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The Challenges of Mobile Banking Application on Novice Users

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Abstract. Banks procedures are one of the most monotonous and long activities, bank users would have to waste time to finish tasks that can be done online, although there is a website designed by Maybank but the use of smartphones are ever growing and led to developing the Maybank mobile application. Maybank mobile application is designed to mainly cater for users on the go, but as many emerging technologies adopted by developing enterprises, the usability of the application should be measured to assess user's overall satisfaction with the application. A study conducted in UUM Sintok with 15 participants, they were given four tasks to perform and were given questionnaires to elicit their experience. The findings of this study revealed that participants were generally pleased with the functions provided in the application.

INTRODUCTION

With the emerging technology people tend to automate functions to eliminate human error and to enhance the business efficiency. Banks are one of the enterprises that have the most tedious processes if done manually through the bank. According to [1] Mobile Banking is an aspect of mobile commerce and a natural development of electronic banking. Although there are other means for banking that provide effective delivery channels such as Automated Teller Machine (ATM), internet banking along with conventional banking channels, are not efficient for users on the move. Therefore, mobile banking offers the opportunity to transact banking business regardless of time and location [2]. Mobile Banking are applications developed by a bank that allows its customer to perform financial transactions distantly using their mobile devices. Maybank is one of the banks that provides Mobile Banking application. The Maybank Application is the easiest tool to provide the customers' needs like: Making various types of payments, international and local transfers and account management. performed under high security level. However, just as any emerging technology users have different opinion on its usability and the way to determine that is by conducting Usability Testing. Usability determines how easy a task is achievable by the user using an application. Usability is referred to as the ease of use and suitability of a system for a specific class of users carrying out specific tasks in a precise environment [3]. The main part of this paper is devoted to study the usability of Maybank Mobile Banking Application to identify the interface and functions shortcomings and provide recommendations based on results analysis.

BACKGROUND

In 1973, Motorola made the first mobile phone call on a device that was 2.45 pounds! But the first commercial mobile phone, the Motorola DynaTAC 8000x was sold for 3,995\$ in 1983. Apple paved the way for

personal smart technology innovation when it created the Newton Message Pad in 1993, in the same time IBM released Simon the first Smartphone. In 1998 RIM released the first Blackberry and its wireless email functionality expressively increased the popularity of the smart phone. The year 2007 was the year that dramatically changed smartphone expectations, that's when Steve Jobs introduced Apple's iPhone. In accordance to the smartphone users' needs for mobile applications, Apple launched the App Store allowing third parties to create mobile apps in 2008 along with Android who launched Android market a few months later.

Mobile application caters a wide range of enterprises to provide their services to the user anywhere anytime. While smart phones are quite popular nowadays, enterprises are constantly looking to provide better services for their customers. Mobile applications are small software that can run on mobile devices such as phones and tablets. Using a smart phone, mobile banking provides an easy portal for users to access financial service [4]. Mobile banking has been developed as an operative and a suitable mean for financial organizations to offer their service to their clients [5], [6], [7], [8] This channel of banking has its pros and cons, it purposes bank users and customers with real-time banking services such as bill payment, transactions, account management, mobile reload and other services [9]. Mobile banking benefit users with traits such as, time optimization, immediate connectivity, instantaneous information, good interactivity, convenience and ubiquity [10].

There are several factors according to [11] the factors contributed in the rapid developing of Mobile banking which summarize the above are: Customer experience, where users are getting familiarity for having access to resources at their fingertips any time of the day; Cost saving, whereby extra costs apply to both users and bank for the smallest transaction; and Security, mobile banking provides a more secure communication channel using WAP and browser-based banking.

However, as any emerging technology mobile banking has a long way to cross to user satisfaction. Usability testing is one of the methods to test the user aspect of the system and has become an essential and excellent indicator to mobile application design and quality [12]. Usability testing is described as a method by which users of a product are asked to perform certain tasks in an effort to measure the product's ease-of-use, task time, and the user's perception of the experience.

To date, 11 banks in Malaysia have their own mobile banking apps for its customers and they remain to bring new features and enhancements in order to amaze users like you and me. But the question is how happy are you with the mobile banking app you are using now? Features, layout, safety concerns and accessibility are important for a mobile banking app to serve a customer. Thus, to attain both good interactions and client satisfaction, usability of such application must be given equal attention and user centered matters must be at the center of the operation. Banks that provide m-banking services have inadequate functionalities and this proves that their interfaces are still insufficient and non-user-friendly [13] Maybank is ranked in the top 5 banks in ASEAN with presence in 10 ASEAN countries. Maybank mobile application is a small software that can run on mobile devices such as phones and tablets. Using a smart phone, mobile banking provides an easy portal for users to access financial service [3] The mobile application for Maybank online banking is used to perform usability testing on novice users in this study.

METHOD

This study was conducted on 3 phases, the first phase is user research where an informal interview was conducted on frequent users of the application to identify key tasks of the application which are checking balance, transferring funds to favorite account, mobile reload and under account management changing account password. Accordingly, the questionnaire was created. The second phase is user experience testing, in this phase the sample were tested individually and were asked to complete the four tasks and fill the usability question afterwards. The last phase is recommendation. Based on the analyzed results obtained from the usability testing the recommendation were given. 15 participants from UUM students who have minor knowledge in Mobile Banking were involved in this study and were given four tasks to complete, out of which, 40% were studying at Bachelor degree level and the remaining 60% at Masters degree level. The age of most of the participants ranged between 18 to 26 years (80%) and the other remaining 20% are within the age range of 27 to 35 years. In addition, 47% of participants were male and the other 53% were female. Statistical Package for the Social Sciences (SPSS) software was used for data analysis and data were exhibited as arithmetic means, and standard deviations. Five common Maybank mobile application's functions were used by the users, these include: 1) Check Balance; 2) Transfer Funds; 3) Mobile Reload; and 4) Change Account Settings (Change Password).

RESULTS AND DISCUSSION

After completing the four tasks, participants were given 21 item questionnaires to express their perceptions on the usability of the application's. Table 1 illustrates task completion results. Most errors happened in task 2 (Transfer) where the main error was in clicking the button to choose the account. The button was not indicating the function it provided, the overall completion rate is 73%. On the other hand, one of the participant encountered an error while doing task 3 which is (Mobile Reload), the error was when choosing a line provider that does not match the phone number entered. Another user faced a problem in task 4 (Change Password) where he chose the wrong option because of interface error. 10 of the participants completed all of the tasks and did not face any difficulties.

TABLE 1. Task Completion Table

Participant	Task 1 (Check Balance)	Task 2 (Transfer)	Task 3 (Mobile Reload)	Task 4 (Change Password)
1	√	√	√	√
2	√	√	√	√
3	√	-	√	√
4	√	-	√	√
5	√	√	√	√
6	√	√	√	√
7	√	-	-	√
8	√	√	√	-
9	√	√	√	√
10	√	√	√	√
11	√	√	√	√
12	√	-	√	√
13	√	√	√	√
14	√	√	√	√
15	√	√	√	√
Success	15	11	14	14
Completion Rates	100%	73%	93%	93%

Summary of the results are stipulated in table 2, only 11 out of 15 of the participants completed task 2 with no errors the task steps are Login>Transfer> Transfer to other accounts> Choose account to transfer from> enter amount> Proceed>confirm with tac, the two participants were unable to find the button to proceed to the fifth step due to interface erroneous where the button does not imply its function, so the user does not know where to click to proceed to the other step. This task has the longest time on task 1 minute and 19 seconds to be precise. On the other hand, task 3 had only one error in entering compulsory fields. While one error was also encountered in task 4, due to labels information. The steps to complete this task are login> me> login details>change password. The user clicked on secure account in step three instead which took him to a different interface that is not designated to change account password. Errors occurred in the tasks are categorized as critical and it resulted in preventing the completion of the task. Task 1 was successfully completed by all 15 of the participants. See table 2 Summary of Completion, Errors, Time on Task.

TABLE 2. Summary of Completion, Errors, Time on Task

Task	Task Completion	Errors	Time on Task
1	15	0	0:09
2	11	2	1:19
3	14	1	0:42
4	14	1	0:27

CONCLUSION

Maybank Mobile Application enables the user to perform most of the banks activities done through the conventional website provided by Maybank. Developing this application caters bank users on the go which is the main goal for this application. However, usability evaluation of the application is an emerging research expanse that faces diverse challenges due to the exclusive features of mobile devices. This study is aimed to evaluate the usability of the functionality and interface of Maybank mobile application as perceived by users. Four most used functions selected by Maybank users in an informal interview which are checking balance; transfer funds to favorite account; mobile reloads; and manage account settings (eg. Change Password). The test started with all participants completing the given tasks and afterwards they were given a 21item questionnaire to capture their experience with the application. Later on, participants answers were analyzed and exposed that unanimously Maybank Mobile Application is perceived as impressive and easy to use, satisfying and appropriate by study participants. Participants general impression showed their acceptance of the application and willingness to use the application in the future.

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