Review Article   Open Access

Designing Financial Fitness Smartphone App: A Case Study

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ABSTRACT
This paper presents a case study on the "Financial Fitness Smartphone App," designed to enhance financial literacy in India. It addresses the low financial literacy rates among adults and leverages the widespread use of smartphones. The study involves research with stakeholders and potential users to identify needs like digitalized learning and accessible expertise. The app incorporates features inspired by platforms like Quora, YouTube, and WhatsApp, focusing on user-friendly design and varied learning formats. The paper concludes with future plans for refining the app through further development and usability studies.

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Introduction
India, being one of the fastest growing economies in the world, is experiencing a radical technology transformation as smartphone ownership and data usage have exponentially increased, with penetration even into low-income areas in urban India. However, when it comes to educating the adult population about finances, very few organizations have been successful in accommodating the needs of the people who are not exposed to the foundational financial literacy concepts. According to the Financial Literacy and Inclusion in India Survey Report, 2019, only 24% of Rural and 33% of Urban Respondents were found to be Financially Literate. Despite that, a growing number of studies have concluded that people between the age group of 18 and 40 lack knowledge of personal finance [1].

"Financial education is the process by which individuals improve their understanding of financial products and concepts; and through information, instruction and/or objective advice develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being and protection" [OECD, 2005]. An S&P survey reveals that over 75% of adults in India lack a basic understanding of financial concepts, with the situation being worse among women, where over 80% are financially illiterate. This widespread lack of financial literacy leads to poor financial decision-making among many Indians. These decisions not only adversely affect the individuals involved but also deter potential users of financial products and services. Therefore, emphasizing financial education is crucial to enhance financial inclusion and promote economic prosperity among citizens [1,2].

Anyone in the age group of 18 and 40 needs to gain financial literacy, given the lower level of financial literacy in India, whereas many positive things can be obtained from financial literacy. We need a solution based on modern technology that allows easy access to financial knowledge. One of the interesting and efficient approaches to encouraging people to change their behavior for a better financial life is through the mobile application [2,3].

Various organizations in India provide financial education and support with microfinance solutions, and as a mediator between mainstream financial organizations, and previously excluded communities. In this paper, we present a financial literacy application–Financial Fitness (FF)–designed to connect one such mediating Finance consulting organization with its target users, mainly small business owners and in- dividual professionals [4]. Small businesses and individual professionals need financial services tailored to accommodate their income patterns, such as highly variable daily, cash incomes and literacy levels. We applied user-centered design principles to achieve usability goals and user experience goals. The final result of the interaction design is in the form of a medium-fidelity prototype based on Google's Material Design guidelines, which is carried out while keeping the end-user needs at the center [5].

Research
We conducted 5 informal stakeholder interviews with the Financial Fitness staff and detailed observations of the Financial Fitness Experience seminar followed by 9 unstructured interviews with the participants.

User Needs
• **Digitalization**
Currently, the financial literacy seminars are being con- ducted in a big conference room which comes with all the constraints of a typical classroom learning. One of the common asks was around scattered data in the hand-written notes as well as the digital tools both educators and learners use in this process. Almost all educators and learners expressed a need to digitalize their course materials as it would be easy to interact with the information and

retrieve it as and when required. One of the participants mentioned, "I would like it to be as easy to use as the WhatsApp application on my phone."

• **Learn from Anywhere**

In the existing approach, Educators organize a 3-hour long seminar at a particular location on a particular date. It creates many logistical challenges for organizers including the decisions about venue, food, seminar outline, keeping the log of attendees, and tracking course sign-ups, to name a few. Learners also expressed their challenges with long commute times and conflicting schedules. Both sides mentioned that they want a way to transform this synchronous and in-person learning into an asynchronous learning model. Learners wished to learn from anywhere and at their own pace.

• **Easy Access to Expertise**

Today, learners find it difficult to follow up with experts. Outside of attending the seminars the only way they can access the expertise of Financial Fitness educators is by visiting in person during the office hours and signing up for personal consulting. From the business standpoint, it creates another problem for the organization as they have limited resources available and cannot accommodate all requests causing over-booked calendars and delays in appointments. One of the learners stated, "by the time I get a chance to speak with an expert, I either have an answer from other resources or I lose interest in the topic because of the delay."

• **Consolidate Information**

The majority of the learners are eager to learn about financial concepts however it involves a multi-modal approach of learning in-person in the seminar, taking notes, reading the books and articles recommended by the educators, surfing through websites, watching videos and maintaining spread-sheets. "If the homework and revisiting all materials doesn't happen smoothly, then there are high chances the learner would feel overwhelmed to manage all the resources and it would be hard for us to retain the client," mentioned the Educator.

• **Networking Opportunities**

Once the Seminar is over, it takes about a month for FF to organize the next workshop. As there have been several batches of students, it becomes challenging for administrative staff to keep track of every attendee, manage their coursework records and follow up with appropriate information. Also, learners wish to connect with other participants, make friends and grow together by helping each other out.

Design Requirements

Based on the research finding, we defined a list of de-sign requirements that would address the goals of both parties–Financial Fitness (educators) and its beneficiaries i.e. small business owners and salaried employees (learners).

DR1: Design a user-friendly mobile app for both educators and learners

DR2: The app should allow asynchronous, self-paced learning for FFE and FFI levels

DR3: The app should support and foster the educator-learner relationship

DR4: The app should help users consolidate the scattered information in one single place

DR5: Alongside educators, learners should be able to communicate with other learners within the app

Design Inspiration

Quora application is one of the popular interaction patterns in education technologies to connect educators to learners. It is based on an open learning model where anyone can post the question and anyone can answer the question. This application's home page is inspired by Quora's design paradigm.

For the Video interface, we took inspiration from the YouTube application that our target users are familiar with.

For messaging interaction patterns, WhatsApp stood out as the guideline as the majority of the adults are already part of Financial Fitness WhatsApp groups.

Design

To build this financial literacy application, we used an iterative design approach, which included interviews with several stakeholders, educators and learners, a selection and implementation of Google's Material design guidelines, and an initial design followed by more feedback and evaluation from potential users. We received feedback on the layout, choice of colors and additional content to be shown to educators. Some of this feedback was incorporated into this initial prototype. The rest will be addressed in the study's next steps.

Designing apps for a target audience with a range of financial and digital literacies introduces tensions between visual interface design and the complexity of information conveyed. In this section, we present our designs and discuss some of these challenges. We found we could communicate familiar information, such as daily questions and answers, upcoming events, and resources, easily to all users.

• **Landing Page and Onboarding Flow**

As shown in Figure 1, the app opens up with a splash screen showcasing the Financial Fitness logo and tagline. For the first-time users, there would be a quick 5-step onboarding flow which can help in introducing key app features.
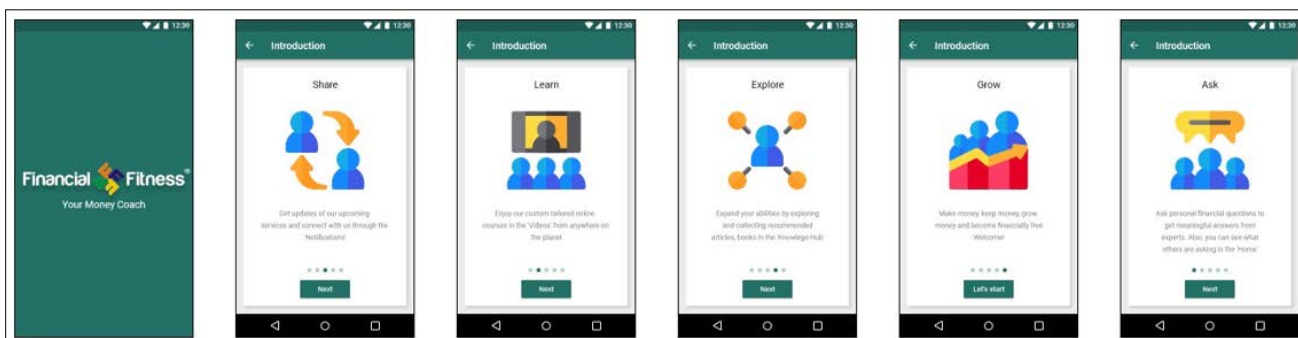

Figure 1: Splash Screen and Onboarding Flow

• **Home Screen**

The bottom navigation bar will have 5 menus (See Figure 2). The landing page or home screen will be the default page users will see. Similar to the Quora application, it will have a timeline view of all the previously asked questions and their answers to foster open learning. The questions and answers will be separated based on the topics of Trending, Entrepreneurship, Real Estate and Equity. A learner can click on the Floating Action Button (FAB) to add a question that they want to get answered by the FF expert. As they tap on the '+' button, the next screen appears with a dropdown to select the topic and a text input box that users can use to type their questions. If a user wants to keep the question confidential, th ey can select the 'add anonymously' checkbox.
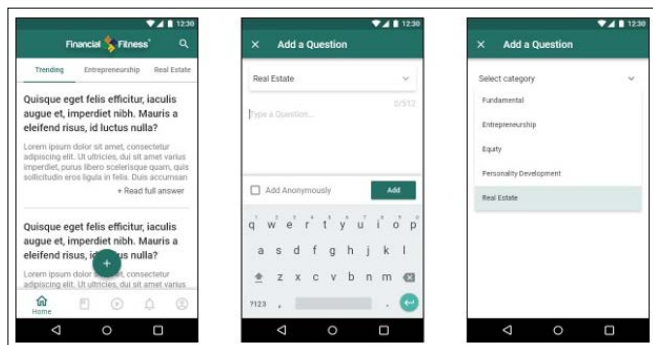

Figure 2: Home Screen

• **Knowledge Hub**

The next menu we propose is the Knowledge Hub to offer curated Blogs, Books and other relevant resources (See Figure 3). Users can select a blog written by educators or a book from a book collection and start reading it in the app itself. Thus, they can mark their favorite reads in 'My Collection'. Thus, they don't need to look at multiple resources available on the internet.
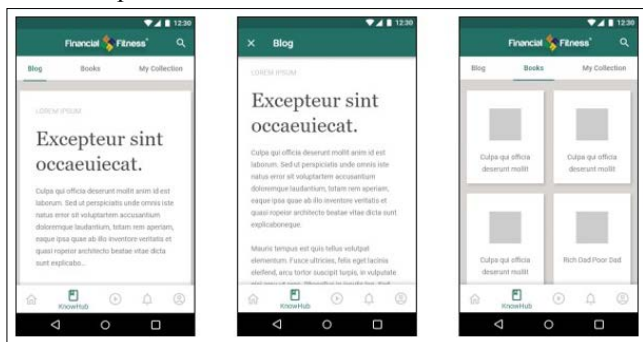

Figure 3: Knowledge Hub

• **Videos**

The most important menu is the videos where the app can display coursework materials in the video format that educators have posted (See Figure 4). Learners can select the topic from the tabs at the top of the screen. They can self-pace their learning without relying on any physical constraints. This screen is based on the standard design pattern with a video viewer, title, description and interactive buttons that Google's Material Design has recommended.

Thus, the first three menus in the navigation bar offer a variety of learning formats to enhance the knowledge-sharing, reading and audio-visual coursework experience between ed- ucators and learners.
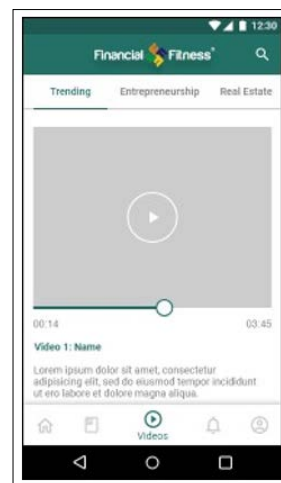

Figure 4: Videos

• **Notifications**

The notifications menu will contain all the updates about upcoming seminars, new additions of blogs, books, questions and answers. Also, the Floating Action Button with a phone icon will allow users to view the contact details of the Financial Fitness organization such as a phone number, email address, physical address and social media links. This can serve as a digital business card for educators and important information at hand for learners. (See Figure 5).
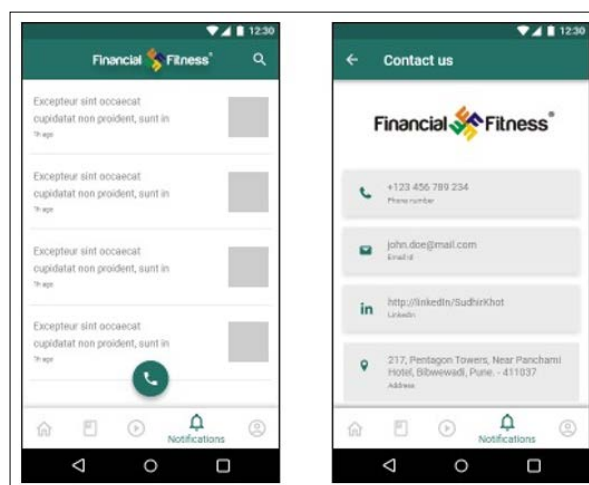

Figure 5: Notifications

• **Profile**

Profile menu as the name suggests will have the user's per- sonal information such as name, address, occupation, course level, etc. Also, users can view the history of all the questions and answers that they have posted on the timeline. The messages tab will allow users to enter their class and connect with other learners and communicate within the app. Thus, they won't need to rely on WhatsApp or any other social media application for these conversations. (See Figure 6).
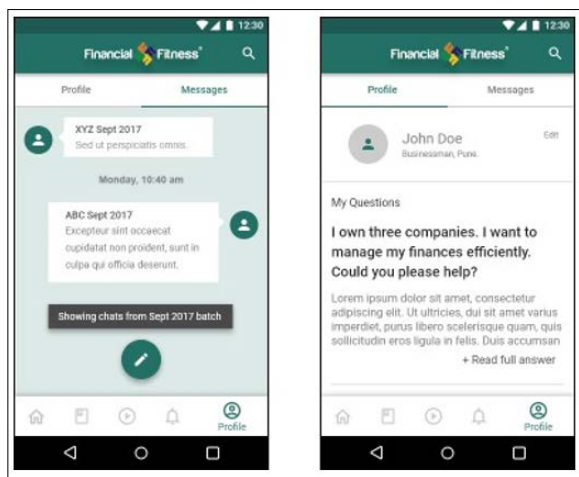
Figure 6: Profile

Future Steps

In the study's following phases, we plan to develop a high-fidelity prototype and conduct a full-scale usability study to evaluate the alignment of business needs and user goals with mobile app design. Such a study would include contextual inquiry of the learners and educators along with the heuristic evaluation of the application interfaces. During the usability study, we will ask users to complete a workflow using the prototype and observe them to collect quantitative data in a moderated session. We will then ask them to evaluate the inter- face qualitatively for interactivity, functionality and learning- process utility. Experts in app design and development would be invited to do the heuristics evaluation. The findings from the usability study will provide deeper insights into the financial literacy education process and contribute to the development of a working mobile application. In the future, we would also like to explore an AI-assisted learning approach for this application.

Conclusion

In conclusion, this study on the" Financial Fitness App" demonstrates a significant stride toward improving financial literacy in India, particularly among adults. By leveraging technological advancements and user-centered design principles, the app aims to address crucial needs in financial education. It offers an innovative approach to learning, making financial knowledge more accessible and interactive. The study underscores the importance of such digital tools in empowering individuals with financial skills and knowledge, ultimately contributing to their financial well-being and economic growth in the country. The next phase of development and usability studies promises to refine the app further, ensuring its effectiveness in meeting the financial literacy needs of its target audience.

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