Enhancing Customer Service through Refined Restaurant Workflow Provided by a Mobile POS System

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**Abstract- *MP Megapro KTV Restaurant is experiencing problems due to its current system workflow that causes delays and customer dissatisfaction. To solve the problem, the researchers looked for three existing mobile POS systems that can help the restaurant namely Pozool, Waiterio and Loyverse POS. Considering the condition of the restaurant and what needs to be fixed, it turned out that Pozool is the most efficient and effective among the three because it offers the best features in a POS system namely: efficient POS because of small file size, automatic receipt billing and printing, inventory tracking and wide ranges of compatibility among printers and devices at a free full price.***

**I. Introduction**

**A. Background of the Problem**

MP Megapro Plus Marketing Corporation is a KTV Bar Restaurant in Jupiter St., Makati City which offers fine dining experience alongside with the entertainment provided by their karaokes. The establishment is composed of 3 parts, the mess hall, the multi-purpose hall and the karaoke rooms all located in the ground floor. The second floor is composed of mostly karaoke rooms and a multi-purpose hall. The labor force of the business consists of eight waiters and one cashier who is handling the POS (Point of Sale) of the whole restaurant. Given the structured layout of the restaurant and the current workflow the employees are implementing, it causes problems like delays even though there are only few customers in the building.

According to the company's workflow, the pattern of order taking will start with the customers informing their desired orders to the waiter, the waiter will then write the orders on an order slip and will give it to the lone cashier in the restaurant. The cashier will then give the order slip to the cook. After the food is done, the waiter will fetch the order from the kitchen and deliver it to the customer. The problem often occurs on the part of the waiters, because no matter how mobile they are, them walking around the place carrying order slips makes the process slow. Human mistakes and sudden confusions like table/room numbers being hard for the waiter to find and wrong order inputs can also be an addition to the delays the customers are experiencing in the restaurant. This project aims to explore a system that can improve customer service through ordering experience and then becoming beneficial to restaurants and alike.

#### B. Statement of the Problem

In what ways would a system be helpful in speeding up the workflow of the restaurant to satisfy the customer?

#### C. Objectives

● To find a system that suits the needs of the client's restaurant   
● To identify the cause of delays in taking an order   
● To lessen the time it takes for the cycle of order taking to complete

#### D. Significance

The result of this study will be beneficial to the following stakeholders:

● To the client

The researchers decided to conduct a research about the client's restaurant to find a solution to the problem that they are having. It will help them find the real problem they are clueless about and have the best possible solution to aid the said problem. The client cares for the satisfaction of their customers, and helping them find a way to achieve the satisfaction the customers deserves will be beneficial for both sides.

● To the customers

This research will significantly contribute to the satisfaction of the customers regarding their experiences in the client's restaurant. The team's main goal is about the customer's satisfaction so the study's utmost priority is the happiness of the customer.

● To the future researchers

As the technology that can improve the system of a restaurant as well as the satisfaction of the customers are evolving, this study could be a reference for other researchers who would like to conduct a research in a similar field with that of the researchers.

#### E. Scope and Limitations

The scope of the study will only be about what does a POS system can do to solve the current workflow problem of the restaurant. Further in-depth analyses about how the systems are developed will no longer be part of the research. The team will only focus on three examples of existing POS systems, what can they offer for the restaurant and will be judged based on how efficient the app will be considering the the context of the client. The team will closely look on their minimum device version requirement, printer compatibility, file size, and additional features to determine the best system the researchers can offer to their client.

**II. Related Literature**

1. **Customer satisfaction in the restaurant industry: An examination of the transaction-specific model**   
Article in Journal of Services marketing · December 2005 By: Syed Saad Andaleeb and Carolyn Conway https://www.researchgate.net/publication/241729526

A research focused on knowing which factor must be best prioritized in ensuring high customer satisfaction. The research concluded that the responsiveness of frontline employees are essential in ensuring the happiness of a customer. This research is relevant on our problem because we are trying to address the problem of responsiveness in order taking.

2. **Are highly satisfied restaurant customers really different? A quality perception perspective.**   
By: Young Namkung and SooCheong (Shawn) Jang www.emeraldinsight.com/0959-6119.htm

This research is similar to the first above. Even though with the same topic, the research found that satisfaction relies from the presentation of the restaurants like its seating arrangement, smooth background music, etc. The responsiveness of the employees came last, but still considered as an important attribute of customer satisfaction.

3. **Singapore Mobile App ordering for restaurants, cafes, bars.**   
http://bigspoon.sg/

Our reference of the project. Bigspoon Singapore is a mobile app that acts as the ordering menu of the customer. With this in hand, the phone will be able to detect which restaurant is he/she in and formulate menus from the said restaurant.

4. **Eatsa Restaurant**  
https://www.eatsa.com/

The Eatsa restaurant uses a technology that quickens the transaction of ordering. The eatsa restaurant has a nine tablets stands which costumers can navigate and from their,the customers will choose the food that they like and it will instantly be seen by the cook thru a screen. The cook will put it in a drop out box and the customer will get it from there.

5. **OTG at Newark**  
http://otgmanagement.com/

The OTG at Newark is a fine dining restaurant within an airport. The technology that the restaurant uses is a tablet that is attached in a table. It will serve as the menu for the customers. No need for them to call a waiter or give their order to the waiter. They will just simply click the food that they want to be it and the cook will see it thru a screen and the order will be automatically registered with their machine. The customer will just wait for the Food to be serve to him/her.

6. **Breadcrumb**  
https://breadcrumb.com/

 https://www.entrepreneur.com/article/224332

This flexible iPad app provides real-time views of tables, catalogs the menu by a selection's name or ingredients, processes sales and delivery tickets and sends orders to the kitchen.: New eateries or those looking to completely overhaul their operations would get the most value out of Breadcrumb because it is so comprehensive. But the app will also work with traditional receipt printers and cash drawers.

7. **McDonalds Create Your Taste**  
https://mcdonalds.com.au/create-your-taste

This a new technology by McDonals where a person can choose choose his/her preferred ingredients of a burger thru a big touch screen machine. The customer will navigate it and once the customer decided what his/her final ingredients will be,he/she will click a button that will send it to the cook thru a screen. Allowing the cook to know the ingredients that will be used for the certain dish. The machine register the order and will give the user a receipt to show at the counter and the user will pay the needed amount their.

8. **Servjoy**  
http://www.gofrugal.com/mobile/servjoy-kot-app.html

This app was built especially for restaurant management purposes like guest seating, restaurant billing, order taking and priority of serve. This app also lets you customize the ingredients that you want on your food.

9. **Touchbistro**  
http://www.touchbistro.com/

Lets the user customize the app for the restaurant. The user can make a menu for their customers to view, personalize, the design of the app on how the user wants to see it. It works just like Servjoy.

10. **ChowNow**  
https://www.chownow.com/

An app that lets the customer order from the restaurant. It lets the customer view the menu outside the restaurant. The customer can use the app if he wants something from the restaurant and he/she can also choose the ingredients he want for a certain food. The customer can pick up the food or let it be delivered to him/her.

## **III. Theoretical Background**

Comparing the processes involved in the current system of our client and the emerging new technologies by other competitors, there has been a clear indication on why the new technologies are better than the current system. In the current system, when someone ordered a food, it must be passed first through the cashier, needs it to be encoded before handing it over to the cook for the preparation of the food. On the other hand, the new technology promotes unification between the two entity, when someone ordered a food, the details will be transferred onto the cashier and also the cook at the same given time. With this kind of integration, the minutes wasted from the cashier handling the order slip to the cook will be eliminated, thus having a short time to deliver the food to the customer. The other advantage of advanced restaurants is that they promote customer satisfaction by letting them order by themselves without the interference of the waiter, that's why ordering platforms like tablets and touchpads are being deployed in tables for customer use.

## **IV. Proposed Solution to the Problem**

The team's proposed solution to the problem is to find the best existing mobile POS that has the needed features for the client's restaurant. The best mobile POS system will be chosen according to the scope the team had elaborated in the scope and limitations.

## **V. Results and Discussions, includes theoretical proof, verification, or evidence**

The researchers found three mobile Point of Sale (POS) systems that can help the cause of the client's restaurant, all of them having their own kind of unique features but one of them will be an effective tool to aid the problem the client is having with his restaurant.

The first mobile POS is the Pozool (*http://pozool.com/*), it is a free mobile POS device that works on the Android platform, and requires your android device to be in versions 4.0 and up. It is customizable, you can create your own items and modify or delete it if needed. It also comes with sales registration that is important in the restaurant's billing process that can configure multiple taxes options and discounts. Pozool also offers the Reporting Suite feature, which will be helpful for the managers to track the health of their business. Lastly, they had a wide variety of printing options, be it cloud printing, bluetooth printing or simply sending it as an email. Also compatible with various Epson printers namely: TM-T88V, TM-T70, TM-U220, TM-U330, TM-P60, TM-P60II, TM-T20, TM-T82, TM-T81II, TM-T82II, TM-T83II, TM-T70II, TM-T90II, TM-T20II, TM-P20,TM-P80. All these feature can be downloaded initially on a 1.7mB .apk file.

Second on the list is the Waiterio app (*https://www.waiterio.com/*), a free multiplatform app that is accessible in an Android, iOS or Windows device. The minimum requirement for installing the software in if you have at least Android version 4.0.3 on your device, requires iOS 7 or later in Apple devices and at least a Windows 7 operating system in PC. It takes the orders faster, and the menu can be customized. Offers fast straight to the kitchen so that the cook can prepare their food right on time. Also has the Sales Reports feature to keep track of how things are going and which menu is hot or not. Comes with modified billing meaning you can set your bills according to circumstances like taxes and discounts. Compatible with various printers like ESC POS Printers, Star Micronics, and Epson TM Series that comes with direct, online, or bluetooth methods according to the printer the users is using. All of these features will be downloaded in an initial 12mB file.

The last mobile POS system to be taken account is the Loyverse POS (*https://loyverse.com/en/products/pos/*) is a 6.6mB app that offers free POS service in Android and Apple devices. It requires versions 4.0 and up for Android while your Apple devices needs to have an iOS 7 or better. It offers a reliable Point of Sale system, where you can take orders electronically without pen and paper and can track your inventory in real-time. It also offers the unique "Customer Loyalty Program" feature where you can run your own loyalty program and receive valuable feedback straight to your app. Lastly, it comes with a web-based "back office" where you can know the hot items, manage your employees and access your sales history for future references.

## **VI. Conclusions and Recommendations**

Of all the three POS, the team decided that Pozool POS App is the best system they can offer for the client's restaurant. It has a good reputation from Android users, having 10,000 downloads and gained a rating of 4.1/5 out of 458 users that decided to give feedback to the app. It has the features that the restaurant needs. One of the needs Pozool can provide is the mobility of giving the restaurant's workflow an online gist by having the order be taken electronically and be sent to the kitchen the same way. With its customizable settings, you can modify menus to the client's liking. It also offers an efficient billing module with its bill splitting feature, which makes a very informative receipt that can involve taxes and discounts, all according to how the client wants it. Even though it is only compatible with Epson printers, Epson has its wide variety of POS printers and all of them are compatible with the app, so it is not an issue. Lastly, the main reason why Pozool is the best among the three is its price. Compared to Waiterio and Loyverse that only offers free or limited trials, Pozool is absolutely free and because of that, it will be helpful to the KTV restaurant as they were just starting and not that popular.

Here are some reviews from the Pozool Google Play Page:

*"Incredible product. Some features I especially like are Pozool's well thought out user interface, it's intuitive nature in the use of images for sales items, the graphical reporting and the inclusion of Yodo mobile payments which can easily be turned on in the settings menu."* ~ Brian Doyle

*"Very helpful and complete reporting. The best mobile POS I have come across yet. The inclusive / exclusive tax option has been very helpful"* ~ Astaroth Ragnarok

*"Very useful app. It will be very helpful if the reports details more info like the bill no and all its detailed summary rather than just a consolidated one."* ~ Aneef Shaik