Project Progress Report

Course code 4834

User interface redesigning of an MFS application (bKash) to increase Usability

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Nowadays, a lot of consumers access mobile financial services to conduct online transactions on various platforms. Over 19 crore Mobile Financial Services (MFS) accounts are now active in Bangladesh among 13 distinct MFS providers. Addressing these applications' usability problems is crucial since they are widely used and play a significant role in our everyday lives. Given that this situation involves sensitive data and financial activities, usability is very crucial. To handle their financial transactions, users must have confidence in the application's simplicity and security.

In determining the usability and effectiveness of an application, user interface design plays a crucial role. An application must have a well-designed interface that is easy to navigate or use to ensure users can stay motivated and continue using the application.

We have chosen the popular MFS app bKash for this project. Our motivation is to increase usability and improve the overall user experience and satisfaction with the application. Our target is to make the application more user-friendly, efficient, and effective. This can lead to increased user engagement, retention, and ultimately, more successful financial transactions.

Progress:

So far we have collected the initial data through surveys and brainstorming to identify the pain points and the areas where we can improve. Then we analyzed the data and built a prototype with the new design. After that, we performed Moderated Usability testing with 10 users. The details are discussed below.

Initial Data Collection:

Our team collected the initial stage of data in the first set of questionnaires and surveys to determine what challenges customers were having with the current bKash app. The goal was to learn more about how participants perceived, expected, and needed the bKash app. Data was gathered primarily using two sorts of methods:

- Online surveys
- In-person interviews

Our team performed 2 interviews and an online survey with 28 individuals to learn more about the design, usability, and user experience of the bKash app. To better understand user pain points, we tried to engage people with a range of ages, educational, and professional experiences.
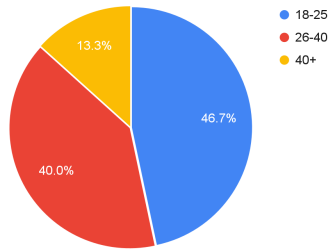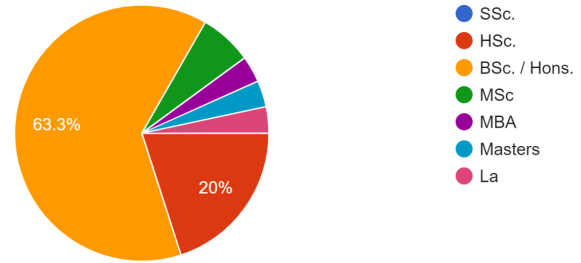
Fig: Age range

Fig: Educational level

Some of the survey questions are listed below:

1. What are the features of bKash you use most often?
2. What are parts of the bKash app that you find confusing or difficult to use? (i.e. difficult to find transaction history, too many options, etc.)
3. How intuitive do you find the layout of the bKash app?
4. How satisfied are you with the font size and style used in the bKash app for the following elements?
5. At first glance, what do you expect from the 'inbox' feature of the app?
6. Have you ever used the bKash menu? If your answer is yes, for which purposes?

Pain Points

From the initial data collection, we shortlisted 5 main pain points:

1. Too many options together make it confusing for the users and they often do not find the most frequently used buttons easily.
2. Finding transaction history and statements is difficult for most users. The 'inbox' button is confusing.
3. Scrolling unnecessary offers/ads in the middle of the screen is distracting. Also, it takes attention away from the main functionality.
4. It is needed to press 'tap to see balance' multiple times, as it is difficult to press it in that tiny area.
5. bKash logo is actually the 'Menu' option. It is very confusing and most often people do not even know that they can find the menu by clicking the logo.
6. The 'Suggestions' and 'My bKash' sections have horizontal scroll which is a bad practice and frustrating for the users.
7. The profile information updating option is quite challenging for a new user.

8. The 'Service' options are grouped in 2 different sections and in 2 different places on the screen which can be confusing because some users may not know that the second section exists.

Improvement scopes:

Based on the pain points identified in the initial survey, we have compiled a list of possible modifications to improve the user experience of the bKash app. These modification ideas were determined from the suggestions of the survey and also from the brainstorming session by us to resolve user problems and deliver a more seamless, user-friendly experience.

1. The overall UI should be less cluttered. The main features are to be properly highlighted.
2. Transaction history should be easily accessible and prominent.
3. Better position for 'tap to see balance'.
4. Better icon for the 'Menu' option which will be more intuitive.
5. Numbers that were recently/regularly used for transactions should be shown on the homepage so that future transactions can be completed with a single press.
6. Better use of the bottom navigation bar.
7. Offers can be put together in the same space instead of multiple places which is disturbing to the user.
8. Less used features should be placed together and made less prominent.

Prototype

We designed a prototype for the bKash app after carefully considering the pain points and suggestions discovered throughout our initial investigation stage. Since other design components like icons, typography, and colors were outside the purview of our research, we only concentrated on changing the app's layout. Through the prototype, we tried to address the main usability problems found in the research.
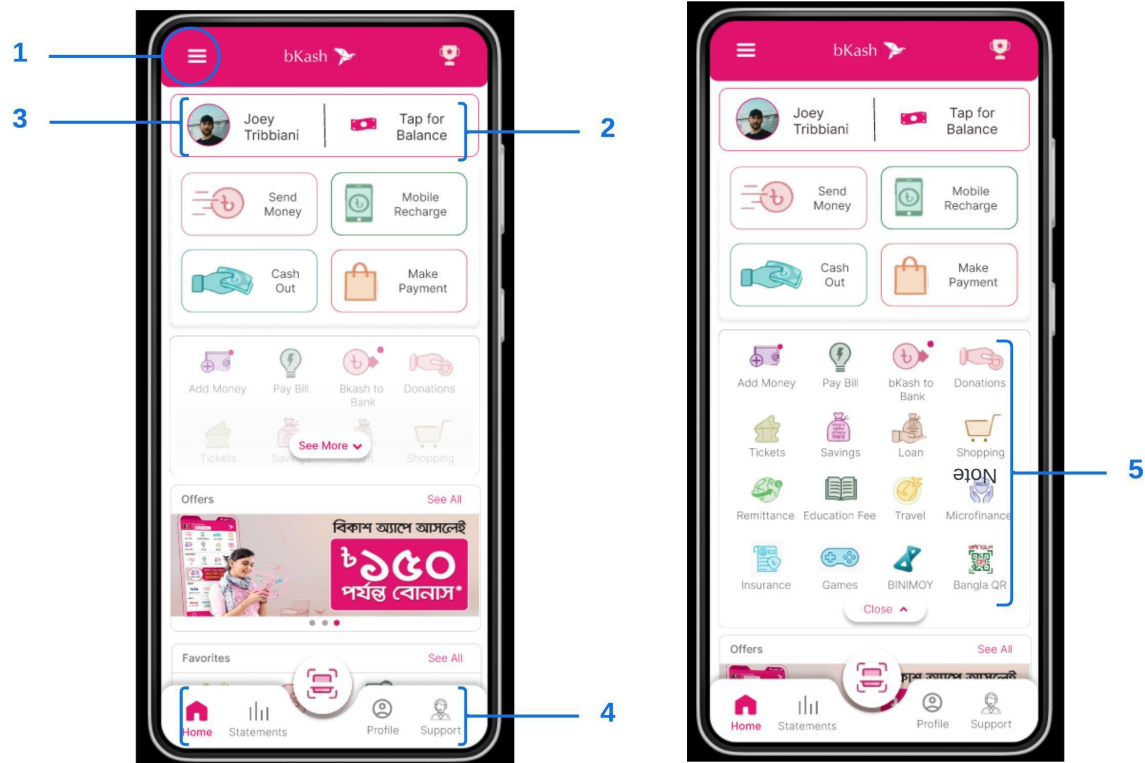
1

We have updated the menu icon. Previously it was the logo of bKash which was confusing. Now the logo is separated and the menu button is more accessible and visible.

2

We have made the tap for the balance section larger to ensure ease for the users.

3

Changing the profile information can be done from this section. And also from the bottom navigation bar. Previously it was in the settings option in the menu bar which was extremely confusing for users.

4

We have tried to make better use of the bottom navigation bar. There are 5 options: Home, Statements, QR scanner, Profile, and Support. 'Home' can be used to land on this initial landing page from other pages. The 'Statements' button will take the user to the transaction history and transaction summary page which is shown in Figure (a) below. The QR scanner option is kept the same as before. From the 'Profile' button, the user can update their profile information. The support page contains the helping options: Live Chat, Email, bKash Map, and Discover bKash. It is shown in Figure (b) below.

5

All the other services are grouped here so that users can find them in one place instead of scrolling through different sections.
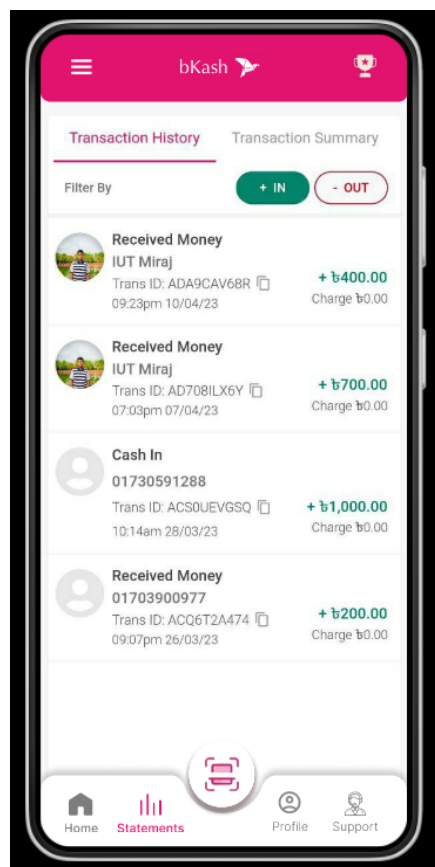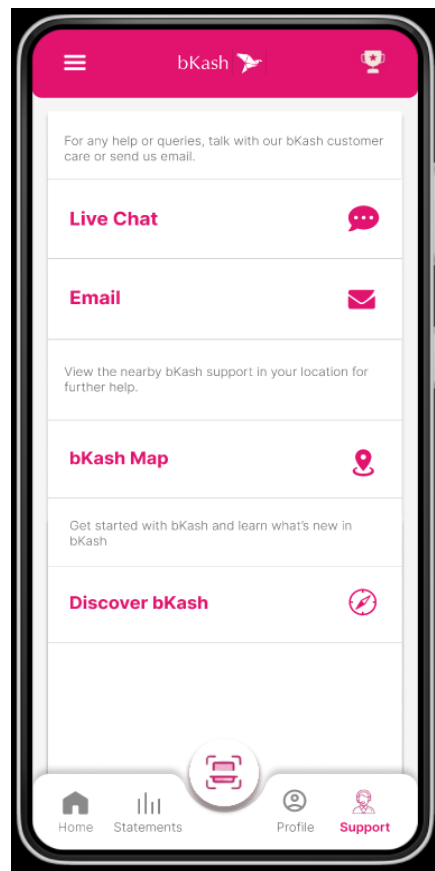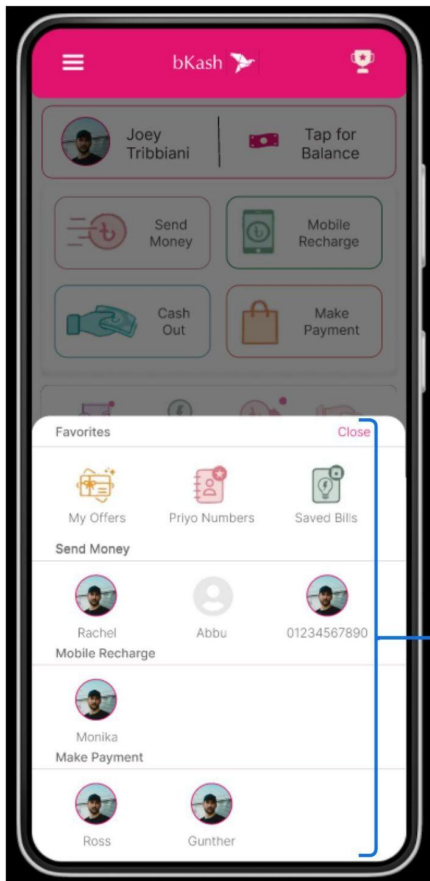

Fig (a): Transaction History   Fig (b): Support page

6 —

7 —

6

We have changed the header from 'My bKash' to 'Favorites'. The recent numbers are categorized based on the activities. Previously all the numbers were kept side by side which was confusing to the users. But now the regular contacts are grouped separately based on the activity performed with the contacts.

7

We have added a 'See all' button here instead of the horizontal scroll of the previous design. Horizontal scroll is a known bad practice that causes frustration while using the feature. So, from 'See all' users will see a list of the features altogether.
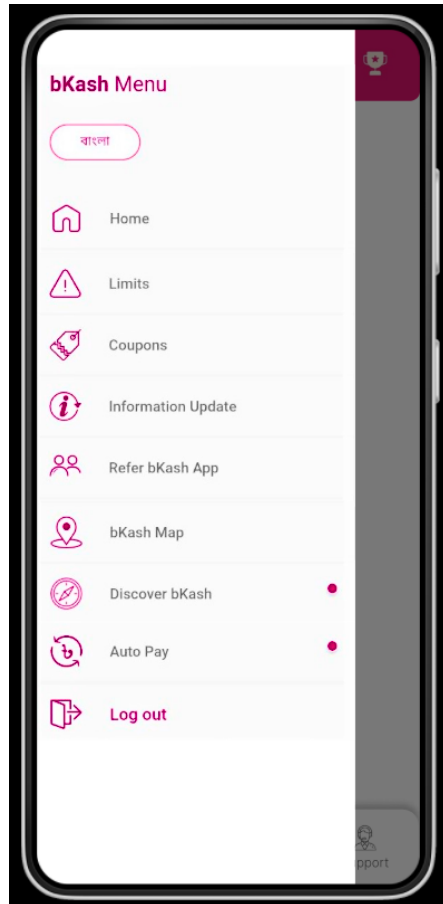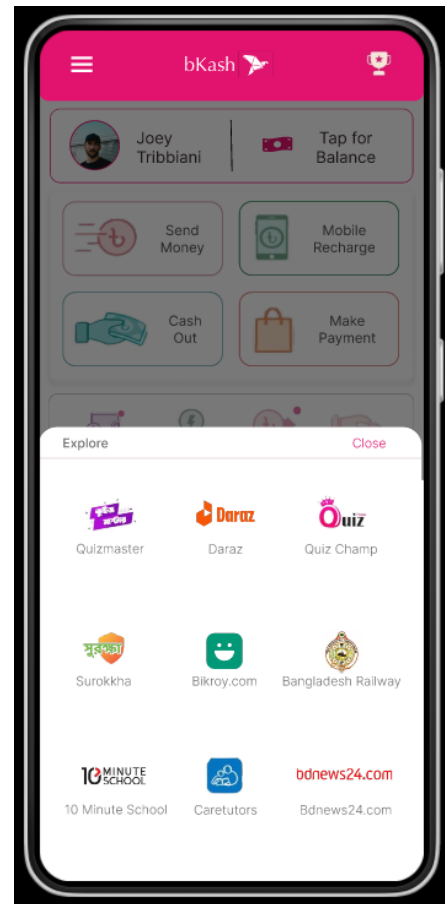
Fig: Updated Menu   Fig: Explore section

Here is our updated menu and the explore section after clicking 'See all'. Besides changing the menu icon, we have updated the menu options. We have removed the unnecessary options we have already incorporated in the home section and the bottom nav bar. But we have kept some common options like bKash Map and Discover bKash in here even though they are now added in the 'Support' button of the bottom nav bar. This is done considering the ease of users who may try to find these options in the menu first.

In the Explore section, the options are shown in a user-friendly way. If more options are added, we can simply add an inner scroll option which is very handy. Horizontal scroll in this scenario would cause difficulties for the users.

Usability Testing

A crucial stage in verifying that a product is user-friendly and operating as intended is usability testing. In order to find any usability problems or potential areas for development, the procedure involves observing participants as they engage with the product. However, because of the complexity of financial transactions and the requirement for security, testing a mobile banking application like bKash offers particular difficulties.

Our team conducted usability testing for bKash by interviewing 10 users via Zoom meetings in order to get over these difficulties. At first, we asked the participants to complete a given set of tasks. To evaluate the effectiveness of our design modifications, we tested the modified prototype independently from the original app. In both cases, participants were asked to complete the same set of tasks. To measure the performance we have tracked 3 metrics:

- Time to complete the task
- Number of taps/clicks
- Number of errors that occurred while doing the task

Tasks

The tasks are given below:

1	Change your profile name.	While creating your bKash account, you made a spelling mistake in your name. Now you want to update your profile name. What steps will you take?
2	Check Balance	How will you check your bKash account balance?
3	Pay insurance fee	Suppose, you want to pay your monthly insurance fee to "MetLife insurance" through bKash. How will you do it?
4	Get a summary report	You want to check the summary of last month of the transactions you made. How will you do it?
5	Transaction History	You usually pay your Wi-fi bill through bKash. But you have forgotten whether you have paid the bill for the last month. How will you check it?
6	Search for nearby merchants	You want to check the nearby merchants in your location, how will you do it?

7	Send Money	You want to send money to the last person you sent money to. how will you do it with minimum taps possible or if I may say in the quickest way possible?
8	Refer bkash app to a friend.	You want to refer bkash app to your friend from the menu. How will you do it?

In order to examine customer satisfaction with our prototype somewhat more thoroughly, we also ran a survey with follow-up questions. The replies to this survey will help us better understand how user-friendly our design is and help us see any potential problems or opportunities for development. Also, we have taken consent from the users to use the data from the recordings through this survey form.

Collected Data

The relevant data that we have collected can be found in the following spreadsheet:

https://docs.google.com/spreadsheets/d/1wlTL2z0T_ij3hibcCMALNj6SMXp4x_UHWhewBWbcNVw/edit?usp=sharing

All the collected data has been added to this spreadsheet in different sheets. The sheets in this link are listed below:
1. bKash App User Experience Survey (Responses)
2. Usability Test for redesigned bKash layout
3. Follow-up Survey for redesigned bKash (Responses)
4. Usability Test for original bKash layout
5. Follow-up Survey for original bKash(Responses)

The interviews have been recorded as well. The recordings have been added to this drive folder:
https://drive.google.com/drive/folders/1s91y19Io9Dmt8dL5h0TLA_1YlGQm5Zrp?usp=sharing

We will be using all of these data for further analysis of our redesign.

Challenges

1. **Limited access to different user groups:** Users of bKash come from a variety of backgrounds and have varying degrees of education, financial status, and technological proficiency. One of the biggest problems we had was finding a sample of users who were representative of the population. However, we were able to somewhat generalize our target audience by incorporating different professionals in our initial survey.

2. **Geographical Spread:** Since bKash is a widely utilized payment app in Bangladesh, it is essential to carry out usability testing in several cities to compile a representative sample of users. However, for the intent of this study, we focused only on Dhaka, the capital and largest city of Bangladesh.

3. **Biasness**: Since most of the participants have already used bKash while trying to use the redesigned bKash app, they relied on the original layout and performed the task accordingly. In order to overcome this, we tried to include participants who have never used bKash before. Another bias is, after performing the tasks on any of the designs, participants tend to follow the same steps for the next design. To remove this bias, we followed a **between-subjects design.**