OLD TECH THAT PROVIDES MODERN SOLUTIONS

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Introduction

In today's word where technology is advancing at an unprecedented rate, it can be easy to forget about older technologies that still have relevance in our daily lives. One such technology is QR Code, technology that is rapidly shaping the digital arena.

A quick response (QR) code is a 2D type of barcode that can be read easily by an imaging device such as a smartphone camera and which stores information as a series of pixels in a square-shaped grid/matrix. While they may look simple, QR codes are capable of storing vast information or data. But no matter how much they contain, when scanned, the QR code should allow the user to access information instantly, hence why it's called a Quick Response code.

Digital technologies have the potential to promote financial inclusion by providing new channels for accessing financial services. In most of African countries, access to financial services is still a major barrier but with the rise of mobile money technology, the opportunity to access finance has increased significantly. Mobile money has transformed the landscape of financial inclusion and for the better enhancing the inclusion of unbanked segments of the population into formal financial services in most of developing countries. Now sending and receive money has become more easier than ever before.

'One Size Doesn't Fit All' sending money to students particularly those in boarding schools has continued to be a challenge and this bring our research question of how technology can promote financial inclusion of unbanked and/or underserved students particularly those in boarding schools across Tanzania?

Fig 3. Justinmind development environment

Method

Human Centered Design was used as a methodological approach to guide our research and development process. Human Centered Design (HCD) is an iterative problem-solving approach that involves understanding the needs, behaviors, and preferences of end-users or stakeholders. There are several models that systematize a human centered design process. In this project we use a three stages framework: clarify, develop, and test. Then the project was conceptualized into five objectives as stipulated in the figure below and each objective was assigned a corresponding method for collecting data.
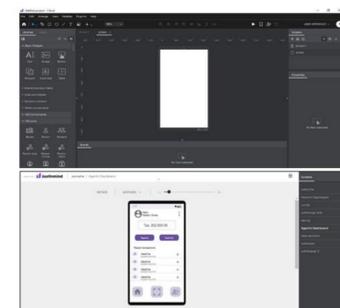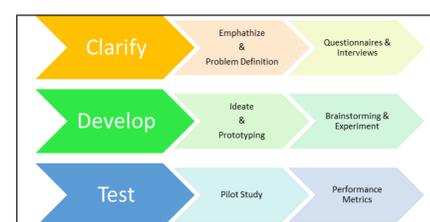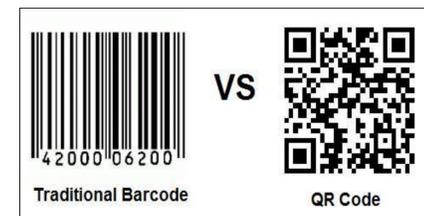
Data Collection Methods

This project used two data collection techniques, these were Survey and Experiments

Survey

We conducted extensive research on the problem of financial inclusion among students in boarding schools with the aid of a questionnaire designed to gather information on how students access and manage their pocket money, as well as any challenges they face. A total of 250 questionnaires were distributed to a sample of 5 randomly selected boarding schools around Tarime.
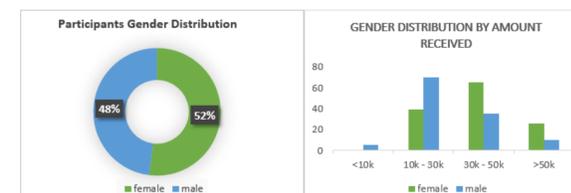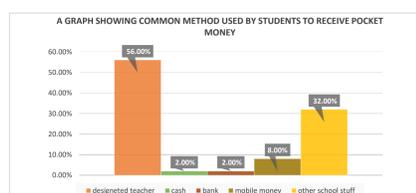
In addition, in-depth interviews were conducted with a sub-sample of students who participated in the survey. The interviews aimed to gather qualitative data and gain a deeper understanding of the problem by exploring the experience of students in accessing and managing their pocket money.

•We started by sketching a rough layout and screens of the app using paper and colour pens. Sticky note was used to provide details of clickable buttons.

•We review and refine the designing and drawing out a final User Interface to be developed.

•We install the "Justinmind" software in a window computer, setting up the environment for development and creating a basic app with core functionalities. Below are some screens from the app

Data Analysis and Findings

Data from survey was analyzed and results were as follows; out of 250 questionnaire respondents 52% were female and 48% were male. All respondents claimed to receive pocket money were 43.6% receives between 10,000 and 30,000, 40% receives between 30,000 and 50,000, 14.4% receives above 50,000 and only 2% receives less than 10,000.

FEATURES	KPI		
	Desirability	Functionality	Ratio
Fast	5	5	1
Safety	5	5	1
Simplicity	5	5	1
Withdrawal Limit	4	5	0.9
Saving	5	5	1
			4.9

CHALLENGES	CASH	BANK	DESIGNETED TEACHER	SCHOOL STUFF	MOBILE MONEY
Theft	•		•		
Overspending	•				•
Incomplete amount	•		•		
High charges		•			•
Delay		•	•	•	•
Suspension		•			•

Conclusion

In conclusion, our research has revealed that most of the students (young adults) are financially excluded which means they rely on cash economy, have no basic financial account and they have no or restricted access to financial services so they are considered a difficult market to serve in terms of financial service provision. On the other hand, they are a growing segment of the population who can be nurtured and financially educated to drive the financial future of Tanzania.

With this in mind, we have designed not just a simple money transfer app, but a comprehensive system aimed to empower and equip the unbanked student population with a tool they need in accessing and managing their finances, develop responsible spending behavior and essential money management skills, thus enhancing their financial literacy and resilience.

By fostering financial inclusion and literacy, we aspire not only to improve the lives of individual students but also to contribute to the development of a more financially inclusive society.