

DIGITAL COMMUNITY CURRENCY USABILITY FROM THE USER'S EYES: CASES OF SARAFU AND MAENDELEO TRADING CREDIT (MTCr.)

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ABSTRACT

Day by day, users demand systems that fulfill their expectations. Often, users of a system are dissatisfied because systems do not meet their expectations. Indeed, user expectations vary, including unrealistic expectations –those that are without regard for constraints such as budget, time, manpower and so on. Even so, place of users' involvement in system development and implementation need to be recognized.

Usability is an important aspect in system development and implementation. It is necessary to have an elaborate understanding of usability from the 'eyes' of a user. This study adopted the qualitative research design that employed triangulation. Two contemporary DCC cases of interest in this research study are: MTCr. in Kisumu; and the Sarafu in Nairobi. This paper espouses usability definitions and associated attributes. Specifically, this study established the meaning of digital community currency from the lens of the users.

KEYWORDS

Community Currencies, Usability, User

1. INTRODUCTION

Kenya's Information Communication and Technology (ICT) sector has continued to witness strong growth as the demand for ICT services. As at the end of 30th September 2020, the number of active mobile subscriptions (SIM Cards) stood at 59.8 million from 57.0 million subscriptions reported in June 2020. This translated to mobile (SIM) penetration of 125.8 percent during the period under review. During the review period, the total broadband subscriptions increased by 8.5 percent to record 24.6 million, from 22.7 million subscriptions posted during the preceding quarter. Mobile broadband subscriptions accounted for 97.4 percent of the total broadband subscriptions. This rise is attributed to the COVID-19 pandemic [1]. Some other factors that in time have contributed to mobile penetration in Kenya include: increasing population coverage of 3G and 4G networks; availability of affordable smartphones and data plans; and increasing consumption of e-commerce; e-government; social media and other online content [1]

ICTs have increasingly become important mediation tools that grassroots organizations are towards fostering inclusive economic growth within various communities they mediate [2, 3]. Community currencies are since being promoted as potential tools for including such populations

in the inclusive economic growth agenda [2]. Besides, being viewed as grassroots solutions, they act as a fundamental step in providing underprivileged populations the opportunity to access ICTs, particularly the mobile phones and internet. This partly demonstrates the importance of ICTs and how integral they are in the vital steps towards effective inclusion [5][6][7]. Even so, the inability of the underprivileged segments of the populations to access and use ICTs is a matter of concern world over including Kenya [1, 7].

Community currencies are increasingly facilitating peer to peer (P2P), Business to Peer (B2P), Business to Business (B2B) transactions in different contemporary settings both at global and local levels [3][4][2]. This digital revolution is increasingly bringing about fundamental changes to traditional monetary exchange and operational business models. Just like the developed countries, developing countries including Kenya are still navigating the utilization of community currencies [3] [4] [5] [6].

Importantly, community currencies vary widely in the way they are set up and run; They may be designed as printed vouchers or as digital credit or token. Inescapably, this comes along with new challenges around their creation and maintenance. Little literature on DCC taxonomies and arising DCC conflicts attracted further classification of DCCs based on the platform architecture, transactionality, governance, virtuality - Restrict, Intensive, Proprietary and Closed [5] [4]. Of interest in this study is the closed group because they operate in a closed system; they support B2B or P2P exclusively; they are largely designed to support the interests and goals of the local traders and for social purposes; they rely on technology that are less complex in architecture. The closed category of DCCs provide basic technological infrastructure that can support DCC transactions without exchanging them for conventional currency, trust being a key construct when using them within the closed networks where they are dedicated [5] [4] [6].

Some of the ways in which the underprivileged segments of the population have been presented with opportunities to better their lives, include business expansions, asset acquisition, access to services, access to basic needs, social bonding, savings and family cash flow management, business cash flow management (including times of crisis like during the COVID -19 pandemic) [7].

1.1. Usability and CC Definitions

There are a variety of models and technologies around the setting up and running of community currency. Contributing factors partly include people related factors, process related factors, and technology related factors. Despite the all these, it is important to acknowledge all these worthwhile efforts geared towards establishing the meaning of digital community currency from the lens of the users [8] [9] [5] [7].

In systems design, usability of the system is a key objective [10] [11]. Systems' design is both conceptual and functional [10]. That is, can be partly based on the responses from users/participants in a systematic study. In such a study, user responses may include distinguishing system features and normally they express them when they interact with the system[10]. Users tend to express system features or system design in terms of needs and wants, that they may somewhat be unclear, 'messy', or unfulfilled expressions and words. In this study, a user is viewed as an individual or a group of individuals in community where DCC is in operation. User characteristics vary in terms of demographic characteristics and experiences [10] [11] [4] [5].

Usability is a term that is widely used in system design. It may bear different meanings for different people and/or even organization including those that deal with software developments at

different scopes [10] [11]. The definitions of the term usability that is most widely used at present are those of the International Organization for Standardization (ISO), and those of Institute of Electrical and Electronics Engineers (IEEE) [11]. ISO defines usability as the extent to which a system, product or service can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use. Looking at the combination of these three things - users, goals and context of use is key for whichever systemic reason that usability is being considered. usability has so far been used as a qualifier to refer to the design knowledge, competencies, activities and design attributes that contribute to usability [12] [13] [10] [14]

Usability being affected by different factors as seen earlier on, there's need to call for continuous proposals towards further research in terms of newer or alternative constructs to measure usability. Discrepancy in usability constructs has been linked to unstable results that cannot unify scientific knowledge around usability, and as such, further researches should come in handy in reducing this discrepancy. Particularly, those that are widely accepted and applied in practice. [11] echo these sentiments by pointing out that, indeed some literatures have defined usability in brief, in ambiguous terms and in informal terms, translating in to a supposed 'dead end' situation [10] [14].

Different definitions of usability may include different parameters such as: user's satisfaction, type of errors, types of tasks to be accomplished. quality of system, technical factors, technological features and aspects, quality user interface and interface design, functional design, data and metadata, and computer systems and networks, user's ability to acquire usable system, users' ability to complete a given task within a predetermined amount of time, ease with which a system can be learned, ability to be evaluate throughout the development life cycle, extent to which a system is effective, learnable, flexible and subjectively pleasing, just to mention a few aspects - can further be categorized further under two key determinants of usage: perceived usefulness; and, perceived ease of use of the system [10] [11] [14]. However, in this particular study, the focus is on definition of usability from the user definitions of the DCCs.

2. METHODOLOGY

The study used co-production Theory and Trust Theory; it adopted qualitative research design; it was an ethnographic study that ran for three months. The participants included active MTCr. and Sarafu users. Data collection tools used included Key Informant interviews (KIIs), focus group discussions (FGDs) and participant observation. Other information included online journals and books. To ensure trustworthiness and authenticity of research instruments, the researcher relied on triangulation of data collection methods. Data was analyzed using thematic analysis through coding and chunking, categorization into themes and sub-themes.

3. FIGURES AND TABLES

Table 1: Table Summary of Key themes

	Key Themes	Sub Themes	Research Question
1	Technology related factors	Transationality Platform Architecture Virtuality Governance Platform Architecture	What do you understand by MTCr./Sarafu/(tokens/credits)?
2	Process related factors	Usefulness Effectiveness Efficiency Satisfaction	What can you say about the features of DCCs?/ Can you transact (buy or sell goods)?
3	People related factors	Ability Capability Past experiences Culture	What do you think has undermined the continuous usage of DCCs?
4	Perceived ease of use	(Verbs demonstrating ease in executing tasks using DCC features)	What is your experience using the MTCr./Sarafu tokens? Individual and group goals
5	Perceived usefulness	(Verbs outlining DCC benefits)	What is your experience using the MTCr./Sarafu tokens? Individual and group goals
6	Demographic factors	Age Gender Occupation Educational background Income level Marital status	What do you think has undermined the continuous usage of DCCs?
7	Trust	(Verbs outlining confidence in DCC)	What is your experience using the MTCr./Sarafu tokens? Individual and group goals
8	Acceptance	Motivation Demotivation	What can you say about the features of MTCr. tokens? Can you transact (buy or sell goods) personally by your phone or by assistance group and individuals?

4. FINDINGS AND DISCUSSIONS

4.1. Demographic Factors

Field interview data revealed some demographic factors influenced how the users defined DCCs – the way they perceived DCCs influenced DCC use and definition of DCCs. Demographic factors as motivations differed from one setting to the other, from one DCC to the other and from one individual to the other, and from one group to the other. Even so, most of the users acknowledged that DCC was in deed useful in their communities because they provided flexibility, efficiency, effectiveness, reliability, availability among many. The users had a strong opinion that the DCC was meant for all the community members who are willing to engage with them, whether young or old, whether educated or not educated, whether ‘rich’ or poor but mostly

they agreed it was of most advantageous to the poor members of the community. The data also speak to the little co dependence of DCC usage on background factors.

4.1.1. Age

The study findings show that age was not a determinant of usage. Both the young and old form the percentage of the users. Majority of the users were youth were categorized as youths (18-49). A few of the DCC users were over 50 years. The findings reveal that all respondents of over 18 years with national identification document can register and use the DCCs. The registration is also tagged to the official phone numbers. The study therefore adequately established that the communities perceived the DCC as a technology targeted at their communities as long as they are registered, can engage in trade and that can engage with DCC features.

4.1.2. Gender

The survey data revealed majority of users of DCC were women while a few of the users were men. This data is a reflection of the higher women enrollment rates compared to their male counterparts. From the data, majority of the businesses are women owned. This could partly be a reflection of the women headed households, or that women have larger or multiple social networks compared to their male counterparts, translating to the spread of the DCCs, however, this does not necessarily mean that gender is a determinant of DCC usage and definition.

4.1.3. Educational level

The participants were asked of their highest level of education. The findings revealed that education levels amongst the DCC users were relatively low. Most participants had less and primary school education, a few had the secondary and tertiary education. The study established that those who were more educated and the young were the ones who were either ready to harness the potentials offered through DCC use.

Besides, the study revealed that for the category of users who perceived the process of DCC use as easy, they tend to overcome the challenges around DCC use by applying appropriate remedy or solutions, whereas those who perceive it as complicated tend to limit or discard the DCC use. And as such, the study revealed that remedies around guidance and trainings around DCC use have come in handy. Technology and DCC literacy translates to high rates in phone use.

4.1.4. Language

The key language in use with the DCCs is English. Interacting with the DCC calls for a basic understanding of English. Even so, from observation findings, trainings are done also in languages other than English to ensure clarity and understanding of DCC features and DCC use – Luo and Swahili. In addition, DCC features with tagged number option are consistent overtime as agreed by majority of the respondents through observation and FGD discussions. And as such recall is made easier enhancing the DCC use -Quick recall translates to frequent and fast interactions with the DCC features. Quick recognition and quick recall are key usability heuristics that promote usability of user interfaces (Pribeanu, 2017).

The study findings further revealed that English language hinders some first time users who have no basic understanding of English, but this is well complemented with trusted third parties who assist with transactions and trainings. Users with difficulties perceived the DCCs as systems intended for the young, educated and the affluent, thus underestimating their ability to use the DCCs.

4.1.5. Income Level

When respondents were asked their main source of income, they referred to the various types of businesses they owned. The study findings revealed that there were varied businesses that the participants engaged, with the smallest reeling in income of between KShs. 0-5000 and largest reeling in between KShs. 5001-10,000. Majority of the income levels of the participants lied between KShs. 0-5000, and a few over KShs. 5001.

The participants engage in cross-sectional businesses ranging from locally produced goods and services to those that are sourced outside the periphery in which the DCCs are in implementation. The DCC users are food vendors, grocery vendors, shop attendants, jewellery sellers, water sellers, waste managers, grain vendors among many. Most established businesses owners attributed to the necessity of them sourcing from outside most of their goods from external markets and that their clientele also include people who do not use the DCCs -wholesalers of key food commodities, photo studios, taxi services, cosmetics shops, shoe sellers, carpenters, vendors of metallic good amongst many.

The study revealed that some users perceived the DCC as an innovation for those who were relatively of slightly higher economic status than theirs. They supposed such people in their midst were in a position to make good use of the DCCs. They noted the need of a wider range of services and products as earlier discussed. They also pointed out that for such services and products to be offered, it goes back to seed capital and what an individual can actually acquire stock and offer to community members. They emphasized that such large purchases are only made possible amongst those with little or no worries around seed capital.

Indeed, the basic DCC features are available on both phone types. However, the findings show that most participants using MTCr. perceive that most DCC features being available via smartphones compared to feature phones, they, prefer smart phones over feature phones. Smart phones are viewed as costly to acquire and maintain, but largely possible for those of relatively higher income with surplus to divert towards acquisition and maintenance of the smartphones and in DCC operations. Users who hold such perceptions view economic status as a necessary determinant of extensive use of mobile phone use and DCC. The perception of users on mobile phone features influences the phone and DCC use with one of the outcomes exhibited around DCC definition.

This means that many first time users' opinion on phone and DCC features can be negatively influenced by their personal insecurities around DCC use, literacy concerns, particularly ability to understand language of command, of which is well compensated by trust. Further to be demonstrated under social structures.

4.2. DCC Dimensions

From the findings, one other motivation of phone and DCC use that contributed to user's definition of what DCCs are, is registration of users. There are no stringent rules for DCC registration. The basic requirements for any eligible member for DCC use are: one to be in possession of one registered phone number preferably safaricom line; one to have a working phone; and one is able to trade. These requirements are supposed to foster increased phone and DCC use. Registered phone number is backed by trusted documents like the national ID thus alleviates some of the insecurities as supposed by newly registered users, naïve users and ardent DCC users. In the Kenyan system, national ID is an instrumental document towards acquisition of a registered phone number, subsequently using registered phone number is a basis that assures security in the DCC networks. There are personal data that are tagged to the national document

for ease of identification of citizens. The participants acknowledge this importance in their definition DCCs, as well as the role of registration in the phone and DCC use in their community.

4.2.1. Transactionality

Definition of DCCs can be viewed as a pointer of phone and DCC usage. The explicit characteristics of the conventional money were not listed out by participants. However, some respondents in their definition of DCCs, likened them to the conventional currency and continued to state the importance and benefits of using the DCCs, of course with emphasis at the local scope. Besides, in the Kenyan context, conventional money is becoming increasingly mobile. This widespread acceptance of mobile money is attributed to characteristics such as efficiency, availability, transferability, valuable, supports transactions in any business amongst many others. From the findings of the study, this aspect also seemed imperative in the acceptance of phone and DCC use. The respondents likened this virtual aspect of DCCs to those of other existing virtual financial services. The respondents viewing DCCs as alternative financial exchange system which exists alongside conventional currency, has also seen them increasing their usage of the DCCs.

Money is generally viewed as an economic unit that functions as a generally recognized medium of exchange for transactional purposes in an economy. It functions based on the general acceptance of its value within a governmental economy and in the predefined borders. The current value of money is derived from the willingness to agree to a value and rely on it for use in transactions - exchange that economies and individuals intend to hold, a unit of account, store of value, and a standard of deferred payment (Begg et al, 2002). With these in mind, findings of this study also shows that if the DCC users can relate to some or all of these conventional monetary aspects, then acceptance and usage of DCCs is heightened.

In addition, the respondents defined DCCs by the social and economic benefits that they offer towards the attainment of their set social and economic objectives – improving livelihoods. This was set forth when respondents were asked of their past expectations and future expectations of DCCs to self and the community. The characteristics of transactions that the DCC enables is of the utmost essence to the users. From the FGD findings, the DCC largely supports distributed peer-to-peer transactions. Majority of the users when asked the frequency of DCC use without assistance to transact, they pointed out that everyday life of an ardent DCC user entails regular purchases and sales. This is translated to the use DCC signs, symbols or tips or features that are familiar to them at every step of the way. Through observation and FGD discussions, such users could demonstrate the process starting from regular physical purchases and sales in the market zones, where products and services are all known to members through DCC descriptions of transactions. Descriptions of products and services are represented by equivalent numbers, symbols, labels, which tends to be handy in inform the DCC users of their preferred selections of different options, categories, and features as they move about to sub-pages and sub-options. This echoes the usability heuristic list as proposed by Nielsen, where, system should inform the user about what is currently happening. This makes it easy for the users to navigate back and forth while transacting using the DCCs fostering phone use.

Findings from the study data indicated majority of the MTCr users prefer smart phones to feature phones. Part of the reasons given is that the smartphones show your current position in the DCC hierarchy or site map– use of labels, symbols, tips, and hints. The clarity in the navigation paths as offered by thee smartphones as opposed to feature phones is a contributing motivation for phone and DCC use. On the other hand, the study data shows that cases of transactions aborting midway, besides, a restart of the process all over again, and the need to recall phone numbers and USSD procedure and options were a hindrance to frequent phone use and DCC transactions.

4.2.2. Virtuality

The virtual dimension of the currency speaks to the definition, security and trust of the DCCs. Face-to-face transactions improve trust and friendship in communities. Totally virtual transactions can have a much wider reach and more participants, but would not contribute to community bonds. The degree of virtuality impacts the social cohesion of a community as pointed out by study data. Partly, for the participants to define the DCCs, they demonstrated the DCC importance to the community, the trust it fosters amongst the members, and its dedicated nature in helping in the attainment of community objectives.

Besides, the study data demonstrates that indeed the definition of DCCs shows the ‘place’ of DCCs in the community. Majority of the users had a shrewd acumen on DCC operations; they perceived DCC features as a reflection of their ‘real world’ of operation thus useful in fostering DCC usage. Majority of the respondents perceived that daily and continuous usage of DCCs in everyday life will yield more benefits to individuals and community as a whole. [15] proposes systems that reflect the real world if majority of its users are to perceive usefulness of such systems. That is, the degree to which a system can enable them to perform the tasks comfortably. For the users who perceived DCC mediated tasks as severely difficult, they were not able to transact on phone. In defining DCCs, it important that the DCCs should be practical in everyday life – users should be able to adopt it to perform their daily transactions. This fact was demonstrated in terms legibility, clarity in functionality; content, menu and tab options, just to mention a few [16] [13]

4.2.3. Platform Architecture

Platform architecture speaks to the principles and guidelines for a user-centered design. From the study data, the architecture embodies principles, guidelines and standards that have proven to contribute to usability. From the study data, indeed the principles appear “obvious” and “simple” from the “eyes” of the user; embedded guidelines have gone a long way in continuously foster usability by providing practical, easy to follow and effective DCC interfaces and features. In addition, the study data also points to the ability of users to transfer their learning experience from one phone type to another phone type, from one user to another user or multiple users. this has contributed to usability by giving the users a sense of satisfaction, accomplishment, mastery and control over the DCCs. The study data from the questionnaire and interviews conducted, majority of the respondents acknowledged that the design aesthetics largely is an individual matter, but the operation of the DCC is independent of the individuals’ preferences. Particularly the typefaces, colour schemes. Even so, majority of the respondents pointed out to the universality of icons, pictures, feedback cues that the DCC offers irrespective of the phone type.

The study data particularly through FGDs spoke to the importance of the DCCs being available when needed regardless of the phone type. In this case, when phone responsiveness offers much and better user experience, the users are more satisfied, they tend to successfully transact by the themselves continuously overtime the DCCs, vice versa. In another case where users perceived as phone type is of importance. The users are more successful when DCC features are optimized for the phones they own and that they can operate the phone they own. When users perceive phones used by other users are more optimized and that they can operate those phones, this translates to low phone use. Even so, from observation data, when such users are offered those phone to use, few could operate those phones, however they could recall and recognize bits of DCC features (from previous trainings and illustrations). In summary, when perceived usefulness (phone and DCC) is low, phone use is equivalently low, vice versa.

Last but not least, correct responsiveness of DCC display, correct DCC operation on phones results to high phone use, vice versa. For instance, when a user avoids errors in operation of the DCCs but the phone displays the DCC features correctly and the phones and DCCs respond correctly, this also has hindered the desired numbers in DCC usability. Even so, trainings and third-party assistance has gone a long way in fostering usability in such cases.

By standardizing a platform – interfaces, options, features, this ensures that interactions in the platform are standardized and that setting up guidelines for the interfaces are enhanced as well. For instance, the sarafu model where the FGD data revealed that the majority of the users acknowledged that the DCC was standardized all through regardless – used Mpesa illustrations to demonstrate the functionalities and operations of the DCC. For example, interview and FGD data from sarafu participants show that majority of the users did not want any changes in the system, they had a high affinity for the notification system, and the fact that a major change was effected in the DCC features did not affect their DCC operation; This has helped increase use among the end-users and fostered recruitment of newer members.

The study data from the sarafu users indicated that the platform was scaled down to accommodate their financial expectations. Initially the costs were relatively high and that promoted user drop outs, discontinued phone use and DCC transactions. The users acknowledged that the that the platform is currently viable for them and that usability is enhanced.

General study data indicate that the additional costs that users incur speaks to the number of users and phone usability and dcc operations. That is, perceived increase in the additional costs reduces the number of users, reduces the frequency of DCC accessibility and operations thus reduction in rates of usability. Additional costs as set forth from the study data included bundles costs and calling costs.

In essence, platform developments offer great promise for DCC. The platform design indeed is a determinant of usability for local DCCs. Platforms must be resilient to change, and scalable to accommodate platform users' requirements. Majorly, the design issues in the study revolved around a) the purpose of the currency - a means of exchange. While there are advantages to traditional payment platforms, mobile technologies provide new opportunities to develop cheap and easy-to-access solutions with superior reach into poor or developing communities. Even so, people are more likely to hoard the currency knowingly or unknowingly. And as such, currency guidelines and principles have an effect on the degree of their continuous circulation.

4.2.4. Governance Structure

The study findings from the KII data reveal that the communities are organized based on pre-existing development groups or commonly known as *chamas* that have been formally registered. These *chamas* majorly are geared towards pooling together individual savings and distributing them to work for the benefit of individual members. In agreement with a study conducted by [17], the *chamas* have played a central role in a process of deploying the DCCs. With the obligations of a regular individual contributions to the group kitty, there are rules on minimum size of that contribution, sanctions for late payments, failing to attend a chama meetings. The *chama* governance rules have largely contributed to the mutualization of community currency. These are rules have and are continuously shaping operationalization of the DCCs - there are mutualized rules both explicit and implicit, those regulate the individual use of the DCCs. For instance, rules concern loan granting, repayment schedules and interest on loans. Typically, all these are related to the performance of the DCCs.

4.3. Trust and usage of DCCs

4.3.1. Efficiency

From the data findings, the DCCs are visible and accessible via any phone type. The access codes and access App were made known to the users at the start of deployment and continuously in engagement meeting. This has gone a long way in ensuring complexities that result from difficulty to precisely locate the DCCs are done away with. For instance, the MTCr. app is visible and accessible from every smart phone. The instructions and guideline are legible and written in an accessible language in order to efficiently clarify specific element of the DCC. For instance, the USSD access code. Further the findings illustrate that even though the DCCs provide for “help” section, very few users have interacted with this functionality. Navigating in the DCC takes place intuitively, all movements and actions around execution of DCC features for most users result from what is visible to them and how they comprehend what is visible to them. These findings applied to both the frequent DCC users and those who do not frequently use the DCC; to the knowledgeable users and to those with limited knowledge on the DCCs. Contrarily, the feature phone users must have a mastery or recall skills to be able to find their way around the DCCs.

With reference to the smartphone MTCr user data, access to most DCC features and content is way easier. The user interface provides for explanation of the DCC functionalities largely via the ‘help section’. However, due to the user background information, desire for quick access and guidance (especially when knowledgeable peers are not around), amount and degree of categorization of content, the study data reveals that users using their own terminologies suggested for a frequently asked questions (FAQ) section. This was so despite the fact that language was a barrier to some of the users particularly the mid-age users. sentiments that most of the younger users desired. They pointed out the functionality will go a long way to help users who are capable of reading guidelines and performing transaction on their own without subsequent assistance, besides, this category of users demonstrated that “quick help” goes a long way in ensuring subsequent uses as opposed to when such an individual gets stuck and have to rely or call for assistance that may otherwise may not be forthcoming at a desired time.

For both the phone types, users acknowledged that the DCCs provided prominent main menus from whence associated menus can be accessed. This accelerates initial knowledge of the system features and efficiency around DCC navigation by new users as well as old users.

4.3.2. Effectiveness

In usability, every end user desires effective systems. Thus, improving efficiency by facilitating frequent access to DCCs features and functions fosters usability. The study data revealed that the DCCs gained users’ interest because of the DCC content around sales and purchases, particularly payment in partly in tokens and partly in cash as agreed during product or service negotiations. When users access the DCC in search of features that are assigned to perform a particular task, the study findings reveal that the main focus on transacting- executing features successfully to meet their needs and expectations at the time of execution. Importantly, from the observation and FGD data, the users subconsciously focus on user interface aspects such as availability of the desired features, shortest possible access to the features, shortest possible execution time, visible or interactive feedback cues, consistency. In the event the user perceives these aspects to have been met during a transaction, it increases subsequent phone use. On the contrary, when the users perceive these as not having been achieved, the subsequent phone use is largely encouraged through trainings and third party assistance. For instance, due to the necessity of repeating an activity, shortest execution time is a subconscious expectation of a user. When the event aborts

every other time or when the event executes with errors, the users rely on the knowledgeable peers around the issue of concern for an accelerated access or execution of the features. However, this is not necessarily the case with the new users who have been in contact with the DCC for the first time. When they perceive the DCC as complicated, they drop out of the process, this translates to an eventual low phone use and access.

4.3.3. Learnability

Design of DCCs should consider how learnable it is, and strive that information is, and strive to deliver features that are inherently learnable. The speed of feature access and transaction speed require that the same are made available and that users are quick grasp the DCC operations. Data from FGD and KII discussions demonstrate that users tend to get frustrated by long learning times, and that new users placed emphasis on the importance of the DCC to offer quick absorption of its capabilities and features. In addition, many readers of technical information are people for whom English is not their native language. Besides, the study data revealed that majority of the users are willing to yield to methods, practices and programmes that worked over a period of time. That the users were willing to commit to hours of trainings, meetings, in order to understand a topic, concept, features around the DCC use. Observation data reveal that users take days of practice to master a tool (of course with the help of peer and dedicated trainers). These were affirmed by data from questionnaires, when users were asked on their voluntariness and ability to train the new and existing users. Majority of the respondents who were comfortable using the DCC and that could transact on their own indicated it is an ongoing activity for them, whereas, the users who had little or no knowledge on certain DCC features indicated they would upon growing confident in using the DCC.

4.3.4. Satisfaction

When users perceive they can operate phones and execute the functionality of the DCCs successfully, it inculcates a sense of satisfaction. Thereafter, this provides for more opportunities to use the phone and DCCs subsequently. However, in the event of any errors, shortest recovery time is of utmost concern to the users as the observation, FGD and questionnaire data revealed. This also spoke to the visibility of feedback and interaction with the system. When such challenges take place and trusted persons are not assigned to assist or they keep off as established by the study, such users perceive the technology as rather unfriendly to them. The study further established that some of the users who had become victims of the same or knew about those who had suffered the same circumstances, were more cautious to engage in phone and DCC related activities that they have limited knowledge and understanding on. Usability is hindered. For instance, the FGD data findings show that an avoidance attitude and not acquiring knowledge on DCC use, could be seen as an individual not interested in the phone and DCC use thus, trainers and peers may assist the users without explaining the process to the user facing the difficulty. As a result of low usage of particular DCCs.

However, the challenge that most have particularly for MTCr. users, is that they still relied on registered smart phone users, trainers and trusted parties to transact for them, some of whom they have feature phones that they could use.

4.4. Usefulness

4.4.1. Perceived Usefulness

The findings revealed that MTCr users who owned both phone types, preferred to use smartphones compared to feature phones. Cited as the reason for this include: a)limited or no

need to recall phone numbers to where the credits are being paid; b) no mid-way procedure loss; c) presence of transaction feedbacks - tick sign; d) clarity of DCC features and their operations; e) other better features in the offering with the smartphones – zooming, storage, social sites and internet; f) need to keep abreast with technological advancements; g) trainers (both peer and dedicated) are smartphone biased during trainings and assistance; h) feelings of transparency being better with the smart phones; i) training speed and duration is lessened with the smart phones; j) better attitude of trainers or dedicated peer trainers; k) availability of the trainers and dedicated peer trainers who transact on their behalf; k) bad attitude by members and phone owners towards the feature phones; l) adamant perceptions that smart phone is better than feature phones that have been inculcated by smartphone users in their midst; m) expectations that they will they will be given free smartphones and other DCC goodies that are smartphone biased; j) Security features.

To further understand the usefulness, FGD responses supported by KII responses showed that a) ‘ignorance in properly defining and understanding what DCCs are, developed into to assumptions that inculcated a sense of fear amongst the already registered traders, that led to massive ‘drop outs’ of the members. For instance, a) DCCs were likened to the DECI financial scheme that targeted the middle and low income people, where they invested lots of money but it ended up collapsing with lots of money and they received no protection or compensation thereafter; organization ; b) DCCs were being linked to untrusted institutions like illuminati organization that is viewed as a demonic outfit; c) DCCs were viewed as an ‘NGO’ that came in to offer cash flow support to cushion businesses and individuals from the covid pandemic; d) Some respondents viewed DCCs are expensive - high operation costs; and e) DCCs were perceived as a replacement of national currency thus considered as an illegal venture for anyone to engage in.

4.4.2. Perceived Ease of Use

Qualitative data particularly from the KIIs, supported by findings from FGDs and participant observations revealed that the community group leaders showed further interest in: a) growth of their communities; b) growth and continuous usage of the DCCs; d) improved livelihood for their groupings; e) sustainability of the DCCs in the event that the supporting grass root organizations exit their community. Besides, the respondents illustrated a) the nature of leadership – leadership roles in their various groupings to steer DCC usage – defined their leadership roles in the community; they could spell the place of the DCC in the community development agenda; they demonstrated their understanding of the nature of members of their communities. The DCC networks have spiraled the usage of the DCCs, that is the more these bonds are strengthened, the more the usage of DCC spirals- members trade in different fast moving commodities, the wider the variety means the DCC circulates within the community, vis a vis. The more the members accept the DCC mode of payment, the more circulation of DCCs within the community. The findings also revealed the place of leadership structure in the continuous circulation of the DCCs within the communities. Some leadership structures are explicitly known and are in existence, whereas, some are not explicitly defined in the leadership structure but are in operation with regards to DCC usage. Both structures have gone a long way in properly defining DCCs to its intended and existing users, availing accurate information on DCCs and in positively influencing the usage of the DCCs. This was exhibited by a) awareness of DCC features and their better understanding of the various features including the USSD access code, search, sending and receiving features.

5. CONCLUSION

Good design can earn a system, a user's trust. It is a users' moral and ethical responsibility to use the system designed responsibly to impact their decision making process. usability is the secret 'ingredient' to the system design, it cannot be an afterthought, a user understands usefulness of the system in terms of meeting their needs, besides a user has his/her own way of resolving these problems around the system usage. In this study, usability has partly been defined by evaluating the users, their precise understanding of what DCCs are as they have interacted with them. For future contextual DCC designs, it important to have a comprehensive and precise definition of usability, system features and their contextual usage. Only on this basis is it truly possible to establish requirements, develop refined system features and accurately communicate usability concepts in an in depth manner for enhanced usability.

Users have their own way of solving a problem and they have a mental image of how a solution to a certain problem would look like - user's mental model. Similarly, there is a designer's model. It would be important to understand definition and usability of the DCCs with a combination of both the user's mental model and the designer's model.

ACKNOWLEDGEMENTS

This was funded by the Danish Ministry of Foreign Affairs, grant no. GFIIEG 18-11-CBS, through collaborative project Grassroots Financial Innovation for inclusive Economic Growth (GFIIEG) with JaramogiOgingaOdinga University of Science and Technology as the lead implementing institution. I also appreciate the community participants of the Sarafu and MTCr. DCC networks

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