AN EXAMINATION OF ELECTRONIC TABLET BASED MENUS FOR THE
RESTAURANT INDUSTRY

by

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Management

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ABSTRACT

The menu has been considered as the primary tool for sales and communication in a restaurant operation, as it drives the production and purchasing decisions for both the customer and the restaurateurs. With the advances in technology restaurateurs have tried to improve menus to make them more appealing in order to boost sales and enhance the ordering experience for customers. In this context, there has been an increase in the application of technology in restaurants such as online ordering, mobile apps for ordering and payments and Electronic Tablet-based menus. This study was conducted to determine if the Electronic Tablet-based menu was significantly superior to the traditional paper based menu when it came to the ordering experience as well as to determine if Electronic Tablet-based menus reported greater usability ratings when compared with traditional paper based menus.

To evaluate both menus, opinions were sought from the patrons of the Vita Nova, student operated restaurant at the University of Delaware. Respondents of the study were given either a paper-based menu or an electronic tablet (iPads) with the menu accessible through a menu webpage developed exclusively for the experiment. Respondents were then asked to evaluate the menus across two important criteria namely, ordering experience and usability. Data was analyzed using independent sample t-tests and bivariate correlations.

Findings indicate that the Electronic tablet-based menu is significantly superior to the traditional paper based menu when it comes to the ordering experience
and also reported greater higher usability ratings when compared with traditional paper based menus.

Restaurateurs need to take advantage of the potential of electronic tablets to bridge the information gap that exists with traditional paper based menus. Electronic tablets have the ability to transfer greater levels of information in an interactive manner thereby enhancing the role of the menu in the merchandising.

Keywords: Electronic Tablet –based Menu, Usability, Ordering Experience, Information Satisfaction
Chapter 1
INTRODUCTION

1.1 Introduction

The restaurant industry plays a vital role in the lives of individuals in the United States; for both the consumption of meals and provision of employment for individuals. This is consistent with the National Restaurant Association (2010) that stated 44% of adults believed that restaurants play a very vital role in their lives. The National Restaurant Association (NRA), (2011) forecast, predicts that the restaurant industry will make $604.2 billion in sales. Additionally, the NRA reported that 83% of adults now consume at least one of their daily meals at a foodservice establishment as they see it as taking a break from the monotony of their daily lives (NRA Forecast, 2010). As a result, the restaurant industry has experienced tremendous growth as more persons are consuming meals outside of the home. It is with this trend, that restaurateurs are seeking to develop new restaurant concepts to meet the many demands of customers.

According to the National Restaurant Association (2010) on a typical day in America, more than 130 million people will be foodservice patrons and that the projected industry sales volume of $580 billion spent on food consumption outside the home in 2010. In a highly competitive market place for these patrons’ dollars, restaurants have been steadily offering consumers a wide range of innovative products and services catering to individual needs.
The strong growth in the industry can be directly attributed to the change in individuals’ lifestyle, as consumers are searching for services to complement their busy and complex lives (Goch, 1999). Another factor that has contributed to the growth of the restaurant industry continues to be the development of new concepts and its competitive nature. Due to this factor, restaurateurs are faced with the challenges of capturing and retaining customers in their market segments.

As an ongoing issue, restaurants have to practice aggressive marketing tactics to attract customers for their products and services while maintaining a competitive edge in the industry (Kimes, 2008). One way that restaurateurs have chosen to address this issue is through the introduction of technology in the industry. The use of technology has become very diverse within the industry and ranges from minimal to extensive use and has assisted in altering the way restaurateurs conduct business (Huber, Hancer & George, 2010). Technology is important to the industry as it has led to efficient operations, more consistent products, and better customer service/experiences. Prior studies have exhibited that the use of technology in restaurants has had four main benefits for the industry, these include- the minimization of cost, better management of employees, improved revenue management and as a competitive advantage as they are better able to cater to customer preferences and tailor menu items to meet customer’s needs (Ansel and Dyer 1999; Oronsky and Chathoth 2006).

1.1.1 Background of the study

While there have been many changes in the restaurant industry, the restaurant menu still plays a vital role and is often viewed as the core of a restaurant’s strategy (McCall & Lynn, 2008). Additionally, the menu, when used as a great marketing tool has the ability to influence customer’s decision and behavior. It is the
menu that drives the purchasing and production decisions for both the potential customer and the restaurateur. Although other factors have been found to drive diners to patronize a restaurant, the menu is the leading driver (McCall & Lynn, 2008). According to Panitz (2000) the menu has a variety of factors that influence the consumer’s response. These factors include: the physical menu’s background, texture, colors, photos, position of items, pricing, font, and size among other factors. With this being said, restaurateurs have tried to improve their menu designs in order to entice their customers during the ordering process.

Designs and displays in restaurant menus have been integral elements of merchandising strategy in the restaurant business (Mills & Thomas, 2008). At a fundamental level, menus play an important role in alleviating consumers’ perceived risk over the menu items they order in a restaurant. However, at a promotional level, they can also serve as vehicles for enhancing the dining experience for customers with the use of rich descriptions and images; this can be achieved more effectively through the application of technology to restaurant menus. Oronsky and Chathoth (2006) are in agreement with the statement that technology can enhance or bring about change in the dining experience of customers, such as the way the meal is presented, prepared and delivered just to name a few.

Based on a review of prior studies Leung and Law (2007) identified that there was seemingly importance of IT in the restaurant industry as the use of new technologies and innovative ideas provide support for the restaurants daily operational and managerial decisions. It is therefore important to understand how technology impacts customer satisfaction and buying behavior. Along with an increase in the importance of technology in operating restaurants there has also been an increase in
the use of tabletop and handheld ordering devices (Rousseau, 2011). In this context, the emergence of innovative hand-held technologies, namely tablets such as the iPad, can pave the way for restaurateurs to augment menus as customers are able to review menu items, nutritional information, and preparation of menu items. Put differently, electronic tablet menus have the potential to enhance informational satisfaction over what a customer seeks to order by reducing customer uncertainty in the decision making process.

Additionally, they also have the potential to enhance the experiential qualities of restaurant consumption through innovative displays of information architected through intuitive interfaces. There have been restaurants which have implemented iPads as menus, some of these restaurant started out using the menus as wine lists then implemented them as dinner menus. Rousseau (2011) reported that the Chicago Cut Steakhouse, implemented the iPad for their wine lists, and has seen an increase in wine consumption of their customers by 20 percent. They have attributed this increase to customers being fascinated by the new technology. Another capability of the use of the Electronic Menu in the restaurant to complete digital surveys about dining experience and also keep track of any frequent diner programs (Rousseau, 2011).

While the introduction of information technology presents numerous opportunities for restaurants, one needs to examine the impact its implementation on customers’ satisfaction. When designing a menu, operators should focus on both the satisfaction from the consumption of the meals presented in the menu and that the ordering process is a pleasurable one for the guest. Shirani, Aiken, and Reithel (1994) found that user’s information satisfaction is a measure of the user’s belief about how
well a system meets their requirements and expectations. These authors suggest that with this technological revolution, the foodservice industry will increasingly be adopting a ‘high tech’ approach to servicing its customers. However, these systems need to be evaluated to ensure that they do not take away the traditional ‘high touch’ that the industry is known to offer.

Information Technology has changed the way we interact with each other, seek out information, and make purchases. It has also provided restaurateurs with new means of reaching out to their customers to meet their demands. While the use of technology has led to many opportunities for restaurateurs, operators need to consider the influence of adopting these technologies on customers’ ordering experience and the usability of these technologies.

According to Law and Ngai (2005) usability, often referred to as the ease of use, can be defined as how well a user can use a technology or a website to achieve specific goals with effectiveness, efficiency and satisfaction. Usability plays a vital role in the design of technology which requires human computer interface as it can lead to satisfaction or dissatisfaction of the customer and will affect future use of the technology. Poor usability can lead to dissatisfaction with the use of technology, as this increases inconvenience for users but also reflects negatively on the organization (Wotton, 2003; Souza, Manning, Goldman and Tong, 2000; Law and Ngai, 2005). As a result of this, it is imperative that the usability of the technology be examined when focusing on the overall satisfaction a customer gains from the use of a technological tool.

Another important factor that should be analyzed with the introduction of new technology such as the Electronic Tablet–based menu is customer satisfaction.
Assaker et al, (2010) supports this statement as the authors highlighted that there is a significant positive relationship between customer satisfaction and loyalty. The ordering experience is a part of the entire service experience which plays a vital role in customer satisfaction, hence its equal importance.

1.2 Problem Statement

The menu plays a vital role in the restaurant industry as it is seen as the key disseminator of information and provides users with detailed descriptions that serve as a guide in the ordering process. Although there is evidence of past research on the importance of restaurant menus and their development (Cichy and Wise, 1999; Kinkaid and Corsun, 2003; Kreck 1984), there is little known about the influences the use of electronic menus has on the ordering experience for restaurant customers. There is also no evidence of research focusing on the usability of menus and the ordering experience at large.

1.3 Research Questions

To fill the knowledge gap on the impact the use of Electronic Tablet – based menus as it relates to the usability and a customer’s ordering experience. This study seeks to investigate the following questions.

Q1. Is the ordering experience perceived as significantly superior with Electronic Tablet -based menus as opposed to traditional paper based menus?

Q 2. Does the Electronic Tablet-based menu have significantly greater usability ratings as perceived by customers as opposed to paper-based menus?
1.4 Purpose of Study

The purpose of this study was to investigate the relative differences in perceptions of the ordering experience and usability between electronic tablet–based menus and traditional paper-based menus. Will the use of an electronic tablet enhance the ordering experience while also reporting greater usability levels when compared with traditional paper-based menus?

Note that the electronic tablet-based menu is only for providing depth in information and not as a direct self-service ordering system. Findings can be used by the restaurant industry to where the interest towards electronic tablet-based menus is gradually beginning to gain traction.
Chapter 2

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of documented sources on the importance and development of restaurant menus. The author sought to highlight how restaurant menus have changed as the industry has implemented technological applications to menus such as kiosks and electronic menus. With the change in menu design it is therefore imperative to examine customers’ readiness and adoption to these technologies, human computer interaction and user interface. The author also examined the literature to identify what we know about customer satisfaction, more specifically the ordering experience and usability.

The restaurant industry is generally competitive by nature and as such restaurant operators are continuously seeking new ways to improve their sales and maintain customer relationships (Ansel and Dryer, 1999; Huber et al, 2010). One way of achieving this is through the use of technology. Technology has become very important to the restaurant industry as it has presented opportunities to reduce cost, improve efficiency, and improve customer service that is provided by the restaurant (Behnan, 1997). Restaurants have now use technology to alter the way they deliver services to their customers such as the alteration of menus to include the additions of pictures and nutritional information.
2.2 Importance of Restaurant Menus

The restaurant industry is a demanding sector from which individuals expect to receive high quality service and, moreover an overall exciting dining experience (Marković, Raspor, & Šegarić, 2010). Markovic et al (2010) further stated that there are many elements that make up the dining experience for the customer; these elements are considered both tangible and intangible. One of the most important tangible elements in the restaurant is the restaurant’s menu. According to Cichy and Wise (1999), a menu can be described as a map which encourages easy navigation between hunger and satisfaction for customers.

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. 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.

In a previous study, Kreck (1984) stated that menus have been compared to speeches by professional speakers and the way the information is communicated is just as important as the information itself. The menu provides a description of the dishes to be served. Restaurateurs should ensure that the description does not overwhelm the customer but that the presentation of the meal is matches the customer’s expectation, as the details of the dishes help to stimulate the desire for the menu item in the patrons mind.
According to Kinkaid and Corsun (2003), the menu is considered to be the main sales tool to be employed by the restaurant as it can be seen as a form of printed advertisement for the organization. Miller (1987) states, “the principle duty of the menu writer is to direct the patron’s attention to those items that you, the operator, desire to sell” and that it reflects the decisions concerning what to serve, how it should be served and the prices to be charged for items. Miller and Pavesic (1996) highlighted that the menu is also 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 center.

### 2.3 Important Factors in the Physical Restaurant Menu

**2.3.1 Appearance of the Menu**

In order for the menu to execute its roles as a profit generator and communication and sales tool, restaurateurs need to focus on the appearance of the menu. Guests are influenced by the visual cues of a menu such as the layout, the design, art work, and the type styles (Cichy and Wise, 1999). It is therefore imperative in the development of a restaurant menu for restaurateurs to consider these 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; Cichy & Wise, 1999) the format in which the menu items are presented will determine how well they are sold thus impacting sales (Amoult, 1998). The décor and attractiveness of the physical environment helps to construct the image of the restaurant. Similarly, the menu also illustrates an image of
the restaurant thus both are considered to be a part of the facility aesthetics (Wakefield & Blodgett, 1994). In their study the authors found that the facility aesthetics does have a positive effect on the perceived quality of a servicescape. Bowen and Morris (1995) also support this as they reinforced that the menu also provides the customer with tangible evidence and a reflection of the restaurant’s image. It is therefore important for restaurateurs to make their menus attractive in regards to a variety of factors that affect customers’ response including color, layout, type and graphic designs to name a few (Scanlon, 1985; Panitz, 2000). Changes in consumer’s preferences have also affected their expectation of menu appearances as consumers now have a higher expectation for high quality color and finishes (Litsikas, 1996).

2.3.2 Use of Colors

When designing the menu, the colors should be chosen wisely, as the colors used can impact the mood of patrons both negatively and positively. Colors can also assist in creating the atmosphere for the dining experience which ultimately impacts the customer satisfaction (Fellman, 1981). Scanlon (1985) highlighted that before choosing the colors for the menu restaurateurs should first decide the desired impact they want color to have, whether the color will be used to create the mood for the customer or to increase the sales of the restaurant. The author further highlighted that in order to design an attractive and interesting menu which will highlight specific items of interest, requires the use of creative colors. This is so as color photographs of menu items helps to highlight the color and texture of the featured dishes, adds variety to the menu, and may contribute to increased sales (Cichy and Wise, 1999). However, when using colors on the menu one should be careful as ‘clashing colors’ can affect the psychological effect that colors may have when used individually. Thus
it is not only important to utilize colors on a menu but to know what colors complement each other (Scanlon, 1985).

According to Singh (2006) color impacts people in different ways. Priors studies have been carried out which examined colors and emotions and have concluded that colors such as yellow, orange and blue were happy colors while brown, black and red were sad colors. Singh’s study further showed that while colors such as red were sad colors, when it is used in restaurants it stimulates the appetite because of the effect it has on an individual’s metabolism. The author also found that yellow get customers’ attention and encourages them to eat, thus encouraging sales. Some restaurants use color such as blue to help customers to feel relaxed as they believe it will lead to an increase in the time spent in the restaurant which may increase sales. While some researchers have concluded that color impacts human behavior there have been others that contradict this theory. Kaiser (1984) found that evidence which links specific colors to specific responses are inconclusive and that physiological responses to colors are just a part of human experience. There was also some limitations to Singh’s study as, as the study was conducted under the assumption that everyone could see color. Those people that are color blind may have varied reactions not due to perception of color.

2.3.3 Layout of the Menu

The layout of the menu is seen as a key aspect of menu design as the placement of the menu items may impact customer’s selection of menu items throughout the ordering experience (Kincaid and Corsun, 2003). The layout should be designed so that it can be clear and easily followed in order to facilitate the sale of high profit menu items, while minimizing difficulties customers may encounter while
utilizing the menu (Scanlon, 1985). There have been Gaze-motion studies which identified the way customers view menus, these studies suggest that customers’ vision travel across the page in a predictable manner, and have also suggested that the more detailed and more often an item is seen on the menu, the more likely it will be ordered (Morris and Bowen, 1995). Another important aspect which has been highlighted is the use of creativity in the layout of the menu. This is an important aspect as it increases the likeliness of a menu item being ordered and also helps to make the ordering process a more memorable experience for guests (Cichy and Wise, 1999).

2.3.4 Typeface

Above all, the menu should be legible as this will have an impact on the overall ordering experience for the guests (Cichy and Wise, 1999). The typeface accompanied by other factors such as the color, size and background will affect the legibility of the menu. According to Scanlon (1985) typeface can be defined as the type of lettering used in the printing process and should be used to complement the character and personality of the restaurant and be consistent with the overall design of the restaurant’s menu. The typeface used in the menu is very important as it has an effect on customers and can also be used in the menu to highlight high profit items or specials on the menu. Seaberg (1991) stated that the typeface establishes a link between the restaurant operation and the customers in the form of written communication as it provides a descriptive copy for customers. Scanlon (1985) also conveyed that different typeface used on the menu can be used to convey different moods. It is also suggested that restaurateurs should consider letter spacing and the contrast as it will affect the readability of the type used in the menu development.
Typeface can make the menu more difficult or easier to read thus all styles should be compatible with one another.

2.3.5 Illustrations and Graphic Designs

The use of illustrations and graphics are very important in menu development as they make the menu more visually appealing to customers and spark a customer’s interest to actually review the menu (Seaberg, 1991). With the change in lifestyle as mentioned above, it is the restaurateur’s duty to make the menu visually appealing to capture their desired target market, especially children. The use of illustrations also helps to reflect the interior design of the restaurant and helps to give the customer an idea of what should be expected from the organization. This is consistent with Fellman (1981) who stated that with the increase in the number of working mothers and single parents, menus to attract their kids are vital. Restaurants need to illustrate by way of the menu their ability to attract and cater to younger target markets. The use of illustrations is able to achieve this goal not just for kids but for adults as well. Brown (1988), stated that a picture is worth thousand words and that the human ability to extract information from visual scenes is far more important than an individual’s ability to manipulate data verbally or arithmetically.

While the use of illustrations and designs have proven to be of great importance in the development of restaurant menus, it is important that restaurateurs do not overcrowd their menus with graphics and illustrations. Scanlon (1985) stated that menus too ‘busy’ with illustrations and graphics distract customers from their food selection, as the graphic overpower the menu items, causing customers to overlook menu selection which may result in the suffering of restaurant sales.
2.4 Changes in Menus

There have been numerous changes to restaurant menus as restaurant operators are continuously seeking ways to improve their menus to retain present and attract new customers (Kincaid and Corsun, 2003). One factor that has assisted restaurateurs in changing their menus in order to achieve these improvements is the introduction of technology in the restaurant industry. Technology has provided restaurateurs with limitless opportunities to improve their menus (Huber, et al, 2010). Restaurateurs use technology to implement change in all aspects of their restaurant more specifically the menu, as they believe it has the potential to increase the speed of service, give customers the opportunity to customize their meals, and provide customers with more detailed information on featured menu items thus increasing customer satisfaction (Kimes, 2008). Restaurateurs have also benefited from these changes as it has contributed to a reduction in labor cost (Ansel and Dyer, 1999).

2.4.1 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, Ostrom and Brown, 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 in 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 can be defined as customers’ participation in the creation and delivery process and it requires meaningful and cooperative contribution to the service process (Auh, Bell, McLeod and Shih, 2007). The authors also stated that the act of co-production gives the customer some level of control over the outcome of the service experience and as a result of this; customers may perceive more value from the experience. One example of co-production being in the dining service is by allowing customers to use the interactive menus rather than the use of waiters and waitresses. According to Ford and Bowen (2003) the use of co-production has also had a positive impact for restaurateurs; customers are able to provide them with better information than they would probably receive from a market research as customers are able to directly share their experience with technology.

While the introduction of self-service kiosks may assist in meeting the needs of customers, some customer 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 kiosks as customer’s satisfaction or dissatisfaction is a factor in determining their retention and loyalty to the organization (Marković, Raspor, & Šegarić, 2010).

In a study conducted by Mueter, Ostrom, Roundtree and Britner (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 in a study to identify some of the sources associated with the dissatisfaction or satisfaction from the
use of self-services technologies. The authors identified some of the sources of satisfaction were ease of use, saving time, convenience and the avoidance of service personnel. From the study it was also revealed that some people experienced dissatisfaction from the use of these self-service technologies as a result of technology failure, poor design, service design or customer driven failure. The authors had recommendations for future research as there were limitations to the study. They believed the sample may have been somewhat biased which may have prevented them from identifying other categories of satisfaction or dissatisfaction from the use of self-service technologies. It was also suggested that research be done to find out what motivates an individual to use self-service technologies and how individuals learn their roles to use these technologies.

2.4.2 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 (NRA, 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). With that being said, the content of the menu is of utmost importance, as it is the most important element displayed in an electronic menu. According to White (2005) ‘content is king’ the content is the information which will be provided for the user with all the necessary detail to match their needs. The information presented on the menu should be relevant, engaging and easily understood by the intended user. The
content includes text, music, sound animation and video in order to relay the intended message. 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 that should 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. White (2005) further highlighted the need for electronic menus to be visually appealing to the customers as this will affect the guest’s perception of the menu, thus it is important that the menu is of good quality and relevant for the intended audience. White (2005) also stated that another important aspect of the menu is its interactivity. Good interactivity facilitates the participation of the customers to be a co-producer in the service which is being provided.

2.5 Customer Information Expectation

Customers are becoming more health conscious and now require more information from restaurateurs on the featured menu items to guide their purchase decisions (Cranage, Conklin, & Lambert, 2004). According to Zeithaml, Bitner and Gremler (2009) customer expectation can be defined as the customers’ belief about service delivered and it is with this belief that customers measure the actual service that is received from a service provider. The customers’ overall expectation of service and the menu is very important to an organization as it may affect the success of the establishment. Knowing and understanding customers’ information expectation plays an integral role in the success of restaurant establishment as the information
provided to customers may ultimately affect the customers purchasing decisions (Mills & Thomas, 2008).

Menus are normally created with much consideration given to aesthetic appeal and also its function as a sales instrument rather than its function as a provider of nutritional information, which is beneficial to customers (Cranage, et al. 2004). With the increase of health conscious customers, the FDA passed the Truth –In – Menu law in 1997 with the focus of reducing the prevalence of obesity and the effects associated with the disease (Mills & Thomas 2006). Health conscious consumers have significantly contributed to the changes such as the amount and quality of information desired in a menu as it relates to nutritional information. This is evident in the case of Pelman vs. McDonalds Corporation when the company was sued for endangering a customer’s health through the use of deceptive advertising (Mill & Thomas, 2006). Customers are living in an information sensitive environment and require all the necessary information in order to make their final menu decisions.

Restaurants are seen to be socially responsible to provide their customers with information necessary in order to make purchase decisions (Cranage, et al, 2004). The authors further stated that customer information expectation based on too little or incorrect information can lead to illusion about the value of the menu item. The information provided to customers assists them to form an idea of the product they ought to receive.

2.5.1 Nutritional Information

The inclusion of nutritional information in restaurant menus is becoming a major concern of consumers. According to a study conducted by Hwang and Lorenzen (2008), there are more than 300,000 deaths in the U.S that are obesity related. It has
become a major concern in America as it can be associated with a number of chronic conditions and diseases. Pulos and Leng (2010) uncovered that restaurants are a seen as a primary source of obesity. One reason for this is that people consume more food outside the home gain a higher caloric and fat content which has created an increase in the need for health literacy. Health literacy is concerned with the ability of consumers to gain access, understand and use information which will promote and maintain good health (Kishbusch and Nutbeam, 1998). While some restaurants have incorporated nutritional information in their menus with the hope of increasing health literacy, there are still others that have not done this. Many state and local governments are now considering the labeling of menu with nutritional information and caloric content as requirements for chain restaurants included in the 2010 health care reform (Pulos and Leng, 2010).

Longevity has affected individual’s eating patterns thus an increase in the need for the presence of nutritional information on restaurant menus. The inclusion of nutritional information may affect the acceptance and satisfaction of meals and also an individual’s dietary intake (Stubenitsky, Aaron, Catt and Mela, 2000). In a study conducted by Cranage, Conklin and Lambert (2004) it was found that there are positive benefits for restaurants when they provide nutritional information on the menu. Providing this information led to customers giving higher satisfaction ratings relating to the quality of food, may increase customers repurchase intentions, and may be seen as a provider of superior service which leads to an increase in the satisfaction with the dining experience. Stubenitsky et al. (2000) study indicated that that inclusion of nutritional information did not have a significant impact on consumers’ meal expectation or acceptance. However, the authors stated that since most of the
participants in the study were regulars at the restaurant, may have affected the results of the study.

Another market research which was conducted by Brandau (2011), in their research they used two quick service menus, one with nutritional information and the other without. From the study it was found that the inclusion of nutritional information on the restaurant menu there was no significant difference in the items which were ordered. However, the study found that inclusion of calorie counts on menus did cause consumers to opt for or avoid certain menu selections.

### 2.6 Human Computer Interactivity

The change in menus have incorporated the use of technology in restaurants, it is with this change that restaurateurs have to consider human computer interactivity when making decisions on the technology implemented as menus. Needless to say, human computer interaction is an integral aspect of user interface, thus it plays an important role in interactive menus to be used by humans. According to Pocius (1991) human computer interaction can be defined as a process in which a user and a computer engage in a communication dialogue in order to accomplish a task. Human computer interaction may differ among individuals, as users’ possess different characteristics. Pocius (1991) and Kumar, Smith and Bannerjee (2004) highlighted that such knowledge may help individuals when designing computer systems to be utilized by individuals from a wide market. This is important as there is an increase in the use of computers within the restaurant industry.

Being characterized as a service industry, technology introduced within the restaurant industry is expected to perform the same roles which are normally executed by humans to ensure the service experience matches or exceeds the
customers’ expectations. According to Brown (1988) having knowledge such as this, systems should be designed in such a manner that they do not require the user to dedicate extensive mental processing to utilize these systems or lead to an increase in service time. This is so as it may affect customers’ acceptance and avoidance of technological tool, some customers have openly welcomed and accepted computer technology while others avoid the use of the technology whenever possible (Pocius, 1991). Sharma, (1986-1987) have identified personality as a vital role in human computer interaction as it not only affects human computer interaction on a task level but it also helps to determine whether or not humans will use a computer to execute a task.

2.7 Technology Adoption Life Cycle

Before the implementation of various technologies within a restaurant, restaurant operators need to consider the fact that technology will become obsolete at a rapid rate due to continuous upgrade of technological tools. The lifecycle of technology is similar to that of a product; it experiences the four stages of the product lifecycle that entails the introduction, growth, maturity and declination and of such should be considered before implementation (Beldona, Nusair and DeMicco, 2009). Individuals will accept technology at different stages of its lifecycle based on individual’s acceptance and attitudes towards the use of technology. Five segments have been identified to group consumers based on the technological acceptance, these segments include “explorers, pioneers, skeptics, paranoids and laggards” (Parasuraman and Colby 2001). Customers that are categorized as explorer are expected to enter the market first, once they have entered, the pioneers will follow and accept a technology, it is then that the technology will move to the next phase to be more widely accepted
by others. Once restaurateurs understand the concerns of consumers towards technology from these different segments it will be easier for them to implement technology so it can be accepted by the different market segments (Yen, 2005).

### 2.7.1 Technology Readiness

To facilitate the adoption of technology within restaurants, it is important for restaurateurs to focus on customers’ reaction and level of comfort with the technological tool (Dixon, Kimes and Verma, 2009). As previously discussed, individuals will have different reaction to computer interaction thus customers’ technological readiness plays a vital role in the development of interactive menus. According to Kimes (2009) today many restaurants are focused on technologically driven changes in the execution of service processes, even though the implementation of technology comes as a cost to the restaurant and may reduce the personal contact with guests. However, restaurateurs have realized it can lead to increased revenue and profit. It also contributes to an increase in speed, improved service and the quality of food provided by the organization (Berry, Seiders, and Grewal, 2002).

The implementation of technology also has potential benefits for customers as it helps in the improvement of customer convenience, increased control and improves quality (Kimes, 2009). Kimes (2008) study identified ways that technology may have contributed to increased convenience for customers, one of which was the ability for customers to make reservations and orders online. The capabilities of making online reservations helps to reduce the customer wait time also gave customers some level of control over the pace of the dining experience. Moreover, the customer who is now aware can make an estimation of both the seating and service process (Kimes, 2008). Customers also have a level of control over the
dining experience with the involvement of technology such as kiosks and virtual menus as they are able to determine specification of their dishes with the elimination of server errors. Kimes (2008) study also highlighted that technology helps to increase reliability as customers perform the same procedure each time the technology is used, thus a high level of consistency in service is necessary.

While studies have highlighted the potential benefits for the restaurant and the customers from the use of technology, the fact that individual’s personality affects their technological readiness should be at the forefront of the minds of restaurateurs (Parasuraman, 2000). This is important as the quality of service of a technological tool depends on how the technology is accepted and used by users. According to Parasuraman (2000) technology readiness is an individual’s ability to embrace and use a new technology in home and work life. It can be used by firms to enhance management’s understanding of customers and also be implemented as a method for segmenting the organizations customers (Verma, Victorino, Karniouchina and Feickert, 2007).

Technology readiness focuses on individuals feelings to accept and utilize technologies based on four traits which include; innovativeness, optimism, insecurity and discomfort. Individuals who display traits of optimism in their personality are often seen as positive drivers of technological readiness and they willingly encourage the use and acceptance of new technologies. Optimism trait focuses on the belief that there is increased control, flexibility and efficiency in life as a result of the introduction of technology because they perceive technology as being more useful and easier to use. Persons who display traits of innovativeness has the tendencies to be the
first to use the technology or thought of as a technology pioneer (Walczuch, Lemmink, and Streukens, 2007; Verma, Victorino, Karniouchina and Feickert, 2007).

However, traits of discomfort and insecurity can be seen as negative forces as they discourage consumers from even trying out a new technology in order to achieve potential benefits. Individuals with traits of insecurity will distrust technology for security and privacy reasons and also its ability to work properly. While traits of discomfort normally tend to have a need for control and perceive the use of technology as reducing their control level. Furthermore, they may feel a sense of being overwhelmed from the use of technology (Walczuch, Lemmink, and Streukens, 2007).

In Verma et al., (2007) study which was done to segment hotel guest based on their technology readiness, individuals responded to technology in a significantly different manner based on their demographic characteristics. In this study it was found that persons that were most technologically ready were more likely to be male, educated, wealthy, young and more experienced travelers. The study also highlighted that managers needed to remember that some customers are not ready or interested in using technology when designing a service.

Customer’s technological readiness will affect the satisfaction received and intention to reuse the technology. Lin and Hsieh’s study (2006) was in agreement that the more satisfaction a customer gained from the use of self-service technology (SST), the more likely that customer would be to use the technology again. The results also revealed that the customer would be more likely to recommend the technology to others once they were satisfied.
2.8 Customer Information Satisfaction

According to Liddle 2005), the restaurant industry has become modernized by the use of information technology. The author stated that it is with this change in the industry, restaurateurs have to constantly measure their overall customer satisfaction to ensure they are meet customers’ needs. According to Oliver (1997) customer satisfaction can be defined as the customer’s response based on fulfillment and may also been seen as a judgment that a product or service feature provides the customer with pleasurable level of consumption related fulfillment. Analeeb and Conway (2006) provided another definition for customer satisfaction; they defined customer satisfaction as the overall level of contentment that a customer receives from a service or product feature.

While several authors have provided definitions and measurements for customer satisfaction, the expectancy disconfirmation theory has been widely accepted to explain customer satisfaction and dissatisfaction (Cheung, Hu and Law, 2009). According to Cheung, Hu and Law (2009), this theory states that customers form their own opinion of a service by comparing the service encounter with their expectation of the service. The authors elaborated that once the customers’ experience matches the expectation then there is a confirmation or zero disconfirmation, however, if the experience does not match the expectation then there is a disconfirmation which affects satisfaction. Restaurateurs should aim to satisfy their customers as this affects their loyalty. Assaker et al, (2010) supports this statement as the authors highlighted that there is a significant positive relationship between customer satisfaction and loyalty. Furthermore there is a positive relationship between satisfaction and repeat visit intentions to an organization. To ensure customer satisfaction, restaurateurs
should ensure that all aspects of the dining experience is of good quality, from the ordering experience to the presenting the quest with their checks.

Delone and Maclean (2004) defines information satisfaction as the satisfaction that a customer receives from an overall information service encounter. The authors also stated that it focuses on how the information provided meets the needs of the customers. Their study also highlighted that the information quality and the user interface quality have a major effect on the customer’s information satisfaction. Therefore, restaurateurs should take this into consideration when developing menus for customer utilization.

According to Kim and Park (2003) customers use technology to search for information to guide their decision of a product or service. This decision will be based on the appearance of the information such as pictures and images and the quality of information that is provided rather than the actual experience. Hence it can be declared that this information is an important factor in building the trust building commerce trust and affects customer’s information satisfaction. From this it can be implied that all these factors are important in the ordering experience.

2.8.1 Usability

As mentioned before, when designing technology for human computer interaction there are many factors that needs to be considered to provide the user with optimum satisfaction. One important aspect that should be considered is the usability of the technology, in this context the menu. In a prior study, Preece (1993) stated that the goals of Human Computer Interaction (HCI) is to develop and improve systems that include computers so that users are able to execute their tasks in a safe, efficient and effective manner while enjoying the experience. The author also stated that these
aspects are communally referred to as usability. In Bedi and Banati (2006) study it was determined that usability can also be referred to as the ease by which a product can be used and learned by a user while providing the user with satisfaction.

Bedi and Banati (2006) also emphasized the need to examine the usability of technology when designing it for human computer interaction. In their study, the authors compiled a list of studies that highlighted some sources and factors which will affect customer satisfaction when using website or technological tools.

**Table 1- Factors Affecting Usability**

<table>
<thead>
<tr>
<th>Source</th>
<th>Factors</th>
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</thead>
<tbody>
<tr>
<td>Shackel (1991)</td>
<td>Speed effectiveness, error effectiveness, learnability, flexibility, and attitude</td>
</tr>
<tr>
<td>Neilsen (1993)</td>
<td>Learnability, efficiency of use, memorability, errors and satisfaction</td>
</tr>
<tr>
<td>Hix &amp; Hartson(1993)</td>
<td>Learnability, long-term performance, retainability and long-term user satisfaction</td>
</tr>
<tr>
<td>Preece et al. (1994)</td>
<td>Through output, learnability, and attitude</td>
</tr>
<tr>
<td>Shneidermann (1998)</td>
<td>Time to learn, speed of performance, retention over time, rate of errors by users, and subjective satisfaction.</td>
</tr>
</tbody>
</table>
Based on the factors which have been identified in several studies it is evident that the usability of a technology is very important for human computer interaction and may impact the reuse of the technology. Several studies have identified that poor usability can lead to dissatisfaction from the use technology as a result of the inconvenience it presents for users, and may also reduce customers intention of reusing the technology (Wotton 2003; Souza, Manning, Goldman and Tong 2000; Law and Ngai 2005). However, if customers believe that self-service technologies are easy to use, it is expected that they will have a higher level of satisfaction. Thus the usability of a menu is an important factor as it can affect the ordering experience for the guest.

2.8.2 Perceived Control

As previously mentioned, perceived control can be defined as the amount of control that a customer feels he or she has over a service experience or the outcome of the experience (Langeard, Bateson, Lovelock and Eiglier, 1981; Dabholkar, 1996). The authors study also implied that perceived control is of great importance in order for customers to accept self-service technologies and that if customers are given the option they will choose the option which gives them more control over their experience. This is so as customers would prefer to have total control over a service experience, however that is impossible (Namasivayan and Hinkin, 2003).

Hui & Bateson, (1991) have indicated in their study that perceived control has had significant positive impact on an individual’s well-being, both physical and psychological. Yen (2005) also found in a study that an individual’s perceived control affected the level of confidence they had in a technological tool. It was found that
persons reported higher level of confidence benefits from the relationship with a firm when they perceived a better control over self-service technologies than those who felt they had little control.

Customer perception of control over a technology should lead to an increase in their confidence with using the technology. According to Yen and Gwinner (2003) having control leads them to have a greater predictability over the likely outcome of the service experience. The study further highlighted that customers may be more satisfied with the quality of service as they perceive more control over the technology they have to utilize. Yen’s study (2005) also found that perceived control is critical and was a determinant for pioneer’s satisfaction when using self-service technologies. Shamdasani, Mukherjee and Malhotra (2008) have highlighted the importance of perceived control to consumers and have stated that high levels of perceived control will affect the overall adoption of a technology.

In Namasivayam and Hinkin (2003) study, the authors have highlighted that when customers feel like they have lost control in a service encounter it may lead to dissatisfaction in the service experience and may also create a variety of negative responses from the customer. The authors also stated that they have found in retail banking researches that once tellers felt they had lost control over the service experience there was less satisfaction with the service experience.

2.8.3 Novelty

Novelty can be defined as the opposite of familiarity as it is the degree of contrast between an individual’s present perception and past experiences (Assaker, Vinzi and O’Connor, 2010). In other words, it is fair to say that novelty is sought by
consumers in order to satisfy an individual’s curiosity (Beldona and Cobanoglu, 2007). According to Petrick (2002) it has been widely accepted that novelty seeking plays a vital role in tourist or guest decision making to use a product or experience a service. The author further stated that it may also impact customers’ attitude towards technology and overall satisfaction that an individual experiences from the use of the technology.

For tourists, the dining experience is just as important as any experience encountered on a vacation, therefore the quest for novelty in the dining room whether technology or cuisine is an aspect some tourists desire to achieve (Chang, 2009). It was suggested by Lee and Crompton (1992) that an individual’s desire for a novel experience ranges along a continuum from novelty seekers to novelty avoiders. In applying this concept to the technology in the restaurant industry, it would be fair to say that novelty seekers would be fascinated by use of electronic menus to enhance their service experience. However, novelty avoiders would prefer regular service procedures remained the same without the preamble of technology.

Beldona and Cobanoglu (2007) highlighted that the effect of novelty will reduce due to continuous or repeat use. Their study also stated that as an individual becomes more familiar with a technology the novelty wears off and the user becomes more capable of using the technology. However, with increased capability, users will be scrutinizing old technology even more.
Chapter 3

RESEARCH METHODOLOGY AND DESIGN

3.1 Hypotheses

This study sought to assess the impact the use of electronic menus have on the ordering experience for patrons in the restaurant setting with the objectives of: (a) evaluating if the ordering experience was perceived as significantly superior with Electronic Tablet-based menus as opposed to traditional paper-based menus and (b) if the Electronic Tablet-based menu has a significantly greater usability ratings as perceived by customers as opposed to paper-based menus.

A review of literature, this study proposed the following research hypotheses

H1: There will be significant differences between Electronic Tablet based menu and Traditional paper-based menus as it relates to the ordering experience.

H2: There will be significant differences between Electronic Tablet-based menu and traditional paper-based menu when it comes to usability.

3.2 Sampling

The subjects used for this research were selected based on the convenience sampling method. The Vita Nova Restaurant, a student operated restaurant at the University of Delaware served as the setting to obtain data for the
research. Permission was granted to the researcher by the restaurant manager to approach guests at the dinner table to seek their participation in the research. Customers were chosen based on their reservation in Vita Nova’s dinner session service. The data collection was executed over a four week span between February 25, 2001 and April 09, 2011.

The study had a total of 250 respondents, 125 respondents for each questionnaire type that was self-administered. The respondents to the survey comprised of customers who were 18 years and older who voluntarily participated in the study. The research sampling technique sought to identify a diversified group for the study to include participants of different sex, education and age group. This would allow the results from the study to be generalizable and ensure validity of the study.

3.3 Pre-Test

Before collecting data for the research it was necessary to get the customers’ view on the questions that would be asked. Twenty customers were surveyed at the Vita Nova Restaurant at the University of Delaware during the dinner service. This was done to test the clarity and the efficiency of the questionnaires. The results from the pilot study were analyzed carefully. Based on the feedback from the participants of the pretest, some of the questions were revised to improve their clarity.

3.4 Research Instrument

Four iPads were used as electronic menu for the restaurant patrons to utilize during dinner service, via a webpage. The menu consisted of pictures of the dishes on the dinner menu accompanied with detailed description of the menu items. The menu also displayed the prices of the menu items such as those displayed in the
regular menu. Nutritional information of all the menus items was presented in the menu for individuals who had an interest in the nutritional contents of the meal they would consume. The nutritional analysis for the menu items were obtained by the use of Chef Tec, which is a Culinary Software. The nutritional information which was displayed on the menu included the calorie count and the calories obtained from fat. A snap shot of different pages of the menu can be found in Appendix B.

In order to achieve the goals of the study, a survey instrument was developed. The measurement instrument was developed for two separate questionnaires and were designed based on an extensive review of literature. A sixteen item scale which focused on various dimensions of usability in user interface design which was adopted from a study conducted by Kumar, Smith & Banerjee (2004) and a study conducted by Beldona & Kalkan (2009). The measurement was developed using 16 variables from previous studies on human computer interaction that influenced feedback, ability of users to find information and the execution of desired task (Kumar, Smith and Banerjee, 2004). The survey focused on key aspects of the menu such as the color, typeface, layout, clarity etc. The components of scale are listed below in Table 2.
The scale was adopted and adjustments were made in order to facilitate this study. From the adopted scale the researcher developed the scale below. The questionnaires were used to rate the extent to which participants agree or disagree with a statement, to facilitate this a seven point Likert-type scale ranging from 7 (strongly agree) to 1 (strongly disagree) was used.

### Table 2- Usability Parameter

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>Strongly Agree (7)</th>
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</thead>
<tbody>
<tr>
<td>A. Finding information about menu items was easy</td>
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<td>B. The information in the menu was well organized</td>
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<td>C. Use of colors on the menu was pleasant.</td>
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<td>D. The contrast of the lettering with the background made the reading of the material on the menu easy</td>
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<td>E. The menu increased my sense of participation in the ordering process</td>
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<tr>
<td>F. The size of the lettering in the menu made reading the material easy.</td>
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<td>G. There was too much information presented on the menu at any given time</td>
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<td>H. The menu was visually appealing and influenced my purchase decision</td>
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To examine the ordering experience the following scale was developed to analyze both the Electronic Tablet-based menu and the traditional paper-based Menu. A copy of each questionnaire is presented in Appendix A.

Table 3- Ordering Experience Parameters

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>Strongly Agree</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>I could <em>visualize</em> what my order would look like</td>
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<td>b.</td>
<td>I had an <em>understanding of the menu ingredients</em> in my order</td>
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<td>c.</td>
<td>I had an <em>understanding of how my order will be prepared</em></td>
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<td>d.</td>
<td>I felt <em>certain about what I ordered</em></td>
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<td>e.</td>
<td>I was <em>happy with what I ordered</em></td>
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<td>f.</td>
<td>I felt <em>in control</em> over what I ordered</td>
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<tr>
<td>g.</td>
<td>In general, I felt like I was <em>informed</em> about menu items</td>
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<tr>
<td>h.</td>
<td>Studying the menu was <em>enjoyable</em></td>
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<tr>
<td>i.</td>
<td>I was satisfied with the ordering process</td>
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</table>
For the evaluation of the paper based menu, the questionnaire was divided into three sections. The first section of the questionnaire sought to examine the customer’s familiarity with the restaurant. To address this, they were asked if they had ever dined at that particular fine dining restaurant before and if they had done so, was their order different from what they normally ordered. The second section of the survey sought to examine customers ordering satisfaction and perceived control when using the menu which they had order. To achieve this statements such as ‘I was happy with what I ordered’, ‘I felt in control over what I ordered’ and ‘I was satisfied with the ordering process’ were used.

In the third section of the questionnaire the researcher then sought to examine the customers’ perception on the usability of the menu. The measure for the scale was adopted from Beldona, Kalkan (2009) and was modified by the researcher to assess the usability of the menu. In this section of the questionnaire components which focused on parameters important to the arrangement of information such as the amount of information included, the order it was presented, the lettering used in the menu and also the visual appearance of the menu. To cover the arrangement or delivery of information on the menu, statements such as ‘the size of lettering made the menu material easier to read’, ‘finding information about the menu was easy’ and also ‘the menu was visually appealing and influenced my purchase decisions’.

For the evaluation of the electronic tablet based menu, the first section of the questionnaire consisted of closed ended question. These questions focused on the customers on familiarity with an iPad or a smart phone or whether they have utilized similar technological tools, namely kiosks. The second section of the questionnaire also sought to examine the respondents ordering satisfaction gained from the menu.
The same questions used in the questionnaire for the paper based menu were repeated in this instrument.

The final section of the questionnaire, the measurement developed by Beldona and Kalkan (2009) was also used to examine the usability of the paper-based menu. The final section of the questionnaire focused on demographic data of the respondents. Both questions sought to retrieve demographic information of the respondents; therefore they were asked their gender, age, occupation and their educational background.

3.5 Data Collection

In order to evaluate the Electronic Tablet–based menu, there was some randomization in the collection of the data as there were only four Electronic Tablet-based menus. With this, only parties of four or less could utilize the Electronic Tablet-based menus at any one time. This was done as the researcher did not want customers to have both menus at the table at once. The research did not want this as it was believed that it could have impacted the how customers would evaluate the menus.

Once guests had been seated in the restaurant, the researcher accompanied the host/ hostess to the table to seek their permission to participate in the study. Once the guest agreed to participate in the study he/she was given an electronic menu from which the guest was able make the decision for their meal. The researcher recorded the time the guest received the menu and the time the menu was returned to the server. After the guests consumed their meal, he/she was approached by the researcher with a paper based questionnaire to complete to evaluate the menu.

For the evaluation of the paper-based menu, the researcher recorded the time the guest received the menu and the time it was returned. At the end of the meal,
quests were approached by the researcher, seeking their participation in filling out a questionnaire on the menu. The participation of the subjects in the study was voluntary and all subjects were given the option to decline.
Chapter 4

DATA ANALYSIS AND FINDINGS

4.1 Descriptive Statistics

4.1.1 Demographic Information

The survey administered was able to capture 250 respondents. After an analysis of the data, a general picture of the respondents was generated. Table 4 provides demographic information regarding the respondents’ gender. This table includes frequencies and percentages of each gender. Based on the analysis, it was noted that the sample was not even across gender as 57.2% of the respondents were females and 41.2% males, 1.6% of the respondents did not report their gender in the questionnaire.

Table 4- Frequencies: Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>143</td>
<td>57.2</td>
</tr>
<tr>
<td>Male</td>
<td>103</td>
<td>41.2</td>
</tr>
<tr>
<td>Total</td>
<td>246</td>
<td>98.4</td>
</tr>
<tr>
<td>Missing Values</td>
<td>4</td>
<td>1.6</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 5 presents a summary of the frequencies and percentages for the demographic information concerning the age of the respondents. Based on the analysis, 10.4% were 18-25 year olds, 7.2% were 26-33 year olds, 10.8% were 34-41 year olds, 18% were 42-49 year olds, 26% were 50-57 year olds, and 25.6% were >58 year olds. The results indicate that most of the respondents were 50-57 year old. In total more than 50% of the respondents were 50 years and older. Five (5) of the respondents failed to state their age on the questionnaire.

Table 5- Frequencies: Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25</td>
<td>26</td>
<td>10.4</td>
</tr>
<tr>
<td>26-33</td>
<td>18</td>
<td>7.2</td>
</tr>
<tr>
<td>34-41</td>
<td>27</td>
<td>10.8</td>
</tr>
<tr>
<td>42-49</td>
<td>45</td>
<td>18.0</td>
</tr>
<tr>
<td>50-57</td>
<td>65</td>
<td>26.0</td>
</tr>
<tr>
<td>&gt;58</td>
<td>64</td>
<td>25.6</td>
</tr>
<tr>
<td>Total</td>
<td>245</td>
<td>98.0</td>
</tr>
<tr>
<td>Missing Values</td>
<td>5</td>
<td>2.0</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 6 presents a summary of the frequencies and the percentage for the demographic data concerning the educational background of the respondents. The
results indicated that 11.6% of the respondents had a high school, 41.6% had a bachelor degree, 25.6 % had a master degree, and 16.4% had a doctorate degree. The results showed that a great majority of the respondents had at least a bachelor’s degree. Twelve (12) of the respondents did not report their educational background.

Table 6- Frequencies: Educational Background

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>29</td>
<td>11.6</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>104</td>
<td>41.6</td>
</tr>
<tr>
<td>Master degree</td>
<td>64</td>
<td>25.6</td>
</tr>
<tr>
<td>Doctorate degree</td>
<td>41</td>
<td>16.4</td>
</tr>
<tr>
<td>Total</td>
<td>238</td>
<td>95.2</td>
</tr>
<tr>
<td>Missing Values</td>
<td>12</td>
<td>4.8</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 7 presents the summary of the frequencies and percentages for the demographic information concerning the respondents’ occupational status. The analysis of the results show that 10 % of the respondents were students, 11.6 % were self- employed, 64.4 % were employed, and 12.4 % were unemployed. Majority of the respondents in the study were employed. Four (4) of the respondents did not report their occupational status.
Table 7- Frequencies: Occupation

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>25</td>
<td>10.0</td>
</tr>
<tr>
<td>Self-employed</td>
<td>29</td>
<td>11.6</td>
</tr>
<tr>
<td>Employed</td>
<td>161</td>
<td>64.4</td>
</tr>
<tr>
<td>Unemployed</td>
<td>31</td>
<td>12.4</td>
</tr>
<tr>
<td>Total</td>
<td>246</td>
<td>98.4</td>
</tr>
<tr>
<td>Missing Values</td>
<td>4</td>
<td>1.6</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 8 presents a summary of the frequencies and percentage for information concerning respondents’ ownership and the usage of an iPad or similar touch screen tablets. The results of the analysis indicate that 85.5% of the respondents did not own an iPad while 14.5% of the respondents did. The results also indicated that a majority of respondents never used an iPad or a similar electronic which was represented by 57.3% and 42.7% had use an iPad or similar tablet before. The results specified that while many respondents never owned an iPad, many of the respondents had utilized one before.
Table 8 - Frequencies: Ownership and Usage of An iPad

<table>
<thead>
<tr>
<th>Own an iPad</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>106</td>
<td>85.5</td>
</tr>
<tr>
<td>Yes</td>
<td>18</td>
<td>14.5</td>
</tr>
<tr>
<td>Total</td>
<td>124</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Used an iPad</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>71</td>
<td>57.3</td>
</tr>
<tr>
<td>Yes</td>
<td>53</td>
<td>42.7</td>
</tr>
<tr>
<td>Total</td>
<td>124</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 9 provides a summary of the frequencies and percentage for respondents’ ownership and usage of a Touch Screen Smartphone such as an iPad Android etc. An analysis of the data indicated that 72.45% of the respondents did not own a Touch Screen Smartphone and the remaining 27.6% did owned one. It was also found that 54.8% of the respondents never utilized a Touch Screen Smartphone while 27.6% have used a Touch Screen Smartphone before. While many of the respondents never owned a Touch Screen Smartphone, nearly half the respondents had utilized one before.
Table 9- Frequencies: Ownership and Usage of A Touch Screen Smartphone

<table>
<thead>
<tr>
<th>Own a Touch Screen</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>89</td>
<td>72.4</td>
</tr>
<tr>
<td>Yes</td>
<td>34</td>
<td>27.6</td>
</tr>
<tr>
<td>Total</td>
<td>123</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Used a Touch Screen</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>68</td>
<td>54.8</td>
</tr>
<tr>
<td>Yes</td>
<td>56</td>
<td>45.2</td>
</tr>
<tr>
<td>Total</td>
<td>124</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 10 displays a summary of the frequencies and percentages concerning respondents’ usage of kiosks in a foodservice establishment. The results were almost represented evenly, with 54% of the respondents never using a kiosk to order a meal and 46% having utilized a kiosk before.

Table 10-Frequencies: Usage of a Kiosk

<table>
<thead>
<tr>
<th>Usage of a Kiosk</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>67</td>
<td>54.0</td>
</tr>
<tr>
<td>Yes</td>
<td>57</td>
<td>46.0</td>
</tr>
<tr>
<td>Total</td>
<td>124</td>
<td>100.0</td>
</tr>
</tbody>
</table>
4.2 Independent Samples T-Test

Table 11 presents the findings from a series of Independent- Samples T-Test. The T-Tests were done to examine if there was any significant difference between the Electronic Tablet-based menu and the Traditional Paper Based menu on customers’ ordering satisfaction. Based on the analysis of the results, the T-Test indicates there were significant differences between the two groups. The means for all Electronic Tablet-based menus were higher than that of the Traditional paper-based menus in all cases. Thus it can be seen that individuals that utilized the Electronic Tablet-based menus were significantly more satisfied with ordering experience. The findings support H1.
Table 11- Ordering Experience Mean Differences between Electronic Tablet-based Menus and Traditional Paper-based Menus

<table>
<thead>
<tr>
<th>Item Variable</th>
<th>Electronic Tablet-Based Mean (SD)</th>
<th>Paper Mean (SD)</th>
<th>T-Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>I could visualize what my order would look like</td>
<td>6.42 (0.87)</td>
<td>4.47 (1.45)</td>
<td>12.91</td>
<td>.000</td>
</tr>
<tr>
<td>I had a good understanding of the menu ingredients in my order</td>
<td>6.10 (1.25)</td>
<td>5.50 (1.32)</td>
<td>3.73</td>
<td>.000</td>
</tr>
<tr>
<td>I had a good understanding of how my order will be prepared</td>
<td>5.90 (1.22)</td>
<td>5.11 (1.39)</td>
<td>4.75</td>
<td>.000</td>
</tr>
<tr>
<td>I felt certain about what I ordered</td>
<td>6.39 (0.79)</td>
<td>5.65 (1.32)</td>
<td>5.37</td>
<td>.000</td>
</tr>
<tr>
<td>I was happy with what I ordered</td>
<td>6.67 (0.61)</td>
<td>5.35 (1.13)</td>
<td>4.60</td>
<td>.000</td>
</tr>
<tr>
<td>I felt in control over what I ordered</td>
<td>6.19 (1.17)</td>
<td>5.35 (1.69)</td>
<td>4.49</td>
<td>.000</td>
</tr>
<tr>
<td>In general, I felt like I was informed about menu items</td>
<td>6.41 (.90)</td>
<td>5.68 (1.08)</td>
<td>5.77</td>
<td>.000</td>
</tr>
<tr>
<td>Studying the menu was enjoyable</td>
<td>6.28 (1.07)</td>
<td>5.56 (1.35)</td>
<td>4.72</td>
<td>.000</td>
</tr>
<tr>
<td>I was satisfied with the ordering process</td>
<td>6.41 (1.0)</td>
<td>6.01 (1.0)</td>
<td>3.20</td>
<td>.002</td>
</tr>
</tbody>
</table>

Table 12 presents an analysis on the difference between the Electronic Tablet-based menu and the Traditional paper Based menu as it relates to usability. Based on the analysis, there were significant differences between both menus across almost all the indicators of usability with the exception of two. Interestingly, “sense of participation” reported a non-significant difference (Electronic Tablet- based menu mean =5.73 and the traditional paper mean = 5.54). Additionally, there was also no
significant difference when it came to whether “too much information” was present between Electronic Tablet-based menu=5.83 and the traditional paper menu =5.64. H2 was supported based on this analysis.

Table 12- Usability Mean Differences between Electronic Tablet-based Menus and Traditional Paper-based Menus

<table>
<thead>
<tr>
<th>Item Variable</th>
<th>Electronic Tablet-based Mean (SD)</th>
<th>Paper Mean (SD)</th>
<th>T-Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finding information about menu items was easy</td>
<td>6.28 (1.0)</td>
<td>5.94 (1.07)</td>
<td>2.536</td>
<td>.012</td>
</tr>
<tr>
<td>The information in the menu was well organized</td>
<td>6.42 (.84)</td>
<td>6.08 (.97)</td>
<td>2.987</td>
<td>.003</td>
</tr>
<tr>
<td>Use of colors on the menu was pleasant.</td>
<td>6.32 (.94)</td>
<td>5.12 (1.56)</td>
<td>7.299</td>
<td>.000</td>
</tr>
<tr>
<td>The contrast of the lettering with the background made the reading of the material on the menu easy</td>
<td>6.35 (0.88)</td>
<td>5.62 (1.20)</td>
<td>5.426</td>
<td>.000</td>
</tr>
<tr>
<td>The menu increased my sense of participation in the ordering process</td>
<td>5.73 (1.53)</td>
<td>5.54 (6.61)</td>
<td>.298</td>
<td>.766</td>
</tr>
<tr>
<td>The size of the lettering in the menu made reading the material easy.</td>
<td>6.21 (1.05)</td>
<td>5.64 (1.16)</td>
<td>4.064</td>
<td>.000</td>
</tr>
<tr>
<td>There was too much information presented on the menu at any given time</td>
<td>5.83 (1.82)</td>
<td>5.74 (1.57)</td>
<td>.424</td>
<td>.672</td>
</tr>
<tr>
<td>The menu was visually appealing and influenced my purchase decision</td>
<td>5.68 (1.40)</td>
<td>4.58 (1.62)</td>
<td>5.709</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 13 presents a summary of Independent–Sample T-Tests. These T-Tests focused on any significant differences between whether or not respondents have
dined at the Vita Nova Restaurant impacted the overall usability ratings of the menu. Based on the analysis of the T-Test there was significant difference in one of the dimensions used to measure usability. The dimension in which there was significant difference was the “visually appeal” in which most of the respondents who have never been to the restaurant before indicated that the visual appeal of the menu influenced their purchase decision. There were no significant differences when it came to other dimensions on the usability between the two types of menus.
Table 13- Usability Mean Differences: Have You Dined at this Restaurant Before?

<table>
<thead>
<tr>
<th>Item Variable</th>
<th>YES Mean (SD)</th>
<th>NO Mean (SD)</th>
<th>T-Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finding information about menu items was easy</td>
<td>6.10 (1.06)</td>
<td>6.20 (1.04)</td>
<td>-1.513</td>
<td>.132</td>
</tr>
<tr>
<td>The information in the menu was well organized</td>
<td>6.17 (1.0)</td>
<td>6.31 (.89)</td>
<td>-1.220</td>
<td>.224</td>
</tr>
<tr>
<td>Use of colors on the menu was pleasant.</td>
<td>5.72 (1.40)</td>
<td>5.70 (1.47)</td>
<td>.121</td>
<td>.904</td>
</tr>
<tr>
<td>The contrast of the lettering with the background made the reading of the material on the menu easy</td>
<td>5.90 (1.14)</td>
<td>6.07 (1.05)</td>
<td>-1.251</td>
<td>.212</td>
</tr>
<tr>
<td>The menu increased my sense of participation in the ordering process</td>
<td>5.86 (6.86)</td>
<td>5.40 (1.60)</td>
<td>.719</td>
<td>.473</td>
</tr>
<tr>
<td>The size of the lettering in the menu made reading the material easy</td>
<td>5.91 (1.04)</td>
<td>5.97 (1.15)</td>
<td>-.436</td>
<td>.663</td>
</tr>
<tr>
<td>There was too much information presented on the menu at any given time</td>
<td>5.72 (1.72)</td>
<td>5.86 (1.65)</td>
<td>-.634</td>
<td>.527</td>
</tr>
<tr>
<td>The menu was visually appealing and influenced my purchase decision</td>
<td>4.86 (1.68)</td>
<td>5.34 (1.52)</td>
<td>-2.282</td>
<td>.023*</td>
</tr>
</tbody>
</table>

Table 14 presents a summary of T-Tests that had the aim of discovering if there was any significant differences between whether or not respondents had dined at Vita Nova before had an impact on the ordering experience. The series of T-Test indicated that there was no significant difference between whether or not the respondents had dined at the restaurant before on their overall ordering experience from the use of both menus.
Table 14- Ordering Experience Mean Differences: Have You Dined at this Restaurant Before?

<table>
<thead>
<tr>
<th>Item Variable</th>
<th>YES Mean (SD)</th>
<th>NO Mean (SD)</th>
<th>T-Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>I could visualize what my order would look like</td>
<td>5.33 (1.53)</td>
<td>5.50 (1.57)</td>
<td>-.844</td>
<td>.400</td>
</tr>
<tr>
<td>I had a good understanding of the menu ingredients in my order</td>
<td>5.73 (1.41)</td>
<td>5.82 (1.26)</td>
<td>-.492</td>
<td>.623</td>
</tr>
<tr>
<td>I had a good understanding of how my order will be prepared</td>
<td>5.53 (1.37)</td>
<td>5.40 (1.38)</td>
<td>.697</td>
<td>.487</td>
</tr>
<tr>
<td>I felt certain about what I ordered</td>
<td>6.05 (1.07)</td>
<td>5.92 (1.24)</td>
<td>.893</td>
<td>.373</td>
</tr>
<tr>
<td>I was happy with what I ordered</td>
<td>6.45 (.94)</td>
<td>6.33 (1.0)</td>
<td>.967</td>
<td>.335</td>
</tr>
<tr>
<td>I felt in control over what I ordered</td>
<td>5.77 (1.40)</td>
<td>5.70 (1.62)</td>
<td>.340</td>
<td>.734</td>
</tr>
<tr>
<td>In general, I felt like I was informed about menu items</td>
<td>6.06 (1.13)</td>
<td>5.97 (1.0)</td>
<td>.674</td>
<td>.501</td>
</tr>
<tr>
<td>Studying the menu was enjoyable</td>
<td>5.78 (1.34)</td>
<td>5.99 (1.24)</td>
<td>-1.237</td>
<td>.217</td>
</tr>
<tr>
<td>I was satisfied with the ordering process</td>
<td>6.15 (1.13)</td>
<td>6.23 (0.93)</td>
<td>-.621</td>
<td>.535</td>
</tr>
</tbody>
</table>

Table 15 depicts a summary of the results for a series of T-Tests which were done to analyze if there was any significant difference between whether or not respondents had dined at the Vita Nova Restaurant before on the satisfaction gained from ordering experience utilizing the Electronic Tablet-based menu. The results indicated that there was no significant difference.
Table 15- Comparative Ordering Satisfaction Mean Differences: Have You Dined at this Restaurant Before?

<table>
<thead>
<tr>
<th>Item Variable</th>
<th>YES Mean (SD)</th>
<th>NO Mean (SD)</th>
<th>T-Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>I felt more certain about what I ordered</td>
<td>5.30 (1.66)</td>
<td>5.81 (1.39)</td>
<td>-1.782</td>
<td>.078</td>
</tr>
<tr>
<td>I felt happier with what I ordered</td>
<td>5.20 (1.65)</td>
<td>5.60 (1.56)</td>
<td>-1.361</td>
<td>.176</td>
</tr>
<tr>
<td>I was more satisfied with the ordering process</td>
<td>5.36 (1.65)</td>
<td>5.70 (1.45)</td>
<td>-1.199</td>
<td>.233</td>
</tr>
</tbody>
</table>

4.3 Bivariate Correlation

A bivariate correlation analysis was conducted to examine the correlation between novelty, comparative satisfaction (more certain, happier, and more satisfied), usability and age against each other in the study. The results of the analysis are presented in Table 16. From the analysis of the data it was evident that the novelty of the technology had a significant impact on customer’s comparative satisfaction from the use of the electronic menu. However, there was more significance with novelty and the usability of the menu. The results indicate that the usability of the electronic menu was significant for customer’s comparative satisfaction whether or not they had dines at the restaurant before. The results also indicated that there was no significant between age and the other variable and the overall ordering experience.
Table 16- Bivariate Correlation: Novelty, Comparative Satisfaction, Usability and Age

<table>
<thead>
<tr>
<th>Item Variable</th>
<th>Novelty</th>
<th>Comparative Satisfaction (more certain, happier, more satisfied)</th>
<th>Usability</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novelty</td>
<td>.217*</td>
<td></td>
<td>.330***</td>
<td>.133</td>
</tr>
<tr>
<td>Comparative Satisfaction (more certain, happier, more satisfied)</td>
<td></td>
<td></td>
<td>.604***</td>
<td>-.152</td>
</tr>
<tr>
<td>Usability</td>
<td></td>
<td></td>
<td></td>
<td>.078</td>
</tr>
</tbody>
</table>

*** Significant at p < 0.001
** Significant at p < 0.01
* Significant at p < 0.05
4.4 Summary of Hypotheses

The results of the analyses are presented below in Table 17. Both of the hypotheses were supported. The results of the study indicated that there is a significant difference between Electronic Tablet–based menu and the traditional Paper–based menu as it relates to ordering satisfaction. The results also showed that there is a significant difference between Electronic Tablet-based menu and traditional paper based when it comes to usability.

Table 17-Summary of Hypotheses

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Description</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>There will be significant differences between Electronic Tablet–based menu and traditional paper–based as it relates to ordering experience</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>There will be significant differences between Electronic Tablet–based menu and traditional paper Based menu when it comes to usability.</td>
<td>Supported</td>
</tr>
</tbody>
</table>
Chapter 5

DISCUSSION AND CONCLUSION

The objectives of this study were to a) Evaluate if the ordering experience was perceived as significantly superior with the Electronic Tablet-based menus and b) to examine if the Electronic Tablet-based menu had a significantly greater usability rating as perceived by customers as opposed to the Traditional Paper-based menus.

5.1 Major Findings and Discussion

The implementation of technology in the dining room for the enhancement of guest experience is at the forefront of the mind of restaurateurs. Restaurant operators have realized that technology presents potential benefits for their operation and customers (Ansel and Dryer 1999; Oronsky and Cathoth, 2006). The findings of this study support the idea that the use of technology does help to enhance the service experience, more specifically the ordering experience for the customer.

The results indicated that customers were more satisfied with the ordering experience from the use of the Electronic Tablet-based menus than that of the traditional paper-based menus as users had a more enjoyable experience exploring the menu, supporting H1. The results also showed that users experienced greater usability from the use of the Electronic Tablet-based menu than respondents that utilized the paper-based menus. This finding is supportive of H2.

The Electronic Tablet-based menu has the ability to provide more detailed information on featured menu items for the customer. Restaurateurs are able to add
recipes and more pictorial representations of menu items on the menu. This information can be very useful for customers especially if a customer has an allergic reaction to certain foods. The inclusion of recipes gives customers the opportunity to have dishes customized to match their needs. While customers were provided with more detailed description and nutritional information on the electronic tablet–based menu, there was no noticeable change in the customization of dishes. Future research should focus on the potential of increase in the customization of dishes given the fact that the use of Electronic tablet–based menu provides the customers with more detailed information to guide customers purchase decisions.

With the use of Electronic Tablet menu, restaurateurs have the ability to add vast variety of information to the menu such as restaurant information, hours of operation, daily specials, and events with little concern of overcrowding the menu. This can be achieved by adding tabs on the menu for the above mentioned information. Customers have the options of choosing the information they want to view without feeling overburdened. Based on additional comments from customers who utilized the Electronic Tablet-based menus, they were happy that they had the option of viewing the nutritional information. However, with a traditional paper-based menu, all the information is presented on the menu whether or not the customer wants to view the information.

A series of T-Tests were conducted to investigate whether or not customers had dined at the restaurant before, had an impact on the usability and overall ordering satisfaction gained from the use of the menu. The results indicated that there were no significant differences in whether or not they had dined at the
restaurant before. Thus this supported H1, that it was the use of the Electronic menu which increased satisfaction gained from the ordering experience.

From an analysis of the data, it was also found that many of the respondents did not own an iPad or a Touch Screen Smartphone; similarly most of the respondents never used any of these technological tools. A Bivariate Correlation analysis was done to examine if the novelty of the technology had an impact on the comparative satisfaction. Based on the analysis it was discovered that the novelty of the Electronic Tablet-based menu had a positive significant impact on the comparative satisfaction. Thus the customers experienced a greater satisfaction from the ordering experience as a result of the introduction of a new type of menu. The results of this finding were consistent with therefore the quest for novelty in the dining room whether technology or cuisine is an aspect some tourists desire to achieve in order to increase satisfaction (Chang, 2009).

Based on the demographic information, it was realized that more than half of the respondents were 50 years and older. Many of the respondents had additional comments on the questionnaire that they were very satisfied with the lighting of the Electronic menus. In most restaurants especially in the dinner session the lights are very dim and may present difficulty for elderly folks to read a traditional paper-based menu. Though this was not a variable measured in the study, it helped to increase satisfaction gained from the ordering experience for some of the customers.

The study also indicated that the usability of the Electronic Tablet-based menu had a significant impact on the customer’s comparative satisfaction when it came to usability. This significant correlation between these two constructs provides great insight for the restaurant industry. With this information, restaurant operators
should ensure that the technology being implemented in the restaurants are easy for their customer to utilize. Thus it is very important that when implementing technology for human computer interface, consideration be given to the user’s technology readiness (Brown, 1988).

It was also found in the study that the novelty of the Electronic Tablet-based menu had a significant impact on the usability of the menu. Restaurateurs need to take this relationship into consideration as the increase in novelty might have a negative relationship on usability of the menu for the customers. Therefore, when introducing technology this should be done at a timely manner to ensure that customers are have a comfort level with a technology before introducing something new as usability has an impact on ordering experience. (Wotton, 2003; Law and Ngai, 2005).

The results of the T-Test on whether or not a respondent had dined at the restaurant before had an impact on the usability ratings, indicated that there were no significant differences. However, in one of the dimension, the “visual appeal”, the results indicated that it had a significant factor in influencing customers’ decision on menu items. This is supported by existing literature which stated that the visual appeal helps to influence customers’ decisions (Cichy and Wise, 1999; Seaberg, 1991). Thus restaurant operators should consider this factor in the development of their restaurant menus.

5.2 Implications of the Study

After a careful analysis of the results of the study, both hypotheses were supported. Being a new study, this study will be of great value to academia and the
restaurant industry. It has been identified that the use of technology is a rising trend in the restaurant industry.

5.2.1 **Academia**

The results of this study have set the foundation for future research on electronic menu. This is so, as there was no evidence of research with the usability of menus and the ordering experience as the primary focus. From the theoretical framework, future studies could be conducted to examine the perceived control customer gain from utilizing the electronic tablet-based menu versus the traditional paper based menu. The results of this research supported existing literature on the usability and satisfaction. The correlation between these two constructs, usability and comparative satisfaction, provides groundwork for academia in future studies. The significant correlation between novelty and comparative satisfaction also supported existing literature on novelty seeking in the dining room and its ability to enhance ordering experience.

5.2.2 **Industry**

Customer are becoming more tech-savvy as they are now utilizing technology to conduct business, buy and sell goods, make restaurant reservations and order meal from anywhere (NRA, 2011). The NRA forecast (2011) also highlighted that in order for restaurant operators to reach out to these customers, restaurateurs need to scan the environment to keep up with technological innovation to implement in their restaurants in order to enhance customers’ experience. The study provided confirmation that the restaurant industry can implement Electronic Menus has the ability to enhance the experiential qualities of the dining experience for customers.
The use of the electronic tablet-based menus had a statistically significant positive impact on the ordering experience for guests. These menus have the ability to assist restaurant operators in the augmentation of menus to better meet the needs of their customers.

Consumers are becoming more conscious and concerned about the impact they have on the environment (Glass, 2007). Thus, the hospitality industry has been campaigning for “sustainable” initiatives. The introduction of electronic menus can lend support to this campaign as this means there will be a reduction in the use of paper in the being utilized in the restaurant industry for the reprinting of restaurant menus.

5.3 Limitations and Future Research

This study is the first of its kind to explore the examination of electronic tablet-based and the traditional paper based menu as it relates to usability and the ordering experience. Thus this study was not without limitations. One of the limitations to this study was the sampling technique utilized. This study used convenience sampling which yield patrons of the Vita Nova, student operated restaurant at the University of Delaware. This method of sampling may have introduced bias in the study because the sample is not representative of the population at large. It is recommended that further research be conducted to in order to expand the scope of the findings to include a larger geographic area.

Another limitation of this study was the fact that the traditional paper based menu used in this study may have not met all the standards deemed important in the development of a menu according to existing literature. Likewise, the template which was used to develop the Electronic tablet–based menu may not have been the
most honorable according to menu standards thus it may have affected the ratings received from respondents. Future research could be conducted to explore whether the templates used had an impact on the usability ratings and the ordering experience.

Though nutritional information was not one of the variable explored in this study, some respondents placed additional comments on the questionnaires that the use of the nutritional information influenced their purchase decision. Future research should be done to explore the impact the inclusion of nutritional information has on customer ordering experience. Also researchers conduct a research to find out the type of nutritional information customers would like to see included in the menu. The theoretical groundwork of the study was solid and the findings of the study should still prove to be insightful to both the restaurant industry and academia.

The results from the Bivariate Correlation showed that there was no correlation between age and usability, age and comparative satisfaction or age and novelty. The fact that 50% of the respondents were 50 years and older, may have contributed to this result. Future research should be done to focus on age groups that fall in age range of 49 years and younger, to explore whether or not age had an impact on the ordering satisfaction or the usability of the menu.
REFERENCES


Kreck, L., Menu Analysis, Van Nostrand Reinhold, New York, NY, 1984


DOI: 10.1108/00251740610673332


Zeithaml, Bitner, Gremler (2009). *Services Marketing*. Integrating customer focus across the firm. 5th ed. p75
This survey is being conducted for the purpose of improving our understanding of the role of Menus in the restaurant industry. Please note that the data from this survey will be reported in the aggregate and cannot be identified to any particular individual. The survey should take about 10-15 minutes to complete and your participation is entirely voluntary. Your responses will be strictly confidential. If you would like to know more about this study, please send an email to beldona@udel.edu.

1. Have you ever been to the Vita Nova for dinner? [ ] Yes [ ] No
2. If YES, was your order different from what you ordered before? [ ] Yes [ ] No
3. Please indicate your level of agreement/disagreement with the following statements over your ordering experience with the Paper-Based Menu

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>Strongly Agree (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I could visualize what my order would look like</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td></td>
</tr>
<tr>
<td>b. I had an understanding of the menu ingredients in my order</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td></td>
</tr>
<tr>
<td>c. I had an understanding of how my order will be prepared</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td></td>
</tr>
<tr>
<td>d. I felt certain about what I ordered</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td></td>
</tr>
<tr>
<td>e. I was happy with what I ordered</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td></td>
</tr>
<tr>
<td>f. I felt in control over what I ordered</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td></td>
</tr>
<tr>
<td>g. In general, I felt like I was informed about menu items</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td></td>
</tr>
</tbody>
</table>
Studying the menu was enjoyable

I was satisfied with the ordering process

Please evaluate the Paper-Based Menu by indicating your level of agreement/disagreement with the following statements.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>Strongly Agree (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Finding information about menu items was easy</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>b. The information in the menu was well organized</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>c. Use of colors on the menu was pleasant.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>d. The contrast of the lettering with the background made the reading of the material on the menu easy</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>e. The menu increased my sense of participation in the ordering process</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>f. The size of the lettering in the menu made reading the material easy.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>g. There was too much information presented on the menu at any given time.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>h. The menu was visually appealing and influenced my purchase decision</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

5. Age: [ ] 18 – 25 [ ] 26 – 33 [ ] 34 – 41 [ ] 42 – 49 [ ] 50 – 57 [ ] > 58

6. Gender: [ ] Male [ ] Female

7. Your Occupation: [ ] Student [ ] Self Employed [ ] Employed [ ] Unemployed

8. Education: [ ] High School [ ] Bachelor’s Degree [ ] Master’s Degree [ ] Doctorate Degree

Thank You for Taking This Survey!
This survey is being conducted for the purpose of improving our understanding of the potential role of **Electronic Tablet-Based Menus** in the restaurant industry. Please note that the data from this survey will be reported in the aggregate and cannot be identified to any particular individual. The survey should take about 10-15 minutes to complete and your participation is entirely voluntary. Your responses will be strictly confidential. If you would like to know more about this study, please send an email to beldona@udel.edu.

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Do you own an iPad, Galaxy, Slate or similar touch screen electronic tablets?</td>
<td>[ ]</td>
</tr>
<tr>
<td>2.</td>
<td>Have you used an iPad, Galaxy, Slate or similar touch screen electronic tablets?</td>
<td>[ ]</td>
</tr>
<tr>
<td>3.</td>
<td>Do you own a Touch Screen Smartphone/PDA such as an IPhone, Android etc?</td>
<td>[ ]</td>
</tr>
<tr>
<td>4.</td>
<td>Have you used a Touch Screen Smartphone/PDA such as an iPhone, Android etc?</td>
<td>[ ]</td>
</tr>
<tr>
<td>5.</td>
<td>Have you ordered using a kiosk in a foodservice establishment?</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

6. Please indicate your level of agreement/disagreement with the following statements over your ordering experience with the **Electronic Tablet-Based Menu**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>Strongly Agree</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>I could <strong>visualize</strong> what my order would look like</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>b.</td>
<td>I had a good <strong>understanding of the menu ingredients</strong> in my order</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>c.</td>
<td>I had a good <strong>understanding of how my order will be prepared</strong></td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>d.</td>
<td>I felt <strong>certain about what I ordered</strong></td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>e.</td>
<td>I was <strong>happy with what I ordered</strong></td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

72
f. I felt *in control* over what I ordered
   
   g. In general, I felt like I was *informed* about menu items
   
   h. Studying the menu was *enjoyable*
   
   i. I was satisfied with the ordering process

7. Please tell how well each of these words below describes your experience with using the Electronic Tablet-Based Menu.

<table>
<thead>
<tr>
<th>Strongly Disagree (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>Strongly Agree (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unusual</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>2. Original</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>3. New</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

8. Please evaluate the Electronic Tablet-Based Menu by indicating your level of agreement/disagreement with the following statements.

<table>
<thead>
<tr>
<th>Strongly Disagree (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>Strongly Agree (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Finding information about menu items was easy</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>J. The information in the menu was well organized</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>K. Use of colors on the menu was pleasant.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>L. The contrast of the lettering with the background made the reading of the material on the menu easy</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>M. The menu increased my sense of participation in the ordering process</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>N. The size of the lettering in the menu made reading the material easy.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>O. There was too much information presented on the menu at any given time</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
P. The menu was visually appealing and influenced my purchase decision

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

9. Compared to your past use of Traditional Paper-Based Menus, with the Electronic Tablet-Based Menu,

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>Strongly Agree (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>I felt more certain about what I ordered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>I felt happier with what I ordered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>I was more satisfied with the ordering process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10a. Have you ever been to the Vita Nova for dinner? [ ] Yes [ ] No

10B. If YES, was today’s order different from what you ordered before? [ ] Yes [ ] No

12. Age: [ ] 18 – 25 [ ] 26 – 33 [ ] 34 – 41 [ ] 42 – 49 [ ] 50 – 57 [ ] > 58

13. Gender: [ ] Male [ ] Female

14. Your Occupation: [ ] Student [ ] Self Employed [ ] Employed [ ] Unemployed

15. Education: [ ] High School [ ] Bachelors' Degree [ ] Master’s Degree [ ] Doctorate Degree

Thank You for Taking This Survey!
Appendix B

HUMAN SUBJECTS PROTOCOL
University of Delaware

Protocol Title: An Examination of Electronic Tablet–based Menus for the Restaurant Industry

Principal Investigator
Name: Srikanth Beldona
Department/Center: Hotel, Restaurant and Institutional Management
Contact Phone Number: 302-831-6192
Email Address: beldona@udel.edu

Advisor (if student PI):
Name: Nadria Buchanan
Contact Phone Number: 302-831-6077
Email Address: nadriab@udel.edu

Other Investigators:

Investigator Assurance:

By submitting this protocol, I acknowledge that this project will be conducted in strict accordance with the procedures described. I will not make any modifications to this protocol without prior approval by the HSRB. Should any unanticipated problems involving risk to subjects, including breaches of guaranteed confidentiality occur during this project, I will report such events to the Chair, Human Subjects Review Board immediately.

1. Is this project externally funded? NO

   If so, please list the funding source:

2. Project Staff
   Please list personnel, including students, who will be working with human subjects on this protocol (insert additional rows as needed):

<table>
<thead>
<tr>
<th>NAME</th>
<th>ROLE</th>
<th>HS TRAINING COMPLETE?</th>
</tr>
</thead>
</table>

75
3. Special Populations
Does this project involve any of the following:

Research on Children? No

Research with Prisoners? No

Research with any other vulnerable population (please describe)? No

4. Research Abstract
Please provide a brief description in LAY language (understandable to an 8th grade student) of the aims of this project.

2011 has been proclaimed as the year of the tablet computer. This study seeks to evaluate information satisfaction stemming from the ordering process with electronic tablet-based menus as opposed to traditional paper-based menus.

5. Procedures
Describe all procedures involving human subjects for this protocol. Include copies of all surveys and research measures.

See attached for a copy of the two surveys.

6. Study Population and Recruitment
Describe who and how many subjects will be invited to participate. Include age, gender and other pertinent information. Attach all recruitment fliers, letters, or other recruitment materials to be used.

Subjects will be randomly selected from a pool of restaurant patrons at the Vita Nova restaurant in the University of Delaware and will be given either the electronic tablet or the physical paper-based menu.

Describe what exclusionary criteria, if any will be applied.

Only persons 18 years or older will be allowed to participate.

Describe what (if any) conditions will result in PI termination of subject participation.
The survey is voluntary. If the respondent does not wish to continue, the survey will be stopped.

7. **RISKS AND BENEFITS**
Describe the risks to participants (risks listed here should be included in the consent document).
If risk is more than minimal, please justify.

*There will be no risk associated with the study for the respondents as their identities will remain anonymous.*

What steps will be taken to minimize risks?

*NA*

Describe any direct benefits to participants.

*It will help restaurateurs to better understand customer preferences in providing the right information when it comes to the ordering process.*

Describe any future benefits to this class of participants.

If there is a Data Monitoring Committee (DMC) in place for this project, please describe when and how often it meets.

*The PI and Graduate Assistant will meet on two separate occasions to review the data collected and if any steps need to be taken to ensure improved responses or ensure greater adherence to the data collection guidelines.*

8. **COMPENSATION**
Will participants be compensated for participation?

*No*

If so, please include details.

9. **DATA**
Will subjects be anonymous to the researcher?

*Yes.*

If subjects are identifiable, will their identities be kept confidential?

*Subjects will not be identifiable.*

How and how long will data be stored?
Three years

How will data be destroyed?

All surveys will be shredded and computer files deleted.

How will data be analyzed and reported?

Reported in aggregate in academic journals.

10. CONFIDENTIALITY
Will participants be audiotaped, photographed or videotaped during this study?

No

How will subject identity be protected?

No names or identifiers will be used to trace responses back to respondents.

Is there a Certificate of Confidentiality in place for this project? (If so, please provide a copy).

No

11. CONSENT and ASSENT

_____ Consent forms will be used and are attached for review.

_____ Additionally, child assent forms will be used and are attached.

_Y___ Consent forms will not be used (Justify request for waiver).

A separate consent form will not be used. A brief on confidentiality, anonymity of the data and the voluntary nature of participation is present in the questionnaire. Verbal consent will also be sought before providing the electronic tablets of usage with the entire paragraph (with contents listed above) mentioned to potential participants.

12. Other IRB Approval
Has this protocol been submitted to any other IRBs?

No

If so, please list along with protocol title, number, and expiration date.
13. **Supporting Documentation**  
Please list all additional documents uploaded to IRBNet in support of this application.
DATE: February 25, 2011

TO: Srikanth Beldona, Ph.D.
FROM: University of Delaware IRB

STUDY TITLE: [223223-1] An Examination of Electronic Multimedia-Based Tablet Menus for the Restaurant Industry

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE: February 25, 2011

REVIEW CATEGORY: Exemption category # 2

Thank you for your submission of New Project materials for this research study. The University of Delaware IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office. Please remember to notify us if you make any substantial changes to the project.

If you have any questions, please contact Jody-Lynn Berg at (302) 831-1119 or jlberg@udel.edu. Please include your study title and reference number in all correspondence with this office.
Appendix C

SNAP SHOTS OF MENU

Figure C.1: Snap Shot of Entree
Figure C.2: Snap Shot of Dessert

Blackberry Cobbler

Fresh blackberries mixed with sugar and lemon juice. Topped with a flaky biscuit comprising flour, baking powder, milk, sugar, cinnamon, butter, lemon juice and vanilla extract and then baked in a cast iron skillet. Served with UD Vanilla Ice Cream and seasonal fruits.
Figure C.3: Snap Shot of Appetizer Sampler
### Brief Nutritional Info

<table>
<thead>
<tr>
<th>Appetizers</th>
<th>Total Calories</th>
<th>Calories from Fat</th>
<th>Salads</th>
<th>Total Calories</th>
<th>Calories from Fat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appetizer Platter</td>
<td>562</td>
<td>245</td>
<td>Blackened Spice Ali</td>
<td>417</td>
<td>231</td>
</tr>
<tr>
<td>Asian-style Salad</td>
<td>299</td>
<td>264</td>
<td>Filet of Beef</td>
<td>718</td>
<td>412</td>
</tr>
<tr>
<td>Caesar Salad</td>
<td>443</td>
<td>365</td>
<td>Crème Brûlée</td>
<td>76</td>
<td>5</td>
</tr>
<tr>
<td>Spicy Thai Chicken</td>
<td>562</td>
<td>245</td>
<td>Lemon Tart</td>
<td>378</td>
<td>175</td>
</tr>
<tr>
<td>Cheesecake Crab Cakes</td>
<td>574</td>
<td>334</td>
<td>Chocolate Cookie Sampler</td>
<td>650</td>
<td>347</td>
</tr>
<tr>
<td>Roast Pork</td>
<td>544</td>
<td>276</td>
<td>Blackberry Cobbler</td>
<td>423</td>
<td>3</td>
</tr>
<tr>
<td>Grilled Mahi Mahi</td>
<td>523</td>
<td>401</td>
<td>Rice Pudding</td>
<td>94</td>
<td>31</td>
</tr>
<tr>
<td>Eggplant Ravioli</td>
<td>741</td>
<td>510</td>
<td>UDairy's Vanilla Ice Cream</td>
<td>96</td>
<td>15</td>
</tr>
</tbody>
</table>
Vita Nova
Voted as Delaware’s Finest for Service - 2010

Vita Nova Signature Salad
Prepared tableside for two or more

Medley of Greens with Candied Walnuts, Jicama and Mandarin Oranges, shaved Asiago cheese, toasted coconut and tangerine vinaigrette.

Appetizers  Salads  Intermezzo  Entrees  Desserts  Nutritional  Info  Home

Figure C.5: Snap Shot of Salad
Figure C.6: Snap Shot of Intermezzo
Figure C.7: Snap Shot of Home Page