Electronic Menus:
II - It impact on the profitability of Restaurants

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Abstract

The aim of use current study is to explore the relationship of customer satisfaction and the exploitation of modern technology, namely, the electronic menu and impact on the profitability in restaurants , the data were collected and analyzed and discussed .

Keyword: Restaurant Menus- Electronic menus – sales -profitability

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Review
Importance of Restaurant Menus

Fellman (1981) supports this statement as he states that the size, colors and wording should create a menu that is informative, complete and easy to read while being able to alert the senses and stimulate the customer. Therefore, the design and content of restaurant menus are of paramount importance for restaurateurs.

According to Cichy and Wise (1999), a menu can be described as a map which encourages easy navigation between hunger and satisfaction for customers.

Markovic et al (2010) further stated that there are many elements that make up the dining experience for the customer; these elements are tangible and intangible .One of the most important tangible elements is the restaurant's menu.

The menu not only serves as a guide, but as the key anchor of information dissemination of a restaurant's core product – its food and beverages. It is the main link between the restaurant and the dining public as it communicates the concept, décor and ambience of the restaurant.

Kiosks

One way in which technology has assisted in the reduction of labor cost is from the use of self-service technologies. The implementation of self -service technologies have allowed customers to co-produce or deliver a service for themselves without assistance from others, one example of such technology is a restaurant kiosk (Meuter, Bitner, et al, 2005). With the emergence of fast casual dining, restaurateurs have realized the need to meet customers demand for quality and quick service, as these factors are seemingly important to the retention and loyalty of their customers. The introduction of restaurant kiosks have assisted restaurant operators in facilitating these needs, as customers are given an opportunity to be co-producers in the service which may be more convenient to some customers. Meuter et al., (2000) defines a kiosk as a self-service technology which allows the customer to consume services electronically without direct personal contact. Co-production gives the customer some level of control over the outcome of the service experience and as a result the customer may perceive more value from the experience.

While the introduction of self-service kiosks may assist in meeting the needs of customer, some customers may experience some level of frustration with the use of kiosks. It is important to identify the sources of satisfaction and dissatisfaction with the use of kiosks as customer's satisfaction or dissatisfaction is a factor determining their retention and loyalty to the organization (Marković, et al, 2010).

In a study conducted by Mueter et al, (2000), the authors sought to find the sources of satisfaction and dissatisfaction from the use of self-service technologies. The Critical Incident Technique (CIT) was used to identify some of the se sources. The authors identified some sources of satisfaction to be ease of use, saving of time, convenience and the avoidance of service personnel. Dissatisfaction with the use of these self-service technologies results from technology failure, poor design, service design or customer driven failure.

Electronic menus

The restaurant industry has continued to be innovative in order to meet the needs of their clientele and has now introduced electronic menus such as the iPad tablets as part of the dining experience (Rousseau, 2011). The introduction of such an upgrade to restaurant menus should be examined by restaurateurs as it is ranked as one of the hot new trends of 2011. The implementation of the electronic menus in restaurants has allowed restaurateurs to provide their guest with pictorial presentations, nutritional information, and the origin of ingredient (Rousseau, 2011).

Rousseau, (2011) indicated that the key elements which were highlighted in the development of a regular paper based menu should be taken into consideration in the development of an electronic menu if restaurateurs expect the menu to fulfill its role.

Another important aspect to be considered in the development of such menus is the structure and the navigation. Users should be able to go through the menus easily and take advantage of the menu's content and learn the menu's functionality.

Definition of electronic menu

According to "Liwei and Pinying ,(2013" Electronic menu and ordering system that intends to provide an efficient and effective customer-wait staff communication is an ideal tool to provide exceptional customer service in restaurants. Customers can browse menu items and other details about the dish. Also, they can quickly enter an order at tableside and send that information to the cashier and kitchen from a familiar touch-screen interface.

Profitability definition

Armstrong (2001) defines profitability as the company's primary aim and the best way to measure efficiency in competitive businesses. He also states that profitability analysis is made to provide more data to improve the company's business performance.

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The two key aspects of profitability are revenues and expenses. Revenues are the business income. This is the amount of money earned from customers by selling products or providing services. Generating income isn't free, however. Businesses must use their resources in order to produce these products and provide these services.

The effect of applying electronic menu on profitability

Digital menu technology isn't just about electronic menu boards. It blends industry expertise, specialized creativity and advanced technology to tantalize your guests and boost profits. Simply put, digital's dynamic imagery looks better and gets results. Plus, by going digital, you can impact in-store customer behavior like never before. Here are six ways you can use digital menus to drive sales and boost profits.

1-Eye catching

*Spotlight*It's all about upsell and upsize. Get your audience excited about moving to more profitable, high-dollar items. Using the golden triangle, put a tantalizing image of your feature front and center, your value offer on the right and other items on the left.

Tempt the senses Show bacon sizzling on the grill. An icy drink, with beads of condensation running down the glass. Much more so than static images, digital images let you entice your guests with dynamic, moving pictures that arouse emotion.

*Menu Changer*In the past, all you could do was to organize your menu in a static presentation and hope for the best. Now, with digital menu technology, you find out what works and use your in store menus as one of your most effective selling tools. Images can be updated to reflect each daypart. Unlimited coffee with an appetizing combo promotes a prolonged stay and increases sales.

Be Nimble ness with **technology** that combines creativity, resources and real-time capabilities, you can boost sales in new ways. Quickly refresh content and seize upsell opportunities on the fly by directing customers' attention where you want it.

2-Reinforce your strengths

*Appealing Food*Digital does more than showcase menu selections. Through quality creative, Digital Menu Boards tell a story and present your brand with a mouth-watering, tempting visual appeal.

Research Hypothesis

Examining the relationship between the electronic menu and the profitability

Research Methodology

Sample and Data Collection

A self-administered questionnaire was designed as the research instrument for collecting primary data. It was distributed to a sample of managers in restaurants. (Table 1)The Seven point Likert-scale method was developed within the questionnaire.

The questionnaire focused on some questions related to the impact of E-menu on profitability.

Table (1) Number of restaurants and location

Restaurant Name	location
Chilis	Heliopoles- Zamalek
Spectra	Tahrir – Abbasya- Nasr City- Manial- Heliopoles
Pizza Hut	Tahrir- Abbasya- Nasr City -HeliopolesZamalek –Ramsis – Tagammoa - Shobra- Maadi- Helwan
KFC	Tahrir- Abbasya- Nasr City -HeliopolesZamalek –Ramsis – Tagammoa - Shobra- Maadi- Helwan
Mo'men	Tahrir- Abbasya- Nasr City -HeliopolesMohandseen –Ramsis – Tagammoa - Shobra- Maadi
Peking	Tahrir- Zamalek -Nasr City- MaadiHeliopoles
Hardees	Tahrir- Maadi –Abbasya- Manial- Nasr City Zamalek- Shobra- Dokki
Prego	Mohandseen-Manial-Abbasya- Nasr City- Maadi - Heliopoles
Tikka	Mohandseen-Tahrir- Manial- Nasr City Heliopoles -Maadi
Papa John's	Abbasya-Zamalek-Dokki-Maadi- Nasr City Heliopoles
Steak out	Heliopoles –Maadi- TagammoaMohandseen
Casper	Abbasya - Nasr City- Heliopoles
Hadramot	Heliopoles -Dokk -Nasr City –Maadi- Helwan
Cook Door	Heliopoles- Nasr City- Tahrir- Zamalek- shobra- Helwan
Fish Market	Heliopoles- Maadi- Tagammoa
McDonald's	Maadi -Nasr City- Tahrir- Heliopoles- Zamalek -Dokki– Shobra- Helwan
Cortigiano	Dokki- Nasr City- Heliopoles- Maadi
Sushi Bike	Tagammoa
77 spice	Nasr City
Al Dahan	Tagammoa- Heliopoles- Mohandseen - Al Hussein

Statistical Package for the Social Sciences (SPSS) software, version 20 was used to analyze the collected data. Mean and standard deviation (SD) were used to analyze the scales. Pearson correlation and multiple regression analysis were used to test the research hypothesis.

Results and Discussions
The impact of using electronic menu on profitability
Table(2) : The impact of using otlob.com on profit

	M	SD
1. Otlob application adds value to your business	4.10	.75
2.There is insufficient evidence to suggest whether Otlob application increases profitability	3.85	.71
3.Otlob application does not add profit	2.09	1.02
4.Otlob application benefits stakeholders most	3.09	.75
5.You cannot measure the impact of Otlob application Immediately	2.71	.93
6.Otlob application gives a company a competitive Advantage	4.09	.75
7.The costs of applying this application are too high	4.28	.63
8.Otlob application is essential	4.14	.46
9.Otlob application is more important than profit	4.19	.90
10. Otlob application is on a parallel relationship with positive Profitability	4.42	.58
11.Otlob application is expensive to a firm	3.33	.64
12.Is Profitability is the most important business objective?	4.14	.71
13.Does Otlob application lead to profitability in the short Term	2.28	.88
14.Is Otlob application impossible to predict its impact on profitability?	1.95	.95
15.Not using Otlob application doesn't make a company socially unacceptable	4.00	.97

Table (2) shows that the mean score for the statement (Otlob application is on a parallel relationship with positive profitability) was the highest (4.42 and SD .58)followed by the statement (The costs of applying this application are too high) with a mean score of (4.28) and SD(.63) Again the statement (Is Otlob application impossible to predict its impact on profitability) was of the lowest score (1.95) and SD (.97) ; the means of the other factors were above (1.95)

Miller and Pavesic (1996) highlighted that the menu is seen as a sales tool that highlights unique dishes which are able to increase the overall profitability of a restaurant and may also be considered the restaurant's ultimate profit and control centre. Rousseau (2011) reported that the Chicago Cut Steakhouse implemented the iPad and achieved an increase in consumption by 20 percent. This increase was attributes to customers being fascinated by the new technology.

It is therefore imperative in the development of a restaurant menu for restaurateurs to consider which factors, as a poorly designed menu can create a negative first impression for the restaurant given that the menu is seen as a source of advertisement. However, a well-designed menu puts the customer in the ordering mood thus stimulating sales that increases the guest check average (Seaberg, 1991;Cichyand Wise ,1999).

The Relationship between Using of Electronic Menu and Profitability

This question was designed to indicate the relationship between using E-menu and its impact on profitability. The relationship was investigated using Pearson product-moment correlation coefficient (table 3). Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity.

Table (3)		E-menu usage
impact	Pearson Correlation	.714[**]
	Sig. (2-tailed)	.000
	N	126

As shown in Table (3), there was a large positive correlation between the use of E-menu and the profitability (r.714, n = 126, p <.000). This finding agree with Arnelyn(2016)"who mentioned that it is anticipated to increase sales. The use of interactive menu and ordering system can overcome the challenges and meet the communication gap between customers and wait staff. The features of the menu are expected to give a vivid image of the dish, enlighten the customers about their order, ingredients, food allergens, grades of spiciness and price.

Testing the Research Hypothesis
The Research hypothesis was tested using regression analysis

Dependent Variable	E - Menu			Hypothesis
	Beta	S. Error	Sig.	
profitability	.334	.241	.000	Supported

It was hypothesized that there would be a positive relationship between Electronic menu and profitability. The results demonstrated positive and significant paths from E-menu and profitability (β =.334, p $\geq$0. 01). Hence the hypothesis is supported.

Conclusions and Recommendations

This research investigated the impact of the electronic menu on guest loyalty restaurants. In order to achieve this aim, a self-administered questionnaire was distributed to a sample of guest in some restaurants.
The following recommendations could be suggested to increase the profitability in restaurants by using the technology:

1- Restaurant operations should shift from using traditional menues towards e-menus;
2- High rates of return is foreseen for usage of e-menus, investment priorities should be shifted towards that type of applications;
3- More user friendly interfaces have to be used in these e-Manu applications, the use of colours and photos is highly recommended other than texts and wording;
4- The use of magnification in e-menus is highly recommended to increase the profitability.

Implications for Further Research

There are good opportunities for future research with regard to the lack of research in relation to the electronic menu in the restaurants. Some of these are:

- The present study focused on the impact of E-menu on profitability restaurants, it would be useful if future researches could be focused on its impact on other aspects such as the staff and quality of service.
- The study focused only on data obtained from restaurants which use the electronic menu, further researches could be focused on other sectors of restaurant industry.

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تأثير تطبيق قوائم الطعام الإلكترونية على الربحية في المطاعم

التكنولوجيا الحديثة لها عدة أشكال وطرق جديدة تستطيع المطاعم تطبيقها بشكل مبتكر للوصول إلى الهدف الرئيسي من إنشاء المطعم وهو رضاء العميل الذي يؤدى بدوره إلى زيادة المبيعات وبالتالي زيادة الربحية. وأثبتت العديد من الدراسات أن إدخال الأساليب الحديثة للتكنولوجيا في الخدمة المقدمة بالمطاعم لها عامل إيجابي كبير ومهم في رضاء العميل وزيادة الربحية .

الهدف الرئيس من هذه الدراسة هو اكتشاف العلاقة بين رضاء العميل ووسائل التكنولوجيا الحديثة في الخدمة وبالتالي زيادة الربحية.

جمعت النتائج باستخدام قائمة استقصاء وزعت على عملاء عشرين مطعماً واستخدمت الوسائل الإحصائية لتحليل النتائج ويوصى البحث بتطوير برامج تحفيزية لتشجيع الاحتفاظ بالعملاء وضمان علاقات قوية بين المؤسسة وعملائها من خلال اختلاف وسائل جذب تزيد الربحية، ومن أهمها في الوقت الحالي استخدام التكنولوجيا الحديثة .

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