1. **Visibility of System Status**  * - The system design provides appropriate feedback like message prompts in response to user actions. * The message prompts are clear, visible and understandable. | Checkmark with solid fill |  |  |  |  |
|  |  |  |  |  |
| 1. **Match between the system and the real world**   - Used words, phrases and concepts according to users’ language rather than system oriented words and computer jargons. | Checkmark with solid fill |  |  |  |  |
| 1. **User control and freedom**   - The system design provides ways of allowing users to easily “get in” and “get out” if they find themselves in unfamiliar parts of the system. | Checkmark with solid fill |  |  |  |  |
| 1. **Consistency and Standards**  * - The colors, text, labels, buttons and other elements in the design are uniform from start to finish**.**   - Text and icons are not too small or too big.  **-** Menus and other features of the system are arranged and positioned in a consistent way. (For ex. If your website has navigation buttons on the top under the page title on one page, the users will automatically look there for the same features on other pages. | Checkmark with solid fill |  |  |  |  |
| Checkmark with solid fill |  |  |  |  |
| Checkmark with solid fill |  |  |  |  |
| 1. **Error Prevention**   - The system design provides an automatic detection of errors and preventing them to occur in the first place.  - Idiot proofing mechanisms are applied | Checkmark with solid fill |  |  |  |  |
|  |  |  |  |  |
| **F. Help users recognize, diagnose and recover from errors**  **-** Error messages and the terms used are recognizable, familiar and understandable for the users. | Checkmark with solid fillCheckmark with solid fill |  |  |  |  |
| **G. Recognition rather than recall**  **-** Objects, icons, actions and options are visible for the user.  - Objects are labeled well with text and icons that can immediately be spotted by the user and matched with what they want to do. | Checkmark with solid fill |  |  |  |  |
| **H. Flexibility and efficiency of use**  - The system design provides easy to navigate menus.  - the system does not make wasteful time of system resources. | Checkmark with solid fill |  |  |  |  |
| 1. **Aesthetic and minimalist design**   **-**Graphics and animations used are not difficult to look at and does not clutter (mess) up the screen.  Checkmark with solid fill- Information provided is relevant and needed for the system design. | Checkmark with solid fill |  |  |  |  |
| 1. **Help and Documentation**   Checkmark with solid fill**-**the system design provides information that can be easily searched and provides help in a set of concrete steps that can easily be followed. |  |  |  |  |  |

**Chapter III. Conclusion and Recommendation**

In conclusion, the MasSafe mobile transaction banking software seeks to solve the difficulties that users in the Philippines encounter with financial inclusion, complexity, and a fragmented user experience. Through the combination of digital wallets such as GCash and PayMaya with traditional banking services, MasSafe offers a smooth and effective platform for handling financial transactions. Both tech-savvy users and those with less experience with digital technology will find the app to be easy to use and intuitive thanks to its user-centered design. Improved security measures foster user trust, while financial inclusion features open banking services to underbanked and unbanked people.

The following recommendations are given considering the information and understanding acquired through surveys, interviews, and the design thinking process: First, it is recommended that ongoing user feedback be sought to improve and optimize the app's features and make sure they change as needed. Second, to ensure seamless integration and increase service offerings, cooperation with banks and suppliers of digital wallets should be strengthened. Third, to help users comprehend and make the most of the app's features, comprehensive user education initiatives must be put in place. Finally, to make sure the app is safe and complies with legal requirements, frequent security audits and updates must be carried out. By implementing these suggestions, MasSafe can develop into a top mobile banking platform that greatly enhances customers' financial management experiences in the Philippines.