

CEMACO: An Innovation to Increase Customer Engagement through Mobile Application



Anuradha V. Kokate, M. B. Chandak, Abhay Kochar

Abstract: *New improvements in online business and m-trade advances alongside the wide reception of cell phones and internet-based life have empowered organizations to upgrade clients' shopping encounters and their association with brands whenever, anyplace. In a lively business condition, organizations distinguish the force and centrality of the web to intrigue clients' consideration. Client communications with an association's application make open doors for positive encounters that can prompt long-term relationship building. The space of client experience (CE) is all around created in the face-to-face setting, yet little consideration has been paid to investigating the idea in the online setting. Client commitment and maintenance of retail marks are critical. Holding and drawing in with clients assist brands with keeping them cheerful, remain faithful, and in the know regarding fresh debuts, most recent advancements, and item suggestions. We have gathered a requirement of more than 200 customers by conducting a series of surveys and after understanding the exact requirement of the people living in Guatemala, we have initiated our project of making an app to increase the engagement level. We have designed this application in ionic using MySQL database and to enhance the level of engagement through its design we used SCSS as the language to give style to the application. This application is integrated with WhatsApp to provide better customer support. The application is designed in the Spanish language to make it easy to use for the people living in Guatemala. This app is fully gamified with all the possible missions' customers can complete easily which also boosts customer engagement by 200%. Hence, This Customer Engagement application will be used to attract customers and engage them on the app by giving them discounts, offers, coupons, and points after successful completion of tasks which drastically improves the conversion rate of the customer for any kind of business in Guatemala.*

Keywords: *Consumer Behavior, Customer Engagement, Customer Experience, Online Context, Retention, Social Commerce, Technology.*

I. INTRODUCTION

CEMACO is one stop solution for the residents of Guatemala to be informed about the available offers and discounts which are available at the shopping stores. All the offers can be found online in a single app so as to redeem them either by online shopping or in CEMACO stores.

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Also, this APP provides the facility to complete various missions and milestones where customers can get exciting offers and coupons.

CEMACO stands for “Centro de Materiales de Construcción”, means “Building Material Center”. Although meaning is not related to the products in store, it's just an abstract word. The whole application is in Spanish, the local language of Guatemala which ease the people for better understanding.

The purpose of this paper is to develop a theoretical model for a unified online customer experience by drawing from related literature on consumer behavior in the online contexts.

II. PROBLEM STATEMENT

Residents in Guatemala do not have any such service which can help them inform regarding the available offers and discounts which they can use while shopping either online or going to the stores.

III. CUSTOMER ENGAGEMENT

Client commitment is a business correspondence association between an outer partner (shopper) and an association (organization or brand) through different channels of correspondence. This association can be a response, connection, impact, or generally client experience, which happens on the web and disconnected. Client commitment is the continuous, esteem driven, passionate connection between the client and the business. Engagement is the net catalyst that converts potentialities to customers, clients to loyal customers, and loyal customers to vocal logo advocates. Online purchaser engagement is qualitatively unique from offline engagement because the nature of the consumer's interactions with a emblem, enterprise and other clients differ at the internet.

IV. ONLINE CUSTOMER ENGAGEMENT SPECTRUM

Online engagement can take many forms, from favoring a Tweet to developing a video on YouTube. But, the reasons why humans engage with manufacturers remain consistent.

If you're no longer satisfied with the level of engagement your brand receives online, then there is a good threat that online visitors discover the brand's offer unclear, undifferentiated from your competitors, beside the point to their needs, untrustworthy, or all of the above. These are the issues to deal with if you really want to clear up engagement problem at the source.

•Visit-Essentially, human being simply showing up, which increases internet traffic.

- Consider- Visitors loaf around and consume content material. This increases time on page, which is good for SEO.
- Acknowledge- These are likes, rating, favoriting, essentially, pushing a button. They're low engagement activities, however do offer a public receipt that content material became consumed.
- Contribute- Taking the time to reply, depart a comment, or chat online.
- Follow- People enroll in your channel or RSS feed, which gives a passive channel of contact to those subscribers.
- Information- This is submitting private data, like filling out a survey, which offers advertising Intel.
- Permission- People publish an email or a telephone number, which enables in addition one-on-one contact.
- Create- People add things they've created or curated, like posts or pictures that increase a brand's content material.
- Amplify- People share content material with their proprietary audience and, in the process, sell emblem awareness.
- Advocate- This way actively endorsing your logo to their proprietary target audience, which, similarly to promoting awareness, also fuels understanding, interest, and trust inside the emblem.
- Convert- Perform the best order ask on the asset-typically downloading, trying and/or shopping for something, or linking somewhere.

V. CUSTOMER BEHAVIOR IN ONLINE CONTEXT

The development of the Web as both a dispersion and a correspondence channel has made the open door for a scope of online association client cooperation [2].

Advances in innovation have made new open doors for online buy as far as when and where clients can communicate online with an association.

The coming of portable trade has seen an expansion in purchaser utilization of the Web by means of cell phones, which have developed from one-to-one correspondence pieces to exceptionally flexible types of innovation encouraging a wide scope of errands supporting client collaboration.

Subjective trust and full of feeling trust are observationally recognized factors in the web-based retailing setting. Psychological trust and full of feeling trust are found to intercede the connection between saw site quality, security, and protection strategy, earlier collaboration experience, saw e-posterior notoriety and shared worth, and consumer loyalty.

Consumer loyalty likewise decidedly impacts dependability aim toward the online retailer [3].

VI. ONLINE CUSTOMER RETENTION

Client maintenance is the assortment of exercises a business uses to expand the number of rehash clients and to build the productivity of each current client.

The objective of client maintenance programs is to help organizations hold whatever number clients as would be prudent, frequently through client dedication and brand faithfulness activities.

Client maintenance builds your clients' lifetime worth and lifts your income. It likewise encourages you to manufacture astounding associations with your clients. They trust you with their cash since you give them esteem in return.

Since client maintenance influences development and productivity, powerful maintenance methodologies in web-based business settings are basic for organizations [4]. Returning and rehash clients are more fiscally significant than new ones.

As indicated by the consequences of the investigation performed by Adobe, returning clients had multiple times higher income per visit (RPV) than new customers [5].

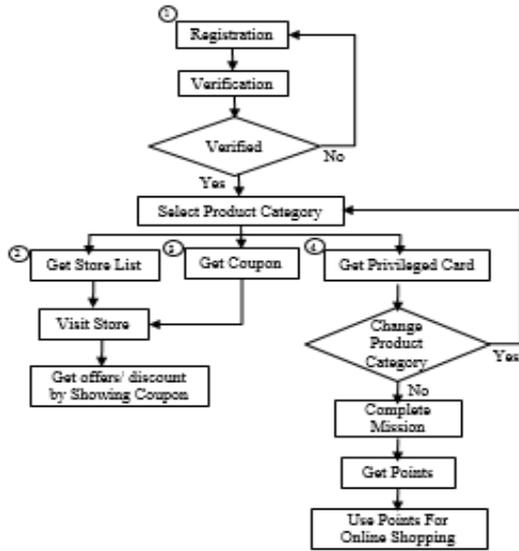
Here are some of the most effective strategies to achieve this goal [5].

- Comprehend the Explanations behind Leaving- The initial phase in a viable client maintenance technique is to comprehend and gauge why clients are leaving in any case. On the off chance that you don't comprehend what's the fundamental problem(s) is, at that point you can't unravel it.
- Make Client Records Discretionary- Don't drive your clients into making a record since it could be badly arranged for them. Rounding out a great deal of obligatory fields may want to do a task, and since there's no task help to utilize, the clients can surrender the structure. A superior method to get clients to make accounts is to give them a choice when making a buy.
- Give Visitor Checkout- As per the overview by the Baymard Foundation, an "excessively since a long time ago/confused checkout process" is among the best three purposes behind shopping basket relinquishment. That is the reason 8 out of 10 effective U.S. retailers including Apple, Walmart, Amazon, and Dell offer visitor checkout.
- Improve Your Client assistance- Your clients completely should be adjusted as well as could reasonably be expected. While it's implied that you should react to all client demands and arranges and guarantee the most ideal client experience.
- Email Your Clients with Customized Offers- If a client bought into your email bulletin, it's basic to not squander this chance! Track their perusing experience on your site and urge them to return by sending faithfulness rewards, data about deals, and guidance about utilizing items they've purchased.
- Send a Birthday Present Get your client's birthday events during enlistment and send them a present. This straightforward signal will go far toward expanding their dedication.

VII. METHODOLOGY

CEMACO is mobile application which runs on the servers provided by company. The data stored on the database of the servers can be accessed only through the software deployed on the platform.

Front end coding of CEMACO is done in Ionic 4 and back end coding is done in PHP 7.0. JavaScript and Typescript is also used in developing this application.



Flowchart 1: Flowchart depicting processes of CEMACO.

Explanation for the above Flowchart 1 is given as follows:

1. Firstly, user have to do registration by entering valid email address and contact number. The verification of email and contact number is done by sending messages. Unless user is verifying, he cannot use application. After successful verification, user enter into application where he can see the various categories of products such as Electronics, Baby products, Gift articles, Toys, Home appliances, Kitchen appliances, Cosmetics, Sporting goods, etc. Among these users can select three categories.
2. After selecting categories of products, user get the list of CEMACO stores in which products of selected category is available. Then user can visit the store and can-do shopping.
3. Also, after selecting product category, user get free coupon. Using that coupon user can get the offers/ discount by doing shopping in CEMACO stores present in Guatemala.
4. User get a privileged card after filling a form. After getting this privileged card user have to complete some missions and milestones. After successful completion of mission user get points using that points user can be used to get offers and discounts online shopping or in CEMACO stores.

VIII. ACTUAL WORKING

For using CEMACO, firstly user have to install the app from play store. Open the app. CEMACO application open with a splash screen having logo of it. After that user can see some tutorial slides giving the short information about what application is? as we can see in figure number 01.



Figure No. 01: Splash screen and tutorial slides

After continuing on these tutorial slides, user come to registration screen. As we can see in figure number 02, user have to register first for using CEMACO application by filling some basic details about himself such as Name, Email address, Password and Contact number. Only user of Guatemala can use this application because CEMACO stores are present only in Guatemala. This is verified by taking the contact number of user having country code of Guatemala.



Figure No. 02: Registration Screen

Then mail containing confirmation link and a message containing OTP is send to a user on registered email address and registered contact number respectively. In this way verification of email and contact number is verified (Figure number 03).

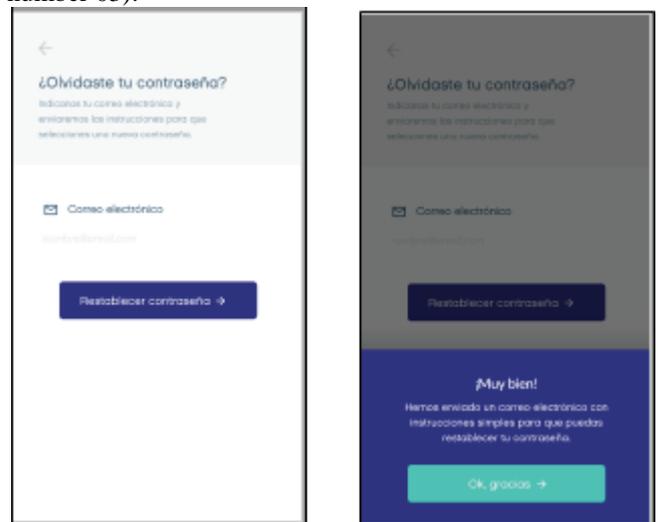


Figure No. 03: Confirmation of Email and Contact number

When user open the application next time user have to login using email and password (figure number 04). No need to register again.

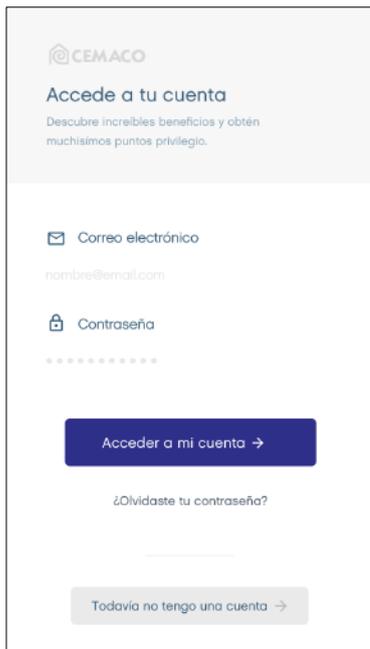


Figure No. 04: Login Screen

After registration process, Terms and Condition screen is open containing the term and condition you have to follow while using CEMACO application. After terms and condition screen, privacy policy screen is open containing the privacy policies for users as he is the member of CEMACO now (figure number 05).

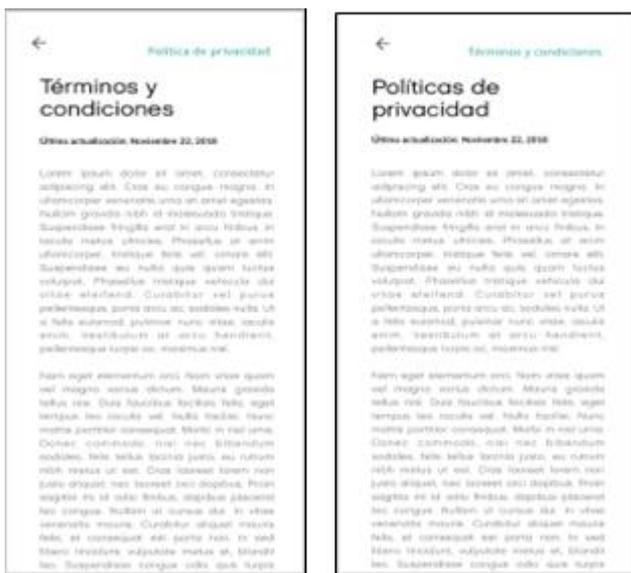


Figure No. 05: Terms & Condition Screen and Privacy Policy Screen

After these screens, user come to product category screen. Various categories of products such as Electronics, Baby products, Gift articles, Toys, Home appliances, Kitchen appliances, Cosmetics, Sporting goods, etc. are given along with their icons and name (figure number 06). User can select maximum three categories of products. User can change the selected categories any time.



Figure No. 06: Product Category Screen and 3 categories are selected

After selecting these categories user get list of selected product categories, products of that category and allotted coupons containing barcode (figure number 07). Then user have to visit to store and can get the discounts or offers by showing the coupons on buying the products. POS (Point-of-Sale) agent in the store scan the bar-code printed on coupon of user's mobile and verified the coupon is valid or not? If coupon is valid then user get associated offers or discount on buying.



Figure No. 07: Free Coupon cards

Also, on this screen user can see the privileged card which is inactive till now. There is a one concept in CEMACO application named Gamification.

In this, user have to fill a privileged form. After clicking on that inactive privileged card, user come to a screen containing form for activating privileged card. After filling this form user's privileged card is activated and user get allotted by some missions (figure number 08). Now user have to complete some missions and milestones (Example: user have to borrow this much amount of product in this month or borrow this category of products or barrow that much quantity of products, etc.) to get redeem points. Using these points user either can visit sopping store and do shopping and get exciting offers and discounts using that points or can-do online shopping using CEMACO site named "cemaco.com" and get offers and discount.



Figure No. 08: Privileged card with barcode

After that user can see activated privileged card and list of stores and number of redeemed points users get for that particular store (figure number 09). Also, user can see the start button to start button. Points are updated at 12 AM everyday if any changes is done such as using points for shopping or after successfully completing any mission or milestone.



Figure No. 09: Privileged card with store lists and earned points

On next screen user can see the latest mission image along with lists of all missions, pending missions and completed missions. Mission is ticked in green color after successfully completing that mission (figure number 10). Use can complete maximum three mission in a month. Although user click on any mission, app gives a pop-up of message telling- Come next month.



Figure No. 10: Lists of all missions, pending missions and completed missions.

If any error occurs while completing any missions such as server issues or mission is in incomplete state then it is shown to user in red screen along with related message (figure number 11).

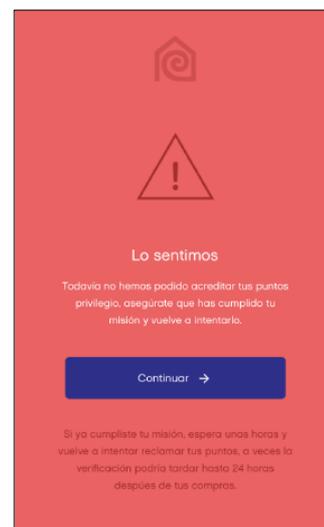


Figure No. 11: Error Screen

If customer faced any issues while using CEMACO application, then user can contact directly using WhatsApp which is integrated in super tab of application (figure number 12).



Figure No. 12: WhatsApp integration for customer support

After selecting categories of products users get list of CEMACO stores present in Guatemala (figure number 13). After clicking on any store user get the list of products present on that store also user get the address of store. After clicking on that address user get one pop-up in which user get the map of road from his location to selected CEMACO store. Cab booking applications are also integrated with this application. If user wants to book a cab then he can easily book a ride to store.

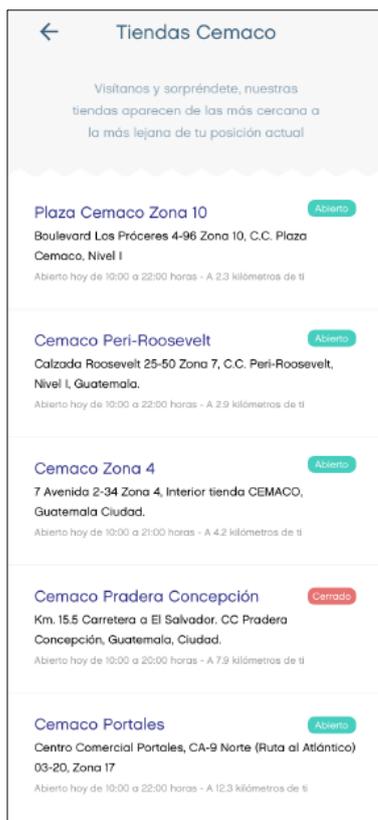


Figure No. 13: CEMACO Store List

Side menu of application contain the tabs such as Change category tag where user can change selected categories, Configure new privileged card tab, Update profile tab where user can add there remaining personal and professional details which is not taken while doing registration such as gender, profile photo, credit card details etc., terms and condition tab, social media buttons such as Facebook, Instagram and LinkedIn and lastly a Logout button (figure number 14).

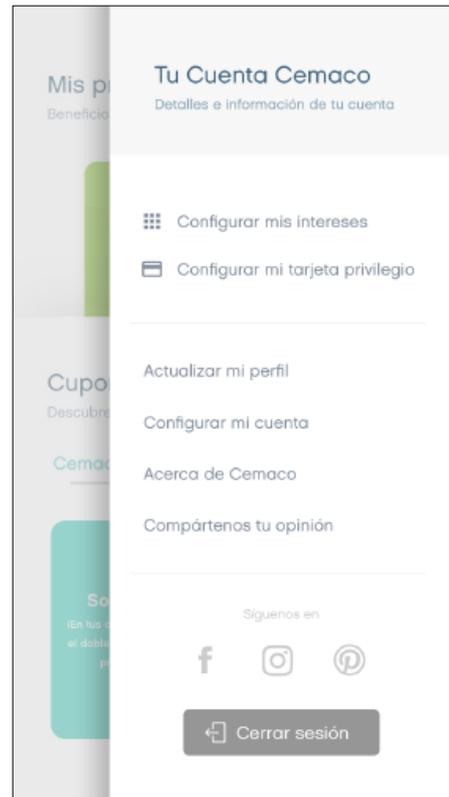


Figure No. 14: Side Menu

IX. DRAWBACKS

Like any other solutions, this too has its own drawbacks.

- Online purchase options not available in CEMACO App.
- This app used for CEMACO stores only.
- Online payment options facility not available.
- Only 3 coupons redeemed by user in months.
- Same coupons not be used in next months.
- We are only showing products information data in app.

X. FUTURE WORKS

- Future works in this app is online shopping facility can also be integrated with customer engagement application.
- Also online payment options facility can be integrated in App. We can expand in other countries.
- We can also implement Artificial Intelligence and Machine Learning to increase user experience.
- We can also analyse customer buying behavior by implementing Data Analytics Algorithm.

XI. ADVANTAGES

- User can always contact with CEMACO store employee.
- User update with store promotions activities information due to this user engagement with store.
- Sale of stores increase due to redeem points,

coupons and other store activities.

- Data security is high. Without login and mobile verification, we not show data.
- Users redeem points always added when user purchase items from the store or visiting store.
- Store can give information of new products to users by store activities or promotion so that cost of advertising of new product will be low.
- We are not dependent on other promotion media such as advertisement, etc.

XII. RESULT AND ANALYSIS

In this section, we will see, how the application helps to increase the customer conversion rate by up to 100% after the launch of application by using a simple graphical representation where customer conversion rate (%) is placed on the y-axis and the trend months is placed on the x-axis of the graph. The launch of the application takes place in the mid October and the ratio increase drastically to 61% in the November month earlier it was 22% which was 63% lower than the November month data.



Graph No.1: Customer conversion rate before and after the launch of application (%)

After testing the application, improvements in customer satisfaction level is also seen from the previous months. Activities like cross-sell and upsell are also increased due to the increased number of customer retention through the launch of CEMACO mobile application.

XIII. CONCLUSION

CEMACO application will act as a communication connection between customers and stores. As a Customer Benefits, Customers will get offers, discounts, coupons and redeem points which help customers to get products at lower price than MRP. Customer Retention is also done here, as customer get offers, discounts and redeem points which help him to get products at lower price than MRP then customer will definitely revisit the application. Due to offers, discounts, coupons and redeem points, customer will definitely revisit the application, which is profitable to CEMACO store.

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